

Superhealth NOW!

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SUPER HEALTH NOW

The Secrets to a Long and Healthy Life

In simple terms,

- how your body works
- the truth about nutrition
- the roles of exercise and stress in health
- the holistic approach to building health and eliminating disease.

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Naturopath

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SECTION ONE:

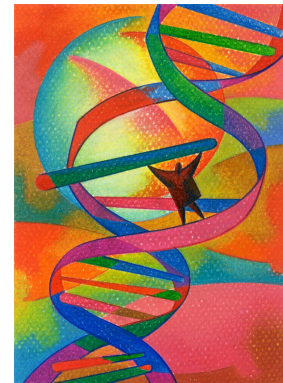
OVERVIEW

What is Health?

Health is much more than the absence of disease. There are many people who just don't feel "well", even though the medical diagnostic machine with all of its technological majesty and wonder can find nothing wrong with them. Often they are told that it is "all in their head", or that they should get a grip on themselves and "get on with it". Or perhaps they are told it is due to "stress" or a mysterious "virus", or that some people are just "prone to this sort of thing". None of those comments or attitudes is helpful. And to be quite blunt they are just plain wrong. People can be taught to handle stress, infections are not a normal part of an optimally healthy system, and although mental attitude has a bearing on health, it is rarely the only factor. The state of a person's health is *always* the result of an interaction between genetic potential, the mind-spirit and the *overall* environment.

What about genetics?

Once upon a time, scientists thought that once we had mapped the human genetic pattern we would "understand it all". But that hasn't happened. The reason for that is that there was an assumption about how the genes operated that turned out to be false. It was expected that one gene or combination of genes would be the blueprint for just one structure. It was therefore expected that the number of genes each human being carried would be huge. But that is not so. The number of human genes is much lower than was expected; so low that there couldn't be enough genes to determine everything that exists in the human body, unless the way they work is entirely different to the original proposition. And it is entirely different.



What we have in our genetic structure is a kind of "alphabet" from which words and sentences and stories are constructed. Admittedly it is a very *large* alphabet. We have about 3 billion genetic "letters" that make up a vocabulary of between 30,000 and 40,000 genes. Each gene may be involved in a myriad of programming functions in our body and may be thought of as a word that can be combined with other words to create the sentences, paragraphs and chapters of the book that is our story. That means that how any person turns out is not really predictable. From one perspective we are writing our own story, and what is happening in the current chapter is dependent on the interaction between our genetic structure and the environment over our lifetime. What does that mean? It means that our story can be changed. With the same alphabet of twenty-six letters millions and millions of books have been written. And similarly with the same alphabet that has created the vocabulary of our genetic structure we can write a variety of different stories. We have far more control over our health than we have realised.

It is true some things are genetically fixed. We have no control over the sequences of genes within the DNA with which we were born. But *not everything is fixed*. Exactly which words of our genetic sequence are chosen,

the particular genes that are switched on or off, to be used or not used in the words of our story *is partly determined by environmental factors*.

Now it is certainly true that we have no control over some aspects of our environment. But there are many of those factors over which we can choose to take mastery. We can choose to eat differently. We can choose to exercise or to not exercise. We can choose to get upset when the traffic is congested or to put on a relaxing CD and enjoy the slower more relaxed pace. We can choose to develop attitudes that lead to peace and contentment and which enhance our relationships, or to live with attitudes that lead to unnecessary stress and anxiety and which change the hormone balance and produce disease.

We have a great many choices. So it is no good saying that it is all someone else's fault. The genes that are switched on or switched off are largely determined by the choices we make in the physical, social, psychological and spiritual areas of life. So our life story in the arena of health is far more open ended than we would like to believe.

Some genetic problems are so severe that no change in the environment will fix them. But I have seen so many people recover from things that they have been told by doctors are “irreversible” or “terminal” or “uncontrollable due to genetic make up”, that I now believe that almost anything can and does happen in the arena of health, including the “impossible”.

Lost heritage

Vibrant health or “super-health”, as I have expressed it on the title page of this book is a gift, but all too often it seems to just disappear into the mist. People find themselves trapped in the spiral downwards towards chronic ill-being instead of being in the spiral upwards towards persistent well-being. This is generally due to either faulty family habits or misinformation. As an example of such misinformation in the nutritional area most health professionals are still advocating that Calorie consumption be divided into the following proportions; 20% proteins, 20% fats/oils and 60% carbohydrates.

But is that really true? And even if so, is that all there is to it? For example the longest lived and healthiest peoples in the world, such as those from the Hunza valley in Pakistan or the Russian province of Georgia live on diets with much lower levels of fats/oils and proteins than that. And their rates of heart disease, chronic degenerative diseases and auto-immune diseases are much lower than the alarming levels experienced by people eating a typical western diet. That has led to a belief accepted for many years now that the only way to keep arteries clear of the fatty deposits that lead to heart attack or the need for heart by-pass surgery is to keep fat/oil consumption down to 10% or less of Calories consumed. But have you ever tried to live on a diet like that? To be honest, it is virtually impossible in the modern world. But as I said before, is that all there is to it? I ask the question because some people live long and healthy lives with dietary fat consumption much higher than 10%. It turns out that the **type** of fats that are consumed is crucial. They must be fats that *reduce* inflammation in the system. Part of the reason for the epidemic of many diseases such as cardiovascular disease but also including cancer, arthritis, autoimmune disease and allergies is that the

modern diet has a balance of fats different to that seen historically, and the current balance *increases* inflammation in the body. High levels of inflammation that is symptom free and goes unnoticed and unchecked for year after year, decade after decade is at the core of the cause of a raft of modern diseases seen in epidemic proportions in the West, including those mentioned above.

Something is wrong with the understanding of most health professionals, and clearly anyone who wishes to optimise health needs better information than is provided by such conventional wisdom. I intend to provide it.

So What is Super-Health?

Let me propose a definition.

Super-Health is that state in which optimum genetic potential has been achieved. For this state of affairs to exist the mind and spirit must be at peace, the body must be properly nourished, and adequate time must be devoted to proper exercise, to refreshing sleep and to rest and recreation.

In such a state people tend to be relaxed even under pressure, happy despite adversity, and relatively free of infections and chronic degenerative diseases. Sleep needs decrease and the diseases of “slow to wake up” and “morning grumpies” disappear. There is an energy and zest for life and a glow of health that distinguishes such people from those who are classified as “healthy” by the medical profession but who know that something just isn’t right.

You may say, “But no-one can ever achieve that!” Probably true. But we can all aim at it. It is my view that all of the above are interrelated. As living beings we are a kind of *mini-ecosystem* of interactive parts consisting of the physical, the mental and the spiritual. And we cannot separate them. Damage in one area invariably leads to disruption of the whole. As an example, nutritional deficiency at the physical level most definitely affects the mind since many nutrients are involved in proper firing of nerve cells in the brain. Both thought patterns and attitudes would change towards the negative. As another example since exercise dissipates adrenalin, if adequate exercise is absent the hormone balance shifts in a way that negatively impacts on physical health. And if the spirit is not at peace underlying attitudes will direct thinking in negative directions, and that will be followed by negative emotions so once again the altered hormone profile will damage the physical body.

The mind, the body and the spirit must *all* be healthy if optimum health is desired. As living beings we cannot escape the fact that we are an integrated whole. We are not a grab-bag of bits and pieces that can be dealt with as discrete and separate entities. So a balanced approach to the development of health (and it *is* an *active* rather than a *passive* state) needs to address *all* of these areas. And if they are all to be addressed we need to understand them.

If we understand our bodies, and if we understand how to provide them with the best nutrition, and if we understand the role of exercise in health, and if we understand the difference between life enhancing attitudes and thought

patterns as compared with destructive ones, and if we learn about stress management strategies, then the impossible goal of superhealth begins to look more possible! It then becomes possible to make *informed* choices that can change the direction of the life story towards super-health, instead of away from it.

And before we go any further please don't think that I speak from a purely theoretical point of view. While I have had my own struggles to overcome, I have wide experience gathered over many years from a number of fields. And I wish to help you by sharing with you what I have learned.

So to arm you with the weapon of knowledge that is essential if you are to be able to make informed choices, I have divided this book into a number of sections.

1. This first section that you are now reading is to give you an overview of my approach.
2. The second section is aimed at giving you an overall picture of how your body functions. It is a cooperation of interdependent systems, working together to perform four main functions.
3. The third section is divided into two sub sections A & B, and each deals with nutrition. This is an important section of the book since faulty nutrition contributes more to poor health than any other factor.

Part A deals with the components of nutrition, both the macronutrients and micronutrients. It commences with an examination of the sorts of things known about nutrition, but more importantly discusses the limitations of both our knowledge and of the scientific method of investigation into factors that contribute to good nutrition. It gives a brief overview of the known essentials, the known toxins and other less essential but nevertheless extremely valuable food components.

Part B deals with food as therapy. It commences by dealing with various diets that have been propounded for weight loss and health, and continues with an examination of the sorts of foods that will provide optimum nutrition and contribute to building super-health. The limitations people face due to social pressures are recognised, and foods are ranked in order from most health building to most health damaging. Important food supplements are recommended, a general eating strategy is proposed and information is provided on how to go about changing your diet. The section concludes with a discussion on the value of both sprouted seeds and juices for health. "How to" information on sprouted seeds and juices is also included.

4. The fourth section deals with stress management. It discusses the role of personal responsibility, attitudinal choices, spiritual aspects, and other stress management strategies to reduce the health destroying impact of stress.

5. The fifth section deals with the role of exercise in health, including discussions on aerobic and resistance training and various programs that are available.

6. The sixth section provides information on a variety of health disorders. It may be helpful but it is by no means complete, either with respect to the disorders covered or in the advice given. Care has been taken to provide accurate information, but no guarantees are given. Wisdom would suggest seeking the face-to-face assistance of a qualified practitioner.

7. The seventh and final section concludes the book with a set of appendices that provide a user friendly summary of key information that may be helpful to you, followed by a recommended reading list.

So what do you think? Are you prepared to allow me to lead you on a journey of discovery that could revolutionise your life?

SECTION TWO:

HOW YOUR BODY FUNCTIONS

The Human Body as a Whole

The human body can be thought of as a complex cooperative system of cells all of which depend on each other for life to be sustained. In one sense the body is a *bag of cells*, the skin being the bag that carries the salty watery external environment in which the cells live and from which they extract the essentials they need for life to continue. This salty and watery environment that is part of the body, but outside each of the individual cells is called either the *interstitial fluid*. The internal environment of the cells, which is once again salty water, is called the *intracellular fluid*. Although both environments are salty in nature, they are different in a number of ways, one of the key ones being that the fluid *inside* the cell has more potassium and magnesium salts, with less calcium and sodium salts, whereas in the *outside* environment it is the other way around.

Now the external environment of the cells, the interstitial fluid, which is contained in the bag of skin, still needs to be able to provide all of the things that a normal salty watery environment would provide to a single cell that is floating in the ocean, which from the point of view of that cell is semi-infinite in size and almost infinitely able to supply the needs of that single cell. For example, the ocean will not become polluted by the waste products of that single cell, and the availability of nutrients is almost endless.

The body as a synthesis of interdependent systems

But unlike a single cell floating in the ocean, the human body does not have a semi-infinite supply of that salty watery extracellular fluid. It has a definitely limited supply of it, and since there are cells living in it, it needs to remain able to accept waste products without becoming polluted and also to be able to provide for the nutritional needs of each cell by bringing the nutrients in from the outside. The body is organised into a series of *interdependent systems* that are ultimately designed to carry out *four main functions*.

The Functions

The four main functions are as follows:

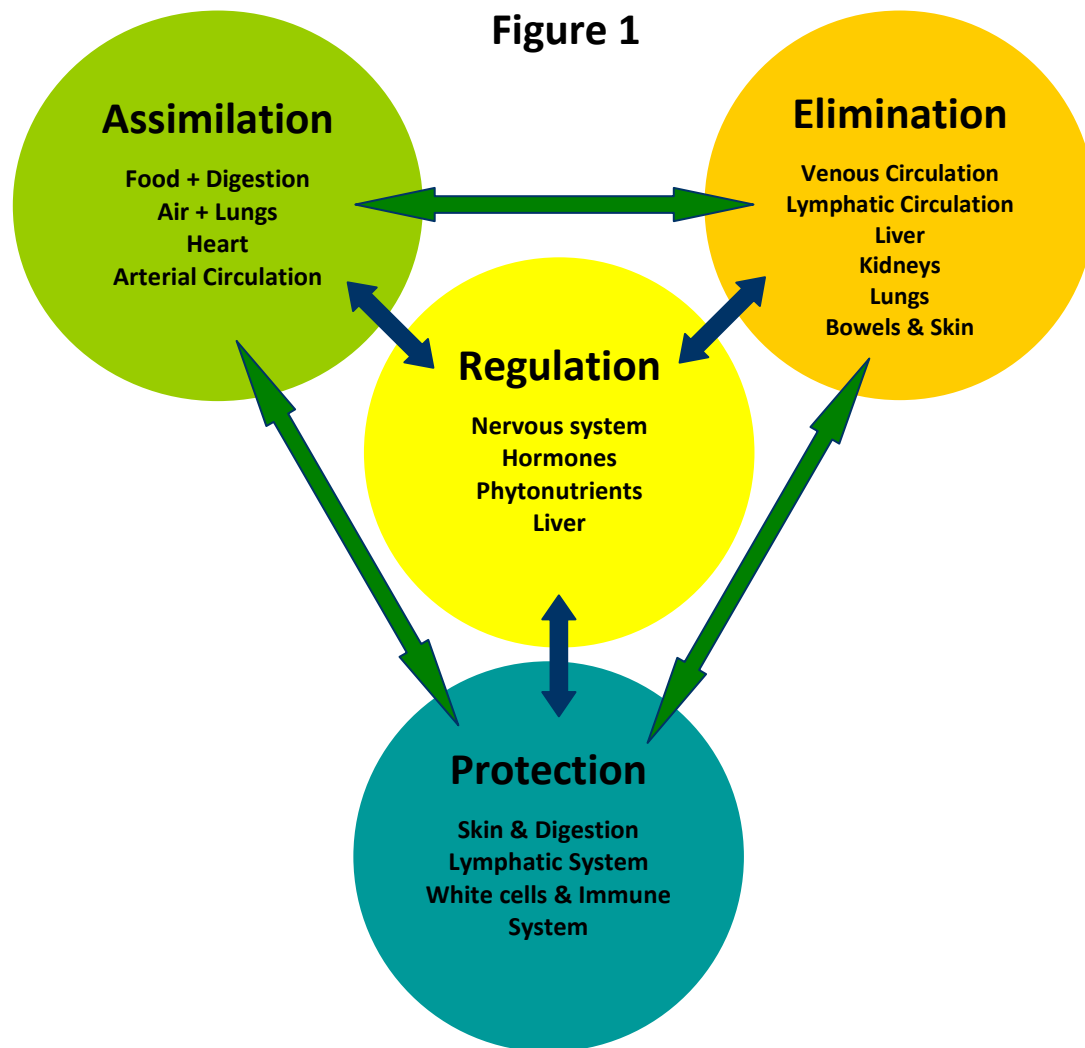
Elimination - Protect that all-important environment from being polluted. It needs to be kept absolutely clean.

Assimilation - Keep topping up the extracellular fluid or lymph with nutrient supplies for the cells.

Protection - Remove foreign invaders (both biological and chemical) that may be a threat to the survival of the cells.

Regulation - And then it all needs to be regulated so that the body in fact operates as a cooperation of interdependent systems.

Figure 1 shows how these interdependencies relate.



Regulation, **E**limination, **A**ssimilation, **P**rotection

Take care of these things, and they will take care of you. Fail to do so and your health will degenerate. You **REAP** what you sow!

The Systems

Within each main system, there are specialised organs, made of *specialised* cells, which are grouped into different sorts of tissues within the organs. So the cells are not all the same. At conception there is only one cell, which divides again and again, and early on in the process all of the cells are the same. But ultimately they become specialised, in a way that makes them capable of performing certain tasks necessary for the survival of all of the body very well, but in specialising in this way, they become incapable of performing certain other functions at all, and so they must rely on other specialised cells to help them out.

These are the main systems of the body:

1. The Musculo-Skeletal System
2. The Digestive System
3. The Cardio-Respiratory-Circulatory System
4. The Detoxification System
5. The Excretory System
6. The Nervous System
7. The Defence System
8. The Reproductive System
9. The Chemical Processing System
10. The Hormone-Messenger System

The Musculo-Skeletal System

This exists so that the cells can move around and gather supplies. It consists of bones, joints and cartilage, muscles, tendons and ligaments. It is not necessary to have a detailed knowledge of this system to appreciate its importance. More detail is provided in the section on exercise.

The Digestive System

This exists so that those supplies may be transformed into a form that the cells can assimilate. Digestion starts in the mouth with *chewing*, which crushes up the food and mixes it with *saliva*, and an enzyme called *ptyalin* then begins breaking down starch. Digestion continues in the *stomach* where *hydrochloric acid* helps dissolve the food, and where stomach movements mix the food, and where the breakdown of proteins, fats and starches commences through the action of the enzymes *pepsin*, *gastric lipase* and *gastric amylase*.

From there the food moves into the *small intestine*. Digestive enzymes are injected into the small intestine in response to hormones called *secretin* and *cholecystokinin*, which are produced by the lining of the small intestine whenever food is present. Cholecystokinin tells the *gall bladder* to pump *bile*¹ into the small intestine. Bile is like a detergent that dissolves the fats and oils to make them easier to digest. Secretin tells the *pancreas* to release its enzymes,² which then work to complete the breakdown of the major components of food; starches and sugars into glucose, which is the sugar the body uses; fats and oils into fatty acids, which are used as vitamins and as an energy source; and proteins into amino acids, which are the building blocks of protein, and also the building blocks of the body's tissues and other things such as antibodies, haemoglobin, enzymes and hormones etc.

Once this is completed, they are ready for absorption through the small intestine into the body. The digested protein, sugar and starch components go into the blood stream and then to the liver via the *portal vein*, whilst the digested fat components enter the lymphatic system before joining into the main circulation in the neck area.

It is also in the small intestine that the absorption of all of the other things called *accessory food factors* such as vitamins, minerals, trace elements and

other things (to be discussed later) occurs. The remainder, which consists of waste and water, then proceeds to the large intestine where most of the water is reabsorbed. This excess water is there because it has been used to carry the digestive enzymes for the digestive processes into the small intestine, and because a watery environment aids the chemical processes of digestion.

Cardio-Respiratory-Circulatory System

The heart is the pump that pushes the supplies of both nutrients (provided by the digestive system) and oxygen (collected by the lungs) through to the various parts of the body. The circulation is the complex system of highways that ensures all cells receive their fair share, and the blood is the medium of transport through the highway system. Nutrients are either dissolved in, or are in colloidal solution in the plasma (the pale yellow liquid component of the blood), or as is the case with oxygen, transported along the highway system by cells, in this case the red blood cells. This highway system is also used to transport waste products to the various disposal units of the body, which are comprised of the *detoxification* and *excretory* systems of the body.

Lymphatic Circulation

At the extreme ends of the circulatory system, where the blood vessels become microscopically small, where the nutrients are actually delivered to the cells, some fluid is lost from the circulation. This fluid is actually deliberately released to saturate the local environment with the nutrients transported by the blood. But this fluid must be collected, or we would bloat up (and this can be seen in certain health problems), and this is done by the *lymphatic circulation*, which is a series of tubes, in a way similar to the system of veins (which return the blood to the heart).

Just like the system of veins that is called the *venous system*, there is no pump action from the heart to return this fluid. It relies on a series of one-way valves in the tubes that only allow fluid flow back towards the heart, and the movement of the fluid is brought about by the contraction of the muscles of the skeleton that push on the tubes as we walk and carry out other movements using our muscles. This is assisted by the pressure from the “pulse wave” which travels along the nearby arteries as the heart pumps, and in the case of return from the lower part of the body the movement of the diaphragm further assists it as we breathe.

Like the venous system, the lymphatic system also transports waste products for processing. Further, most of the fats that we eat and most of the cholesterol we consume enters into the lymphatic system rather than straight into the circulation.

At intervals along the lymphatic vessels are *lymph glands*³ that are like outposts for the military. They are rich in white blood cells that are there specifically to destroy bacteria, abnormal cells and foreign materials such as large protein molecules that have been imperfectly digested, thereby providing protection for the body before this material even enters the bloodstream.

The fluid collected by the lymphatic circulation is returned to the blood stream at a couple of different points through lymphatic vessels which are joined to veins in the neck area of the body, just before the returning blood enters the right side of the heart. From the right side of the heart, blood is pumped to the lungs so that the red blood cells can dispose of the carbon dioxide waste and collect more oxygen. This oxygen rich blood then returns to the left side of the heart, which pumps it to the rest of the body.

The Detoxification System

Following absorption, many food components are transported to the liver, where those that are dangerous are “detoxified” (rendered less poisonous) by the liver cells. This process of detoxification is one of the chief functions of the liver, and it not only does it during digestion. It is the liver that detoxifies many natural but dangerous waste products from human metabolism, and it is the liver that detoxifies poisonous substances (both natural and man made) that find their way into the body. Pesticide residues, preservatives, ingested hormones, antibiotics,⁴ artificial colourings and both prescription and illegal drugs are all artificial toxins the liver must render harmless. Waste from excessive protein consumption, undigested food particles which enter the system through a “leaky” gut, natural plant toxins and the body’s own naturally produced hormones are key biochemicals which arise just from the process of living, and they are all rendered harmless by the liver. In its detoxification role, the liver is basically preparing the waste/toxins for removal from the body through the kidneys by changing them from *fat soluble* toxins into *water soluble* toxins.

There are two phases in liver detoxification, not surprisingly called Phase 1 and Phase 2! Phase 1 is usually quite efficient. When there is a liver problem, it is usually with phase 2 – which if slow, leads to a build up of toxins in the system, made worse by the fact that the intermediate chemicals produced by phase 1 are often more toxic than the original chemicals themselves. So with Phase 1 happily working and Phase 2 stalled, we have recipe for toxic disaster!

There are 4 main Phase 2 pathways; glutathionation, sulphation, glucuronidation and glycination, and each of them requires specific nutrient profiles for their efficient operation. They also tend to be a little specific in the sorts of toxic biochemicals they handle. See the table below.

Phase 2 Pathway Specific Job

- Glutathionation - Major pathway for natural metabolic toxins and wastes.
- Sulphation - Major pathway for steroid hormones, drugs, xenobiotics (man made substances that mimic natural bioactive substances), and phenolic compounds.
- Glucuronidation - Mainly hormones.
- Glycination - Major pathway for salicylates. Salicylate sensitivity may be no more than a weakness in this Phase 2 pathway.

See further comments on the importance of detoxification by the liver under the later heading “**Congested Liver Syndrome**”.

The Excretory System

The kidneys are the main excretory organs, although as said before the liver does most of the preparatory work. Kidney tissue consists of millions of *nephrons*, each of which is really just a sieve (glomerulus) with a long tube on the other side. This sieve lets anything small enough get through, and anything too big is retained in the blood. Then the job of the tube is to re-absorb the lost fluid, plus anything that was small enough to get through that the body really needs to hang onto. Kidney tissue lets all of the other stuff, which is the waste products, continue on where it is stored in the bladder until we need to spend a penny.

As an example of the sort of thing the kidneys do, as a general rule they let potassium go, but hang onto sodium. In fact it could be said that the kidneys have been designed to retain sodium and let potassium go, because the amounts of sodium consumed on a natural diet are low, whereas the kidneys have no capacity to re-absorb potassium, which is not a problem if we are eating a natural diet which will necessarily be very rich in potassium.

However for people living on a typical western diet that has far too much sodium and far too little potassium, the amount of resorption of sodium is lower than it would be on a more natural high potassium low sodium diet. The fact is that many health problems result from the fact that we have reversed the natural balance of intake due to the way we eat today.

Lungs are also waste removal organs. They get rid of the carbon dioxide which is the gas produced when the cells use oxygen as part of their metabolic process.

When the kidney-liver system isn't working properly, the body will use secondary systems to eliminate wastes, for example skin, hair and fingernails and toenails. That is why sick people have funny coloured skin, and why vibrantly healthy people have lovely skin and hair. Frank disease is only detected when something terrible goes wrong, but poor health can be demonstrated by merely assessing the quality of these things, much like assessing the health of a dog by examining the richness of its coat.

The Nervous System

This is the command centre that tells all of the other cells what to do. Release of hormones, digestion, excretion, control of muscles etc are all ultimately under the command of this system.

The Defence System

This is designed to take care of invading foreigners. It consists of the digestive system, the liver (after digestion), the lymphatic system and the immune system.

To understand the defences of the body, we need to realise that the greatest danger to the body is actually *foreign proteins*. Most of the body's communication between cells is via protein molecules. Receptors on cells that receive the communication are proteins, and these respond to "signals"

sent by other cells that are also proteins. For example, cells that are side by side send each other little protein signals that say, “Hi! I’m still here, don’t reproduce yet, you don’t need to!” But when one of the cells dies the one next to it knows the signal has stopped, and that stimulates the remaining cell to divide so that the dead cell is replaced.

If foreign proteins get into the body in large enough numbers, the body cannot function properly because its communication system is ruined. The body needs a system to carry away the faulty (foreign) messenger proteins. So from one perspective, the defence system is basically there to protect the communications system.

Therefore the first line of defence is actually the *digestive system*. The greatest proportion of our digestive enzymes are protein digestive enzymes, because proteins constitute the greatest threat to the integrity of the body.

The second line of defence is the *lymphatic system*, which acts as a filter, and houses many white blood cells. Two thirds of our lymphatic tissue is associated with the digestive tract, and this is an indicator that defence starts right at the place where foreign proteins are most likely to sneak through. Even in the best digestive system imaginable, about 2% of proteins will enter the body either undigested or only partially digested. The “Gut Associated Lymph Tissue” (called “GALT”) then comes into play.

The third line of defence is the liver, which has large numbers of white cells called *Kupffer cells*, which are really only liver associated *macrophages* (see below). Proteins which enter the body through the digestive system, whether properly digested or not, go straight to the liver where the Kupffer cells handle any troublemakers.

Overall white blood cells, which are crucial to the body’s defences, are divided into a number of different types much like an army. Some are the commanding generals (*T-Lymphocytes*), and some produce bombs to throw at the enemy. The bombs are called *antibodies*, produced by *B-Lymphocytes*, which are assisted in doing this by specialised T-lymphocytes called “*helper cells*”.⁵ The bomb throwers are vital for the fight against bacterial infections. It is the lymphocytes that are actually regarded as the *immune system*.

Other white cells are the front line shock troops (foot soldiers), and these basically “eat” the enemy⁶ (*neutrophils and macrophages*). They are the cells mainly responsible for the second and third line of defence discussed above. Some white cells engage in chemical warfare, creating an environment hostile to the enemy by releasing histamine and creating inflammation (*basophils & mast cells*). Once their job is done, another class of white cells called *eosinophils* move in to clean up the debris, basically by *phagocytosis*. That is, they eat it.

Some white cells specifically kill off infected cells and cancer cells. They are specialised T-Lymphocytes called “*natural killer cells*”. These cells are like special agents acting on their own initiative to hunt out and destroy dangerous cells. Then there are some *macrophages* that are on constant patrol searching for the enemy, and which may also act as messengers to the generals (that is the T-Lymphocytes). They do this by ingesting the enemy and taking it to the T-Lymphocytes for analysis. These macrophages clearly

have a roving role; they are on hunt, capture and destroy missions. But others remain in one place attached to certain tissues, especially the liver (see *Kupffer cells* above), the alveoli⁷ of the lungs, spleen and bone marrow, and are like guards on duty who will act if they detect the enemy. In this role they are often referred to as being part of the *reticulo-endothelial system*.

It should be noted that the *lymphocytes*, which is that group of white cells that are in fact the *very small* section of white blood cells known as the *immune system*, only come into play as a last resort, **when the other defences have been overwhelmed**.

The Reproductive System

This exists to ensure that the human species continues when the current bag of cells finally wears out!

The Chemical Processing System

The liver acts as the main chemical processing plant. In addition to the liver's function of detoxification, it also manufactures many substrates that other cells and organs use to build other things, but which they are unable to produce for themselves. The liver is the body's key factory. It produces 2000mg of cholesterol daily (from acetic acid), which is much more than even a high cholesterol diet puts into us (800mg per day),⁸ and it does this because from this cholesterol other organs manufacture many hormones. For example all of the sex hormones and cortisones are made by building on or slightly altering the basic cholesterol molecule. It should be clear however that we need *no* cholesterol from the diet at all.

The Hormone-Messenger System

There are *many* hormones that are used to regulate body function and metabolism. Here is a partial list of the organs that produce the hormones, the hormone, and the function of that hormone.

1. *Hypothalamus* - This is a part of the brain, and it produces a whole range of *messenger hormones* that tell other hormone producing organs to release their product into the blood stream. This is the command centre.
2. *Liver* - Produces *angiotensinogen* that is sent to the kidney, converted by *renin* (manufactured by kidney) into *angiotensin I* (elevates blood pressure), and this is sent to lungs that convert it into *angiotensin II* (which again elevates blood pressure).
3. *Testes/ovaries* - produce *testosterone* and *androsterone* (testes), *oestrogen*, and *progesterone* (ovaries). These are also produced in smaller quantities by the adrenal glands (these sit right next to the kidneys). They determine maleness and femaleness.
4. *Thyroid* - produces *thyroxin*, controls metabolic rate, which is the rate at which you burn Calories to stay alive. It also produces a hormone called *calcitonin* (also called *thyrocalcitonin*) if blood calcium levels are too high. It is the job of calcitonin to lower blood calcium and as such its action is the

opposite to that of *parathyroid hormone* (also called *parathormone*). See *Parathyroid* below. Calcitonin is involved in the laying down of calcium in bones.

5. *Parathyroid* - The parathyroid gland produces *parathyroid hormone* (also called *parathormone*). This hormone has the opposite effect to calcitonin. It removes calcium from bones.

6. *Pineal gland* - sits in the brain and its activity is regulated by sunlight. It produces *melatonin*, whose effects are related to hibernation in animals and in humans lowered activity and energy in winter. It has a range of other effects too complex to discuss here.

7. *Adrenal glands* - produce *cortisones* which are used to mobilise materials ready for repairs after an injury, also *adrenalins* that prepare us for fight and flight, and *aldosterone*, which controls fluid retention and therefore fluid levels in the body.

8. *Kidneys* - *renin*, see liver above, and also *erythropoietin*, which stimulates the bone marrow to produce more red blood cells.

9. *Pancreas* - Produces *insulin*, which lowers blood sugar and controls blood fats, and mediates protein metabolism, so that it is implicated in muscle development and repair of all tissues. Also produces *glucagon*, which releases stored glucose (glycogen) back into the blood stream.

10. *Pituitary* - produces *growth hormone*, hormones which stimulate the sex organs to make their hormones, a hormone to tell the thyroid to manufacture more thyroxine, a hormone to raise blood pressure (*vasopressin*) and *oxytocin*, which is the hormone involved in contractions of the uterus during labour, and perhaps also in female orgasm. The pituitary gland produces many other hormones as well, but for the purposes of this book, which is to give you an overview, I think you get the point. This gland is the second in command to the hypothalamus.

11. *Thymus* - produces *thymic hormone* that stimulates the immune system.

12. *Stomach* - produces *gastrin*, which tells itself to make more acid.

13. *Small intestine* - produces *secretin*, which tells the pancreas to make more digestive enzymes, and also *cholecystokinin*, which tells the liver to make more bile.

There are also types of mini-hormones which are manufactured by all cells, and which are meant to have only a very local effect, rather than affecting the whole body. Some of these are things like *prostaglandins*, *leukotrienes* and *thromboxanes*, for each of which there are many different types, and they are basically involved in the regulation of inflammation, and the control of smooth muscle⁹ contraction.

Over and above all of that, the action of Vitamin A is actually more like a hormone than a vitamin. It is implicated in the hormone balance in women's cycles for example. It could be considered a hormone that we can take into the body from outside!

The above outline is by no means complete, but it can be seen that whilst the basic concept is easy, the human body is a marvellously intricate piece of designed machinery.

The Interdependence of the Systems

Obviously, all of the systems are interdependent. We cannot gather food without the musculo-skeletal system, nutrition won't reach the cells without the cardio-respiratory-circulatory system, and no matter how good these are, without detoxification and excretion, the cells of the body will die from the build up of pollutants. Without a superduper chemical factory (the liver) to provide needed chemicals, the rest of the cells could not keep functioning, and without an adequate system of defence, the weakest microbe would take over the body and destroy it. And then we need the control systems, namely the nervous system and the hormone-messenger system to coordinate everything. But the fact is that some systems are more crucial to health than others.

Key systems for health

We all know for example, that if the heart stops beating, we die. So is this the most crucial system for long term vibrant health? No it isn't, because if other systems are working well, provided there is no genetic defect in the heart, it will function perfectly for your whole life. If something goes wrong with the circulation, which causes the blood supply to be cut off, or a clot to form, serious health problems that may well be life threatening can result. Does this mean that the circulation is the most important system for long-term vibrant health? No, it isn't, because although it is important, the fact is that other things generally determine the health of the circulatory system. Get those right, and the circulatory system will not give any trouble. And whilst we would die without the lungs to gather the oxygen that our cells need, they are also less important than other systems. The fact is that **with one exception**, in the long run the most important systems are the *digestive system*, the *detoxification system*, and the *excretory system*.

The Digestive System

This can hardly be overestimated. Long life and good health are more likely to be achieved by a person blessed with a superb digestive system, than by someone blessed with superb cardio-respiratory and muscular systems but only a less than average digestive system. The cells of the body cannot thrive without adequate nutrition, which depends on proper functioning of the stomach, small intestine, large intestine, pancreas, liver and gall bladder. And the protection that the bowel provides to us is similarly crucial. For example, if the bowel does not selectively filter what goes into the blood stream well enough, because for example it has been irritated by certain long chain proteins which are difficult to digest such as gluten (wheat, rye, oats and barley) or casein (dairy products),¹⁰ the liver is then forced to work harder because it has to break down the larger incompletely digested food components which have entered the blood stream when they should not have done so. When the liver cannot keep up with the load, the

immune system then has to handle these things, and allergy is often the result.

Contrary to accepted medical dogma, undigested proteins and polypeptides (which are really partly digested proteins), as well as proteins and toxins from bacteria in the gut *do* breach the digestive barrier in sufficient quantities to be recognised by the immune system,¹¹ and there is considerable evidence that they affect endorphins (the body's natural morphines) and hormones, and have other toxic effects.¹² It would be expected to be particularly certain if known gut irritants such as casein and gluten as mentioned above are a *large* part of the diet.

And remembering what was said in the section titled “**The Defence System**”, then the white cells involved in “eating” these foreign proteins, the neutrophils and the macrophages, have to work overtime, and therefore it will be more likely that the body's communication system will be compromised. The higher the protein consumption, the harder the white cells have to work at handling that alone, without even considering their role in combating actual infective agents.

In my experience as a naturopath, people on high protein diets are more prone to both infection and non-specific metabolic disorders and auto-immune diseases of almost any sort.

In the case of infection, this is probably because the white cells cannot cope with infective agents as easily as they otherwise would do if they were not busy handling the protein problem. In the case of non-specific disorders of metabolism and auto-immune diseases, it may be because once the first lines of defence are breached, one of two things happen:

1. The communication system is now disrupted due to the delay in handling the foreign proteins.
2. The immune system reacts to the foreign proteins by producing antibodies to neutralise them. Sometimes these antibodies start to attack body tissues because they wrongly “recognise” them as the foreign protein they were designed to combat. Diabetes, Myasthenia Gravis, Thyroid disease, Ulcerative Colitis, Psoriasis, Systemic Lupus Erythematosus (SLE), Dermatomyositis and Pancreatitis, which are all chronic diseases of civilisation, have been associated with immune system antibody response to foreign proteins.¹³ Remember this when you read about the problems of high protein diets, and the problems with dairy foods and grain products in the section titled “**Problem Myths And Problem Foods**”.

It should be noted however, that if the body *needs* or *finds useful* some very large molecule, the bowel will selectively absorb it by a process called *active transport*. The old idea that everything is completely broken down in the digestive tract has been proven to be overly simplistic. For example, many plant enzymes such as *papain* from pawpaw (papaya), or *bromelain* from pineapple, are absorbed whole into the blood stream, without being broken down into their component amino acids (the building blocks of proteins, and all enzymes are proteins).

This is very useful to the body if these fruits are eaten raw, because then the enzymes continue to behave as enzymes in the blood stream, and they have anti-inflammatory properties.¹⁴ But it is useless if the plants are eaten cooked, because enzyme action is destroyed permanently if they are heated to temperatures above approximately 60° to 70° Celsius, and this protein chain then becomes nothing more than yet another large molecule that the liver must deal with to help protect our bodies. This gives a preliminary look at the importance of a diet rich in raw food. See later discussion.

The Detoxification and Excretory Systems

Just as putting the right stuff into the body, and having it processed by a top rate digestive system is crucial to health, equally important is the capacity to neutralise toxins (liver) and excrete them (kidneys) so that the internal environment remains unpolluted and pure. And of these two, the organ which suffers the greater abuse, and which is more likely to be struggling is the liver. Getting the liver right is *essential* to the achievement of superb health.

Congested Liver Syndrome

This is a naturopathic term which means that the liver is not functioning properly, even though that may not show up in the results of a normal liver function test as ordered by a medical practitioner. Doctors laugh at such a diagnosis. Far too often I have had doctors contradict me when I have informed patients of mine that their liver was not functioning as well as it could. They have done so out of ignorance, but given the extent of their training it is an inexcusable ignorance, as will become apparent.

Normally, the blood stream contains very low levels of particular enzymes that are peculiar to liver cells. They are there for one simple reason. In the normal course of life, liver cells die and are replaced by other liver cells, just as occurs for most body tissues. When these cells die, they release their enzymes into the blood stream, and it is this low level of enzymes that is being measured by a medical liver function test.

The blood levels of these enzymes do not rise *until such time as the liver is severely damaged, and masses of cells are dying off all at once*, such as will be the case in active hepatitis, or in cirrhosis of the liver, or as a result of long term consumption of some prescription drugs (and illegal drugs). At this point, a medical liver function will show these higher levels and the doctor will then pronounce that the liver is not functioning properly.

But the fact is that there must be *something* between a state in which *all* of the liver cells are in pristine condition, and just a few cells are dying off because they have reached the end of their natural life span - there must be *something* between that and the other extreme in which *many* liver cells are dying off because the liver is not coping with some microbial or chemical attack. It is this “in between” state of less than optimum health of the liver that naturopaths call a *congested liver*, and let me assure you that it **does** exist.

People with congested liver are among other things sluggish in the morning, take a long time to wake up, crave stimulants such as chocolate and coffee, suffer with food cravings, have sallow skin, may suffer with constipation or diarrhoea or alternate the two. Aside from these and other symptoms, there are signs in the iris and the sclera that a good iridologist will use to confirm the diagnosis.

These days a medical test has been developed called the “Comprehensive Detoxification Profile” in Britain, and a “Functional Liver Detoxification Profile” in Australia, which basically measures how the liver is going by injecting into the blood stream, very low levels of specific toxins. These poisons, namely caffeine, aspirin and paracetamol are each known to require one or more of the four main chemical detoxification pathways that the liver uses to do its job. The clearance rate of these toxins is determined by taking saliva (caffeine) and urine samples (aspirin and paracetamol) at specific times and over a specific period. What turns up in the samples shows how the liver has dealt with the toxins and this gives a much better indication of the state of the liver than a normal medical liver function test, and in addition it will show exactly which chemical processing systems of the liver are struggling. This test reveals problems *long before* a normal liver function test *ever* could, and lends weight to the old naturopathic idea of a “congested liver”.

But to be honest, such detailed knowledge is rarely required for diagnosis by a naturopathic practitioner, and the list of functional symptoms and iris signs of which naturopaths are aware provide enough evidence for a competent naturopathic practitioner to commence treatment. And the fact is that herbal and nutritional supplements have been fixing this problem for many years in the absence of any detailed scientific analysis.

As an example, one of my patients was diagnosed by myself as having fairly severe liver problems. In fact in her case, she had medically measurable permanent liver damage (according to a standard liver function test) due to long-term use of a prescription drug. I will not name the drug for fear of litigation, but permanent liver damage is listed as an expected outcome in MIMS (the medical drug handbook doctors and pharmacists use) when this drug is used long term.

So I placed her on a liver cleansing regime, including a change in diet and an herbal liver tonic. Her doctor checked her liver function after one month. He told her “no change”. I kept her on the protocol, because although my naturopathic analysis showed she had improved, her liver was still “congested”. After three further months of my treatment, the doctor once again conducted a standard liver function test. Her test result was not only completely normal, something which is impossible if the liver has been permanently damaged (according to the medical view), but the doctor admitted that the previous liver function test had also been completely normal, which only indicates the inadequacy of the test, since the patient still had liver problems. And it is clear that the doctor had lied about the test results because he simply did not believe the laboratory had done its job properly. The laboratory **had** done its job properly. What the doctor saw was not a miracle. It was a typical result for standard naturopathic treatment of congested liver syndrome!

Almost all chronic disease of the body results from nutritional deficiency due to poor food choice or poor digestive function (or both), and pollution of our internal environment is the result. The cells of the body do not function properly in this situation and almost anything can (and does) happen. This also places the liver under a load that it was never designed to cope with over a prolonged time frame, and “congested liver” follows as surely as night follows day. Radical change in diet in conjunction with liver detoxification procedures can overcome just about anything.

The liver is crucial to the treatment of most chronic and degenerative diseases, and also for the complete recovery from many diseases that leave people no longer medically sick, but “never quite right” again, with no zest for life, and just plain chronically tired. This sort of scenario is common following glandular fever (Epstein Barr virus), cytomegalovirus, and Ross River fever. All of these organisms leave the patient with a congested liver. Liver cleansing produces rapid improvement in the health of people who have been debilitated by these and other diseases, even if it is commenced *years* after the initial attack.¹⁵ In addition, slow recovery after major surgery is often due to the congestion of the liver by the anaesthetic. Further, chronic low level health will result due to liver congestion when patients are forced to stay on almost *any* prescription medicine for a prolonged period. This is true even without considering the directly toxic effects of the medicine on other cells.

And can you see that if the liver is “congested”, the role of the liver as a chemical manufacturing plant will be compromised? How can the liver perform its fundamental tasks properly if it is under load, attempting to handle serious problems? The balance of substrates produced for other cells and organs of the body will be thrown out of balance. Sometimes that will mean over production, sometimes underproduction. For example, if you have a congested liver, you will develop atherosclerosis, and you will eventually need by-pass surgery, regardless of how good everything looks!

Whichever way you try to look at it, the state of your liver is *absolutely crucial* to your health and it is a great pity that the point of all of this is totally missed by almost all medical practitioners. Even with the advent of the “Functional Liver Detoxification Profile”, most doctors are unaware of the significance of such things. It seems they prefer to continue suffering from “ostrich syndrome”.

The fact is however, that almost everyone in the western world has some degree of liver congestion due to faulty dietary balance and the pollution of the environment, and a good naturopathic practitioner will almost always treat the liver, whatever the presenting problem, because once the liver is congested, almost *any* health problem can develop, from cancer to auto-immune diseases, from allergies and asthma to menstrual problems. Exactly *what* happens is probably more dependent on genetic make up than anything else.

How you keep your internal environment clean and look after your liver will be discussed later, but this leads me to answer the question that has been begging. What is the exception; what is it that is more important than the digestive, detoxification and excretory systems? The answer to that is your *mind*. If you decide to feed yourself on foods which deplete your health, then

no amount of supplementation, no magic liver tonic, no miraculous lymphatic cleanser, no super digestive supplement, and no marvellously genetically gifted combination of a wonderful digestive system, a superb liver and a fabulous set of kidneys will save you from the dire consequences of your poor choice of food. See the later discussion on diet. This book merely provides information. What you do with it is your affair, but for it to do you any good, you need to decide to act upon it.

SECTION THREE:

NUTRITION PART A:

Components of Nutrition

Macro and Micro-Nutrients

Introduction

When we eventually get to the guidelines for attaining super-health, it will become apparent that you don't need a detailed knowledge of nutrition to achieve that objective.

Brief History of Discovery

Historically speaking, the study of nutrition in a scientific way is relatively new; only about 100 years old. It was first supposed that animal life forms only needed a few essential components of food to sustain life and growth, and that the rest was pure waste. But experiments conducted to test this hypothesis proved it to be false.

In one of the first experiments, animals were fed a diet of pure extracted protein, carbohydrate (sugars and starches) and oils. The animals did not thrive. They became sick and they died. That discovery was the beginning of the search for and the discovery of the micronutrient factors, which I call the *accessory food factors*. I call them the accessory food factors rather than essential micro-nutrients, because although some are essential to life, others can be left out of the diet, yet nevertheless if included they create a higher level of well being than if they are absent.

Over time, all of the currently known essential vitamins and minerals were discovered - Vitamins A, B, C, D, E, K, calcium, magnesium, potassium, sodium, phosphorous, chromium, selenium, zinc etc. Discovery of these has taken a long time, and initial discoveries have often been less clear than one would like. For example, Vitamin B was first thought to be one vitamin. It was only later that it was realised that Vitamin B is a whole complex of vitamins - B1 (thiamine), B2 (riboflavin), B3 (niacin and niacinamide), B5 (pantothenic acid and its derivatives), B6 (pyridoxine and pyridoxine hydrochloride), B9 (folic acid), B12 (cyanocobalamin), B13 (orotic acid), B15 (pangamic acid), B17 (nitrilosides, laetrile), choline, biotin, inositol, PABA (para-amino-benzoic acid) - and I'm sure the list will grow.

Further, for a long time many of the trace elements were still thought to play no part whatsoever in human health. In fact it was believed that they were purely toxic contaminants of food that the body had to eliminate to prevent build up and damage to health. Selenium, zinc, copper, manganese, chromium and others have all fitted this category. In most cases, it was not until the second half of the 20th century that it was realised that the body needed these nutrients. For example a lack of iodine leads to goitre, and a lack of selenium leads to "Keshan Disease" (a kind of *cardiomyopathy* - i.e. a problem with the *heart muscle*).

It is when we have too much of these nutrients that they become toxic. But the same is true for *all* nutrients, *including water*. If you keep on drinking water and refuse to stop, you will kill yourself in the end. The truth is really that we need some nutrients in large quantities, some in small quantities, and some in miniscule amounts. Perhaps one way to think of it is the naturopathic saying that nutritionally speaking at least...

“There is no such thing as a toxic *substance*; there is only such a thing as a toxic *dose*”.

Some things become toxic at very low doses, other things only become toxic at extremely high doses.

In the last twenty years or so, more trace elements thought to be toxic only, have been shown to *participate* in chemical reactions in the body, although they have not been proven to be essential yet. It may eventually turn out that they are only needed in doses much lower than is usual for trace elements. Examples of this are cadmium, mercury and lead.

WARNING - Stay away from these things. You have no way of regulating your dose so that you avoid being poisoned!

And the search goes on. It has been quite a while now since anything new has been discovered to be essential, which doesn't mean of course that we have come to the end of such things. However the list of accessory nutrients that *improve* health, as against being essential to health and life, steadily grows as more and more is learned about the actions within the human body of various bio-chemicals found particularly in plants. These factors include the enzymes, bitter substances, anthocyanins, chlorophyll, plant hormones etc (etc referring *both* to things I haven't listed and to things as yet undiscovered by science).

Deciding What is Essential

The dividing line between essential and non-essential nutrients may not be as clear-cut as it has been supposed. Those nutrients that have been seen to be desirable but not essential may only be non-essential from one rather short sighted and biased perspective. The way the so-called “necessity” of nutrients for life is defined leaves a great deal to be desired. The basic supposition is that they are only essential if removing them from the diet causes some frank and obvious acute problem. For a start that means that the symptoms are rapid in onset. An example would be scurvy, which most people know is due to a deficiency of vitamin C. This approach allows for easy research, because experiments don't have to be carried out for any more than a few months. Even a few weeks are enough in many cases.

But this doesn't tell the whole story. What if a nutrient is required to prevent a disease process which is very slow in onset, and which takes many years to develop? There is evidence that food factors such as the *anthocyanins* are involved in preventing cholesterol from depositing in the arteries. Long term, a disease called *atherosclerosis* develops because cholesterol is deposited in the arteries. It may take years to develop, but it will kill you just as dead as scurvy does because it will ultimately lead to heart attack or stroke. Yet I have *never* heard anyone from the scientific camp put forward the hypothesis that anthocyanins are a food factor that is essential to life in order to prevent death from heart attack or stroke. Whilst in the short term, it is true that they are not essential, in the long term, it should be clear that they *are* essential.

It is my belief that if we studied long enough, we would ultimately prove that *everything* that we *know* about is essential in some way or another, even if

only at the level of nanograms (millionths of a milligram) or picograms (millionths of a microgram). Take note though, that I believe that food is so complex that there will always be something that we *don't* know about.

This is why it is so dangerous to refine food, on the basis that the things taken out are not essential. If they are there, they are essential.

Short Sighted Agriculture

And the situation is even worse when we consider the way agricultural science is approached. Generally it is studied from the point of view of what are the *minimum* requirements for *plants* to grow and produce a harvest. It is profit driven, so it will always be a lowest common denominator or minimalist approach. The problem is that there are probably a myriad of things that may be contained within the plants which may not be essential to the *plant*, but which are very necessary to the health and well being of *people*, even if they are not actually essential to *life*. Further, even when these substances are still present in the plants that we eat, the levels of them may be much lower than the ideal. And it is clear that many of these substances may still be in that rather large bag which we may call the “undiscovered unknowns”.

Making up the Shortfall

One answer to this problem is to eat organically when we can afford it, and another is to concentrate the nutrients by juicing plant foods, which allows us to take in larger quantities of these nutrients than we ever could by eating the whole food. But even there we may fall short, because since the earth was created many nutrients have been washed out of the soil. That is why the sea is so salty. Even organically grown foods may therefore be deficient or unbalanced in their nutrient content. So one useful tip (especially to make sure you obtain more ideal levels of minerals and trace elements) is to grow your own vegetables and fruits at home, fertilised with seaweed based fertilisers. Yet another is to take supplements that are derived from the ocean. One normal sized kelp tablet contains as much iodine as 70 lbs of fresh vegetables, and is rich in many trace elements. Further, the mineral balance in seawater itself is very close to that found in human blood, and it contains all of the trace elements needed by humans. And when one compares the health of sea creatures with land animals, the differences are startling. For example, *no* sea creature has ever been shown to have atherosclerosis (the fatty deposits in the arteries which lead to “by pass” surgery), yet *all* land animals develop it to some degree. Cancer is rare in ocean fish, but quite common in fresh water fish. And life spans of species with similar physiologies to land animals are very long by comparison.

It is the superiority of the mineral rich food chain of the ocean that is largely responsible. So if you are to use it as a mineral tonic, how much seawater do you need? Five millilitres daily, which is one teaspoon. That is all, although I personally recommend one to two tablespoons daily, which is 20 to 40 millilitres, because Australian soils are world renowned for their mineral depletion. Paavo Airola recommended two to three tablespoons daily to reverse the premature greying of hair.¹⁶ But significant improvements in the

well-being of people with a wide variety of health problems have been documented at the five millilitre dose. The long term benefits of such supplements should not be overlooked. If you need more convincing about the value of sea water and ocean products for health, read Dr Maynard Murray, *Sea Energy Agriculture* (Winston-Salem: Valentine Books, 1976) and Charles B Ahlson, *Health from the Sea and Soil* (New York: Exposition Press, 1962).

However, having poked holes in the accepted dogma, for the following discussion, I will acquiesce to it, and discuss the accessory food factors under three main headings – “known essentials”, “known toxins”, and “other factors”.

Known Essentials

Considering the uncountable number of vitamins, minerals and other biochemicals found in foods that could enter into human nutrition, relatively few have been *proven* to be essential. That fact alone may lead you to the conclusion that my previous comments on how such decisions are made carry weight. I believe that the “proven” group is ridiculously small and that it will grow over time. But the following gives an overview of current scientific thinking.

Water

This is the most overlooked nutrient. You can survive weeks and sometimes months without food, but a couple of days without water will see the end of you! Good clean water is essential to vibrant health. So few people have access to really good water that I generally recommend a good quality filter. Drink enough that your urine is pale in colour. This takes the load off the kidneys and ensures toxins are not building up in your system. A good rule of thumb is to drink as much as is required to quench your thirst and then one glass more.

Proteins

These are composed of chains of building blocks called *amino acids*. Chemically speaking, for each amino acid there are two possible forms; “L” form and “D” form. They are the mirror images of each other. Most life forms including human beings use the “L” forms.¹⁷ There are eight “L” form amino acids that are essential because the body cannot manufacture them for itself, and these must be obtained from food. These essential amino acids are *isoleucine*, *leucine*, *lysine*, *methionine*, *phenylalanine*, *threonine*, *tryptophan* and *valine*. There are another 14 amino acids which the liver can manufacture using the eight essential amino acids as starting material, making 22 amino acids in total, although one of them called *histidine* is essential for growing infants, and the capacity to do without obtaining it from food only develops later. Amino acids are used by the body to make its own proteins, which are used in structural components of the body such as muscles, hair, nails, skin, and the protein matrix of bone into which the calcium is deposited, and for blood proteins such as *haemoglobin* which is the component in red blood cells which carries the oxygen.

Aside from this, amino acids are involved in many biochemical processes. They are not merely structural.¹⁸ Proteins are involved in cellular signalling processes. For example, hormones are either protein or steroid based. Clearly protein based hormones need protein as a substrate for the body to construct them. Further to the role of cell to cell signalling, as for both sugars (see the heading “**Carbohydrates**” below) and fats (also called oils or lipids, and see the heading “**Essential Fatty Acids**” below), proteins may be joined to either a simple sugar to make a complex molecule called a *glycoprotein* (“glyco” means sweet), or to a fatty acid to make a complex molecule called a *lipoprotein*. These complexes are located on the surface of cell membranes, are called “receptors” or “receptor sites” (because they “receive” the hormone or other signalling molecule) and are involved in the ability of cells to recognise each other and to recognise hormones and other cell signals.

Proteins can be used for energy if either there are not enough sugars and fats in the system or if the proteins are supplied in excess of bodily needs. However proteins should only ever be regarded as an emergency energy supply. Firstly, in the process of transforming them into energy the “amino” part of the molecule¹⁹ is chopped off producing amine chemicals that are toxic to the body. Secondly, if the body is energy starved muscle tissue is usual source of the amino acids that are then converted to energy. In other words, muscle is broken down to ensure survival.

Digestion is supposed to break proteins down into the amino acid building blocks from which they are constructed, but as will be seen in later discussion this breakdown process is always imperfectly completed, even in very healthy people.

The richest and best sources for humans are animal proteins; meat, fish, poultry and eggs.

Essential Fatty Acids

Fatty acids are the building blocks of fats and oils, also called lipids. Digestion breaks down fats and oils into these components. The essential fatty acids are *alpha-linolenic acid* (an omega 3 oil, often simply called *linolenic acid*) and *linoleic acid* (an omega 6 oil), and they are essential to growth, health of skin, hair and nails, vision, lining of the digestive tract, heart health, regulation of the inflammatory process through the mini-hormones called *prostaglandins*, *thromboxanes* and *leukotrienes*. These are collectively known as *eicosanoids*.

Derivatives of these essential fatty acids are also used in the construction of every cell membrane of the body, and the ability of the membrane to properly determine what is allowed into and out of the cell, and also its ability to receive and act upon cellular signals meant for it (for example, instructions from hormones) is dependent upon having the membrane composed of the right fatty acids. In addition to having a role within the membrane itself, like proteins, fatty acid complexes are located on the surface of cells and are involved in cell to cell signalling. Typical complexes include joining with either a protein to make a complex molecule called a *lipoprotein*, or with a simple sugar to form a complex molecule called *glycolipid*. A failure to consume enough of the correct fatty acids can therefore contribute to

problems related to hormone signalling at two levels. Firstly, the wrong fatty acids in the membrane interfere with the capacity of the cell receptors to recognise the hormone or other cellular signalling molecule because the membrane may be too inflexible to allow the hormone to attach. Secondly a lack of the appropriate fatty acids may preclude the manufacture of viable receptors in the first place.

Good examples are insulin resistance, syndrome X and type 2 diabetes. In these three disorders, a failure to act upon signals given by insulin is a core feature. But many other health problems also result from either faulty cell membrane construction or receptor availability. Every physiological process in the body relies on signalling processes. A fault in this basic process could be involved in anything from faulty bone lay-down leading to osteoporosis, to inability of the immune system generals (T-Lymphocytes – see later) to issue important commands to other sections of the immune system to carry out attacks on invading organisms, or to an inability of immune cells to recognise genetically altered cells (cancer cells) and destroy them before they become a problem. Essential fatty acids are an overlooked key to super health.

Fats and oils are also a key source of energy for the body, particularly the muscles. The richest sources are nuts and seeds, but once again the levels are so high they will do more harm than good. Refer to the more thorough discussion on fats under the heading “**Good Oils, Bad Oils?**” later in the book.

Carbohydrates

These are found in fruits as simple sugars, and in fruits and vegetables and grains and legumes as starches, which are simply long chains of sugars joined together. This is the main energy source of the body; in fact the brain will not use anything except glucose unless the body has gone into starvation mode.

Essential Sugars

However some carbohydrates, specifically simple sugars, are more than merely an energy source. Simple sugars are vitally involved in biochemical and physiological mechanisms. Over 200 different simple sugars have been identified in plants, and of those eight have so far been shown to be involved in cellular process other than energy supply. These eight sugars are; glucose, galactose, mannose, fucose, xylose, N-acetylglucosamine, N-acetylgalactosamine and N-acetylneuraminic acid (also known as sialic acid)²⁰. And just like fatty acids and proteins, the non-energy producing role in which these sugars find themselves involved is in the arena of cellular signalling as part of *glycoprotein* and *glycolipid* complexes.

Further these essential sugars attach to receptor sites within the body to which infective bacteria love attach. Attachment to these sites is how the bacteria concerned manages to gain a foothold in the first place. A good example of this is the protective effect against urinary tract infections provided by one of the sugars in cranberries. That is precisely how cranberries work. They don't attack the invading organism and kill it. A simple sugar in cranberries denies the offending bacteria a foothold. There

are other places in the body where this protective effect has been demonstrated; for example in reducing the incidence of middle-ear infection.

These simple sugars have also been shown to be of assistance in controlling or modifying the disease processes of inflammatory bowel diseases, osteoarthritis and tumour growth²¹.

Having an ample supply of these essential simple sugars is important for health. The best source of them is fruit and vegetables. See the heading “**Fibre**” immediately following.

Fibre

Whether or not this is essential for life is debatable, but low levels of dietary fibre are associated with so many health disorders that I have placed it in with the known essentials. Obesity, gallstones, constipation, diverticulosis, irritable bowel syndrome, cancer of the large bowel and probably other cancers, coronary heart disease and diabetes have all been associated with low fibre diets. So a lot of people have rushed out to buy fibre supplements without altering their diet. BAD MOVE! Recent research indicates that fibre obtained from supplements may well *increase* the risk of both cancer of the large bowel and the development of the bowel polyps that often precede it.²² Stick to the fibre in raw fruits and raw vegetables. It is of the *type* the human body needs, and it is in *balance and proportion* with everything else!

An explanation may be required here. Firstly, fruit and vegetable fibres are soluble, and by absorbing water they bulk up the stool and assist with proper bowel elimination. Some other sorts of fibre, for example that which is found in some grains (e.g. wheat), are insoluble. Insoluble fibre does NOT absorb water, and the effect on the bowel is akin to scraping it with a pot scourer. You could obtain a similar effect by consuming saw dust or wood shavings. Further these fruit and vegetable fibres are composed of long chain sugars called oligosaccharides. Why is that important? It is important because oligosaccharides are broken down by *commensal bacteria* in your digestive system to be used as an energy source, increasing the population of these organisms²³. And what are “commensal bacteria”? They are the good and friendly bugs in your digestive tract you are encouraged to consume via either tablets or fermented milk products through a multitude of media campaigns. The fact is consuming these products won’t do you any long term good unless you provide these lovely bacteria with food for survival! And why are these bacteria important? They help with digestion, and they modulate the activity of the immune system, thereby reducing the chance of allergy and auto-immune disease. Who doesn’t want to help these little critters out? Eat your fruit and vegetables.

Finally, as stated above the breakdown of these oligosaccharides by commensal bacteria provides a ready source of essential simple sugars so necessary for a wide variety of physiological functions. Eat your fruit and vegetables.

Vitamins

Vitamin A

This is found only in animal products such as liver, dairy, kidney and eggs. But the body can make vitamin A from beta-carotene (carrots et al), which is actually half of a vitamin A molecule. The liver basically sticks two of them together to make the vitamin A.

This vitamin is involved in good vision (especially night vision), growth and development, regulation of the female hormone system and the immune system, and healthy skin. The earliest deficiency signs are night blindness, dry eyes, and follicular hyperkeratosis. This latter symptom looks like permanent goose bumps at the base of hair follicles, and the easiest place to see it is on the back of the upper arm.

The key dietary sources of vitamin A are as listed above. The key dietary sources of beta-carotene are dark leafy green vegetables (the darker the colour, the richer the supply) such as spinach, and orange and yellow fruits and vegetables such as carrots, apricots, oranges, red grapefruit, and pawpaw (papaya).

Vitamin B

There are so many components to the B vitamin group that I will not cover them in detail here. They include B1 (thiamine), B2 (riboflavin), B3 (niacin [which is nicotinic acid] and niacinamide), B5 (pantothenic acid), B6 (pyridoxine), B9 (folic acid), B12 (cyanocobalamin), B13 (orotic acid), B15 (pangamic acid), B17 (nitriloside, laetrile), biotin, PABA (para-amino-benzoic acid), choline, and inositol. You may wish to do some further reading. Vitamin B is involved in all growth, the energy production of each cell, and the proper functioning of the nervous system and the liver. In addition some of the B vitamins are involved in eyesight and the health of the skin, as is Vitamin A. Vitamin B17 is thought by some to protect against cancer and even help treat it when it is established. B17 is richly available in apricot, plum, nectarine and peach kernels, in apple and pear seeds and in sprouted seeds.

The best sources of vitamin B are grain and legumes products, dairy foods, liver and brewer's yeast, leafy green vegetables, other fruits and vegetables etc. In other words, they are found everywhere, but not all of them are in any one food. In addition, under certain specific dietary conditions, vitamin B is produced by bacteria in the bowel and absorbed into the body. This will happen if a person is on a strict raw food diet low in protein. Stomach acid levels drop sufficiently that bacteria which normally only inhabit the lower part of the bowel move up into the small intestine, enabling the B vitamins they produce to be absorbed into the system. This is why the predicted B vitamin deficiencies of vegetarians don't in fact happen.

The main deficiency symptoms (aside from terrible diseases such as beriberi, pellagra and cirrhosis of the liver) will be sore tongue, cracks in the corners of the mouth, greasy facial skin, lack of energy and nervous disorders varying from depression to irritability. If severe enough, paranoia is one result.

Useful extra information - B2 taken by mouth in high doses has been used as an insect repellent. B6 is involved in controlling the female hormones so is helpful in PMT and morning sickness. Choline and inositol are involved in

controlling blood fats. The richest natural supply of these is lecithin. Buy the granules because it is cheaper. Don't worry about the colour, it varies. But fresh lecithin will run like raw sugar. If it is sticky, it is no good.

Vitamin C

This is necessary for the connective tissue of the body (this is the fibrous stuff which provides structure to the body, a bit like reinforced concrete). It is also needed for the production of cortisone by the adrenal glands and the normal metabolism of cholesterol. The main sources are most fruits and vegetables, especially leafy greens.

The main deficiency symptoms include easy bruising, bleeding gums, and swollen gums. But before these appear, nervous system problems similar to Vitamin B deficiency, and including hypochondriasis (thinks they are sick when they are not) become apparent. Frequent infection is another clear indicator.

Vitamin D

This is produced in the skin after exposure to sunlight. In most Australian climates your body can make enough for your needs if you expose your face to the sun for about ten minutes each day (assuming you are white skinned). Vitamin D is used in calcium metabolism. You cannot put calcium into your bones without it.

You will never see a deficiency in Australia unless someone remains locked up in a dark room for ages. Don't bother taking a supplement. Deficiency symptoms revolve around failure to properly lay down bone.

Vitamin E

Vitamin E is a complex of substances like Vitamin B. There are a number of *tocopherols* (alpha, beta, gamma delta, epsilon...), the most commonly prescribed one being alpha tocopherol. All of the tocopherols are fat-soluble. They can be made water-soluble by chemical processing, and these are easier to absorb if you are taking supplements, and the body can convert them back.

Vitamin E is an anti-oxidant, so it is mainly involved in protecting all of your cells from oxidative damage. There are no reliable *early* deficiency symptoms although very severe deficiency leads to cardiomyopathy (similar to but not identical with that found in selenium deficiency - see above). Some believe it is helpful in artery disease, boosting the immune system, lowering cholesterol and reducing the risk of stroke by balancing blood-clotting mechanisms.

Sources include nuts and seeds, soybeans, dairy foods, eggs and lettuce. Safe doses are 300 to 600 International Units (IU) per day, but if you have high blood pressure, start at 100IU per day, and then each fortnight increase the dose by 100IU.

Vitamin K

This is a complex of vitamins like Vitamins B and E. They are all involved in production of blood clotting factors, particularly *prothrombin*. The main sources are dark leafy green vegetables such as brussels sprouts, broccoli and spinach and turnips, green tea and cereals. Some Vitamin K is produced in the gut, but not enough to avoid the need for dietary sources. Bleeding disorders are the chief symptom, and since newborn babies are deficient in Vitamin K, injections are routinely given to prevent problems. See the comment on vitamin K under “**Osteoporosis**”.

Minerals

Calcium

99% of calcium is required for the bones and teeth. The remaining 1% is kept in solution in the body, and helps in various chemical reactions of the body (biochemical reactions). Allergies, increased tendency to absorb toxic metals such as lead and aluminium, depression, anxiety, panic attacks, nervous tics and twitches, insomnia, hyperactivity, and joint pains and arthritis can all be related to calcium deficiency or to faulty calcium metabolism. *Long-term mild calcium deficiency causes cataracts*. The importance of calcium to human health cannot be overestimated.

Excess calcium can lead to kidney stones, poor muscle tone, constipation, abdominal pains, loss of appetite, nausea and vomiting, and deposits of calcium outside the bones.

The best sources are debatable. Doctors will tell you that dairy, legumes, nuts, seeds, peas, beans and lentils are the best sources. But the amount you need depends on the rest of what you are eating. I believe that to rely on these things for calcium causes a dietary imbalance in the first place which increases your need for calcium. Other sources that I believe are better include broccoli and other green leafy vegetables.

Magnesium

70% is found in the bones, most of the remainder is inside other cells and it is the second most abundant mineral inside the cell after potassium. It is closely linked with calcium and phosphorus metabolism. We need 400 to 800mg daily but high protein diets, high calcium diets, high phosphorus diets and high vitamin D intakes increase the need.

Diets high in refined food are deficient in magnesium, and Australian soils are magnesium deficient almost without exception. Everyone not juicing needs a magnesium supplement. Magnesium is involved in maintaining the correct distribution of sodium, potassium and calcium across cell membranes. Magnesium deficiency can therefore look like deficiencies of these other minerals. Magnesium also controls hormones that are involved in proper bone construction so it is essential for prevention and treatment of osteoporosis.

The main deficiency symptoms are cramps, especially of the hands and feet, but others constitute a long list; loss of appetite, nausea, apathy, weakness and tiredness, numbness and tingling, confusion and disorientation, learning disability and memory impairment, vertigo, convulsions, epilepsy,

muscles cramps and tremors, eyes flick uncontrollably, muscular incoordination, insomnia, hyperactivity, constipation, heart rhythm problems, susceptibility to the toxic effects of digoxin (used to treat heart failure), low blood sugar (hypoglycaemia), difficulty in swallowing, abnormal ECG, premenstrual symptoms.

Magnesium supplements are indicated in any of the following conditions. Osteoporosis, joint aches and pains including arthritis, any psychiatric illness, premenstrual tension, heart disease, history of blocked coronary arteries, high blood pressure, kidney stones, alcoholism, diabetes, epilepsy and convulsions, childhood hyperactivity.

The best natural sources are nuts, soy products, prawns, and *especially* leafy green vegetables, the darker the better, since magnesium is part of chlorophyll. More chlorophyll means more magnesium. The supplemental dose is 500mg of chelated magnesium 2 to 4 times daily. If you take too much, you'll get diarrhoea.

Phosphorus

Phosphorus is the second most plentiful mineral in the body. Food sources include dairy, nuts, wholegrain cereals, poultry, eggs, meats, fish and legumes. Phosphorus is essential as a cofactor to the action of all B vitamins, and it is part of the key chemical involved in energy production and storage within the body, ATP (adenosine tri-phosphate).

Phosphorus deficiency can be caused by alcoholism or from excessive use of antacids, but it is rare. In the west we more often see the effects of too much phosphorus in the diet, which leads to phosphorus induced calcium and magnesium deficiencies.

Potassium

Most of our potassium is inside our cells. Its concentration in there is 30 times higher than outside the cells. Potassium is required in millions of reactions in the body, but its main areas of action are the correct operation of the heart and other muscles, proper functioning of the nervous system, and the maintenance of normal blood glucose levels.

Deficiency symptoms include muscle fatigue, poor appetite, mental apathy and fatigue, depression, constipation (caused by poor muscle tone in the intestines), irregular and either slow *or* rapid heart beat, muscle cramps, weakness, irritability, tissue swelling, headaches, bone and joint pain and rapid heart beat. There is also evidence that a low potassium intake can predispose people to high blood pressure. Deficiency can be caused by some diuretics (dandelion leaf is an excellent diuretic that is also a potassium supplement), chronic diarrhoea, excessive salt intake, aspirin in excess, prolonged laxative therapy, some gastrointestinal disorders such as coeliac disease and ulcerative colitis, and steroid therapy (cortisone). *Excessive* levels of potassium will stop the heart.

The answer to the potassium problem is to eat a diet rich in fruit and vegetables, drink some juices, and Bob's your uncle. They are all rich sources of potassium, and your body cannot get too much potassium from

them. *Never* take a potassium supplement unless it is part of a balanced vitamin and mineral formulation, or you are under the supervision of a qualified practitioner.

Sodium

We have 70 to 100g of sodium in our bodies, mainly outside the cells. It is involved in fluid balance and blood pressure control. We take in about 4-6g daily, but this is probably way too high. We only take in that much because we are on a modern diet, which uses sodium nitrate as a preservative, and monosodium glutamate as a flavour enhancer. And of course there is the use of ordinary table salt. Natural diets take in a lot less sodium and a lot more potassium. *Many many* health problems, from allergy problems to arthritis, are fixed with a long-term adjustment to diet that alters the relative intake of these two minerals towards the normal.

Nevertheless sodium is an essential mineral, and deficiency symptoms include nausea, vomiting, dizziness, cramps, exhaustion, apathy, and if extreme, circulatory failure. Working in hot environments, vigorous exercise and saunas are the chief causes of sodium depletion because sweat is rich in sodium.

Excessive sodium can cause high blood pressure, and too little sodium leads to low blood pressure. NB - Excessive intake can be fatal, especially to infants. That is why infant formulas have no added salt.

Sulphur

Sulphation is a process used by the liver to render many toxins inert, both natural and synthetic. As only one example, it is important for the removal of toxic metals from the system. In addition sulphur is needed to provide strength to connective tissue, (for example as part of *chondroitin sulphate*, part of cartilage in the joints). Its role is therefore hard to define medically, but it has been used naturopathically for arthritis, chronic fungal infections, allergies, skin diseases of all sorts including infective diseases such as boils and acne. There is no known recommended daily dose. The best sources are vegetables of the cabbage family such as brussels sprouts, cabbage, turnips, swede turnips, cauliflower, radish, and broccoli. But it is also rich in parsnips, watercress, raspberries, kelp, leeks, onion and garlic, peas, blackcurrants, asparagus, avocado, tomato, eggplant and brazil nuts.

Trace Elements

Boron

The need for boron wasn't established until about 1980. It converts the vitamin D produced in the skin by sunlight into its active form. It is also involved in regulating the sex steroidal hormones such as testosterone (males) and oestrogen (females). In fact because of this one study implies that it may be of use as an anabolic agent for athletes.²⁴ But most importantly a deficiency of boron negatively affects bone metabolism and construction. So boron has a role to play in the treatment of osteoporosis and osteoarthritis. One study showed decreased bone loss in

postmenopausal women who took boron supplements.²⁵ Another conducted by the Royal Melbourne Hospital in Australia showed 71% of patients with *longstanding* and *severe* osteoarthritis improve by more than 50% with boron supplements.²⁶ Boron supplements are also effective in many cases of rheumatoid arthritis and especially in juvenile arthritis. The therapeutic dose is 6mg to 9mg daily. The maintenance dose is 3mg per day. Unfortunately this element has been banned in Australia, but it is freely available in New Zealand if you wish to contact nutritional supplement suppliers in that country. Fruits and vegetables are the main dietary sources, but in Australia soils are boron deficient, so supplements may be needed for people with the above bone disorders.

Chromium

Chromium works hand in hand with *insulin*. So it is involved in the control of blood sugar. What most people do not realise, is that insulin controls blood fat levels (triglycerides and cholesterol) and protein metabolism as well. Chromium could therefore be expected to be helpful in diabetes, cardiovascular protection and for athletes for whom building muscle is an advantage. In other words chromium is one of the most underestimated but important trace minerals. For a long time it was uncertain as to the form which was used by the body, and the active form was called *glucose tolerance factor*, but it has been found in the last few years that this active form of chromium is either a chemical called *chromium picolinate*, or the body can so readily convert it into the active form that it may as well be. The daily dose required is 200µg (micrograms) of *chromium picolinate* per day. Tablets that provide twice that basic amount can be bought from the health store or chemist for around \$13 Australian for 100 tablets. Little else in life is as cheap! The following benefits of chromium are now well documented:

Anabolic Effects (that is, muscle building effects)

Double blind trials conducted in the 1980's by Dr. Gary Evans of Minnesota State University, showed that for *both* average young men who we may classify as "non-athletes" *and* for highly trained athletes (American footballers), muscle gains over a six week period of weight training in those taking only 200 micrograms of chromium picolinate per day can be quite remarkable. In fact gains in lean muscle for the groups taking the chromium supplement were *between two and thirty five times* the gains achieved by those taking the placebo. Whilst the greatest difference in the results was seen in the non-athletes, some of the athletes made gains normally only expected with the use of anabolic steroids! In addition, in the group of athletes both body fat levels and body weight reduced. This is all the more startling since the average gain in lean muscle for the athletes over the six weeks of training was more than 5 pounds!

Blood Profiles

Fats

Chromium picolinate supplementation lowers cholesterol in people in whom it is elevated.

Blood Sugar Control

Chromium picolinate supplementation lowers blood sugar in people in whom it is elevated.

Foods Highest In Biologically Active Chromium

Brewer's yeast, beer, liver, lobster tail, shrimp (prawns), whole grains, mushrooms, black pepper.

Daily Supplemental Supply

There are two key ways to obtain the daily amount that is medicinally active.

1. 3-4 tablets of high chromium yeast (brewer's yeast).
2. Chromium picolinate tablets - which are small and normally 400µg (micrograms) each. 1 tablet daily provides twice the required amount.

Cobalt

Normally this is in the body as part of vitamin B12, but cobalt itself is active in the body in a capacity separate to its role as part of B12. Its role is uncertain, but a lack of cobalt leads to a predisposition towards violence. This was discovered during a study of offenders in US prisons. An excess of cobalt leads to too many red blood cells.

Copper

Our bodies contain 60 to 110 mg. It is so easy to take too much and poison yourself that you should avoid it. But deficiency symptoms include anaemia, skeletal defects, elevated cholesterol, and impaired immunity, and taking excessive zinc supplements will cause a copper deficiency. With respect to cholesterol problems, copper, zinc, vanadium and chromium are four absolutely essential trace elements.

Soil content determines food copper content, so any list of sources needs to be treated with caution, but oysters and nuts are usually good sources. Women on the pill should never take copper supplements, since the pill raises copper and depletes zinc.

An important role of copper is in treating the pain of arthritis. Wearing copper bracelets *does* work, as demonstrated by an Australian study run by Dr Ray Walker.

Fluoride

This has never been proven to be essential, but when it is incorporated into the structure of bone and teeth, it adds enormously to the strength of the same. Too much fluoride leads to white patches in the teeth, and eventually corrosion of the teeth and bones. It may also increase susceptibility to cancer. But naturopaths argue that problems occur mainly when supplements of the soluble form (sodium fluoride) are given. The insoluble form (calcium fluoride), whilst a poison in large amounts, is more difficult for the body to use. Further, it is the calcium fluoride form that is incorporated into bones and teeth anyway. It is used by naturopaths to dissolve the bony

projections (osteophytes) that grow on bones in osteoarthritis, and there is x-ray evidence to back it up. The dose is 16mg twice per day. It is also used to rebuild bones in osteoporosis, to strengthen poor tooth enamel, and to improve elasticity of tissue in disorders such as varicose veins and recurring injury problems in athletes, especially those injuries involving tendons and ligaments.

When I needed to treat my own arthritis it was unavailable in tablet form, so I bought it in raw mineral form (called *fluorspar* or *fluorite*) from a lapidary club. I ground it up into a powder as fine as talcum, and knowing the specific gravity of fluorite I was able to calculate²⁷ that by adding $\frac{3}{4}$ of a metric teaspoon of this powder to 1kg of fine caster sugar, $\frac{1}{4}$ teaspoon of the mixture would yield near enough to the therapeutic dose.

Iodine

This has been known as an essential trace mineral for 150 years! Iodine is essential for the production of thyroid hormones. If it is lacking, the thyroid grows to try to compensate, and this is goitre. But eating too much iodine suppresses the thyroid gland, and again it will grow to compensate; another cause of goitre. We need just the right amount. Good sources are all seafood, kelp (as a supplement), sushi, beef liver, pork, lettuce, spinach, green peppers, dairy, lamb and raisins.

Iron

This is part of haemoglobin, which is the part of the Red Blood Cell that transports oxygen. It is also involved in many enzyme-mediated reactions of the body (enzymes act as catalysts for other essential reactions in the body). The body has 4 to 6g, $\frac{2}{3}$ of which is found in the red blood cells. The rest is in enzymes, stored in the liver, spleen and bone marrow, or part of myoglobin, which is a relative of haemoglobin, but found in the muscles.

The best sources are liver, kidney and heart, egg yolks, legumes, cocoa, molasses, shellfish, and parsley. Red meat, fish, poultry, nuts and green vegetables are second best. Most fresh fruits contain iron.

The classic deficiency symptom is anaemia, but you will see it as listlessness, fatigue, obvious heartbeat on exertion, sore tongue, cracks at the corners of the mouth, difficulty swallowing, and poor resistance to infection (especially in children). NB - Iron deficiency can exist without any changes in blood levels. In a Canadian study 19% of the population was deficient, but only 2% were anaemic.

Lithium

It isn't certain if it is essential, but it has a positive effect on people with manic depression, and the form used is lithium carbonate. Never take a supplement unless directed by your doctor.

Manganese

This trace element is essential for normal growth, for normal cartilage (so finds a use in osteoarthritis) and is found in bone, pituitary gland, liver and

kidneys. Its role is not completely determined. A healthy body contains about 20mg of manganese and loses about 4mg per day. If supplements are needed, 10mg to 20mg per day of the chelated form will be required.

Molybdenum

Our bodies contain only 8-10mg. Deficiency has been linked to cancer of the oesophagus (gullet). And it is concentrated in the liver, kidney, adrenal glands, bones and skin, so it probably has a role to play in all these areas. You cannot buy supplements. The best general source of all of these ultra-trace elements is *kelp*. One tablet per day will do it.

Nickel

If nickel is in your cells, they respond better to the influence of insulin. In other words, less insulin is required to get the message across that insulin is trying to tell the cells to take in the sugar, or the cholesterol or the protein. Little else is known about nickel.

Selenium

Selenium is a component of an enzyme that prevents damage to cells by oxidation. In other words, it is an *antioxidant*. Selenium is not essential to plants, so no attention is paid if the soils are deficient (which Australian soils are, but New Zealand soils are worse by far). Because of its role as an antioxidant, selenium may help prevent cancer. Studies have also shown an association between low selenium levels and heart disease and heart attacks. It may also help reduce sensitivity reactions to chemicals. Certainly in the clinical situation, supplementation leads to significant improvement. Selenium also helps take mercury, a toxic metal, out of the system.

But people can also get too much selenium, mainly if they are involved in metal smelting industries. Symptoms include hair loss, brittle nails, white spots in the nails, tooth decay, loss of sensation in the hands and feet, pins and needles, poor appetite and weight loss, reddish pigmentation of the skin, and an odour like garlic on the breath even when not eating it.

Silicon

Medically speaking this is not yet proven essential, but any naturopath will tell you that arthritis develops without it. It is incorporated into structural tissues and provides the strength in things such as artery walls, tendons, skin, cornea, sclera, and cartilage and the form the body uses is *silica*, which is the common mineral quartz. In other words it is in any tissue with large amounts of collagen. Atherosclerotic arteries contain *less* silicon than healthy ones.²⁸ Naturopaths also use it in the treatment of osteoporosis. The therapeutic dose is 30mg twice daily for any of these complaints. Herbs and stalky vegetables such as celery and silverbeet are the best sources.

Vanadium

Deficiency leads to high triglycerides and high cholesterol. Sources include buckwheat, parsley, soy, safflower oil, eggs, sunflower seed oil, oats, carrots,

cabbage, garlic, tomatoes, rice, sunflower seeds, corn, green beans, and oysters. Vanadium may have a role to play in manic-depressive illness, but more research is needed.

Zinc

Deficiency symptoms include slow growth, infertility, low sperm count, hair loss, various skin conditions, diarrhoea, immune deficiencies, behavioural and sleep disturbances, night blindness, impaired taste or smell, impaired wound healing, and white spots on the fingernails. It is also implicated in benign prostatic hyperplasia (non-cancerous enlarged prostate in men). There are so many things that respond to zinc therapy one would think everyone should take a supplement. But if you eat a relatively healthy diet, the best thing to do is to take a supplement throughout winter to boost your immune system, or if you are a male over 50 years old, consider it as a preventive against prostate trouble. Children and teenagers may need a zinc supplement during growth spurts, and pregnant women may need it to help the baby grow. Further some cases of teenage acne respond well to zinc supplements, but not all. Toxic metal poisoning can also be cleared using zinc. Otherwise, don't take it as a matter of course. You may cause a zinc induced copper deficiency. Blackmores produce one called bio-zinc, but there are many other good ones these days. Zinc is involved in cartilage manufacture so it finds a use in the treatment of arthritis.

The main sources are oysters, ginger root, muscle meats (chops, steak etc), pecans, pumpkin kernels, split peas, brazil nuts, almonds, walnuts, hazelnuts, prawns, turnips, parsley, potatoes, garlic, carrots, and beans. It is pretty much everywhere in whole unprocessed food.

Known Toxins

Minerals such as cadmium, aluminium, mercury and lead are known toxins, without proven human benefit *yet*, although some of them have been shown to *participate* in certain enzymatic reactions in the body. Keep away from them, because although I believe they will eventually be proven to be essential in miniscule amounts, we have no idea how low we have to go to reach the safe dose level. Most foods rich in other trace elements will have these things in them at the right level. Take a kelp tablet daily and put your mind to rest.

Aluminium

Aluminium salts are added to table salt to stop it becoming lumpy. It is used in deodorants, flour bleaching, antacids, and the manufacture of cookware and in food cans. We ingest more aluminium now than ever before in human history. And it is toxic. It can cause liver and kidney damage; it negatively affects the central nervous system, and interferes with calcium metabolism via the parathyroid gland. But worst of all it has been associated with the development of Alzheimer's disease. As much as is possible, reduce your contact with aluminium.

Cadmium

Any natural source of zinc, including food contains cadmium as a contaminant. So it is impossible to avoid. Water supplied through galvanised water pipes or from rainwater that has been collected from galvanised iron roofs is somewhat contaminated and the problem is made worse if the water is “soft”. Cadmium also enters our bodies through cigarette smoke. Some red and yellow ceramic pigments contain cadmium.

Cadmium accumulates in kidneys liver and blood vessels. Its toxicity is mainly due to the fact that it displaces zinc so that important biochemical reactions do not take place. Some of these reactions are related to blood pressure control, so high blood pressure is a symptom of cadmium toxicity. Diets rich in zinc, vitamin C and iron tend to protect against the toxic effects of cadmium. So eat good natural food!

Lead

Lead has been known to be toxic to humans for centuries. The Latin word for lead is “plumbum”, from which we derive our word “plumbing”. The Romans used lead pipes for plumbing, and lead poisoning of those rich enough to have plumbing was a problem. Lead poisoning is potentially fatal, but more disturbing is the toxic effects of chronic low level lead consumption from paints, tobacco, pottery glazes, and petrol. The results of this include stillbirths, cancer, heart disease and high blood pressure, immune system disorders, kidney disease, mental disease and learning and behavioural difficulties such as hyperactivity and a predisposition to violence. IQ drops as body lead load increases.

Like cadmium lead interferes with zinc dependent enzyme systems as well as enzyme systems involving other trace elements so the list of the symptoms of lead toxicity is almost endless. Diets rich in vitamin C, vitamin D, vitamin E, zinc, calcium, magnesium, iron, selenium and chromium protect against the toxic effects of lead.

Mercury

The biggest source is amalgam fillings. There is increasing evidence that they leak enough mercury into our bodies that they are not safe. Mercury depresses the immune system and can cause skin rashes and brain damage. Why were hatters mad? Because the compounds they used as part of their trade were full of mercury and it drove them mad. In fact mental and neurological symptoms are the main manifestation of mercury poisoning. Neurological symptoms can mimic multiple sclerosis. Nutrients that protect against mercury toxicity include vitamin C, vitamin E and selenium.

Other Food Factors

In addition to vitamins and minerals there are numerous substances within uncooked foods whose effects on human health are just beginning to be investigated. Most of these substances are destroyed by heat.²⁹ But these substances have remarkable positive effects and provide great potential for high-level health. I will not attempt to describe them all, or even to cover all of the major groups of these compounds. But the information here does serve to make the point that there seems to be no end to the value of plant

biochemicals.

Enzymes

Enzymes are the catalysts for all chemical reactions in plant and animal life. There are at least 50,000 known enzymes working in the human liver alone. Plant enzymes are often similar in structure to our own enzymes and can assist the action of our own enzymes. For example papain (an enzyme found in pawpaw, i.e. papaya) very closely resembles pepsin, the enzyme in our stomach that commences protein digestion. So papain will assist if present. Extensive tests in Europe have shown that plant enzymes are not destroyed by the digestive system. Some are taken into the blood stream. Others proceed to the large bowel, where they protect against the negative effects of harmful bacteria, and promote the growth of friendly bacteria. This helps the body produce its own vitamins B and K.

Bromelain

Bromelain is an enzyme found richly in raw pineapple. It assists in digestion, is anti-inflammatory, relaxes smooth muscles (important for asthma), reduces excessive clotting of the blood, prevents cancer and assists in its remission, prevents ulcers, gives relief to sinusitis, reduces appetite, shortens labour, enhances wound healing, and reduces period pain. When being used as a supplement, if it is being used to help digestion, it should be taken with food. Otherwise it should be taken between meals so that all of it is absorbed into the blood stream, none being used in digestion.³⁰ Papain (found in pawpaw, i.e. papaya) and enzymes akin to it found in ginger have similar effects to bromelain. NB - Ginger (the whole plant) has been shown to lower cholesterol. The enzymes in it may do most of the work. It is dangerous to extrapolate too much, but it may be that ultimately pineapple and paw-paw (papaya) also prove useful for lowering cholesterol.

Carotenoids, Flavonoids & Anthocyanidins

These substances are all potent antioxidants and constitute most of the natural colourings of plants, although there are colourings not part of this class of food chemicals such as chlorophyll (green), and some members of this class of food chemicals are colourless. The most commonly known example of a carotenoid is *beta-carotene*, which colours carrots and many other yellow or orange coloured fruits and vegetables. (NB - Not all yellow or orange colours are beta-carotene!) The red-purple-blue colours found in beetroot, blueberries and bilberries, blackberries, cherries, grapes and hawthorn berries are examples of *anthocyanidins* and *proanthocyanidins* (which are long chains of anthocyanidins joined together, i.e. *polymers* of them). All of these substances are *natural antioxidants*, and they are in fact far more important than vitamins A, E & C, or the minerals zinc and selenium.

Further, these substances are often *tissue specific*. That means that particular members of this food factor group *target specific organs and tissues* for their health building effect. For example, the flavonoids found in *hawthorn* (berries, flowers and leaves), specifically target collagen and the joints, but more particularly and importantly, the lining of the arteries to protect against atherosclerosis, and the muscle of the heart to strengthen its

beat. That is why it is so important to have a wide variety of foods and juices to provide a wide variety of factors, which will then cover *all* of the tissues and organs of the body. Concentrating on carrot juice alone for example, just doesn't give the broad-spectrum protection that mixed juices will provide. It does not take into account the complex system full of wonderful variety. It not only provides wider enjoyment. We must consume a wide variety for peak health. Listen to *no-one* who has a lot of knowledge about one food factor and then becomes fanatical about that, and that alone.

Carotenoids (Carotenes)

Of all factors that have been assessed in studies of mammals including humans, tissue carotenoid levels have proven to be the best predictor of species lifespan.³¹ They have been shown to protect against cancer, specifically cancers of the lung, skin, cervix, respiratory tract, and gastrointestinal tract,³² and to protect against heart disease due to atherosclerosis.³³ Immune function is improved with carotene supplementation.³⁴ Beta-carotene is well known, but there are at least 400 other carotenoids, including other forms of carotene such as alpha-carotene and gamma-carotene. Only 30 to 50 of these have any pro-vitamin A activity such as beta-carotene does,³⁵ which is made into vitamin A by the liver. Another carotenoid is *lycopene*, the red colour in tomatoes, and it has twice the antioxidant capacity of beta-carotene. It protects against many cancers including lung cancer,³⁶ bladder cancer,³⁷ breast cancer,³⁸ prostate cancer,³⁹ and probably skin cancer.⁴⁰ It reduces the damaging effects of UV in sunlight.⁴¹ It won't replace a good sunscreen, but it helps.

Flavonoids

Collectively these are often called *vitamin P*, and they work with vitamin C to enhance its effect. The most commonly known and commonly occurring ones are rutin, hesperidin, quercetin, catechin, khellin, asculetine, luteolin, apiin, kampferol, and astragelin. Hesperidin for example has been shown to increase the efficiency of vitamin C up to ten fold. There are too many flavonoids to name, but here are some examples of the benefits of some of these wonderful health substances.

Rutin is an antidepressant, and with hesperidin it reduces the fragility of capillaries (so prevents easy bruising).

Nobiletin is more anti-inflammatory than cortisone, and with tangeretin, helps remove toxic metals from the body.

Quercetin is a natural anti-inflammatory, and it reduces the ability of certain viruses to replicate and infect cells, enhances the release of insulin by the pancreas, and suppresses the formation of cancerous tumours.

Methoxylated Bioflavonoids reduce the clumping of red blood cells, so that blood flows more easily and is less prone to excessive clotting. These also inactivate cold and flu viruses.

Ipriflavone enhances incorporation of calcium into bones. This is discussed further under the heading “**Osteoporosis**”.

Overall however flavonoids have a much wider range of actions than is indicated by the above few examples. Here are some of their other roles in human health.

1. Firstly as to their general effects.

- a) Flavonoids are *antioxidants*. This is crucial to preventing the cellular damage that leads to chronic degenerative diseases, cancer and aging. One example of this action is the role flavonoids can play in protecting the liver against liver poisons. Herbs such as Milk Thistle (*Silybum marianum*) and foods such as globe artichoke are rich in flavonoids that fulfil this function.
- b) Flavonoids *regulate enzyme activity* in the body. In other words, they have a role to play in the metabolism of *every single cell*.
- c) Flavonoids prevent the breakdown of collagen by *hyaluronidase*. Collagen is the main substance of which the *connective tissue* of the body is comprised. Collagen fibres provide tensile strength to body tissues, increasing the force that would be required to tear them apart. Flavonoids also regulate connective tissue *formation*. Hence flavonoids stabilise the general structural integrity of the entire body.
- d) Flavonoids act to *reduce inflammation*. Some have a directly anti-inflammatory effect. But others act indirectly via mechanisms such as increasing the circulation time of our natural cortisones, or by preventing *leukotriene* formation. Yet another mode of action is the stabilisation of the permeability of capillaries. In other words, they are rendered less “leaky”, especially when high levels of histamine are present. Some flavonoids also inhibit mast cell degranulation,⁴² which if it occurs releases histamine and other strongly inflammatory chemicals⁴³ into the tissues. This inhibition is an important positive benefit for people with allergic disorders such as urticaria,⁴⁴ hayfever and asthma.⁴⁵ In fact all of the above anti-inflammatory actions are of great importance for the prevention of allergic reactions generally. And it is clear that consumption of high quantities of flavonoids are helpful in *any* disorder in which inflammation is a key feature of the disease process.
- e) Flavonoids have a role to play in *cancer prevention*. Any tissue in the body can develop cancer. But flavonoids have a general *anti-tumour activity*, thereby helping to prevent cancer.

2. Secondly, as to their system specific actions.

- a) Flavonoids act positively on the *circulatory system*. They have been shown to have a *hypo-tensive* effect. That is, they reduce blood pressure. They also increase red blood cell numbers in anaemia, help regulate cardiac blood flow through the coronary arteries, regulate heart beat, and protect against atherosclerosis. Flavonoids also have a *haemostatic* or *styptic* action. That means they will *prevent excessive bleeding*. Yet at the same time they have been shown to *reduce platelet aggregation*, thereby *preventing excessive clotting*.

b) Flavonoids *stimulate the immune system*, by activating both *antibody production* and *lymphocyte transformation* (into active lymphocytes) and by *promotion of T-cell formation*. Remember, T-cells are the commanding “Generals” of the immune system. So flavonoids are crucial to the control of infectious diseases. Further to this activity of flavonoids, some have been shown to have *directly antibacterial and antiviral activity*.

c) Flavonoids have a positive action on the *nervous system*, *improving nerve transmission* whilst simultaneously acting as a *natural sedative*, so calming the anxious. Still within the framework of the nervous system, some flavonoids are *antispasmodic*. That means they reduce the tendency of muscles, both the muscles of the skeleton, and other involuntary muscles such as in the arteries, the digestive tract, respiratory tract and uterus, to go into spasm when they shouldn't. As a result, some women for example find flavonoid supplements helpful for period pain. And as you may expect some asthmatics also find such supplements useful in reducing the frequency and severity of asthma attacks.

d) Flavonoids also have a weak *female hormone effect*. In other words, they have actions like oestrogen or progesterone, but are weaker. This means they help regulate the female cycle and also help protect against many female cancers.

e) Flavonoids have a role to play in the *urinary system*. Some of them act as mild diuretics. This helps eliminate excess fluid from the body.

f) Flavonoids assist with the activity of the *digestive system*. Some of them act as *cholagogues*. This means that they activate the production and release of bile. Bile is essential to the digestion of fats and oils.

g) Flavonoids are involved in *blood sugar regulation*. They help lower it when it is too high, but not when it is low.

Having given a brief overview of the actions of flavonoids, please remember something *very* important. Whilst it is possible to take supplements of individual flavonoids, or combinations of flavonoids designed to carry out a specific task in the body, we are only scratching the surface in our knowledge of them. And these substances tend to work *synergistically* with each other *and* with other substances not classified as bioflavonoids. In other words, a wide variety of them is needed to attain the full health benefits. So get them from food and juices. Take supplements *only* when advised by a practitioner.

Anthocyanidins and Related Compounds

These are a biochemical group closely related to flavonoids. In fact sometimes they are regarded as a *subgroup* of the flavonoids. They include anthocyanidins, anthocyanins, proanthocyanidins, proanthocyanins, procyanidins, and oligomeric procyanidins (OPCs). They have very strong antioxidant activity, up to twenty times that of vitamin C and 50 times that of vitamin E. Most of their activity has to do with connective tissue, joints

and arteries. So they strengthen tendons, ligaments and cartilage. These substances *cross link* adjacent collagen fibres, strengthening them in the process,⁴⁶ they prevent damage to the body's collagen during inflammation, they prevent free radical damage, and they prevent the release and the synthesis of many compounds which are involved in promoting inflammation, such as histamine, serine proteases, prostaglandins and leukotrienes.⁴⁷ So they have a remarkable anti-allergic effect, and may contribute towards controlling autoimmune diseases, since the damage is primarily due to inflammation. In addition to all of that, because of the way they strengthen collagen, they have the potential to prevent atherosclerosis. In some animal experiments, feeding them extracts of proanthocyanidins has both reduced blood cholesterol levels and *reversed atherosclerotic lesions in the arteries*.⁴⁸ In other words, they clear arteries blocked with cholesterol deposits.

One of the more important groups of these compounds, OPCs has been the subject of a great deal of scientific research, and their physiological and biochemical effects are very broad and extremely valuable to human health. They have been shown to alter physiological processes in ways that enhance immune function, reduce inflammation thereby controlling allergic reactions and autoimmune diseases (including SLE [lupus]), positively affect brain problems such as ADD and Alzheimer's disease, improve varicose veins, reduce the symptoms of asthma, delay the progression of diabetic retinopathy and in some cases begin to reverse the degeneration of vision that has occurred, help psoriasis and other inflammatory skin disorders such as eczema, reduce the body's tendency to lay down fat so may have a role in the treatment of obesity, induce cancer cell suicide (called *apoptosis*) in breast cancer cells, reduce platelet aggregation in smokers (which means OPCs afford them protection against stroke) and enhance learning and reduce memory loss⁴⁹.

As for flavonoids though, individual anthocyanidins often have tissue specific effects. The purple anthocyanidin pigment of raw (*not* cooked) beetroot prevents cancer growth. For people with cancer, the juice extracted from ¼ to 2 kilograms of beetroot per day is required. And the deep blue/black colour of the European blueberry (bilberry) has been shown to successfully treat night-blindness, glaucoma, cataracts, and degeneration of the retina. In other words, it seems to have a particular affinity for the eye. Further, it helps in rheumatoid arthritis, and an extract of the leaves of this plant helps in sugar diabetes. And the pigments in red grapes help keep the arteries clear of cholesterol deposits. It is *not* the alcohol in red wine that does it, since beer and spirits do not produce the same effect. Red grapes have been regarded as a rich source of these compounds. But recent research shows that the humble apple has *seven to eight times* the level of proanthocyanidins as red grapes.⁵⁰

Bitters

Bitter tasting principles in plants have a number of actions helpful to the body, especially in the digestive area. They stimulate appetite, increase the flow of digestive juices, increase the flow of bile, improve the ability of the liver to clean itself, regulate the secretion of insulin and glucagon from the pancreas (and so are helpful in *both* diabetes *and* in low blood sugar conditions), and they stimulate the repair of the lining of the gut wall.

Volatile Essential Oils

Some of these are bitters. See above. But virtually all essential oils are natural antibiotics (examples are tea tree oil and lavender oil), and most activate the immune system. The oils found in the skins of lemons and oranges are especially good here. Next time you make a lemon drink for a cold or flu, include some grated peel in the drink. Many flavours of foods and herbs are due to volatile essential oils. So the pleasure involved in eating is not the only purpose of them! They also dilate the peripheral blood vessels, stimulating the circulation, and have a range of actions in the digestive system, relaxing it (antispasmodic), and taking care of gas (carminative). Why do you eat after dinner mints? Well, if they were made from real mint, they would help you digest that fatty meal you have just eaten. Some volatile oils help relieve pain (clove oil). Others help relieve coughs (eucalyptus oil). Volatile oils have such a wide range of actions they are a course on their own.

Chlorophyll

Chlorophyll is the green pigment of plants. *Chlorophyll* is a *porphyrin protein structure* like *haemoglobin*. But haemoglobin has iron in the centre of it, and chlorophyll has magnesium at its centre. Chlorophyll will build up blood in certain types of anaemia much better than iron supplements, and I have successfully used it to treat people with low platelet counts. Chlorophyll has been shown to be helpful in a wide variety of conditions. It is bacteriostatic (stops the growth of bacteria, but doesn't kill them); it helps regenerate tissue (for example the lining of the gut, and it has been used to sooth the irritated lining of the vagina). Crude extracts of chlorophyll rich plants (*not* refined extracts) have an impressive record in the treatment of heart disease, atherosclerosis, sinusitis, osteomyelitis (inflammation and infection of the bone marrow) and depression. It may also block the genetic changes stimulated by cancer producing chemicals. It makes saliva more alkaline (which helps in starch digestion), and prevents the harmful effects of unfriendly bacteria in the gut.

Plant Hormones

There are many different sorts of plant hormones, just as there are many different human and animal hormones. And they do enter the blood stream and participate in human metabolism. Gibberellins, which are growth hormones in plants, stimulate the human immune system, and abscisic acid, another plant hormone, helps us use the gibberellins. Most interesting are those plant biochemicals that enter our system and mimic the actions of our own hormones.

Plant Steroids

The terms plant steroids, phytosterols and phytoestrogens all describe plant components that are similar in their action to the male and female hormones (androgens and oestrogens). There are many such compounds. They are often biochemicals such as *isoflavones*, *lignans* and *coumestans*.

The medicinal constituents of many herbs are biochemicals of this type and they are therefore hormonal in action. Saw Palmetto has a hormonal

constituent that has a *tonic* effect on the male reproductive system, yet it simultaneously prevents the overstimulation of the prostate gland so that it is used to treat non-cancerous enlarged prostate problems. Yet still the *same plant component* will restore breasts that have withered due to breastfeeding, *without* masculinising the women. And it doesn't feminise men treated for enlarged prostate either!

Most of the herbs which are used to balance the female system (dong quai, angelica, blue cohosh, black cohosh, false unicorn root, true unicorn root, fennel, fenugreek, wild yam) and most of the herbs used to balance the male system (saw palmetto, sarsaparilla) contain such substances as their active constituent(s). Liquorice, ginseng, red clover and alfalfa are also rich in isoflavones. In fact red clover extract (I think it is called *Promensin*) is now marketed by chemists as a remedy for menopausal problems. Herbal practitioners have been using it since the year dot!

There is great interest in these plant chemicals and in the herbs and especially *foods* that contain them (such as soybeans), because diets that are high in them have been shown to reduce the severity of menopause, decrease the likelihood of the development of osteoporosis in both females *and* males, and also protect against heart disease.

Cancer Protection

Plant steroids have another wonderfully positive effect. They act as *differentiation* agents. It is too complex a subject to go into in detail, but one of the characteristics of cancer cells is that they have become *undifferentiated*. That is they have become more *primitive*, like cells found in a rapidly growing human embryo. Differentiation agents help stop this process of cells becoming more primitive, and so act as anti-cancer agents. It has been shown for example, that soybean isoflavones, the same ones that help reduce the severity and effect of menopause, the same ones that protect against osteoporosis, also protect against breast cancer, cervical cancer, uterine cancer and prostate cancer. The reason they are protective is that all of these cancers grow more rapidly in the presence of the natural hormones. The isoflavones compete with the receptor sites on the cells that receive the natural androgens and oestrogens. Whilst they do act to stimulate the cell in a similar way to the natural hormones, they are weaker than those hormones by up to 100 fold. So in effect they competitively inhibit tumour growth by limiting the degree of stimulation caused by the natural hormones. People on diets rich in foods containing such substances have low incidences of all of the aforementioned cancers.

Unwanted Cancer Promotion

The above benefits are in marked contrast to the effect of man made chemicals which can have hormone like effects. These substances also compete for the receptor sites, but they act as strongly if not more strongly than natural hormones, so accelerating tumour growth and raising the incidence of virtually all hormone responsive cancers. Such chemicals include pesticides like PCB's, and nonylphenols added to plastics to prevent oxidation. When the effects of these and other chemicals are added to those of the synthetic hormones prescribed medically, it is no wonder the

incidence of hormone responsive cancers is rapidly increasing! Stick to the natural. It promotes health. What we add in generally destroys it.

Sources Of The Good Guys

There are rich sources of naturally beneficial phytoestrogens other than soybeans and these include alfalfa, cabbage family vegetables, linseeds, cucumbers, squash, yams, tomatoes, eggplant and peppers. It should be clear that any high raw food diet, supplemented with juices, will contain *more* than adequate amounts of these substances, and will provide considerable protection against a wide range of health disorders.

Co-Enzyme Q10 (Ubiquinone)

This is produced by the body, and is found in many foods. As we age, levels of bodily production drop, and supplements may be beneficial, although a diet rich in raw fruits and raw vegetables will probably cover the deficiency. I mention this substance because of its wide application. CoQ10 works with the biological engine within cells⁵¹ that produces the energy each cell needs to live. CoQ10 could be thought of as similar to the spark that is necessary to ignite the petrol in an engine. Without it, it doesn't matter how big the engine is it won't work.

Because it is involved in every cell a deficiency will affect every cell, and deficiency may therefore be expected to lead to almost any disorder. For that reason, we would expect CoQ10 to be helpful in a very wide range of health problems. Research confirms this. Supplements of CoQ10 have been found to be helpful in a variety of cardiovascular diseases including heart attack, angina, congestive heart failure, cardiomyopathy, mitral valve prolapse, and high blood pressure. It has also been helpful in diabetes mellitus, periodontal disease, and abnormalities of the immune system, peptic ulcer, allergy, muscular dystrophy, and obesity. And it improves athletic performance and is a potent antioxidant. Generally I am not a promoter of "single nutrient" supplements. But if you wish to take a supplement, the dose is 20-50mg per day. In serious illness such as heart disease or chronic fatigue syndrome, higher doses up to 100mg per day may be needed.⁵²

Conclusion to Other Food Factors

There are literally millions of plant factors. Some others which we haven't discussed include natural long chain alcohols such as in peppermint oil. Tannins, coumarins, anthraquinones, glycosides, alkaloids,⁵³ genistein, the allylic sulphides, catechins, indoles, isothiocyanates, limonoids, terpenoid compounds and phenolic acids are others. All have been shown to impact on human metabolism and health in a positive way. But do I really need to say more?

We will *never* get to the end of it all, because we are finite. Unending analysis in the hope of being able to produce the ideal "accessory food factor pill" is not the answer to high-level health. If ever we *could* get to the bottom of it all, we would undoubtedly find that in order to ensure the balance is correct, the answer is to eat natural foods.

Many of the accessory food factors have not been proven to be essential. However they so clearly enter into human metabolism in such a positive way that it is difficult to draw the conclusion that they were not meant to do so, unless one buries one's head in the sand and refuses to look at the weight of the evidence from the perspective of an *overview*, as against looking at it in a piecemeal way.

We were *designed* to have these things running around our bodies as part of our normal function, and clearly we were meant to have an infinitely wide variety of them. ***They are not an add-on extra.*** Neither are the millions of as yet unknown and unanalysed items contained in natural foods.

Conclusion to Nutrition Part A

Do you understand now why it is ridiculous to do any of the following?

- (i) Promote a certain group of biochemicals as being the only essentials.
- (ii) Pronounce certain food components to be unnecessary and then exclude them from the diet.
- (iii) Promote certain single foods (or herbs) as being “the answer”. Carrot juice, Ginseng and Barley Green are three that come to mind.

We will *never* get to the end of it all, because we are finite, and the universe is not only infinite in space and time, but also infinite in variety and complexity. Unending analysis in the hope of being able to produce the ideal “accessory food factor pill” is not the answer to high-level health.

At the physical level, life is not a series of unrelated chemical reactions, which when things go wrong, can be fixed by the “magic bullet” approach of giving one substance or one food and then thinking it will all go away. ***It won't. Life is an intricate multidimensional web*** in which ***everything*** works together for our good.

So let me make something absolutely clear! Survival, and optimum and vibrant health are *not* the same thing. Modern medicine has tended to study nutrition from the perspective of the requirements for *survival*, and even then it is the requirements for *short-term survival*. Naturopathic practitioners study it from the perspective of the requirements for *optimum and vibrant health*. There is a *world* of difference between the two!

The only way to promote and sustain super-health is to consume a wide variety of foods that are natural to humans.

But what are such foods? Read on!

SECTION THREE:

NUTRITION PART B:

Food as Therapy

The Holistic Approach to Nutrition

Introduction

What I would like to do first is to deal with the thing that is in most people's minds when they talk about a "diet". What they usually mean is a "weight loss diet".

Weight Loss Diets

There have been many different approaches over the years. Different fads have come and gone. And the evidence is now in. *None of them work in the long run.* The only thing that works is a general lifestyle change directed towards high-level health. Weight problems naturally sort themselves out on this sort of program. But don't misunderstand me, weight control is very important. Being overweight is associated with an increased chance of contracting a wide range of diseases, from high blood pressure to diabetes, from cancer and heart disease to stroke. It is no laughing matter. My point is merely that the best approach is to work towards healthy eating and lifestyle, and let the weight take care of itself.



General Warnings

1. Diets specifically designed for weight loss are by their nature **not** lifestyle diets, and as such, when the person returns to their previous eating habits, the lost weight is regained quite quickly. There is no positive permanent change in the body.

2. Most people fail to exercise whilst they are dieting. So the body breaks down muscle tissue as well as fat (in about a 50/50 ratio) to help make up the energy shortfall. The most dangerous aspect of this is that the *heart* is a muscle. In *anorexia nervosa*, muscle loss from the heart can become so severe that when the condition is treated, the therapists need to be very careful that they don't allow the patient to put on weight too quickly. If they do, the heart doesn't cope with the extra load. Many victims of anorexia died of heart failure *in the recovery phase* until doctors woke up to what was happening.

Further, when the weight goes on again after a diet, more of it is fat than it was before because muscle tissue has been lost, and people who are obsessed with weight control, even if they remain thin can wind up with what I call "skinny slob" syndrome. They are *thin*, but they have very little muscle tissue. They are not *lean*. And in fact it is being *lean* which protects you from most of the health problems associated with excess weight. "Skinny slob" often suffer the same health problems that obese people have to deal with.

3. When calorie intake is reduced, the body thinks it is in a famine situation and lowers its basal metabolic rate⁵⁴ to protect its fat stores, because the body thinks it may have to eke them out for a long time. But when food intake is increased again *metabolism remains low for a long time*, so that **more of the food is stored as fat than it ever was before**. This is exacerbated by the fact that muscle cells use about *100 times* the energy of

fat cells *even when they are not doing anything*. So now that body weight has gone up, but has a higher proportion of fat, the basal metabolic rate is lowered *permanently* (assuming there is no therapeutic intervention), and so weight spirals upwards.

Chronic yoyo dieting is a recipe for disaster. Metabolism slows down, the body becomes flabby with more fat and less muscle, it becomes harder and harder to lose those unwanted pounds/kilos, there is less muscle tissue to carry out daily tasks so that fatigue becomes unremitting, and in the worst cases, in the long run there is actually a steady *increase* in the weight of the person.

4. If you are going to go on a diet specifically to lose weight, make sure you ***exercise*** at the same time.

Low Carbohydrate Diets (Ketosis Diets)

Low carbohydrate diets are diets that reduce carbohydrate to the point that you are only just getting enough to provide glucose for the brain to operate. The rest of the body runs on fat for its energy. Without sufficient carbohydrate (sugars and starches) in the system, our bodies do not burn fats efficiently. They only partially burn, so we only get part of the energy they provide. From the point of view of the proponents of this diet, this is a bonus, because the body must dip deeply into its fat reserves to continue providing enough energy for its cells. However there are some serious health dangers associated with this diet.

This state of affairs is not natural for the human body. The only other time it is seen is in diabetics, when they haven't had enough sugar or they have overdosed with insulin. The body has begun a process called *ketosis* (the partial burning of the fats) - and this can lead to coma. In non-diabetics, coma will not occur, but still the body is being poisoned by the *ketone bodies* (or *ketones*) which are the bits left over when the fat molecules are only partially burned. Normally, the body continues to process these ketones right through to CO₂ and H₂O (carbon dioxide and water) and eliminates them safely, but this won't occur in this situation. The body becomes quite acid as a result, and people on these diets can feel quite sick.

Further the excessively large amounts of protein that are eaten in these diets poison the system. When the body cannot use all of the protein it takes in, it chops off the amine group, (which is what makes this carbon chain a protein in the first place) so that it can use the remaining bit, (which is now more like a sugar or starch) as a source of energy. But those amine groups are toxic to the system, and the kidneys are put into overdrive to handle them. Lots of water must be drunk on this sort of diet to provide protection to the kidneys, and even then, *in people who already have a kidney problem, kidney failure may result.*

But there are more significant problems than that with ketosis diets. Although they can be effective short term, long term they raise cortisol levels, which in the end raises insulin levels, which makes your fat cells lay-down fat rather than releasing it (increasing your risk of obesity), AND increases levels of inflammation in your body, which in turn predisposes you to a greater risk of all forms of cardiovascular disease, cancer, allergies, arthritis

and autoimmune diseases. *Avoid ketosis diets unless you are under the supervision of a qualified practitioner!*

Single Food Diets (eg the Grape Diet)

There have been many weight loss diets of this type. Because most of them involve eating a single *fruit* exclusively, in the short term, they do the least amount of harm of any fad type weight loss diet. But our bodies need more than what a single fruit can provide, so they are best avoided anyway.

Summary and Advice on Weight Loss

Basically I don't recommend weight loss "diets". I have not seen a single one of the more popular regimes that actually work long term. But if you want a rapid loss program that actually works in most cases with no health down side, here it is.

1. Without counting calories eat as much as you like as often as you are hungry, but *eat nothing but raw fruit, raw salads and raw sprouted seeds.*

NO COOKED FOOD.

2. Drink nothing but *water and the fresh made juices* of raw fruits and vegetables, but avoid citrus juices. And keep the quantity of juice down to 1 litre per day or less. If you must drink something else drink green tea, which has been shown to accelerate fat burning.

3. Take a supplement that contains the lipotropic factors methionine, choline and inositol. They help the body access and use its fats as an energy source.

4. Get some exercise.

a) Walk, cycle or swim, or any combination, 5 times per week for 20 minutes at a time.

b) Do some resistance training (weight training or isometric exercises) to maintain muscle mass.

If you follow that program, then *if you have no serious health problems* the most likely outcome is that in two to four weeks your blood pressure will normalise, your energy levels will rise astronomically, and your weight will have moved dramatically towards a healthier level. And provided you then keep exercising and begin eating according to the guidelines given later under the heading "General Dietary Guidelines", you will most likely experience fewer health problems overall. In fact your health should steadily improve to a level you have only dreamed of until now. And if you *do* have serious health problems, the most likely outcome is that they will improve dramatically!

Other Dietary Regimes

There have been a myriad of dietary regimes apart from those discussed under "**Weight Loss Diets**". The following examples may be considered

representative. They cover the general approaches that you will come across.

The Pritikin Program

Nathan Pritikin designed this program and he beat his own heart disease with it. But he also had leukaemia, and whilst his diet controlled it, it didn't eliminate it. Perhaps enough has been said. But the diet in its pure form is a low fat and low sugar diet, to the point that even fruit consumption was kept to a minimum. The diet concentrated therefore on vegetables, legume and grain products. It does clear the arteries of atherosclerotic deposits, eliminating the need for by-pass surgery, but it does have its problems. These should become clear as you read the sections on the dangers of high protein diets.

The Macrobiotic Diet

Like the Pritikin diet, this diet is low in fat and cholesterol, so it has some advantages short term for the treatment of cardio-vascular disease. But the diet is about 50% brown rice, about 25% cooked vegetables and the rest is made up of legumes and seaweed. It has little to no raw food, so aside from the fact that it suffers from the same problems as the Pritikin diet, it is also woefully deficient in many of the accessory food factors which are destroyed by cooking.

Food Combining

This idea is based on the premise that health problems arise because of supposed limitations of the digestive system, which purportedly cannot provide sufficient enzymes in both variety and quantity to digest more than one type of concentrated food at a time, so that if they are eaten together digestion isn't carried out properly. The resulting improperly digested food components create the health difficulties.

The basic rules of operation of this diet are these:

1. Eat only one type of concentrated food at any given meal. That is, eat *either* a high protein food, *or* a high starch (grains, legumes, potatoes) food each meal, but never together.
2. Eat fruit alone, never with protein foods, never with starchy foods, and it is best not eaten with vegetables.
3. Protein foods should be eaten with vegetables, but not with potatoes.

This system works quite well, but I have some reservations about the fundamental premise. For example vegetables, even starchy vegetables such as potatoes seem to be digested quite well if eaten with fruit. And whilst the body doesn't like large amounts of protein or grains/legumes with large quantities of fruit, the juices of fruits make *excellent* marinades to tenderise meat and assist in its digestion. The fact of the matter is that our digestive systems were never designed to be able to handle large quantities of *any* foods that need massive input of digestive enzymes produced by our own

bodies on any sort of a frequent basis. We have a digestive system that is designed to consume mainly foods that already contain many enzymes that aid in digestion. Our own enzyme production is a back-up system. If you follow the general health guidelines that I give, you won't have to think about food combining. It simply becomes irrelevant.

Problem Myths and Problem Foods

Generally speaking, if you follow the guidelines for diet to be outlined shortly, you will build a level of health that will ensure you need your doctor or natural health practitioner far less than you do now, and you won't need to spend a fortune on supplements either.

The health of the body can never be any better than the sum total of the health of its individual cells. So we want to keep the cellular environment perfectly clean and toxin free, and at the same time we want it to be nutrient and oxygen rich. This naturally enough leads to a discussion about which sorts of foods will create that environment most effectively. This discussion cannot be complete therefore, without warning of the dangers of foods that have been traditionally regarded as health building, when they are no such things at all.

Protein Needs

It is possible to consume too much protein. But you have to deliberately work at it. Too much in the diet leads to excessive levels of very poisonous nitrogenous wastes,⁵⁵ which arise when the body converts the unnecessary protein into energy. This places the liver under load because it must detoxify these, and subsequently the kidneys are also placed under load because they must excrete them. In fact if taken to extremes, kidney failure will result. And furthermore high protein consumption is implicated in premature aging. And further still, high intakes lead to the removal of calcium from the bones to combat the acidity that it produces in our systems. High protein diets can be a key factor in the development of osteoporosis, because such diets increase excretion of calcium through the urine, and this fact has been known for over *twenty years*.⁵⁶

However most of the above problems occur if protein is consumed without the simultaneous consumption of fruits and vegetables. For example, fruits and vegetables combat the acidity produced by protein. Personally I believe the problems that have attributed to excessive protein consumption are really a deficiency problem; a deficiency of every nutrient contained in fruit and vegetables; vitamins, minerals, oligosaccharide plant fibre and phytonutrients.

In fact the need for protein is partly dependent upon two important considerations.

1. The form in which it is ingested. In the right form, bodily needs for protein are much less than you think. The food for the most rapidly growing humans (infants), which is human breast milk, has less than 10% of its energy in the form of protein. But it must be remembered that breast milk protein is the most perfect form of protein imaginable or possible. Most protein you will consume will not be used by your

body as efficiently as an infant uses breast milk protein. So protein needs for super health may be a good deal higher than 10%. In fact most doctors and dieticians will state that you need to derive 20% of your daily Calorie⁵⁷ intake from protein foods. For most people, I agree with them.

2. The contents of the rest of your diet. It is clear to me based on cultural and historical evidence, and on the basis of both personal experience, and the experience of a number of my clients, that it is possible to maintain very high level health on very low protein consumption. I have both known and read about people who eat little other than raw fruits, or a combination of raw fruits and vegetables, which have been thought to contain relatively low levels of protein, who have maintained almost perfect health over a prolonged period of time. So how do we reconcile the two perspectives?

The fact is that even low protein foods such as fruit can have as much as 17%⁵⁸ of their Calorie content in the form of protein. With the exception of the humble apple, which has only 1.4% of its energy supply in the form of protein, all of the fruits commonly eaten in Australia have levels greater than 3% and most of them are higher than 5% but less than 10%. Further, it is rare to find a raw vegetable that has less than 10% of its Calories as protein, and many of them have protein levels that represent between 25% and 50% of the Calorie content!⁵⁹ And remember that the proteins in these foods are mostly free form amino acids; either single amino acids or di-peptides (two amino acids joined together. Protein in this form is virtually predigested, and if eaten raw it is not subject to the damaging effects of heat.

And it must also be remembered that these foods are exceptionally “clean”. The body does not need to perform much in the way of detoxification, and liver detoxification processes use quite a lot of protein in the form of single amino acids. But once you add other things into the diet, it is my view that the need for protein rises quite dramatically. So how much do you need?

Well, percentages don't really help, unless you are prepared to weigh everything, and refer to a handbook that will allow you to calculate exactly how many grams of protein are required for your body. What an imposition! I would never do that to my clients! Just take a look at the size and thickness of the palm of your hand. That's how much protein you need for *your* sized body; two to three times daily for most people; three to four times daily for athletes or those in physically demanding jobs. That's it. Look at your hand. That will tell you all you need to know. And eat plenty of fruit and vegetables.

Good Oils, Bad Oils?

Omega 6 or Omega 3?

The first thing to deal with is the whole omega 3 versus omega 6 question. It isn't the oils themselves that are good or bad. It is the derivative biochemicals formed from them that are health promoting or health damaging. So let's try to understand them.

The body converts essential fatty acids (oils) to a number of other fatty acids, which are then used to produce compounds called *eicosanoids* (see also “**Essential Fatty Acids**” under the heading “**Known Essentials**” in Section 3 - “**Nutrition Part A**”). And there are a number of different types of eicosanoids, depending upon which of the fatty acids they arise from.

1. **Arachidonic Acid (AA)** is an omega 6 fatty acid that leads to the production of eicosanoids that are involved in promoting inflammation, increasing smooth muscle contraction (sometimes to the point of spasm), overstimulating the immune system and making blood sticky and more likely to clot via an increased tendency of blood platelets to aggregate. So they increase the risk of stroke and make disorders such as period pain, arthritis, asthma, eczema, hayfever, migraine, high blood pressure and auto-immune diseases worse. From the point of view of promoting super health, these are the *bad guys*.
2. **Dihomo-Gamma-Linoleic Acid (DGLA)** is also an omega 6 fatty acid. It is made in the body from *Gamma-Linoleic Acid* (GLA), which is a component of both *Evening Primrose Oil* (EPO) and the oil found in pine nuts. But the eicosanoids DGLA produces have precisely the *opposite* effect of those produced by Arachidonic Acid, and very powerfully so, even though *both* are made from omega 6 oils. These eicosanoids are antiinflammatory, relax smooth muscle, regulate the immune system in a calming way, and thin the blood by decreasing platelet stickiness. These eicosanoids reduce the risk of stroke and improve disorders such as period pain, arthritis, asthma, eczema, hayfever, migraine, high blood pressure and auto-immune diseases. From the point of view of promoting super health these are the *really good guys*.
3. **Eicosapentaenoic Acid (EPA)** (normally associated with fish oil) is an omega 3 fatty acid which produces eicosanoids with similar effects to those made by DGLA, but they are far less powerful. But they are nevertheless VERY important, as will become apparent if you read on. From the point of view of promoting super health these eicosanoids are also the good guys. And EPA itself, as you will find, turns out to be a really good guy.
4. **Docosahexaenoic Acid (DHA)** (again normally associated with fish oil) is another omega 3 fatty acid which produces eicosanoids (or more correctly in this case, docosanoids) with similar effects to those made by DGLA, but again they are far less powerful. From the point of view of promoting super health these are also the good guys, but nevertheless DHA is far less important . Read on.

Now let me clarify. In fact the body needs to be able to both *promote* inflammation, and to *quench* it. Why? It needs to be able to calm down the inflammatory reaction to reduce the negative effects of allergy and autoimmune disease. But the immune system uses inflammation to combat viruses, bacteria and fungi. Having the ability to do either one is like having a rein on each side of the horse's head. You can steer the horse either way as required.

But you see that's the problem. On an ordinary modern western diet, we have a rein on only one side of the horse's head – the side that leads to inflammation. This is because the modern diet provides excessive levels of omega 6 fatty acids, and very poor levels of omega 3 fatty acids.

But wait a minute. Aren't there some omega 6 derived eicosanoids, such as those made from DGLA that are good guys? That's true. But without adequate levels of the omega 3 fatty acid EPA, the liver converts DGLA (the strongest good guys) into AA (the bad guys). Now do you see the problem?

One consequence of that is that people who take evening primrose oil to assist with health problems, often women taking it for period pain or premenstrual syndrome (PMS), may well achieve an initial improvement, only to find symptoms come back worse than ever. That is because they have insufficient consumption of EPA to prevent the conversion of the DGLA (the really good guys) made from the evening primrose oil into AA (the really bad guys). Now they have extra AA producing extra bad guys making the problem worse.

The problem is further exacerbated by really high carbohydrate consumption common in the west (due to excessive grain and sugar consumption), which stimulates high levels of insulin, which in turn stimulates the liver to increase production of AA, again the bad guys. Stress does the same thing. Stress increases cortisol production, which increases insulin production, and off we go on the same merry-go-round. (To any Americans reading this, that's a carousel.) And to top it all off, AA production increases as you get older.

So the issue is how to increase the good guys and decrease the bad guys. This is what you need to know.

1. Reduce the consumption of both AA, the oils that eventually lead to its production, and carbohydrates.
 - a. AA is found in red meat that has been grain-fed at all, battery chickens, battery eggs and farmed salmon. Avoid them. Please note that most so called grass fed meat is still grain fed for six weeks prior to being taken to market to fatten it up so the farmer obtains a better price. This process the farmers call "finishing". Finishing alright. It may well finish *you* if you're not careful! It takes 12 weeks to totally change the oil balance in an animal (or a human). So even with grass fed meat which is fed for six weeks on grain, significant negative change has already occurred. Question your butcher VERY carefully, and don't let him or her dodge the issue. In Australia, yearling beef is mainly grass fed only, as is King Island rump. Ask for it at your butcher.
 - b. There is less AA in grass fed red meat, free range chicken and free range eggs. Wild ocean caught salmon has much lower levels of AA than farmed salmon. No, it isn't because the wild animal (fish) is caged. It's the food they are fed. It is rich in omega 6 oils, and is processed by the fish straight through to AA. It is an irony of modern life that people will specifically

purchase farmed salmon in the belief they are consuming the good omega 3 oils, but they're not. It's nearly as bad as grain-fed red meat.

- c. Reduce the use of most vegetable cooking oils. They are rich in omega 6 oils, which the body eventually converts, even though inefficiently, to AA.
 - d. Keep your consumption of grains and processed foods containing simple sugars low. As stated above by increasing insulin production, they stimulate the liver to increase production of AA.
2. Increase the consumption of EPA so that there is a shift towards the good eicosanoids. Fish is widely known to be a good source of the omega 3 oil EPA. But did you know that grass-fed red meat is almost as good? Did you know that free range chicken and free range eggs are also good sources of omega 3 generally, and EPA specifically?
 3. If you are going to take evening primrose oil (EPO), make sure to simultaneously take a supplement rich in EPA. Fish oil will do it, but you need to take a lot of it. Better still is to find a fish oil supplement which has had the DHA removed to enhance the EPA content. You need approximately 3 times as much EPA as EPO.

Make the change. Your body will love you!

Omega 9 Oils

Omega 9 oils don't produce eicosanoids. But they do compete for use of the enzymes the body uses to make them from the omega 6 and omega 3 oils. So these oils can competitively inhibit the production of the bad guys.

Olive oil and macadamia nut oil are good sources, and are better as cooking oil in preference to the cheap omega 6 rich oils, which is most cooking oils on the market.

Saturated Oils (Fats)

Saturated oils (fats) don't produce eicosanoids either. Now don't get too worried. Saturated oils are mainly dangerous when the balance of omega 6 to omega 3 is wrong. Did you know that cardiovascular disease increased when standard omega 6 rich cooking oils were introduced, even though there were simultaneous recommendations to reduce the consumption of saturated fat? It wasn't the consumption of saturated fat that mattered. It was the balance between omega 6 and omega 3 that mattered. And that was ruined by the introduction of omega 6 rich cooking oils.

Good sources of saturated oil include coconut oil and avocado oil. *Coconut oil* makes great cooking oil. But the prince of cooking oils is *avocado oil*. It is rich in good saturated oils, AND in omega 9 oils. And the taste is superb. If you don't believe me, try it!

Margarine

Still on the topic of good oils and bad oils, let me give you one final word of warning. **WARNING! Stay away from margarines.** The process of transforming the oil from which they are made into the solid form in which you purchase them changes the fatty acids of the oil from “cis” forms that are natural into “trans” forms that are man made and unnatural. Aside from the fact that “trans” forms cannot function as essential nutrients but can only ever be fuel for the body (Calories), “trans” fatty acids are implicated in altering blood fat profiles in a negative way. They increase the artery clogging LDL cholesterol whilst simultaneously decreasing the protective HDL cholesterol.⁶⁰ They also raise the levels of triglycerides and lipoprotein a, which are both predictive of heart disease.⁶¹ In fact “trans” fats/oils have been shown to increase the incidence of heart disease by 25%.⁶² And to revisit the role of fats/oils in cancer, women with high levels of “trans” fats/oils increase their risk of breast cancer by 40% compared to women with low levels.⁶³ Do you still want to eat margarine? And watch out, because that is not the end of the “trans” fat/oil story! Many commercially made biscuits, cake mixes and other processed foods use “trans” fats/oils as a replacement for saturated fat, and are listed as unsaturated fat/oil. That makes you think you are getting something healthy, but “trans” fats/oils are at least as bad for your health as saturated fat, and may be considerably more damaging. If we were meant to handle “trans” fats/oils they would have been built into the food chain. But they’re not.

Dairy Foods

Humans do not digest *any* milk products *properly* after weaning since the special digestive enzyme called *rennin* that infants have to help with digestion is no longer present. This is exacerbated when we use *cow’s* milk rather than *human* milk. The nature of the protein is not even similar. Human milk protein is mainly *whey* protein, with a little bit of *casein* protein, which is far less difficult to digest than cow’s milk protein which is mainly *casein*, with only a little bit of *whey*. And cow’s milk has twice the protein content of human milk anyway. This casein irritates the bowel lining, as does *gluten* found in wheat, rye, triticale, barley and oats. This leads it to become more “leaky”. In other words, it ends up letting things into the blood stream that would normally be filtered out. Casein is also the base to many glues, and since it isn’t digested properly, you wind up having this stuff glue up your system. NB - *The cheese making process eliminates the whey and concentrates the casein, so cheese is basically a glue ball begging you to eat it!*

When milk was consumed *raw* (as against *pasteurised*), there were far fewer problems than there are now. Pasteurisation destroys the natural enzymes found in raw milk which help to predigest it, and which therefore assist the body in handling it. The process of homogenisation exacerbates the difficulty. It should be noted that the yoghurt making process partly breaks down the problematical casein protein into whey protein, but only *partly*. If you *must* consume dairy foods, use yoghurt as a first preference, and the best way to do it is to make your own. See the recipe for making your own yoghurt in appendix 1. As a second preference, at least purchase one of the milk substitute products that are based upon whey powder.

Pasteurised and homogenised dairy foods are one of the most dangerous foods on the market as far as long-term health goes. As a naturopathic

practitioner I have *never* seen a child who consumes *no* dairy foods with a throat infection or an ear infection.⁶⁴ These are common to children whose mothers, being aware of only half the evidence, are feeding them up on milk. And contrary to conventional wisdom, dairy products don't even improve the calcium balance in osteoporosis. Milk products are so rich in protein that they actually *deplete* calcium from the body, as demonstrated in a study on post-menopausal women who were supplemented with them, as reported in the American Journal of Clinical Nutrition.⁶⁵ As an adult you won't get immediately sick from consuming dairy foods, but they won't build your health either. Eat dairy foods **very** sparingly.

Grains and Legumes

All grains and legumes have enzyme inhibitors in them that prevent proper digestion when they are raw. They need to be cooked or sprouted to make them digestible. Sprouting breaks down the digestive inhibitors completely, but cooking does not. Even when cooked they are still quite difficult to digest. Birds for whom such things are a natural food have a specially designed digestive apparatus to handle them, but we do not. Because they are difficult to digest, they place a strain on the pancreas, which must produce sufficient digestive enzymes to cope with them.

This is not to mention the problems created by long chain proteins found in legumes and grains called *lectins*. These can be absorbed through the gut lining, and once inside the body, they attach themselves to receptor sites on cells which are designed for the body's own hormones, mimicking their activity and ruining the natural balance. As an example, some common lectins bind to insulin receptor sites, and when the cells involved are fat cells, the lectins concerned promote fat lay-down and reduce fat breakdown, thereby increasing the difficulty of weight loss.⁶⁶

Of these two food types, grains are the worst because most grains contain a long chain lectin type protein called *gluten*, which is by far the most damaging dietary factor we eat. Gluten is the protein that makes bread dough "stretchy", as compared with rice dough and corn dough that tend to fall apart if you pull on them. Corn and rice have no gluten, but wheat, rye, triticale (a cross between wheat and rye), barley and oats all contain gluten. Wheat has the greatest quantity.

The breakdown products of gluten, alpha-gliadin, and beta-gliadin are *always* toxic to the bowel. Ankylosing spondylitis, rheumatoid arthritis and systemic lupus erythematosus (SLE, an auto-immune disease) have all been associated with problems handling gluten.⁶⁷ When the sensitivity is strong enough, a frank disease called *coeliac disease* is diagnosed, but significantly more people than coeliac disease sufferers have gluten problems,⁶⁸ and in addition it has been shown that in Britain at least, the incidence of full blown coeliac disease may in fact be up to 30 times higher than the usual rate of diagnosis.⁶⁹ Coeliac disease is probably under diagnosed in all western nations. In my own case, a life long battle with "irritable bowel syndrome" and bowel wind was not won until I discovered that gluten was the main problem, yet I have never been tested for nor diagnosed as suffering with coeliac disease. These days I adopt the view that "all irritable bowel syndrome is gluten intolerance until proven otherwise", whether full blown coeliac disease is present or not.

What these gliadins do, is to irritate the bowel and make it more “leaky”. If protein levels are high in the diet, problems will develop as surely as night follows day, because long chain polypeptides (partly digested proteins) which are large enough to be recognised by white blood cells as an enemy will enter the blood stream, and allergy may result. Even if it doesn’t, excessive demand on the white cells which “eat” invaders such as the neutrophils and the macrophages, requires the body to devote huge energy resources to the problem, and the body’s alarm system switches on with consequent production of adrenal hormones, just as if there were some external physical threat. Chronic fatigue from adrenal exhaustion, even if not full blown medically diagnosable “Chronic Fatigue Syndrome”, can result. You can work out if you have a food doing this to you by using “**The Pulse Test**”. See appendix 2. Grains or legumes, if used at all, either need to be used sparingly or sprouted. See the section on “**Sprouting**”.

So what is good food?

Good food will be nutrient dense, containing rich supplies of the vitamins, minerals, trace elements, and other accessory food factors. It will provide adequate levels of protein without there being a level of excess that leaves dangerous levels of nitrogenous wastes. In fact the general level of toxins in it will be low, and it will leave little toxic residue when used by the body, so reducing the load on the detoxification and excretion systems. It will also be low in fat so that cellular oxygenation is optimised; yet it will provide enough essential fatty acids to maintain health. And it will be easily digested, being rich in natural enzymes which will assist the body’s built in digestive apparatus, thereby reducing the load on the digestive system. So does such food exist? Yes it does, so read on!

Raw Food As The Ideal Human Nutrition

A look at nature

By simple observation it is clear that all animals on the face of the earth are able to eat their natural food raw. So if a food is natural to humans, it should be able to be digested in its *raw* state. It shouldn’t *need* any cooking. And if we examine those animals with digestive systems very similar in structure and function to the human digestive system, we should be able to get a good idea as to what foods are really natural human food. The animals with digestive systems closest to our own are the *primates*. Those with digestive systems closest to the human are the chimpanzees and orangutans. So what do *they* eat? Both are *predominantly* fruit eaters when it is in season (well over 90% of their diet), but they do eat other vegetable matter when fruits are less available, including raw *unripened* nuts. And contrary to popular understanding, they do eat animal protein; insects and other small creatures. And chimpanzees send out hunting parties to catch monkeys. They tear them apart and eat them raw.



But if you eat too many ripened grains or ripened legumes or ripened nuts you will be in trouble health wise. If you eat too much bread or pasta, too

much rice, too many cakes and biscuits, too many split peas or lentils or chick peas or things made from them (such as hommos), or soybeans or anything made from them (such as tofu, miso or soy milk), or too many nuts or seeds of any sort, *then no matter how many good things they seem to contain as measured in a laboratory which can analyse their food components, **you will eventually get sick.*** If you make them the *central plank* of your food consumption ***you will eventually get sick.*** Your digestive system was *not* designed to handle them, and it does *not* handle them well.

And remember that what your cells receive in nutrition is a result of what your body can *extract* from the food, *not* merely what the food contains as it may be measured by a scientist in a laboratory.

All of the aforementioned problem foods (grains and legumes) can only be digested raw if they are first *sprouted*, at which point they are as easy to digest as raw fruits and raw vegetables, because in the process of germination the enzyme inhibitors that protect the seed whilst it is in its dormant phase are broken down. Sprouted grain, legume and nut seeds, are much more suitable for the human digestive system. Even so, have you ever tried soy bean sprouts? They will still give you bowel wind. That suggests there is something indigestible still in them. So although sprouted seeds are quite good, go a little easy on them.

A Look at Culture

All cultures eat fruit and vegetables raw. Some of them you may prefer cooked. But they are still digestible raw. And contrary to popular belief animal proteins *can* be digested by the human digestive system if still raw, and the proof can be seen in the dietary habits of some other cultures. Eskimos eat all meat and fish raw. The Japanese eat raw fish. Even in the West, sushi is becoming quite popular. Now I am not suggesting that you eat all of your meat, fish and poultry raw. But the fact that it *can* be eaten raw may indicate that such foods are suitable to the human digestive system and that they may well build high level health. Most nuts are eaten raw, although some of them, such as cashews, need a lot of processing to remove toxins that are naturally contained within them.

Conclusion: Good Food Is?



On the basis of the natural & cultural evidence, I believe that the *most natural* and *most ideal* human diet, is a diet composed of raw fruits, supplemented with vegetables and and sprouted grains & legumes, plus animal protein and some nuts and seeds. Ripened seeds such as grains and legumes and those foods made from them, and dairy products should be used very sparingly.

In conclusion I believe that for super-health to be achieved, raw fruits, raw vegetables and raw sprouted seeds should be by far the largest part of the diet, *at least ¾ of it.*

The Problem of Modern Life

It would be ideal if we could eat such a diet, composed only of the most ideal foods, wouldn't it? But very few people have the will to do so. And social pressures alone make it virtually impossible except for fanatics, or for those who are facing imminent death, and who therefore need to change for survival. And social pressures are not the only consideration. The fact is that food has more than nutritional value. It has social value, as we have just seen. But it also has *pleasure* value. You must be able to *enjoy* your food, or you'll never stick to a healthy diet in the long term.

But choices can be made to consume food in a way that deviates as little as possible from such an ideal. To be sure, some damage to health is done, but in the end we all die. The question then becomes, how do we eat for super-health yet get away with a little of what we like?

General Dietary Guidelines

In light of all of the above, the dietary advice that I have given as a naturopath over many years, with great success in both improving health and alleviating almost any chronic health disorder you could name, is the following.

1. Make the staples of your diet those foods that are easiest to digest. These are raw fruits, raw vegetables and sprouted seeds. Try to make these things about ¾ of your diet by volume. Add the other “human foods” in to this base.
2. Consume three “palm of *your* hand” sized serves of protein per day.
3. Use juices to increase your intake of important micro-nutrients. Again, have these early in the day, at breakfast and lunch.
4. Snack on fruit.

These are your staples.

5. To the extent that you want to eat grains and legumes, use them sparingly. In contradiction of conventional wisdom, think of them as *treats*, NOT staples. And remember, a treat is something consumed intermittently as well as sparingly.

6. Avoid dairy foods as much as possible, but if you insist on eating them, once again use them as a treat both intermittently and sparingly, not as a staple. And make your first choice yoghurt based dairy foods.

Food Rank List

Here is a list of foods, ranked from *easiest to digest* at the top of the list through to *most difficult to digest* at the bottom of the list. It should be noted

that foods that are more difficult to digest invariably leave metabolic residues that are more toxic to the body than do foods that are more easily digested. This list is therefore also a list that ranks foods from *most health building* at the top, through to *most health damaging* at the bottom. For easy reference, you will find this list repeated in appendix 3.

Staples

Raw fruits - the most important of all

Raw vegetables

(Cooked fruits and vegetables)

Sprouted seeds

Fish, Meat Poultry & Eggs

Non-essential add ons

Nuts (walnuts, almonds etc) and edible seeds (e.g. - sunflower, sesame, pumpkin kernels)

Legumes

Grain products and legume products, in the following order from least to most dangerous:-

- millet
- rice
- *corn
- oats
- barley
- rye
- triticale
- wheat and *corn

Dairy foods

- These are best avoided but if you must have them, use yoghurt.

**Note on corn.* Some people handle it well, and it sits between rice and oats. Others do not, and for them it is as bad as wheat.

Guideline Summary

The above guidelines can be neatly summarised in the following two guidelines:

1. The more food you consume from towards the top of the list the better, and the less from lower down the list, the better.
2. Use lots of fresh juices.

How Many Calories?

To maintain your ideal weight, you will need to consume 35 to 45 Calories per kilogram of body weight,⁷⁰ which is equivalent to about 16 to 21 Calories per pound of body weight.⁷¹ Refer to appendix 4 for the Calorie content of raw fruits and raw vegetables. This will give you an idea of the volume of food you need to consume. It will also convince you that you cannot remain or become overweight on such a program.

Important Supplements

I am not a fan of vitamin and mineral supplements in general, even multivitamin and mineral supplements, with a couple of exceptions listed below. They all fall so abysmally short of the complex nutrient make up of natural foods that it hardly seems worth it, even for those on a poor diet. I prefer supplements derived from *whole* foods **known** to be rich sources of *many* essential nutrients and accessory food factors. So in addition to the above I would recommend the following supplements. For easy reference, this information is repeated in appendix five.

Kelp

Take 1000 mg daily. This takes care of the trace elements which are lacking in food as it is grown today.

Seawater

Take 1 tablespoon daily, which is about the amount in your average ice cube. This is just as important as the kelp and for the same reasons.

Alfalfa (Medicago sativa)

This is called lucerne in Australia and Britain.⁷² Grow a little patch of it in your back yard, and use it in salads. This is such a nutritious food that the Arabic peoples called it Al-Fal-Fa, which is where the name comes from, and it means “Father of All Foods”. Of land plants, it is the richest known source of many vitamins and minerals. Its roots go very deep, and it brings up minerals and trace elements from the subsoil. It helps the body absorb nutrients from other foods, and has been found useful in the treatment of a wide variety of health problems including gas, fluid retention, arthritis and recovery from alcohol and drug addiction. It also increases milk production in nursing mothers.⁷³ And all this from a *food*! This food is especially valuable during convalescence from illness. For general use, the dose is 3 to 10 grams daily.

Brewer's Yeast

Take one rounded teaspoon daily in juice. “Soland” brand is my taste preference. The flavour is like vegemite.⁷⁴ Brewer's yeast is rich in B vitamins and chromium, which helps control blood fats and blood sugar.

Lecithin

Take 1 dessertspoon of the granules daily. Lecithin is rich in choline and inositol. Soy lecithin renders cholesterol more soluble, reducing the chances

of it depositing in the arteries, and increasing its removal from tissue deposits.⁷⁵ It is found naturally in the myelin sheath that surrounds nerves, so it helps maintain a healthy nervous system. It is also helpful for maintaining brain cell health. It increases resistance against viral infections and can help prevent the formation of gallstones. It has many other important functions in the body, including blood pressure control, and keeping the tubes of the kidneys unblocked.⁷⁶ The granules extracted from soybeans are the cheapest form. They are tasteless. When fresh, if the package is squeezed it will run like raw sugar. If it is sticky, it has gone rancid, so do not buy it. Colour varies, and is no indicator of freshness.

Juices

Use juices freely. See the next section for further details.

Garlic, onion and ginger

Use these liberally. Even glaze ginger is better than no ginger. Or put ginger in your juice. See the section on juices below for the quantity. Garlic can be taken by chopping up a clove and taking the pieces as you would a tablet. One clove daily. Or alternatively, purchase “00” sized empty gelatine capsules from your pharmacy and fill them with garlic powder that is available from your supermarket. Take one to two capsules daily. If you cannot stand the taste of ginger, buy the gelatine capsules and fill them with ginger powder, and take one to two capsules daily. Use onions freely both in salads and as a cooked vegetable. Both garlic and onion may be juiced, but juice them *first* and then juice the other things you are using to hide their flavour or the taste of them will linger in your juicer forever!

Green Tea

Green tea is worth considering as a replacement for tea or coffee. It reduces the risk of cancer, heart attack and osteoporosis. It reduces inflammation in arthritis and helps control weight. It is also rich in *phytoestrogens*, which are those plant chemicals that help a great deal in balancing the female system and controlling prostate trouble in men. Very few things you can consume will have such wide application.

Food Extracts

It is possible to purchase a range of products that are extracts of natural foods known to be rich in plant nutrients. Those available include extracts of wheat grass, barley green, alfalfa (all in powder form), kelp and spirulina, chlorella and lactobacillus bacteria. One company that supplies quality products along this line is the “S.A.F.E.” company. See appendix 14 for the contact details.

Chromium

If you are over 45, or if there is a family history of diabetes, or any difficulty controlling blood sugar or blood lipids (fats), or if you have had heart by-pass surgery, then take Chromium Picolinate 200 to 400 micrograms (µg or mcg) once daily.

Zinc

If you are a male over 50 take a zinc supplement for one year until the recommended diet gives the full health benefits, and eat plenty of pumpkin kernels to help with impending prostate problems. And believe me if you are male and in that age bracket, they are impending problems, not maybe.

If you follow these guidelines as a general part of your dietary philosophy, then you are unlikely to ever suffer problems due to nutrient deficiency, and if someone invites you out to a fast food restaurant which is full of yummy health destroying rubbish, you should be able to go along and eat what you like without worrying about *anything*. *Just don't allow such a treat to become the norm!*

Sprouting

Humans have been using sprouted seeds as food for 5000 years or more. They are not a new idea. “Essene bread”, a type of bread used by the Essenes, a religious sect in first century Israel, had a lot of sprouted grains in it. And they have been an important part of the diet of long-lived groups such as the Hunza people. Most seeds that you can buy can be sprouted. Some of them such as the sprouted seeds from tomatoes, capsicum or eggplant are poisonous, but anything else available through normal channels is not. Some others such as rice are difficult, so I wouldn't bother with it but most are easy. Provided that the seeds you buy have not been hulled or irradiated, they will sprout. Don't use seeds from a seed nursery. They have been dusted with poison. You need unhulled and non-irradiated seeds if you want to grow them. The following seeds are suitable for sprouting; alfalfa, fenugreek, mustard, radish, sesame, dried legumes of all sorts including adzuki beans, chick peas, lentils, lupins, mung beans (Chinese bean shoots), and soy beans. Grain seeds such as barley, unhulled millet, oats, rye and wheat can all be sprouted.

Advantages of Sprouted Seeds

Nutritional

Seeds are a storehouse designed to ensure new generations of plants, and they contain all that is needed for the new plant to thrive until it can establish its root system and begin extracting nutrients from the environment. Once germination commences the digestive inhibitors are broken down, and all of the valuable nutrients in the seeds that have been difficult for the human digestive system to assimilate are converted to an easily digested and absorbable form.

As the seed begins to sprout, vitamin and enzyme levels rise astronomically (some as much as 20 fold), and long chain proteins (including the dangerous lectins) are broken down into the basic building blocks that are amino acids. Even the amino acid balance changes so that there are more of those essential for humans and less of the inessential ones that our liver can manufacture. Oils are broken down into essential free fatty acids, starches are converted into simple sugars, and minerals which have been bound to phytates in grains, rendering them difficult to absorb, are released for

absorption. The levels of anti-cancer factors such as the *nitrilosides* (laetrile, vitamin B17) increase by 10 to 30 fold,⁷⁷ as does the level of lecithin, which is a food substance rich in choline and inositol, which are involved in controlling the damage done by fats in the diet, including cholesterol. Nutritionally speaking, the only food that betters sprouts is fresh picked raw fruit.

Financial

If you can put up with the boredom, you can live on nothing but sprouted seeds and if you can find a bulk supplier, it will cost you no more than a few dollars per week per person. Very few seeds are required for a large amount of food. One teaspoon of alfalfa seeds will make about 250 grams of sprouts.

Disadvantages of Sprouted Seeds

The above information is correct; *most* of the time. However it is also true that some seeds are more difficult to sprout than others, and that the “indigestibles” in them are less completely broken down than is admitted by those who are fanatical about the value of sprouted seeds. I remember sprouting soy bean seeds. It took ages to get them to sprout at all. And then even after more than a week of steady growing, when I ate them I still produced enough bowel wind to use as a weapon of mass destruction. The truth is that when gas is being produced, the food is fermenting, not digesting. Something in there is not as digestible as purists would like to admit. You will find the same thing is true of all legumes, but to a lesser degree. And of course how much trouble sprouts cause you depends upon just how strong your own digestive system is. So take notice of how well you process them before making them a substantial part of your diet.

With that proviso in mind, sprouts are cheap and nutritious, so they are worth looking at. See appendix 6 on how to grow your own sprouts.

Juices as an Aid to Health

Foods are less nutrient rich than they should be because they are not grown on ideal soil. But juices can be used to increase your intake of the accessory food factors because they are a food concentrate that is easily digested and absorbed. A juice extractor may in fact be one of the best investments you can make for your health. Backing this up with a vitamiser or “slender blender” type of mixer expands what you can do.

What Type of Juicer?

There are basically two methods of juice extraction, the *centrifugal separation* method and the *compression* method. The centrifugal separation method cuts the fruits or vegetables up very finely and then spins the pulp at high speed to force the juice out through a fine sieve, whilst the remaining pulp shoots off into a separate collection receptacle. The compression method works by grinding up the food under pressure, and allowing the juice to dribble out.

It has been claimed by adherents to the compression method that the centrifugal method of juice extraction mixes so much air with the juice that

enzymes and other important accessory food factors are damaged or destroyed by oxidation,⁷⁸ in which case it is pointless drinking the juice.

Advocates of this theory prefer those juice extractors that work by compressing the food, and it is possible to purchase both hand-mechanical and electrical versions of the same. The theory is that less or no air is mixed with the juice and the health benefits of the juice are entirely preserved.

I have some reservations about this theory, because I have never seen any scientific data to back it up. I make the following points.

1. All juice however made will oxidise on exposure to the air, and it is easy to tell when it has happened. Have you ever cut an apple and left it sitting exposed to the air? You will have noticed that the surface turns *brown*. The air has oxidised important biological molecules in the surface of the apple and the colour change is indicative of that event. If juice has been oxidised, its colour will change. It will darken, tending towards a browner tinge. NB. Do not confuse this with the dark colour, often brown in tone, which develops when a number of different juices are mixed. The juices of *any* green vegetable mixed with almost any other juice will create this colour. It does *not* indicate that the juice factors have been oxidised.
2. You can taste a difference in the juice when it has been oxidised. If by your taste buds or by a change in colour, you believe your juice has been oxidised, then don't drink it.

Having said that I have had unconfirmed reports that cancer patients do not improve on juice made by centrifugal extraction. But once they change to a compression juicer improvement follows. You need to weigh the evidence up for yourself before going to the trouble and expense of purchasing a juicer.

I think that both methods of juice extraction work very well. But I suggest that juice is *best* made and consumed immediately, because however extracted the oxidation process *will* commence *immediately*, and it is true that the longer it is left the less positive benefit the juice will be to your health. If you are unable to make juice as often as you wish to consume it, keep it in an airtight container, refrigerate it, and place a small amount of vitamin C powder in the juice to act as an antioxidant. One-quarter teaspoon per cup of juice will suffice. If your schedule will only allow you to make juice on weekends, try making a large batch, add the vitamin C, and freeze most of it in serving sized portions. Each night at bedtime, take out your next day's allowance and let it defrost at its own pace in the refrigerator.

You may purchase a compression method juice extractor if you desire, but the only electrical one that I am aware of is nearly three times the price of the best centrifugal one that money can buy. Prices of centrifugal juice extractors vary from \$45 Australian to \$180 Australian as of the date of writing this. Durability, availability of spare parts, proximity to service centres, the extent to which fruit needs to be chopped up before the juice can be extracted, size of motor and ease of cleaning are some criteria that may help you in your selection. The fact is however that I used a small and cheap juicer myself for a number of years and found it to be satisfactory. I

only bothered to upgrade it because I found a superior juicer for \$4 in an opportunity shop! It was filthy, but three hours later, it came up trumps! How could I refuse it at that price?

How to Consume Juices

For easy reference in the future you will find the following information summarised in appendix 7.

Mixing Juices

Although many people suggest that the juices of fruits and vegetables should not be mixed, at the practical level I have found this to be not worth worrying about. Juices can be mixed fairly freely.

Which Juices?

A good starting base is a mixture of carrot, celery and apple, with a little ginger added to help with your circulation. Use a piece of fresh ginger about half the size of the end of your thumb, measured from the end knuckle to the tip, and do that each time you make juice. Ginger has been demonstrated to reduce platelet aggregation (reducing the tendency of blood to clot unnecessarily), and to reduce serum and liver cholesterol levels.⁷⁹ In other words, amongst its other benefits⁸⁰ it makes the blood less sticky, which is one objective that is prerequisite for achieving super-health. To this mix may be added anything you like to flavour it. But remember that bananas, passionfruit, avocados and paw-paws do not juice in a normal centrifugal juicer. They need to be blended with a little juice using a vitamiser or a “slender blender” to make a kind of “smoothie”.

Juice based banana smoothies are wonderful for disguising the taste of less palatable juices. You make them by putting your juice in your vitamiser, and adding a chopped banana. Blend it up. Or use one of the “slender blender” type machines. As an example of its capacity to hide less palatable flavours, it will disguise beetroot juice beautifully, and the fact is that it is a good idea to include a bit of beetroot juice frequently, because of its cancer controlling properties (see “**Cancer**” under the heading “**Part 6. Health Disorders**” below). I personally find beetroot juice hard to take, taste wise. But add a banana, and I hardly even notice it is there! You will find a similar taste problem with the juices of many green vegetables, which also have anti-cancer properties, and banana works its magic for them also. When in season, passionfruit pulp blended with juices also helps disguise flavours.

Almost anything else will juice okay *but if you juice garlic or onion* juice them *first* and then juice the other things you are using to hide their flavour or the taste of them will linger in your juicer forever and ever and ever amen! And remember as a simple rule of thumb; use only a little juice from very strong foods like onion and parsley. Make the bulk of your juice with the standards mentioned above.

Having said all of the above, it is okay to use single juices as a treat. Rockmelon (cantaloupe) juice on its own is marvellous, and the stock standard apple juice is always a good stand by. However beware of drinking

too much orange juice. Oranges have substances in them that are hard for the liver to handle, and they precipitate either eczema, asthma or arthritis in susceptible people, so use them sparingly. However every so often, make your orange juice by putting it through the juicer skin and all. The volatile oils in orange peel stimulate the immune system, provided they are modestly consumed. When you do this don't add ginger to the mix. You won't need it.

“Not Really” Juices

A great way to start the day is to have a “not really” juice. By that I mean that instead of extracting the juice, use a “slender blender” type of mixer or a vitamiser to reduce a mixture of fruits to a liquid pulp. Any fruits may be used, but if a consistency like a “smoothie” is desired, some fruits work better than others (see above), and apples don't really work very well at all. There is just something about the consistency of the mush that just isn't “smoothie”! And if you are going to make ginger one of the ingredients, you will need to peel it.

Finally, if you are looking for a treat on a hot summer's day, try this. Watermelon will juice very well, and adds a subtle but distinct taste to your juice mix at any time. But in hot weather, set your juicer aside, and blend up the flesh of some chilled watermelon, seeds and all (they are rich in essential fatty acids) using your vitamiser or “slender blender”. The seed husks will sink to the bottom, leaving the crushed seeds in suspension in the mix. This makes a fantastic watermelon smoothie, which is very refreshing in the heat.

How Much Juice, And When?

If you are ill, juice consumption can be increased. At such times, two or more litres per day are not too much. Otherwise ½ litre to 1 litre per day is more than enough, consumed early in the day, up to and including lunchtime. For example, what about one 250ml mug full at breakfast with fruit, and the same at lunchtime, either with fruit or salad? Generally speaking don't go overboard or you'll be running to the toilet all day to empty your bladder!

Please note well, regarding the seawater supplement that I recommended in the section headed “**Important Supplements**”, under the major heading “**General Dietary Guidelines**”. It can be added to your juice, and you'll hardly even know that it is there! And as stated previously, make only enough juice for immediate use. Don't make it and store it if you can avoid it. If you must do that, freeze it and defrost it without the aid of heat or microwave. If you preserve it any other way, it will begin to oxidise, and you will start losing some of the key health building nutrients.

Further Reading

The topic of juice therapy is so complex that I cannot possibly do it justice here. But I have provided a list of books that you may like to consult in Appendix 15.

Changing your Diet

It can be the hardest thing in the world to change diet. Habits of a lifetime are hard to break. I cannot give you a foolproof method that will work. But I do know this. If you tell yourself that you *can't*, and all that you can *imagine* enjoying is the food you are used to, you will never change. There is a connection between your *imagination* and the *subconscious* part of your mind, and it is your subconscious that programs you for success or failure. It is not what you *think* that programs your subconscious, it is what you *imagine* that does it. If the only thing you can imagine is enjoying the foods that lead to poor health, you are programming your subconscious mind for failure, and your diet will not change long term. Willpower won't help you.

But the power of your imagination can.

Sit quietly with your eyes closed, and imagine yourself eating the foods that would make you healthy. Put as many details into the scene as you can. Imagine the setting, the company, the sights, the sounds, the touch of things, and the smells and tastes. Now imagine that you are enjoying that food immensely. When you can do that, you will have the problem licked. And of course as your health improves, your sense of well-being will bring added encouragement. And that will happen much faster than you think is possible!



Identifying Food Addiction/Allergy/Intolerance

But there are some physical problems you need to watch out for that may make it seem even more difficult to change your diet than it is.

One problem you may face is an addiction *to one or more particular foods*. You may suffer from this and not even know it. Some years ago one of my patients needed to give up dairy foods to improve her health. She came back for her check up in a month, and insisted that she had found that milk was the only drink that could quench her thirst. She insisted that one morning she had drunk two litres of juice, so that her stomach was sloshing, but her thirst had not abated until she had drunk a glass of milk. This lady was *not* thirsty *at all*. She had enough liquid in her system to sink the Titanic! Her craving for her food of addiction, which was milk, manifested itself as *thirst*. And I have had my own struggle.

Just shortly after I had commenced my practice as a naturopath at the young age of 32, I went for a medical examination for insurance purposes. To my great surprise I failed the blood pressure test! It was 160/90, and that is high for a person of that age. The accepted normal blood pressure is 120/80. My own reading gave me a fright. So I took some herbs and got it down to 135/85 and that reading just passed the test. But I didn't want to be on blood pressure controlling medication for the rest of my life even if the medicines were natural. So I went off the herbs and the predictable occurred. My blood pressure went back up!

So I did what I would have asked any of my own patients to do. I kept a record of everything that I ate for a week to see if there was any pattern to my food consumption that would indicate I had a food addiction or

intolerance that was contributing to the problem. Such a problem often shows up in a weekly diet record because the food concerned will be something that is consumed daily and in large quantities. And I was eating a *lot* of bread. And I also love biscuits (cookies to any Americans who are reading this) and cakes and I was eating a lot of them too! I thought I could get away with it because my weight was low and I was extremely fit. I was paddling a kayak 20km most days. My resting pulse rate was around 50. That is fit. But even though it was all made from natural wholegrain my body was not handling it well. Clearly I had a problem with wheat.

So to remove it from my system I ate nothing but raw fruit for 2 weeks. I ate as much as I wanted, any variety of fruit that I wanted, but I ate only raw fruit. At the end of the first week my blood pressure had dropped to 130/70 and my energy levels had risen dramatically. By the end of the second week blood pressure had dropped to 110/70, and that is the blood pressure that I would regard as the *real* normal value. And it stayed there after I reintroduced many other foods, *until I reintroduced wheat*. Then it went up again!

As time marched on I discovered that I had a general problem with gluten containing grains, which are wheat, triticale, rye, barley and oats. Whenever I stay away from them many minor niggles disappear. If I eat them I just don't feel right. And as I have stated elsewhere in this book chronic digestive troubles hound me unless I stay away from gluten containing grains.

The point is this. As I have stated above you may have a problem and be unaware of it. If you cannot seem to satisfy your hunger or thirst *without* a particular solid or liquid food, be suspicious. If you have suspicions the first step is to keep an accurate record of everything that you eat *for one full week*. Foods eaten daily and in large amounts are the most likely culprits. Sometimes the foods involved are obvious and you can see what you need to eliminate. And if your health improves dramatically by staying off a food you have noticed is a large part of your diet then you have probably nailed the problem.

But sometimes it won't be as simple as that. And if you are having trouble identifying problem foods you need a more powerful tool than the pattern of your food consumption. And that brings us to the next section.

The Pulse Test

If you *do* have a food addiction, to one or more solid or liquid foods (milk is a *food*, not a drink), then each time you consume that food, you get an adrenalin hit. It gives you a lift. When you need another hit, the way that will manifest is either as *hunger* that isn't satisfied until that food is eaten, or as *thirst* that isn't satisfied until that liquid food is drunk. And it is possible to use this fact to identify the problem food(s).

The first step is to eliminate probable culprits from your system by following an elimination diet, which consists of eating nothing but raw fruits and their juices (no strawberries or citrus fruits), raw vegetables and their juices (no tomatoes), and sprouted seeds for 14 days. This is followed by eating the suspect food and measuring your pulse. If you have been given an adrenalin

hit by a food your pulse rate will rise. If you need to go this far refer to **“The Pulse Test”** in appendix 2 where full details of the procedure are given.

However in most cases you don't really need to check for possible food addictions. If you stick closely to the dietary recommendations, food allergies, cravings and addictions will pass in 2 days to 2 weeks. So stick at it. As you feel better your desire for foods that are harming you will reduce. So use your imagination in a positive way to program your mind to eat good food and reap the benefits. Having said that, if you do have a food addiction or allergy/intolerance, it may be that even if you stay away from it for a lengthy period, your body will never be able to handle it. And if you start eating it again your old problems will return. Although the pulse test is unnecessary most of the time, if in doubt use it to identify those foods that you must eliminate completely for the sake of your health.

Comment On “Elimination Diet” Powders

Elimination diets are used as a first step in the process of identifying problem foods to which people are having an adverse reaction, either in a biochemical sense or with full blown immune system mediated allergy. The basic idea is to eliminate all possible allergy producing food components (usually proteins), and then to later challenge the body by eating the suspect food. Obviously the first problem is to be able to eliminate the allergy-producing problem from the diet in the first place.

To help eliminate food based allergens from the system some companies are producing food powders with specially treated proteins in them. The proteins in these powders are small enough that the immune system doesn't see them as a threat and so doesn't respond to them. Most full-blown immune based food allergy is due to the immune system recognising as an enemy, a large protein that has entered the system via a leaky gut.

If the size of a protein “particle” is less than 5000 “Daltons” (the unit of size measurement used for these things), it won't be large enough for the immune system to bother with it. In some powders this protein is derived from rice, which I believe creates problems. In the best powders the treated protein is “hydrolysed lactalbumin”. Lactalbumin comes from whey, which is a protein suitable for human consumption. Most of the protein found in human breast milk is whey protein.⁸¹ The process of “hydrolysis” breaks the lactalbumin into smaller units, making it even less likely to be seen as a threat by the immune system. And so the danger is eliminated.

But the fact is, that most proteins in raw fruits, raw vegetables and sprouted seeds are either single amino acids or two or three amino acids joined together, and these protein units are much smaller than the final product of “hydrolysed lactalbumin”. I am saying that in most cases there is little need to pay for these specialised protein powders. They are expensive. Provided liver detoxification is undertaken in conjunction with a strict diet of raw fruits and juices, raw vegetables and juices and raw sprouted seeds, this is most likely all that is needed. It is true that some people react to things found in other foods that are not proteins. But this reaction is usually due to a leaky gut and liver congestion, and this heals very rapidly on the program I have recommended. I seriously doubt the value of the specialised

powders for people who are prepared to be strict with their diet and liver cleansing program.

As mentioned before an elimination diet that I have used with success in my practice, and the procedure for testing for food allergies/intolerances is found with “**The Pulse Test**” in Appendix 2.

SECTION FOUR:

STRESS MANAGEMENT

Introduction

Most health practitioners will tell you that stress is a factor in many illnesses. But why is that so? When stress hits us, the sympathetic nervous system is activated and the hypothalamus area of the brain tells the adrenal glands to release extra adrenalin and cortisol. These things have wide ranging effects. Respiration deepens, heart rate increases, blood pressure rises, the pupils dilate, and blood is diverted from the skin, stomach, liver and intestines to the heart, muscles and central nervous system. Cholesterol levels rise, digestive processes are suspended, glucose reserves are released from storage in the liver, the immune system is depressed due to the cortisol release and the spleen discharges its store of red blood cells. This state is meant to be temporary. Whilst all of the above activities of the body are necessary in a fight or flight situation, if they persist over a prolonged time the normal balance of the body is compromised, and almost anything can and does happen as a result of that imbalance.



Research now shows stress to be linked to very many diseases. The fact is that stress negatively affects the white cell defence of the body, making us more susceptible to almost any infection, and by reducing the deal with cancer cells before they become a threat.⁹² Clearly the management of stress is crucial to good health.

Most people do not understand stress or how to manage it. Stress is in fact essential to life. Single cell creatures placed into an apparently ideal environment with no challenge whatsoever *die*. But equally if they are overstressed to the point that the stress becomes distress, they *die*. Humans are not a lot different. We *need* some stress, but not too much. It is *dis-tress* that is the problem, although it is commonly referred to merely as “stress”.

And the list of the symptoms of dis-stress is a long one, even if frank medically classifiable disease is not present; fatigue, feeling exhausted, “run down”, frequent headaches, migraine, gastro-intestinal disturbances, weight change (loss or gain), difficulty sleeping (waking after two or three hours sleep and feeling alert), and then perhaps being unable to wake up in the morning, breathlessness, inability to shake off a cold, excessive sweating, muscle tension, neckaches, spasm, backache, rapid uncontrolled speech, loss of interest in sexual activity, temporary impotence, increase in any of the following - smoking, drinking, drug intake, sleeping or eating, plus dramatic changes of mood, vagueness, forgetfulness, not finishing sentences, depression, excessive worry over big or small issues, touchiness, sudden outbursts of hostility and anger, angry at self, suspiciousness, at times almost paranoia, mistrust of friends and family, feelings of inadequacy and helplessness, feelings of isolation, buckpassing, scapegoating, blameshifting, dreams full of conflict situations, loss of sense of humour, inability to relax, difficulty with decision making, and excessive daydreaming. You cannot possibly have all of those symptoms. If you did, you would be incapable of reading the page! But if you are dis-stressed you will have some of them.

The Extent of our Responsibility

The extent to which we feel stress is not merely due to what is happening around us. There is an interaction between the external environment and the things that make us what we are. So to some extent we must accept responsibility for the problems that dis-stress causes us.

Patterns of Thinking

A lot of handling dis-stress has to do with the way we *think* about things. The patterns of thought we frequently use, and the explanations for life events that we accept have usually been programmed into us at a young age. An old truism is relevant here, and it is this. “There are only three ways that children learn.” Let me list them for you:

1. The first way is by example.
2. The second way is by example.
3. And the third way is by example.

Even if a home is full of love and caring, if the parents have automatic thinking patterns that are destructive to their own well being, even should the parents *not* be abusive to the children, their children will tend to learn and adopt these faulty patterns of thinking without question. Worse still, if the family home was highly dysfunctional and abuse of some sort was present, there develops a tendency to see things in a catastrophic light. These “automatic” modes of thinking are usually not very helpful to us and they may be manifestly destructive for us. But these automatic thought patterns *can be changed*. We can *choose* to change them if we want to! It takes work, but it is possible. Research in the area of cognitive psychology has now demonstrated this. Examples of these sorts of destructive thinking patterns include the following.

1. All or Nothing Thinking

This means believing that if something isn't perfect, it is therefore totally useless. Nothing is ever perfect. Aim for excellence but praise yourself for what *is* achieved, rather than focusing on the shortcomings of your achievements.

2. Over-Generalisation

This means generalising a single and specific negative event as an indicator of an ongoing pattern of failure and defeat. A single failure is just that: a single failure. And is failure such a disaster anyway? The person who never failed never achieved anything. Successful people usually fail more than they succeed. But they are unfazed. They try so many different things, that something has to work in the long run!

3. Filtering Out The Good

This means filtering out or ignoring positive feedback and concentrating on negative feedback. This includes exaggerating the importance of negatives

about yourself and downplaying the value of the positives. People with this problem are always saying “yes, but...” about what they’ve achieved. Try to get a balanced view of yourself. There is no such thing as a total loser.

4. *Jumping to Conclusions*

This means jumping to negative conclusions when the evidence doesn’t warrant it. This includes predicting a negative future and then acting as if it were established fact, or reading negative attitudes about yourself into other people’s minds. It is true that it is possible to “read between the lines”, but our own bias often gets in the way of accuracy. So don’t mind read. You need to argue with the so-called evidence for the negative. Is it really like that? If you think it is, you probably have a built in “automatic” thinking problem.

5. *Believing Feelings*

This means assuming that your feelings are a good indicator of the way things really are. This only reinforces the negative feelings and increases your stress. The fact is that feelings do not necessarily give a true indication of how things really are. You need to take notice of your feelings. But if you believe them as a matter of habit, you cannot fail to be stressed.

6. *“Shoulding” On Yourself*

This means telling yourself that you “should” or “shouldn’t” be doing this or that. Other people put enough pressure on you. Why do it to yourself?

7. *Self Labelling*

This means to habitually label yourself in a negative way. For example calling yourself a “loser”. Once again, other people put you down enough. Why do it to yourself?

8. *Blaming Yourself*

This involves accepting blame for things when you are accused even if it is not your fault. We all need to take responsibility for what is our responsibility. But don’t buy into what *isn’t* your responsibility!

9. *What If...*

This involves worrying about things that may never happen and it is a waste of time. But everyone knows that already. The fact is that *no-one* ever stopped worrying by being told not to worry! To be defeated, *worry needs to be replaced with something*. A better approach is to realise that worry is a sign of a very creative mind! But it is *negative* creativity. Learn to be creative in a more positive way. So “worry” *positively*, not negatively and enjoy your creative energy instead of directing it towards destroying your joy.

10. *Comparisonitis*

This means comparing yourself with others, and usually in a negative light. But why bother? The fact is that you are how you are. All people are

equally valuable in the universe regardless of the faulty measuring sticks that people use which seem to show differences. End of story. However if you are where you are because you have sat on your backside and failed to even try, then you have a problem to deal with. But that has *nothing* whatsoever to do with *where other people are at*. You can decide to start trying now can't you? It is true that you may never be able to make up lost ground but who cares? The joy of life is in the *journey*, not the destination!

Many of these automatic thinking problems amount to a combination of pessimism and unreasonable self-criticism. Learn to be optimistic and tell that critic sitting on your shoulder to take a hike! Learn to argue back! For help in identifying and dealing with these automatic but destructive patterns of thinking I thoroughly recommend three books.

1. *Feeling Good, The New Mood Therapy* by David D. Burns.
2. *Learned Optimism* by Martin E. P. Seligman.
3. *10 Dumbest Mistakes Smart People Make And How To Avoid Them* by Dr Arthur Freeman & Rose DeWolf.

Refer to appendix 15 for publishing details.

Attitudinal Problems

But it is not just thinking patterns that are a problem. Underlying *beliefs* and *attitudes* play a major role in determining the subjective level of stress that we experience as a result of life events. However just as we can choose our own thoughts, we can also *choose the attitudes* that we adopt in life. The fact is that our minds are under *our* stewardship, *not* the stewardship of someone else. If we *choose* to think about things in a negative way, or *choose* to adopt *unhealthy attitudes*, we *choose* to be dis-stressed and we have no-one to blame but ourselves! The fact is that if a tidal wave sweeps away all that you materially own, then if you become stressed it is your own silly fault for adopting an underlying attitude and belief *that material possessions like that really count in the overall scheme of things*.

Control Your Mind, Develop Your Character

It is *our own responsibility* to take control of our minds.

Many stresses are self imposed, and we can't blame anyone else for them! If we pollute our minds with material from books or movies or television shows which promote anger,⁸² violence, hatred and unbridled lust, and which make a virtue of manipulating and using other people, we will be placing stress on our inner most being. We were not designed to operate in that way. Remember that your eyes are the windows of your soul, and your ears are a doorway to the heart. And if you pollute your mind you damage your mind-spirit-body eco-system. The hormone balance will shift and you will enter the downward spiral to ill-being. Your well-being will definitely be compromised.

The fact is that what you repeatedly expose yourself to *will* influence your imagination, your attitudes and beliefs, your actions, and ultimately your character.

Why be careful? Because at the end of the day the only thing you can build that you can really hang onto is your *character*. ***Everything else can be taken from you!***

But do more than avoid things that are unhealthy for your mind because your mind is an active thing. It is always filled with *something*. Merely removing mind pollution will not transform you. If you wish to be transformed the pollution must be *replaced* with something. So make a conscious effort to dwell upon those things that are uplifting, peaceful, joyful, pure and good.

And use your imagination to reprogram your subconscious, because it is the *imagination* that programs the *subconscious mind*, not simple thought, and it is the attitudes and automatic reactions and thinking patterns that are programmed into the subconscious that tend to dictate how we handle things. So in a deliberate attempt to *reprogram* your subconscious mind it is helpful to actively imagine scenarios in which your previously poor attitudes have landed you in trouble, and then *imagine* handling them in a *different way with a different and more positive attitude*. Set up the scene in your mind and put in as many details as you can; the emotional background, the sights, the sounds, the smells and the tastes. The more detailed it is the more effective it will be in reprogramming your subconscious.

For as long as you can't imagine doing things differently you won't be able to. But once you can imagine it the automatic reaction of your subconscious will be different to before and more positive. That *won't* change other people, but it *will* change *you* and how you handle them!

This process is not easy and it takes time and persistence.

Difficult People; Our Fault Or Their Fault?

Having said all of the above, the fact is that most of the stresses we face are tied up with our *relationships with others*, and there is no doubt that there are difficult people in the world. However we are transformed such people are not going to go away. But we can learn how to handle them if we want to: if we are prepared to put in the work. An excellent reference for people who wish to work through such issues is the book "*Boundaries, When to Say YES, When to Say NO, To Take Control of Your Life*" by Dr Henry Cloud & Dr John Townsend. There is also an excellent companion video set available with the same title and which I strongly recommend if you have difficulty in this area. Refer to appendix 15 for publishing details.

But learning to deal with difficult people by taking the responsibility for setting our own boundaries is only part of the answer. In addition we may need to deal with our own underlying negative attitudes to people in general. Because if we approach our relationships full of "attitude" as the Americans say, they will never be good relationships and we will be constantly under stress. Having "attitude" is just as health destroying as deliberately taking a small daily dose of a slow acting poison. It will eventually get you! In fact,

ventilation of anger has now been shown by proper research to make anger worse, not better,⁸³ and the long term effects on health are devastating.

Love is Important

We need to remember that love, grace and forgiveness are more important than being *right*, and much more important than getting our own way! Develop *those* attitudes, learn to handle your envy and pride, and much stress will simply evaporate.

The Cult of Self

Modern western culture is obsessed with the “self”. You can find “self improvement” or “self actualisation” or “growth” courses or seminars wherever you want to look. In fact you are probably reading this book to help you improve your own health! Is that bad? Is that unhealthy? Yes and no.

It is okay to want to be the best “you” that you can be, and to work towards it. But the modern tendency to self-absorption or self-obsession is bad and unhealthy. The terms “self obsessed” or “self absorbed” are really only nice ways of saying “self centred”. When interest in self-improvement becomes self-centredness, you have started on the slippery path to despair and loneliness without even realising it. Why is that?

As I have already stated, one of the key attitudes for lowering stress and for achieving happiness is an attitude of *love* for others. And the fact is that love is *other* centred, not *self*-centred. Self centred people are obsessed with ensuring that they get what they think they deserve, what they think their rights are and so on, with little thought for the other person. But the fact is, that this world is not perfect, and someone is going to tread on your toes, invade your territory, or infringe on your rights *every single day that you walk this earth!* So what are you going to do? Get angry *every* time it happens? You will you know, if you are self-obsessed and self-centred! And that is *not* healthy. And who wants to be the friend of someone who is totally self focused?

I am not advocating being a doormat. Self-care is *okay*. But some balance needs to be in place. If we make our most important life’s goal our own happiness, we will *never* achieve it, because *happiness is a **by-product** not an **end product***. Working to achieve everything for self leads to loneliness, unhappiness and despair, not happiness.

In other words, the road to stress reduction, to fulfilment and to happiness, is to forget about self and to serve others.

Have I given you something to think about? I hope so, because the western world is in deep trouble right now. In an era in which there are greater resources than ever before to help us handle our problems, we have more unhappiness, more depression, more suicide, more drug problems, in fact more of almost every problem you could name, and there is one key reason for it. ***We have become self absorbed and self centred.*** I repeat, *happiness is a by-product, not an end product*. If you aim at it, you’ll miss it. If you forget yourself and look after others, you’ll achieve it as a by-product.

As I have stated before use your imagination to reprogram your subconscious mind with the attitudes I have discussed. This is the only way you'll attain the peaceful disposition that leads to health. Refer to the heading "**Control Your Mind, Develop Your Character**" at the start of this section on attitudinal problems.

I recommend the two books by Burns and Seligman that I mentioned above for dealing with destructive patterns of thinking. Burns deals with perfectionism, addictions to approval and love, and with the problems caused by equating your worth with your work. Seligman deals with the problems of pessimism and how to become more optimistic. These two books are worth a thorough read.

Having said all of the above, I recognise that we are all fallen creatures, and that we will become dis-stressed about things that we shouldn't. So how do we manage our *distress* when it hits us, and how do we manage our stress *so that it doesn't become distress*?

Stress Release Strategies

The key impact of stress upon us that leads to both physical and mental health problems is that it causes the release of the hormones *adrenalin* and *cortisol* from the *adrenal glands*. The rest of the physiological changes and the problems that result flow from that release.

Even assuming that our thinking is dysfunctional and predisposes us to distress, we can take steps to either reduce the extent of the release of the damaging hormones, or accelerate their clearance from our bodies.

Sleep

When people are overtired, they tend to run on adrenalin. It has to kick in just to keep them going! And any stress at all when people are in this state is felt more acutely. A great many stress problems look much better after a good night or two's rest. Sleep needs decrease if the diet I am recommending is followed, but don't try to push it in proving the point. Adequate sleep is essential if stress levels are to be kept within reasonable bounds. The question is, do you get enough sleep or not?

Time Management

Do you *ever* take the time to smell the roses? Are you always rushing to save a few precious minutes? If you are, what important thing are you going to do with those minutes? You need to allow yourself a margin of spare time to just "be", without doing *anything*. And that is in addition to the things that you need to timetable in for yourself that are just plain *good fun*. These recreational times are in fact the times in which you *re-create* yourself, and fill up the tanks so that you are ready to take on other challenges. Take control of your time or other people will take control of it for you!

Maybe you need to seriously consider the possibility that you have too much on your plate: too much to do and too little time to devote to rest and recreation and to building relationships with supportive and loving people.

People on their deathbeds never say things like, “I wish I had devoted more time to my career.” What they say is that they wish they had devoted more time to friends and family. Foster *relationships first*. The achievement of success is a secondary issue in the overall scheme of things.

Diet

Firstly, the adrenal glands of people with high-level health don't over-react as much in stressful situations as do those of people whose health is less than ideal. And the adrenal glands of people with high-level health switch off more quickly when the stress stops. So eat healthily! But secondly if your diet is poor, there is a good chance that something you are eating is giving you an adrenalin rush. That means that you are addicted to that food (see “**Identifying Food Addiction/Allergy/Intolerance**”), and you need to overcome that. More importantly, depending on your personality, that adrenalin rush will be associated with either feelings of *fear and anxiety* or *anger*. If the anger is turned inwards it results in *depression*. In my own case, if I eat a lot of wheat I feel angry pretty much all of the time. A lot of negative emotions that are perceived as “feeling stressed” come back to food consumption, and this food triggered emotional backdrop makes it more difficult to handle outside stresses when they arise. It is *imperative* that diet be as healthy as possible to reduce these effects.

Herbs

1. If stress is producing exhaustion, use either Korean (Chinese) Ginseng or Siberian Ginseng at a dose of 100mg once per day. This is much lower than the usual recommended dose. But at that dose, the use of either one of those herbs will help regulate the adrenal glands so that they are less prone to over-reacting and therefore over producing the stress hormones. Both of these herbs also help the adrenal glands to switch off more quickly once stress is gone.⁸⁴ But don't take both of them at the same time. Take one or the other.

a) An alternative to either of the above is to use Indian Ginseng (*Withania somnifera*). This herb has similar tonic effects to either Korean or Siberian ginseng, but it also tends to have a calming effect. Some people become “hyped up”, even very angry, if they take either Korean or Siberian ginseng. In such cases Indian ginseng works well. The disadvantage of this herb is that it is required in much higher doses than the others to be effective. The required dose is 1500 to 6000mg (1.5 to 6g) daily, taken in divided doses (that means take 1/3rd of the daily dose three times over the day, or ½ the daily dose twice over the day).

2. If stress is producing anxiety, herbs such as vervain, skullcap, hops, wild lettuce, passionflower, chamomile, oats, wood betony and valerian may help. Several different combinations are available from your health food store.

Hobbies and Activities

We can use stress-releasing activities. Different things work for different people. For some people exercise works well. To be fair, research shows

that exercise works for *everyone*,⁸⁵ provided it is done at a level that is not so strenuous or intense that the exercise itself becomes yet another stress load. But the fact is that it works better for some than others. For other people, such things as reading or listening to music work well.

What works is largely dependent on your *personality*, and what works can also be *predicted by how you personally respond to stress*. If you respond to stress in a more physical way you will need a physical release, and listening to music won't work so well for you. But if you respond to stress *cognitively* (that is in a more mental way), you need a mental outlet, and physical outlets won't work as well for you. If your stress response is both physical and cognitive, you need both sorts of outlet.

Physical Responders

Symptoms

If you find that you respond to stress with the following sorts of symptoms, you need some type of *physical* release for stress: rapid heart beat, feeling jittery in the body, diarrhoea, tense in the stomach, nervously pacing the floor, becoming physically immobilised, elevated levels of perspiration.

Release Mechanisms

Exercise, dancing, having sex, sun bathing, sport, holidays, warm baths, hobbies, massage, sight seeing.

Cognitive (Mental) Responders

Symptoms

If you find that you respond to stress with the following sorts of symptoms, you need some type of *mental* release for stress: difficulty concentrating because of uncontrollable thoughts, worrying over things that don't really matter, imaginings of terrifying scenes, can't keep anxiety provoking pictures or thoughts out of the mind, unimportant things bother you, a sense that you are losing out because you can't make up your mind more quickly.

Release Mechanisms

Prayer and meditation, art, music, reading, theatre and movies (*not* including action, thriller or horror movies!), TV (same provisos as for movies), relaxation tapes, flotation tank sessions, talking and debating.

Please note, that if you find that you respond to stress in both physical and cognitive (mental) ways fairly evenly, you will need to participate in both types of stress release activities.

Humour

Laughter is one of the best stress control mechanisms. Developing a sense of humour is one of the greatest assets to good health and dis-stress relief. The whole balance of hormones in the system changes when we have a good

laugh. And there is one very important fact that we all need to realise about life.

We do not laugh because we are happy.

We are happy because we laugh!

Develop your sense of humour in the face of adversity, and no-one will be able to take the joy of life away from you! Nor will your health suffer as a result of external stresses.

I recommend the following “Ten Commandments” for handling stress.

1. Don't strive to be perfect or even try to be.
2. Don't try to be all things to all people and spread yourself too thinly.
3. At times leave things undone that ought to be done.
4. Don't criticise yourself for decisions that were made without the benefit of hindsight.
5. Learn to say NO!
6. Schedule time for yourself and for your family and friends.
7. Switch off and do nothing on a regular basis.
8. It's OK to be boring, untidy, inelegant and unattractive at times.
9. Don't feel guilty for taking the time to look after yourself, or for things that are the responsibility of others.
10. ESPECIALLY don't be your own enemy - be your own best friend.

SECTION FIVE:

THE ROLE OF EXERCISE IN HEALTH

Introduction

The role of exercise in health cannot be overestimated. **Both** *aerobic exercise* (walking, swimming, running, cycling) and *resistance training* (isometric exercise, weight training, push ups, chin ups etc) have been shown to positively change blood cholesterol and triglyceride profiles, and both exercise types have been demonstrated to positively affect mood. Moderate exercise is a great stress releasing strategy. Aerobic exercise is well known for all of this, but the positive health benefits of resistance training have been overlooked for too long.

Further, exercise such as walking, playing tennis, or weight training etc, but *not* weight *supported* exercise such as swimming, rowing or cycling, reduces the risk of osteoporosis in both men and women. Exercise also helps control weight. And the muscular weakness found in the elderly has now been shown to be more due to years and years of a lack of resistance style exercise (honest hard work or weight training or isometrics) than it is due to age related degeneration. And the fact is, that if what you are aiming at is the health benefits, you don't have to become fanatical about it.

Generally speaking it is advisable to include both aerobic and resistance training components in any exercise program designed to improve health and well being.

Generally speaking it is advisable to include both aerobic and resistance training components in any exercise program designed to improve health and well being. These will be discussed separately, and then the value of certain pre-packaged combined programs will be examined.

Aerobic exercise



have purchased good quality running shoes, especially if you are overweight. A lot of arthritis in hips, knees, ankles



Virtually all of the major health benefits of aerobic exercise can be gained by completing a 30 minute brisk walk daily. You may wish to be fit enough to win the Olympic marathon, but if you train that hard you are training for reasons other than health. All of the extra work won't improve your health enough to justify it on those grounds alone. In fact exercise at that level produces a lot of free radicals that damage your health. Running is okay, but I do not recommend it until such time as you have been on a healthy diet for some time, and

and feet has developed in overweight and badly nourished people who pound the concrete or bitumen in poor quality running shoes. And then when you do run, run on grass as much as possible.



Other aerobic activities such as cycling and swimming are just as beneficial in most ways, although they contribute little to the prevention of osteoporosis because they are weight supported. Digging in the garden provides aerobic benefits, with the added advantage that it also provides some *limited* resistance training effect. If you are running, cycling, swimming or similar 20 to 30 minutes three times per week, that will suffice for the health benefits. But if you are enjoying it and not pushing yourself, it certainly won't hurt if you do it 5 or 6 times per week either. However even *ten minutes* 3 times per week will give *significant* health benefits, although it will not make you an athlete.



Personally I cycle for 20 minutes 4 to 6 times per week. Whatever you do, don't do it to the point that it becomes an obsession. That is psychologically unhealthy, and you will do yourself physical damage. I should know. Been there, done that. I have competed in 15 Red Cross River Murray Marathons. That event is a 400km flat-water canoe and kayak race over five days between Christmas and New Year on the Murray River in Australia. Although I gained three second places and one first place in the men's open doubles touring kayak/ kayak sections I have to ask myself if it was worth it. And from the health perspective it definitely was *not*. It didn't build my health any better than moderate exercise and I kept hurting myself by over training! Please, this is a good argument for learning from my mistakes rather than your own!

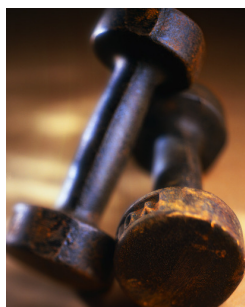


Resistance training

The main way to get this sort of training is by a program of *exercises* of which things like push-ups and sit-ups are examples. This style of program builds useful muscle, which aside from other health benefits raises metabolism and therefore helps in controlling body fat levels. Weight training and isometric exercises are other examples of resistance training.



Weight training



You *don't* need a lot of equipment for this. Ron Laura and Ken Dutton at the University of Newcastle organised much of the body building "mythology" into a system called the "Matrix System". It is claimed to be so effective that if the program is followed carefully, its results are almost as good as being on anabolic steroids. The training effect of a *ten minute* session is equivalent to a *thirty to forty minute* program of normal body building. *Only three sessions per week are required*, and in their book "*12 Weeks To A Better Body For Men*",⁸⁶ which can also be

used by women, they give a series of exercises that use the sort of equipment that could be found in a home gym.

I have personally used this “Matrix System” and can vouch for its unequalled results. The secret of the system is to force the muscle to complete a pre-determined complex series of full movements mixed with part movements and isometric contractions for any given exercise. One of the key advantages is that only light weights or even just body weight are all that is required. No heavy weights are used so compared with normal weight training programs, the chance of injury is greatly reduced.



However should you want to do some weight training, but do not want to go as far as this quite complex system, recent research indicates that one set of 15 repetitions of an exercise for any given muscle group, repeated three times per week, using a weight which is only 60% of that which could just be lifted once only, will produce significant gains in strength.

Other research indicates one set of 8 to 12 repetitions completed just twice per week gives novice trainers 90% of the benefits achievable via the completion of 3 sets of 8 to 12 repetitions. In other words, just as it was for aerobic training, you don't need to go overboard or be fanatical to benefit. Just organise a program that covers all of the major muscle groups and do the routine 2 to 3 times per week. I would suggest that the basic exercises should consist of the following.

Sample Program

- A.** Warm up thoroughly - skipping for a minute or two followed by stretches.
- B.** Exercises - keep the rest time between each exercise to 30 seconds where possible.

Warning! - Have someone show you how to do these exercises properly, or you could injure yourself!

1. *Lower Back* - Low back hyperextensions.
2. *Legs* - Squats, *plus* calf raises *or* donkey calf raises.
3. *Chest* - Bench press.
4. *Shoulders* - Upright rows *or* roll presses.
5. *Triceps* - Triceps push down (this is a triceps extension using the bar on a lat machine) *or* triceps dip.
6. *Abdomen* - Crunches *or* bent knee leg raises *or* bent knee jack-knives.
7. *Upper back* - Lat pulldowns *or* machine rows.
8. *Biceps* - Barbell curls.

C. Warm down - consisting of stretches.

Where a choice of two or more exercises is given, it is a good idea to alternate them session by session. The health benefits of an increased lean muscle to fat ratio will follow. If you are short on time exercises 4, 5 and 8 may be left out because those muscles receive a degree of work in exercises 3 and 7. But it is better to do them.

For my own purposes, I use a system of performing repetitions based on the matrix system as explained in “*12 Weeks To A Better Body For Men*”, but I use the exercises as listed above. When I am going well, it takes me 15 minutes to complete the weights, another 5 minutes total for warm up and warm down; total time, 20 minutes twice per week. This seems to give me as much benefit as the programs I used to do years ago when I was training heavily for marathon kayak paddling, and they took 60 to 90 minutes!

Isometrics

For those who have neither the time nor the inclination to go to the gym, these are just great! They were all the rage in the 1950's and 1960's. They are most effective when a muscle has degenerated to well below its natural capacity after injury or prolonged disuse through illness, and so are often prescribed by physiotherapists. They are not a complete training system for athletes, although many athletes have used them as *part* of training, especially those in the strength and power sports.

As inferred before, they are also very useful to people who don't really want to be athletes, but want to gain the health benefits of resistance training with an absolute minimum of time input. Every muscle group can be exercised in *3 minutes or less*, since each muscle needs to be contracted against resistance *for only 6 to 7 seconds*. These exercises can also be spread through the day to become part of daily routine.

And there is no need to strain. Significant benefits can be gained by contracting the muscles to about 60% of their full capacity. This can be “guesstimated” accurately enough to achieve the objective simply by contracting briefly to full capacity, then backing off a little for the remainder of the 6 to 7 seconds of the contraction. Isometric exercises need to be done daily.

If you wish you can purchase commercially manufactured isometric exercise apparatus, but whilst these are excellent products, for the health goals defined in this book I don't believe they are necessary. For your benefit, I enclose a program of isometrics that I developed for the Explorer's Canoe Club and which they used in the late 1970's and 1980's as part of their preparation for the Red Cross Murray River Canoe Marathon.⁸⁷ Do isometrics work? Yes they do, but they are not as good as the weight training programs I have discussed, which is why I do weights instead. But for busy people they are superb since they require a very low time commitment, so low that they can be done before showering in the morning.

And I have personally had occasion where I have been so busy that the isometric program I am providing for you is all that I have had time for. I remember one time during which I had become so lazy that I had done no

exercise for a prolonged period and I was called upon to mount some very heavy homemade speaker boxes up onto some portable speaker stands above my head. I was having trouble lifting them, and I virtually had to “throw” the speakers up there and hope that I got the hole in the speaker box lined up with the metal fitting on the stand right away. I didn’t have the strength to hold it there and fiddle with it until it was right. That gave me a fright because I had always been able to do such things. So I started using the isometrics program that I had previously developed and which I am recommending.

Four weeks later I had to perform the same task with the same speakers and stands. I was able to lift the speakers easily and calmly hold the speakers above the metal fitting without strain while I lined up the metal mount. That is quite a training effect with only three minutes per day over four weeks! Did it make me into a heavily muscled body builder type? No. But it did give me significant gains in a short period. And it did reduce the load on joints and spine because the muscle tone was good enough to cope with the demand placed upon it.

But remember, if you should choose to use isometrics as your resistance training component you will need to add in some aerobic training as a separate issue.

Isometric Training Program

Definition

Isometric contraction means *contraction of a muscle without movement of the muscle*. The first *modern* proponent of this form of exercise was Charles Atlas who called it “Dynamic Tension”. Dr E. A. Muller and Dr Steinhaus later verified his claims of its efficacy at the Max Planck Institute in Germany. Strength can increase in a given muscle at a rate of up to 4% per week with only one contraction daily of 6-7 seconds duration and at about 60% of maximum strength. If muscular strength is low, it is possible to *double* strength in *six months*.

How To Do Them

For whichever exercise is being performed, slowly increase the muscle tension to maximum, then reduce to 60% and exhale as you count “one thousand and one, one thousand and two”...up to ...“one thousand and six”, then slowly release the tension.

Danger! Be Careful!

Many people hold their breath whilst lifting something heavy. This is called the *Valsalvas Manoeuvre* and it places strain on the *heart*. The Valsalvas Manoeuvre is dangerous at any time *but it is particularly dangerous in isometric muscle contraction*.

NEVER HOLD YOUR BREATH WHILST PERFORMING AN ISOMETRIC EXERCISE

ALWAYS EXPEL YOUR BREATH OVER THE SIX SECOND DURATION OF THE EXERCISE

The Basic Isometric Exercise Program

A. Neck Muscles

1. “Front Neck Press” - Hands pressing onto the forehead, resist with the neck muscles.
2. “Back Neck Press” - Hands pressing onto the back of the head, resist with the neck muscles.
3. “Side Neck Press”
 - a) Right hand pressing onto the right side of the head, resist with the neck muscles.
 - b) Left hand pressing onto the left side of the head, resist with the neck muscles.

B. Arms & Upper Torso

1. “Monkey Grip Pull” - Hands clasped in monkey grip in front of the chest. Try to pull them apart. Repeat this at waist level, above the head, behind the neck, and behind the back.
2. “Chest Press” - Push the palms together (or make one hand a fist and push it into the other hand) in front of the chest. Repeat this at waist level, above the head, behind the neck, and behind the back.
3. “Doorway Chest Press” - Stand in a doorway facing the doorjamb. Make a claw of your hands, and placing them one on each of the walls of the two rooms on opposite sides of the doorway, use the chest and forearms to try to bring the hands together. Note well that this exercise can be done with the hands at any level from groin height to right overhead. Each position will exercise the muscles in a slightly different way.
4. “Overhead Doorjamb Press” - Using a doorjamb, push *up* above the head against the horizontal section of the doorjamb with both arms.
5. “Sideways Doorjamb Press” - Using a doorjamb, push *sideways* on the jamb with both arms, *left* palm on the *left* jamb, *right* palm on the *right* jamb. This also exercises the triceps muscles. A variation of this is to do it in a hallway narrow enough to reach across whilst the arms are still somewhat bent.
6. “Doorway Pulldown” - Using a doorjamb, reach *up* and with the *arms as straight as possible* place the *right* palm against the *right* jamb, and the *left* palm against the *left* jamb. Push *outwards*, and pull *downwards*, trying to widen the doorway! A variation of this is to do it in a hallway narrow enough to reach across whilst the arms are still above the head.
7. “Wall clap” - Face a wall, feet about 45 cm (18 inches) away from the wall. Place the *palms* against the wall *as widely apart as possible*, arms almost straight. Try to bring the palms together by pushing down the wall.
8. “Curls” - With the fist of one hand clenched, knuckles facing *down*, resist the bending of that elbow up towards the chest by holding the arm down with the other hand. Swap arms to make sure both are done.

9. “Reverse Curls” - as for number one, but with the knuckles of the fist hand *up*.
10. “Chair Biceps” - Sitting in a chair. Grab underneath the seat with both hands, and try to pull the seat up towards you. It is possible to exercise the chest and upper back muscles at the same time in a kind of “dead lift” in this exercise.
11. “Chair Triceps” - Sitting in a chair, push down with your hands, one hand on each thigh, or each hand pushing down onto the arms of the chair if it has them.
12. “Table Arm Press” - Sitting at a table or desk, place your hands palm down and flat on the table top. Push your hands *down*, simultaneously pulling them *outwards* and *backwards*, using all the muscles in the shoulders, arms and back.

C. Abdomen

1. “Abdomen Push” - Sitting in a chair, lean forward, placing your elbows on the knees. Push downwards using the stomach muscles.
2. “Stomach Suck” - Suck in the stomach as far as you can and hold it in for the exercise time.
3. “Abdomen Side Press” - Stand in a door jamb. With your *right* hand, reach over the top of your head towards the *left* side of the door jamb. Use the *left* side of the abdominal muscles to push against the door jamb through your hand. Do the other side to even up.

D. Lower Back

“Back Arch” - Lying on your back on the floor, push your legs down with your legs straight, simultaneously pushing down with your head and shoulders.

E. Thighs - Quadriceps and Hamstrings

1. “Doorjamb Thigh Push”

Type a) - Using a door jamb, face one side of it and push your toes into it, using the quadriceps (front of the thigh) muscles to apply the force. Repeat with the other leg.

Type b) - In a hallway, with your back against one wall, lift one leg up, placing the flat of the foot against the other wall at about waist height. Push with your leg hard against the far wall, bracing yourself against the other wall with your back. Repeat with the other leg. NB!! Make sure you find a spot where there is a *wall stud* or you’ll push through the plaster! (The best spot to place your foot is a place in the hallway where the wall makes a *corner*. There is always a stud there,)

2. “Doorjamb Hamstring Push” - Same as number 1 type a), but push on the jamb behind you with your heel, using the hamstring muscles (back of the thigh) to apply the force. Repeat with the other leg.

3. “Cross Leg Pull-Apart” - Cross the legs and lock them together using the feet. Try to pull them apart sideways. Reverse the cross of the legs and repeat.

4. “Cross Leg Push-Together” - Cross the legs and lock them together using the feet. Push the *bottom* leg up against the *top* one and the *top* one down against the *bottom* one. Reverse the cross of the legs and repeat.

5. a) “*Thigh-Hand Push*” - Reach behind with the *right* hand whilst bending the *right* knee up behind you as if you were trying to kick yourself in the bottom. Grab hold of the right foot with the right hand. Using the quadriceps muscles (front of the thigh), try to straighten the leg whilst the hand holds it bent. Repeat with the other leg.

b) “*Alternate Thigh-Hand Push*” - As for 5 a), but this time grab the *right* leg with the *left* hand. This exercises the muscles in a slightly different way. Repeat with the other leg.

6. “*Leg Press*” - Standing in a doorway, bend your legs enough so that you can place your arms on the upper door jamb with your arms straight, and push up with your legs.

7. “*Inner Thigh Press*” - Sitting, legs apart, bend your torso *forward* and place your *right* palm on the inside of your *left* knee, *right* elbow on the inside of your thigh *near* the *right* knee but just *above* that knee, and your *left* palm on the inside of your *right* knee, *left* elbow against the *back* of your *right* hand. Now try to *push* your knees together.

8. “*Outer Thigh Press*” - Sitting with your knees slightly apart, lock them up so they cannot move further apart by putting your arms around them and clasping your hands behind your lower leg, then *try* to *push your knees apart* whilst holding them together with your arms.

F. Whole Body

“*Prone Press*” - Lying face down, feet together, stretch your arms out in front, as far forward as possible. Attempt to lift yourself off the floor, touching the floor with only your toes and hands.

If you *can* lift off the floor, this is called a *prone press*. You most likely have a stocky build with short arms and legs and a long back. Do as many as you can.

If you cannot lift off the floor, you are either weak muscled or have a lean build with long arms and legs - and not many with this build can perform a prone press. In this case you are doing an isometric. Hold it for six seconds. It would pay to do a number of repetitions of this exercise.

Creative Isometrics During The Day

There are no rules in doing isometrics aside from NEVER HOLDING YOUR BREATH. There are therefore an infinite variety of isometrics that can be done. What you do is limited only by your imagination! Here are some examples:

1. *Squeeze* the telephone as you answer it.
2. As you are drying yourself after your shower, *pull the towel apart* with your arms, in various positions.
3. Pull your stomach *in* as hard as you can.

4. Whilst sitting, place your hands on the desk and *push down*.
5. Legs straight, cross your legs and *push them against each other*. Push the *bottom* leg up against the *top* one and the *top* one down against the *bottom* one. Reverse the cross of the legs and repeat.
6. Legs straight, cross your legs and lock them together with your feet. Try to *pull them apart* sideways. Then reverse the cross over and repeat.
7. Lock your hands in a monkey grip and try to *pull them apart*.
 - a) Hands locked in front at chest height, then waist height, then head height.
 - b) Hands locked behind your back.
 - c) Hands locked behind your neck.
8. Press your palms together and *push*.
 - a) Hands in front at chest height, then waist height, then head height.
 - b) Hands behind your back.
 - c) Hands behind your neck.
9. Sitting, legs apart, bend your torso *forward* and place your *right* palm on the inside of your *left* knee, *right* elbow on the inside of your thigh *near* the *right* knee but just *above* that knee, and your *left* palm on the inside of your *right* knee, *left* elbow against the *back* of your *right* hand. Now try to *push* your knees together.
10. Sitting with your knees together, lock them up by putting your arms around them, then try to *push your knees apart* whilst holding them together with your arms.

Conclusion to Isometrics

For future easy reference, in appendix 10 you will find an “**Isometric Memory Jogger - By Exercise Station**”. If you wish to use the isometric exercises, you can photocopy this and stick the copy to your wall so that you have all of the exercises in brief form on one page as a reminder.

Combined Training Systems

For people with little time, a pre-packaged combination program of both aerobic and resistance training that takes little time can often be the best solution. Here are two that I have used and found to be excellent.

5BX and XBX

Two of the best and simplest systems for those who do not wish to be athletes but who wish to achieve the many health benefits of exercise, is the programs developed by the Royal Canadian Airforce; the 5BX plan for men, and the XBX, that is the 10 BX plan for women. There are 5 exercises in the men’s program, (hence 5BX) and ten exercises in the women’s program (hence XBX, i.e., 10 BX). They were published together in the one small paperback book, and that book is still published from time to time. These programs are normally completed daily; it takes 11 minutes for the men’s

program and 12 minutes for the women's program each time it is done. Age related guidelines for fitness are provided, although I have found that the expectations for people over forty are well below what may be readily achieved by someone who looks after their health in other ways. Once the desired fitness is attained it can be maintained by completing the program three times per week. See Appendix 15 for publishing details.

Total Fitness in 30 Minutes A Week

This program was developed by Laurence E. Morehouse, and is explained in the book of the same title written by Morehouse and Leonard Gross. At the time of writing his book Morehouse was a professor of exercise physiology and founding director of the Human Performance Laboratory at the University of California at Los Angeles. The program is similar in style to the 5BX & XBX systems, but has only one program for both men and women that takes ten minutes per session, and which is meant to be completed three times per week. If you are impressed by this book and wish to take it further, read "*Maximum Performance*", by the same authors. See appendix 15 for publishing details.

There are health benefits to be gained from exercise, and committing quite low levels of time and effort can attain these. Are you prepared to commit that small amount to attain the super-health that you deserve?

For future easy reference the general information on exercise is summarised in appendix 11.

SECTION SIX:

COMMON HEALTH DISORDERS

A Comparison of Two Approaches

Thank goodness for modern medicine. In a life-threatening emergency there is nothing like it. But for just about everything else, including very serious long-term disease, the naturopathic/holistic approach is superior. Let me explain.

The Modern Medical Approach



When the modern medical system tackles health problems, their approach is to identify the disease and then try to knock out the bug with antibiotics, or to alter body chemistry with powerful drugs that overwhelm the natural balancing mechanisms of the body, or to cut it out if it is a growth. Or perhaps they may try to poison a cancerous growth with radiation or chemicals.

These methods always produce a lot of collateral damage, and sometimes the results are worse than the disease. This damage is rather euphemistically referred to by the medical establishment as the “side effects” of the treatment. This is after all what *chemotherapy* is about. Only recently has modern medicine begun to attempt to work *with* the body, and even now, they are still looking for “magic bullets” to fix specific problems, instead of acquiescing to the obvious fact that the body works as a cohesive whole and it needs to be treated as a whole. For all its high technology and vast pool of knowledge, modern medical approaches to the restoration of health are clumsy in comparison with the built in mechanisms of the body.

The Naturopathic/Holistic Approach

On the other hand we have the naturopathic/holistic approach, which is to create conditions in the internal environment of the body such that it is capable of healing itself. In this case it is a fact that the name of the “bug”, or the identification of the actual “disease process” is far less important than it is in the medical approach. There *are* times when a medical diagnosis is very helpful, even crucial, but generally speaking we are far more interested in the “health process”. We want to enable the body to do its own stuff. This “self healing” of the body, when it occurs in diseases for which modern medicine has no answers, is rather contemptuously referred to by the medical profession as a “spontaneous remission”. Aside from a minority of individuals who are often ostracised by their peers, medical practitioners as a whole are often unable to see or unwilling to admit that the natural approach has had any bearing on the problem. But in the midst of their insult naturopaths such as myself take great comfort and joy. After all we are in the business of helping people produce “spontaneous remissions”. That is pretty much how we work. That is *exactly* what we are aiming at!



So a holistic practitioner will assess the quality of your circulations, both blood and lymphatic, estimate the efficiency of your digestive system,

examine your nutritional status, and work out how well your body is eliminating its wastes through the liver and kidneys. Most of this can be done without using invasive diagnostic tests. Examination of the iris and sclera of your eyes, the quality of your skin, hair and nails, the nature of your bowel and urinary habits, the normality or otherwise of your menstrual cycles, and the palpation of your upper abdominal region are some of the things which may be done. The fact is that a medical diagnosis is only a back up.

Having said that, a good alternative therapist will put on a medical hat for a short while just to make sure there is no condition present that requires immediate medical attention to avert disaster. But once that has been eliminated as a possibility, the approach swings to an entirely different strategy. And in the end, the naturopathic approach amounts to two main things.

- a) Improve nutrition through the correction of dietary imbalances, the identification of food allergies/intolerances and by the improvement of the digestive processes. This sometimes needs herbal or nutritional supplements, but they will be used *as a back up only*.¹⁰³
- b) Clean out the internal environment of the body by improving the functions of liver, lymph and kidneys.

Sometimes the circulation or particular organs may need specific targeted assistance. But usually, pretty much everything follows on from the above two points. If those two things are accomplished, circulation will usually improve without other assistance, tissue oxygenation will increase, and every body system will move towards proper equilibrium.

Cleansing the Bowel and the Liver

You will have already gathered that the digestive system and the liver must be functioning optimally if super-health is the goal. The bowel and the liver are two key components from the naturopathic point of view.

Bowel

As far as the bowel is concerned, shifting the diet towards the guidelines I have indicated will pretty much do all that is needed to repair the bowel lining, alter the balance of micro-organisms within it towards a healthy mix, and stop it leaking undesirables into your body. If this is not enough you'll need to consult your therapist for the specific medicines that will help this process along. However two things may help dramatically.

a) *Lactobacillus* - Supplements have a very positive effect on the bowel. Ensure you take one that will survive both stomach acid and bile, and which will adhere to the bowel and multiply. Most of them do not. Don't be afraid to ask to see the specification sheet. One such strain is called *Lactobacillus G.G.*, the letters being the first letters of the names of its discoverers, Gorbach and Goldin.

b) *Garlic* - This promotes the growth of friendly lactobacillus bacteria and inhibits the growth of the unfriendly bugs.

Liver

If the liver has been under load for a long time it is far more likely to need a helping hand in addition to the change in food than is the bowel. As I have stated previously, most people have a degree of “liver congestion”. Further, if you have any chronic disease, illness or syndrome, or even any little niggling health problem at all, from arthritis to cancer, from asthma or hayfever to multiple sclerosis, from enlarged prostate to gallstones, from allergies to addictions, from menopausal problems to chronic fatigue syndrome - whatever your health deficiency, and no matter how minor or severe, **THE LIVER MUST BE TREATED!** But unlike the bowel, if it needs assistance other than a change of diet, there is a lot more that you can achieve independently of a practitioner to assist it. This information is provided for you in appendix 8.

Treating Specific Health Disorders

The information I give in this section is for interest only. It may give you an idea as to what is possible if you first balance your food consumption. For many of the disorders listed you need to obtain the advice of a competent health practitioner. I would never treat a client without having a face-to-face consultation, because there are usually factors that the client has not taken into account. So nothing that follows is meant to be prescriptive. If you choose to ignore what I have just said and treat yourself, ***remember that the responsibility is entirely your own.*** But here is some general information.

If you were to stick to the most rigid dietary regime of only raw fruits, raw vegetables, sprouted seeds and juices, and if you were also to take steps to clean out the liver, most health problems would just disappear over time. But time is the operative word. For example, on a diet very similar to my recommendations 71% of asthmatics were free of the disorder after 4 months. But after 12 months 92% were symptom free! It took another 8 months for the extra 21% to respond.⁸⁸ Perhaps response would have been faster had liver cleansing also been a part of the treatment.

So as stated above, it has been my experience that for all serious health problems the client must concentrate on raw fruits and their juices, raw vegetables and their juices, and sprouted seeds. **AND TREAT THE LIVER.**

General Note on Vitamin and Mineral Recommendations

Where these have been indicated as a possible therapy it is my view that the requirement for them usually stems from faulty diet, poor digestion and the problems caused by liver congestion and general toxicity. Sometimes there is a genetically increased need for them but again, strict adherence to the general dietary guidelines given in this book usually takes care of that. For that reason they should either be thought of as a last resort, or used in the early stages of treatment to accelerate the reduction of symptoms. Do not rely on them.

Acne

Acne is caused by bacteria that live on the skin surface and which split fats into fatty acids for their food. A process follows which causes the pimple formation, and a contributing factor is thickened skin due to high oestrogen or testosterone levels. These high hormone levels are precipitated by high fat diets. Low fat diets reduce both the food for the bacteria and the levels of hormones, so diet as recommended and liver cleanse are usually enough to solve the problem. If not:

- a) Women suffering as part of their menstrual cycle are usually also suffering with PMS, so treat that. See “Women’s Problems”.
- b) In young men and young women, high doses of vitamin A, plus zinc.
- c) There are many effective herbals. See your therapist.

Allergies

a) General

These generally occur because something goes wrong with immune control, and in most cases the problem usually turns out to be nutritional deficiency. Following the general advice given should clear most things up. Reducing the numbers of those white cells that are involved in releasing all of the biochemicals that precipitate allergic reaction symptoms is a start, and clearing worms from the system can be a help. The only way the body can defend itself against parasites is through the same inflammatory reactions involved in allergy. Keep the worm load low with regular treatment. So seriously do I regard this, that if you do not have access to natural remedies I recommend obtaining something from the local pharmacy.

b) Food Allergies/Intolerances

In some genetically susceptible people, sometimes the “fingerprint”⁸⁹ used by the body’s immune system to identify a foreign protein looks so similar to the body’s own tissue that the antibodies produced to specifically latch onto that “fingerprint” and nothing else also attack the person’s own body.⁹⁰ And protein components of foods *are* absorbed through a leaky gut in sufficient quantities to be recognised by the immune system. Disorders that now have research to back up this “fingerprint” mix up include eczema, asthma, migraine headaches, learning disabilities, hyperactivity and other behavioural disorders. It is a fact that normal *healthy* humans absorb as much as 2% of food protein intact (that is, not broken down at all), and patients with allergic and gut (gastrointestinal) diseases absorb much higher percentages than that.⁹¹ This brings into stark relief the fact that to consume a high protein diet is to play Russian roulette with your health.

Having said that, a true allergy only exists if the immune system is involved. But other smaller but nevertheless serious reactions or “intolerances” to food may occur for a whole variety of reasons, and these reactions may be responsible for some chronic degenerative disorders such as arthritis. Using the “The Pulse Test” can help identify the problem foods. Refer to appendix 2 and see the discussion in the section titled “Changing Your Diet”.

A crucial question is whether a problem food can ever be reintroduced. The answer is often a qualified yes. Often once the liver is cleaned and general health has improved, and if such foods are consumed in low quantities, they

present no problem. Such foods need to be checked by the pulse test from time to time.

A key problem is “leaky gut syndrome”, which is often present in allergy sufferers. This is a condition of the bowel (discussed above) in which a higher than acceptable level of protein is being absorbed into the system without proper digestion, placing an excessive load on the liver and the immune system, which now have to handle the problem. And this problem is generally caused by long chain protein irritants like gluten (wheat, rye, triticale, barley and oats) and casein (dairy products, especially cheese). Eliminating these from the diet often immediately relieves bad reactions to other foods because when the gut is less leaky due to removal of the irritants, it lets in less of the problem components from other such troublesome foods. There are many herbs which can help close a leaky gut, such as those rich in tannins to directly tighten the gut lining, bitters to stimulate bile flow and bowel movement, saponins to promote the formation of the mucous barrier on the gut, volatile oils to reduce gut wall irritability, and mucilage to act directly as a temporary barrier to irritation. Other herbs such as Echinacea improve non-specific clean up of foreign proteins by the immune system. If you need to go this far *don't self medicate*. See your naturopathic practitioner for a tailor made prescription. If “leaky gut syndrome” *can* be effectively dealt with, problem foods can often be reintroduced. But if it *can't* be dealt with in any permanent way, the offending foods must be removed from the diet *permanently*.

c) Candida

Candida infestation is often blamed for these sorts of problems. Candida may be both a *cause* and a *result* of them. Often it tends to disappear without any specific intervention when other steps are taken. But see the specific heading “Candida albicans” in this section.

d) Vitamin C & Bioflavonoids - These help many people with allergies.

e) Onion & Garlic - High consumption of onion and garlic helps patients with allergy problems. Garlic has been shown in research to reduce the allergic reaction to allergy inducing stimuli.⁹²

Alzheimer's Disease

There have been a number of nutritional or toxic associations made for this disorder.

*a) High Aluminium Consumption*⁹³ - Evidence is still inconclusive, but to be safe avoid aluminium cookware, aluminium containing antacids, and aluminium containing deodorants. Silicon supplements reduce absorption of aluminium.⁹⁴ Health food stores stock them but diets rich in raw fruits, vegetables and sprouted seeds will have plenty of silicon.

b) Homocysteine - High levels in the blood have been well documented to be associated with Alzheimer's.⁹⁵ High homocysteine levels are associated with relative deficiencies of B6, B12 and folic acid, and deficiencies of these nutrients have been demonstrated to negatively impact on Alzheimer's patients, whilst supplements improve mental performance.⁹⁶ Supplements of the highest doses available of these nutrients plus a vitamin B-complex may help.

- c) *Diet* - The nutritional imbalance that leads to the aforementioned problems should be fixed by following the recommended diet.
- d) *Liver, Food Allergy/Intolerance* - Leaky gut and liver congestion do not help any disorder. Clean the liver, follow the elimination diet and use the “The Pulse Test” to check suspect foods. See appendix 2 and appendix 8.
- e) *Ginkgo biloba* - This herb has been thoroughly tested for usefulness in Alzheimer’s, and results suggest it will stabilise and even improve mental performance in most patients.⁹⁷ The dose required is 120mg daily of the 50:1 herbal concentrate, which translates to 6 grams of the whole herb daily. It is expensive to buy but may be well worth it. Alternatively, plant a tree. They are available, and the leaf is the therapeutic part of the plant.

Anaemia/Blood Building

- a) *Green vegetable juices*. They are rich in *iron* and *chlorophyll* (which is similar to haemoglobin) and work faster than iron supplements.
- b) *Vitamin supplements* - A wide variety of vitamin deficiencies lead to anaemia, including deficiencies in Vitamins A, B1, B2, B5, B6, B12, C, E, and folic acid. If in doubt take a general multivitamin, extra B12 and folic acid, plus the mineral iron.
- c) *Trace elements* - Iron is essential to Red Blood Cell formation, and others work with it and with supplements in part b) to build red blood cells. These include copper and zinc. A general trace element supplement is best.

Angina

This disorder is basically due to *atherosclerosis*. Refer to that heading and consider the information following.

- a) *Hawthorn leaves and berries* - commencing at 500mg once daily, each week increase the dose by 500mg, until the dose is 1000mg twice daily.
- b) *Magnesium* - Deficiency adversely affects heart function in angina patients. Supplement at 100 to 200mg of elemental magnesium daily.

Anxiety

There are many factors here including the existence in a person’s life of factors that would normally be *expected* to produce anxiety. But anxiety without adequate reason is another matter. Following the general dietary advice of this book often fixes the problem because the diet is low in protein and high protein diets such as those generally followed inhibit *serotonin*,⁹⁸ which regulates many aspects of mood. It is calming to the anxious and lifts the gloomy out of despair. Low levels may therefore be implicated in anxiety. In fact the sort of diet recommended in this book triggers the *release* of serotonin. The following also deserve consideration:

- a) *Avoid anti-nutrients* - caffeine, sugar and alcohol.
- b) *Nutrients* - The B vitamins, calcium, magnesium and potassium are all involved in nervous system regulation. L-Tryptophan is a nutrient precursor to the neuro-transmitter serotonin, and as stated above deficiency can lead to anxiety. A supplement of L-Tryptophan sometimes helps.

c) *Counselling* - Some anxiety is self induced due to habitual faulty thinking. Refer to the section on stress management.

Arteriosclerosis

See “**Atherosclerosis**”.

Arthritis

There are many different forms of arthritis. Some are regarded as inflammatory *auto-immune diseases*, so see that heading, especially for rheumatoid arthritis. But the truth is that there are inflammatory processes happening for *all* forms of arthritis, including osteoarthritis, which has traditionally been regarded as a “degenerative” (“wearing out”) disorder. The question then becomes, “What causes the degeneration?”

The friction between the joint surfaces when cartilage is present and in good condition, is less than the friction between two wet ice cubes being rubbed together. In other words virtually *nothing*. Joints do ***not*** wear out, they are *bombed* out by inflammation. Arthritis is a metabolic disorder, not a wear/degenerative disorder. Poor digestive function, congested liver and leaky gut combine to permit undigested proteins into the body, and when the immune system attacks them as an enemy, “immune complexes” are formed by the combination of the foreign protein and the antibodies produced to combat it. These lodge in the joints and irritate the cartilage, eventually destroying it. Any long chain protein can do it, either animal protein as in dairy, meats or fish, or vegetable protein as found in grains, nuts or legumes.

Cultures with low protein and low fat diets such as are found in Africa and Asia have dramatically lower incidences of arthritis than are found in the west. This is especially true of the severe inflammatory forms.⁹⁹ Such low incidences are not due to genetic advantage, since when people from these ethnic groups adopt western diets they develop the disorders at the same alarming rate as westerners.¹⁰⁰

A low protein diet is crucial to resolution of all forms of arthritis.

Remember, there is enough protein in raw fruits, raw vegetables and raw sprouted seeds, and such proteins as are in these foods are small enough that the immune system takes no notice of them, removing the inflammatory processes.

a) *Reactive Foods* - Clean the liver, follow the elimination diet and use the “**The Pulse Test**” in appendix 2 to find out which foods are contributing to the problem.

b) *Likely Food Culprits* - My own clinical experience would suggest that dairy foods and gluten containing grains (wheat, rye, barley and oats) are the most likely problem foods, but other grains and legumes are often implicated, so keep grain and dried legume consumption to a minimum. Meats, poultry and fish are less often a problem, but they may need to be checked out.

Aside from protein mediated problems, other food chemicals can provoke sensitivity reactions. The common culprits are citrus fruits, tomatoes, strawberries and chocolate. Avoid them.

c) *Infection* - Rheumatoid arthritis has recently been associated with a number of infections, including proteus and herpes gamma viruses such as Epstein Barr and HHV-8,¹⁰¹ which are treatable using Golden Seal for proteus and St John's Wort for herpes. Additionally ankylosing spondylitis, an auto-immune arthritis, has been associated with the Klebsiella organism, and one case cleared after treatment with the herb "Bearberry" (Arctostaphylos uva ursi), which is specific for that organism.¹⁰² For these and other inflammatory arthritis diseases, herbs such as Echinacea and Olive leaf extract, both of which activate the immune system should be considered. See "Infections".

d) *Celery juice* - This is the single most effective juice.

e) *Anti-inflammatories*

(i) WARNING! BEWARE OF MEDICAL NON-STEROIDAL ANTI-INFLAMMATORY DRUGS (called NSAIDS). These are often prescribed to combat the inflammation and pain, but *some* of them have been shown to block repair of cartilage, *thereby accelerating the destruction of the joint*. Check with your practitioner.

(ii) Turmeric & Ginger - Safe alternatives are ginger and turmeric, herbs that can be purchased in powder form from the supermarket shelf. Mix them in equal parts, buy some "00" size gelatine capsules from the chemist and make your own anti-inflammatory capsules. Turmeric has been used historically for inflammation and has now been shown to be as effective as cortisone, without the side effects.¹⁰³ Ginger also has an historical use, with modern research to back it up.¹⁰⁴ They are safe, so start at 2 capsules three times per day, and increase until the pain is controlled.

(iii) Bromelain & Papain - Further, enzymes such as bromelain¹⁰⁵ and papain are established anti-inflammatory agents, and Blackmores produce a tablet called "Digestive Aid", which is rich in these two things. If taken between meals, it will act as an anti-inflammatory.

(iv) Feverfew - This is a strong anti-inflammatory herb.¹⁰⁶ See the discussion under "Migraine" for the dose, but take it three times daily instead of once.

(v) Green Tea - In animal experiments the inflammation of arthritis has been reduced by as much as 50% using green tea. Sufferers could do worse than drink a few cups of green tea daily.¹⁰⁷

f) *Glucosamine and Chondroitin Sulphate* - These are the building blocks of cartilage, and a supplement may help rebuild the joint. The medical profession has been sceptical. But despite accusations that the reports of success in the trials are exaggerated, an analysis of 37 trials showed that glucosamine and chondroitin were effective and that their effects were moderate to large.¹⁰⁸

(i) A combination powder is available. If there is a lot of pain, the aforementioned powder can be obtained with another ingredient in it called MSM (Methyl Sulfonyl Methane) that seems to help with the pain a lot.

- (ii) Shark Cartilage - This is a rich source of both chondroitin and glucosamine, and has recently proven to give dramatic results in arthritis.¹⁰⁹
- (iii) Gelatine Crystals - A cheap alternative to shark cartilage is gelatine, which is made from skin, cartilage, ligaments and tendons of animals (all rich in chondroitin and glucosamine), and although no actual data is available, gelatine would be expected to be rich in these substances.

I have successfully resolved my own osteoarthritis using this as part of the regime instead of the more expensive alternatives. The dose I used is 2 rounded teaspoons of gelatine crystals in juice twice daily.

g) Pennywort - Also called Gotu kola, *Centella asiatica*, *hydrocotyle asiatica*, Indian Pennywort (it is also native to Australia) etc. This herb has a tremendous benefit on connective tissue. It stimulates its strengthening and growth in a variety of ways. It accelerates wound repair. In particular, it increases the formation of mucin and glycosaminoglycans such as hyaluronic acid and chondroitin sulphate, all of which are involved in cartilage growth. So its reputation in arthritis treatment is well deserved. See the reference in the footnote, which quotes four research papers to back up the claims with respect to the substrates for cartilage growth, from 1951 to 1988. Try to obtain a live plant. The dose is one to six leaves per day.¹¹⁰ The leaves may be chewed.

h) Green lipped mussel extract - Rich in glycosaminoglycans. It helps some people, usually those with rheumatoid arthritis.

i) Minerals and Trace Elements - Boron, calcium, calcium fluoride, copper, magnesium, manganese, silicon and zinc. See the notes under the appropriate headings in “*Part A. Components of Nutrition, Macro & Micro-Nutrients*”.

j) Lightly loaded exercise - for example, if arthritis is in the knees or hips, cycling. For the shoulders, swimming. This stimulates the regrowth of cartilage, once thought impossible.

k) Oils - Oils such as evening primrose oil (EPO), EPA or MaxEPA and linseed oil alter eicosanoid metabolism to reduce both inflammation and smooth muscle contraction. EPA or MaxEPA and EPO can be taken at 2000mg to 4000mg of each daily but the cheapest alternative is linseed oil. The dose is 5 to 20 ml daily. See the comments in “Good Oils, Bad Oils?” in part B of “*Part 3 Nutrition*”. The full effects won’t be seen for 4 to 6 weeks.

l) Vitamins - B3 in the niacinamide form at doses of 1000-3000mg daily has caused some dramatic recoveries, and improvement in joint mobility and pain levels in other people. B6 in doses of 50mg or more also help. B5 at 1000mg daily may help over a few months. Vitamins C at 5000mg daily, and E at 500IU daily help as antioxidants, and both zinc at 20mg daily and copper at 2mg daily can have positive benefits for some people.

m) Sulphur - levels in fingernails are low in rheumatoid arthritis, and many patients improved with intravenous colloidal sulphur or sulphur baths.¹¹¹

Sulphur supplements are available through health food stores.

N.B. I would do *everything else* before adding in the vitamins and minerals, because in my opinion the need for these supplements is usually related to faulty diet in the first place.

Asthma

Firstly, take note of the introduction to this entire section in relation to the results obtained on a high raw food diet. 92% of people are symptom free after 1 year. Remember, dietary change often takes a long time to bring results.

Secondly, be wary of being lulled into a false sense of security if you or your loved ones are on medical bronchodilators. Continuous bronchodilation probably exposes the lower airways to greater contact with inhaled allergens, worsening the problem. And bronchodilators increase the secretion of a thick viscous mucous by the airway linings. It is this mucous which is a feature of fatal asthma attacks. In other words, medical bronchodilators may in fact be implicated in both the increased *severity* and *fatality* of asthma.¹¹²

Thirdly, see the discussion about food allergies/intolerances under “Allergies”.

a) *Food Allergy/Intolerance* - See food elimination diet and allergy/intolerance testing in appendix 2.

b) *One medium sized onion per day* - protects many asthmatics from attacks.¹¹³

c) *Vitamins* - Natural vitamin A and natural vitamin E may reduce the frequency and severity of attacks. The dose needed for response varies and both A & E must be taken, together with 1000 to 4000mg of vitamin C daily. The adult dose for vitamin A is from 10,000IU to 60,000IU per day, and for vitamin E the adult dose is from 100IU to 500IU per day.¹¹⁴ The following vitamins have all demonstrated decreased frequency and severity of attacks in asthma patients. Vitamin B6 at 50 to 200mg daily, B12 at 1000 micrograms injected intramuscularly once/week for 4 weeks, vitamin C at 2000mg daily and 4000 to 8000mg daily during reactions.¹¹⁵

d) *Minerals* - Magnesium helps at a minimum of 100mg elemental magnesium daily.

e) *Oils* - Oils such as evening primrose oil (EPO), EPA or MaxEPA and linseed oil alter eicosanoid metabolism to reduce both inflammation and smooth muscle contraction. EPA or MaxEPA and EPO can be taken at 2000mg to 4000mg of each daily but the cheapest alternative is linseed oil. The dose is 5 to 20 ml daily. See the comments in “Good Oils, Bad Oils?” in part B of “*Part 3: Nutrition*”. The full effects won’t be seen for 4 to 6 weeks.

f) *Feverfew* - Although not commonly prescribed by naturopaths/herbalists, I have found it effective as part of a total treatment protocol, probably because feverfew regulates prostaglandin, leukotriene and thromboxane¹¹⁶ metabolism. See the discussion under “**Migraine**” for the dose, but take it three times daily instead of once.

g) *Swimming* - thoroughly recommended.

h) Playing a reed driven wind instrument - clarinet, oboe, saxophone. NOT FLUTE. The others teach both strength and control in breathing. I have seen asthma relieved once one of these instruments is taken up.

If asthma (and hayfever) is worse in the pollen season (spring), it may be partly due to pollens in the atmosphere. In Melbourne Australia, asthma attacks are worse when the rye grass flowers in spring up in the Wimmera district, 300 kilometres away! Prevailing winds take the pollens down to Melbourne. Needless to say, attacks are worse in the Wimmera itself at this time of the year. If this is the case, the following may be relevant.

i) Bee Pollen - This often helps reduce the severity of reactions to pollens in the atmosphere. See your health store or apiarist (bee keeper). 2000-3000mg or one teaspoon of the granules daily.

j) Vaccine - When the above is not enough, if you know what the offending pollen is, or even if you don't, but merely collect flowers and the flower heads of grasses growing nearby, you can make a home-made oral vaccine. In the people for whom it works, it is almost magical. See appendix 13.

Atherosclerosis

Aside from the poor tissue oxygenation and the consequent increased cancer risk due to this condition, atherosclerosis is the usual precondition to coronary disease/coronary artery disease, heart failure, heart attack, high blood pressure, stroke and male impotence. And faulty diet is the chief cause. The higher the fat consumption, the higher the cholesterol production and in the absence of protective nutrients found in raw fruits, raw vegetables and sprouted seeds, the arteries become clogged with cholesterol deposits.

We are deficient in many micronutrients in the west due to dietary imbalance, aside from the things we consume in excess such as fat. One interesting Dutch study showed that the consumption of dietary *flavonoids* that are richly found in raw fruits, raw vegetables and sprouted seeds, reduced the risk of sudden death heart attack,¹¹⁷ which is ultimately due to atherosclerosis. In some animal experiments, feeding them extracts of proanthocyanidins, which are the deep red or blue or purple colours in fruits and vegetables, has both reduced blood cholesterol levels and *reversed atherosclerotic lesions in the arteries*.¹¹⁸ Other research shows that when diets are deficient in vitamins B6, B12 and folic acid, faulty methionine¹¹⁹ metabolism leads to excessive levels of *homocysteine* in blood and tissues, and injections of homocysteine into primates causes atherosclerosis *regardless of cholesterol levels in the blood*. Cholesterol itself may well be a secondary issue that only becomes a problem with lack of certain nutrients.¹²⁰ These problems will be resolved by following the diet recommended in this book, which is rich in all of the necessary nutrients.

a) Liver - Clean it - see appendix 8. Congested liver is responsible for poor cholesterol metabolism. Arteries will be cleaned much faster if liver cleansing is undertaken. In particular the Musashi "Fat Metaboliser" formula as recommended in the liver cleansing regime is crucial.

b) Ginger - helps thin the blood and is safer than aspirin. It is therefore useful in *preventing strokes*. It also helps *control cholesterol* and keeps the *arteries clear*. A piece half the size of the end of your thumb measured from knuckle to the tip is the right size, put through your juicer with other juices.

Or alternatively, purchase “00” sized empty gelatine capsules from your pharmacy and fill them with the ginger powder that is available from your supermarket. Take two to four capsules daily.

c) *Lecithin* - is a fat *emulsifier*, and helps control *atherosclerosis* by making the cholesterol more soluble and by helping the liver to work better. See the notes on this under the heading “Important Supplements” in the “General Dietary Guidelines” section. Two tablespoons daily. Whatever the mechanism, it works.¹²¹

d) *Dark red grape juice* - contains many anthocyanidins that protect the artery walls from becoming clogged. Apples are also rich sources of these compounds.

e) *Garlic and onions* - liberally used in the diet often help. In fact the risk of death by heart disease in people with high onion consumption is half that of people with low onion consumption.¹²²

f) *Green Tea* - Green tea has been shown to lower blood cholesterol levels. It does so by increasing conversion of cholesterol to bile acids that are then eliminated via the bowels.¹²³ Green tea is also rich in antioxidants that may offer some protection against the formation of cholesterol deposits in the arteries. In fact one or more cups of tea per day *halves* the risk of heart attack (which is ultimately due to blocked arteries) as compared with non-tea drinkers.¹²⁴

g) *Alfalfa* - Slows development of atherosclerosis, and may reverse it.¹²⁵

h) *Lysine, Vitamin C, Vitamin E & Coenzyme Q10* - In divided doses, 5000mg of lysine daily, 5000mg of vitamin C daily, 600IU's of vitamin E daily, and 30mg of Coenzyme Q10 daily. Improvement has occurred in some patients on this regime in as little as 2 months,¹²⁶ but it could take up to 2 years for full recovery.

i) *Hawthorn berries and leaves* - One problem associated with atherosclerosis is the blockage that develops in the coronary arteries. Hawthorn has been used historically to assist struggling hearts, and the benefits are now well documented scientifically. Hawthorn decreases blood pressure and increases blood supply to the heart.¹²⁷ It is worth taking whilst changes are made to assist the clearing of the arteries.

j) *Niacin (Vitamin B3)* - Provided it is in the form *nicotinic acid*, not niacinamide, this vitamin is more effective than any of the medical drugs at lowering cholesterol. The key side effect is an uncomfortable “flushing”. Aside from the discomfort the flushing is of no importance. Start at 100mg 3 times daily with meals. Every couple of days increase by 100mg each dose until the dose reached is 1000mg 3 times daily. If at any dose level flushing occurs, stay at that dose until the effect diminishes. Total cholesterol will reduce by up to 25%, and HDL cholesterol (the good guys) will be raised by 25%.¹²⁸

DO NOT USE THIS IF YOU ARE ON CHOLESTEROL LOWERING DRUGS, UNLESS SUPERVISED BY YOUR DOCTOR.

k) *Other Nutrients* - Chromium, potassium, iodine and taurine (an amino acid) have all been shown to retard the development of atherosclerosis.¹²⁹ In fact a large number of nutrients have been shown to either inhibit the development of atherosclerosis, or reduce cholesterol, or improve the situation by some other mechanism and space does not permit full

discussion. These nutrients include folic acid, vitamins B3, B6, C, E, the minerals calcium, magnesium, copper, potassium, zinc, and selenium, the food cofactors bromelain (pineapple), carnitine, chondroitin sulphate et al.¹³⁰ See also the introductory comments for atherosclerosis with respect to homocysteine and deficiencies of B6, B12 and folic acid, flavonoids and anthocyanidins, and the comments under the headings “*Copper*” & “*Vanadium*” in part A of the nutrition section. The list could go on and on, but the fact is that a diet as outlined in this book in conjunction with kelp and seawater supplements will take care of the problem.

l) *Chromium* - In particular, since chromium is a cofactor for the action of the hormone *insulin*, which is involved in blood fat control as much as it is involved in blood sugar control, and since it is deficient in the western diet, 400 micrograms of *chromium picolinate* once daily is an important supplement. This may be worth taking regardless of any change in diet.

m) *Sugar* - Avoid it. It increases the tendency of the blood to become “sticky” by increasing platelet adhesiveness and aggregation.¹³¹

n) *Margarines* - These are to be avoided. Studies show that consumption of them is associated with the development of atherosclerosis, not the prevention of it as is commonly promoted. See the discussion under the heading “Good Oils, Bad Oils?” in part B of the nutrition section.

o) *Coffee* - High consumption raises blood cholesterol, and it is not just the caffeine that does it.¹³²

Auto-immune Diseases

These disorders include such things as systemic lupus erythematosus (SLE), multiple sclerosis, muscular dystrophy, scleroderma, Raynaud’s Syndrome, rheumatoid arthritis, neuromuscular degeneration, vasculitis, myasthenia gravis, Graves disease, erythema nodosum, Reiter’s syndrome, iritis, dermatomyositis, and probably the inflammatory bowel diseases Crohn’s Disease and ulcerative colitis. All epidemiological¹³³ evidence shows auto-immune diseases are on the increase. So since the genetics of the human race haven’t changed environment is a key factor, and food is one of those factors. Check for food allergy/intolerance using the elimination diet and pulse test (appendix 2), and see the discussion on “leaky gut syndrome” in the section “Allergies” above, because that is the first step after the radical dietary shift along the lines that I have suggested is necessary for everyone.

Sometimes the “fingerprint”¹³⁴ used by the body’s immune system to identify a foreign bug, or the breakdown products of the bug looks so similar to the body’s own tissue in some genetically susceptible people, that the antibodies produced to specifically latch onto that “fingerprint” and nothing else also attack the person’s own body.¹³⁵ So slow burning infections may be a factor in auto-immune disease. The following auto-immune disorders have definitely been associated with this problem; diabetes mellitus, myasthenia gravis, Graves disease, erythema nodosum, Reiter’s syndrome, iritis, ulcerative colitis, lupus erythematosus, dermatomyositis, and some types of arthritis including rheumatoid arthritis.¹³⁶ Some diseases not normally regarded as auto-immune diseases such as psoriasis and acute pancreatitis, have also been shown to be associated with this sort of “fingerprint” mix up.¹³⁷ As mentioned under the heading “Arthritis”, one case of ankylosing spondylitis, which is an auto-immune arthritis, was cleared by treatment of

the Klebsiella organism with the herb “Bearberry” (*Arctostaphylos uva ursi*), which is specific for that organism.¹³⁸

As far as auto-immune diseases go, if dietary change, identification of food allergy/intolerance and liver cleansing don't fix the problem, see your practitioner.

a) *Nutrients* - research shows improvement in a wide range of auto-immune diseases with any of the following taken independently of each other.

(i) Vitamin E - at 800 to 1600 IU daily for some months.¹³⁹

(ii) Fish oils (EPA or MaxEPA) - at 1.8 to 3.2 grams daily for 6 weeks.¹⁴⁰

NB - Linseed oil (flaxseed oil) is rich in the same sort of oils found in MaxEPA. It may be worth considering because it is cheap by comparison. Yet in a wide range of health disorders for which EPA or MaxEPA would be prescribed I have found it to be clinically superior. The doses I have advised for clients have ranged from 5ml to 20ml daily. If it is to be used it must be food grade, not the stuff with which you oil your cricket bat!

(iii) Evening Primrose Oil (EPO) - This has been proposed as a possible therapy in a medical journal at 1 gram 4 times daily.¹⁴¹ On the basis of its known eicosanoid biochemistry it would be expected to do a similar job to EPA/MaxEPA for which there is actual research. I would not hesitate to prescribe it for any patient of mine with this type of disorder.

b) *Herbs* - Herbs that build the immune system may be needed. See “Infections”. If the specific bug is identified, there are often herbs that will be specific for that.

Blocked Arteries

See “***Atherosclerosis***”

Bruising

See “***Wound Healing***”.

Burns

See “***Wound Healing***”.

Cancer

Firstly, DETOXIFY THE LIVER! See appendix 8. Secondly, HANDLE YOUR STRESS! It is depressing your immune system and reducing your chance of survival. So far as diet and supplements are concerned, the following information is provided for your interest.

a) *Eliminate* - all animal products and extracted sugar from the diet.

b) *Raw food* - **No cooked food**. It is best to stick with only raw fruit, raw vegetables and raw sprouted seeds. Raw food is rich in antioxidant

nutrients that help prevent the cellular damage that can lead to cancer, and which may help to repair cells already damaged. And these antioxidant nutrients both work *together* and help preserve each other for further use in the body. For example vitamin C and CoQ10 recycle vitamin E. Carotenes, anthocyanidins, glutathione and lipoic acid recycle vitamin C. And glutathione is recycled by anthocyanidins. That doesn't mean I am suggesting that people with cancer rush out and buy supplements of this limited number of substances. There is an *uncountable* variety of "phytochemicals" in plant foods that are protective against cancer and sometimes directly active against it. And they act in a wide variety of ways. Here are examples of others besides those just mentioned:

- (i) Allylic sulphides - found in garlic and onions; may protect by stimulating a detoxification enzyme called glutathione-S-transferase.
- (ii) Capsaicin – found in hot peppers, this protects DNA from carcinogenic damage.
- (iii) Carotenoids - found in parsley, carrots, squash, sweet potatoes, yams, cantaloupe (rock melon), apricots, spinach, citrus fruit, tomatoes etc.

These are antioxidants and cell differentiation agents. The New York Cancer Research Institute has recorded cases of cancer remission from taking beta-carotene *alone*. Their studies indicate that there are two natural forms of beta-carotene; "cis" form and "trans" form. The "trans" form is made into vitamin A by the liver. Carrots are rich in the "trans" form. However it is the "cis" form that is active against cancer, and this is richly found in orange coloured soft fruits and leafy green vegetables such as apricots, mangoes, cantaloupe (rock melon), broccoli, and the leaves of dandelion and fennel.¹⁴²

I further refer you to the notes on *lycopene* given previously in this book, which is just one of the carotenoids found in tomatoes, water melon, apricots and red grapefruit, and which has been demonstrated to protect against lung cancer, bladder cancer, breast cancer, prostate cancer, and probably skin cancer.

- (iv) Catechins - Found in green tea and berry fruits, these are strong antioxidants and reduce the chance of bowel cancer.
- (v) Coumarins – found in green peppers, carrots, pineapple, tomatoes and strawberries they prevent the formation of carcinogenic nitrosamines.
- (vi) Ellagic Acid - Like capsaicin it prevents damage to DNA. It is found in grapes, raspberries and strawberries.
- (vii) Flavonoids - Many flavonoids (if not all) are cancer fighting agents, and they are found in most fruits and vegetables.
- (viii) Indoles - found in broccoli, cabbage, and brussels sprouts; stop oestrogen from over stimulating breast tissue and promoting cancer. The same chemicals protect against prostate cancer.
- (ix) Isothiocyanates - These induce protective enzymes and are found in mustard, radishes and horse radish.
- (x) Limonoids - As for isothiocyanates, these induce protective enzymes and are found in citrus fruit.

(xi) Monoterpenes - These aid protective enzyme activity, inhibit cholesterol production in tumours and are antioxidants. They are found in a wide variety of vegetables including parsley, carrots, broccoli, cabbage, cucumbers, squash, yams, tomatoes, eggplant, peppers, mint, basil and citrus fruit.

(xii) Phenolic acids (tannins) - These affect enzyme activity, inhibit the formation of nitrosamines and are antioxidants. They are found in parsley, carrots, broccoli, cabbage, tomatoes, eggplant, peppers, citrus fruits, whole grains and berries.

(xiii) Plant steroids, for example genistein - This is an *isoflavone* found in soy beans and products including soy sprouts, and in cabbage family vegetables. It prevents the development of blood vessels in tumours, so preventing tumour growth. Soy beans contain other compounds related to genistein (*daidzein, glycitein* et al), most of which inhibit cancer weakly, but together they act synergistically to produce a much greater than expected effect.¹⁴³ This highlights the need to consume whole foods. There are many other plant steroids. As a group they are cell differentiation agents,¹⁴⁴ and are found in broccoli, cabbage, cucumbers, squash, yams, tomatoes, eggplant, peppers, soy products and whole grains.

These substances are useful for all cancers, but most particularly for breast, cervical, uterine and prostate cancers because they compete for receptor sites on the tissues involved and thereby reduce tumour growth that results from stimulation by the male or female hormones. See the section on plant hormones earlier in the book.

*I want to make it clear that I have covered only **some** of the “phytochemicals” discovered by science. And what about the benefits of all those yet undiscovered? So especially with respect to preventing cancer, don’t go overboard on one or two foods. Variety is important. On the basis of the list of fruits and vegetables found above, are there *any* that do not protect against cancer? I venture to say the answer is NO!*

Trust nature’s good provision and eat widely, rather than trusting human knowledge and restricting the diet to those things demonstrated by the laboratory.

Having said that, if cancer is actually present, it doesn’t hurt to have some knowledge about foods which have a *strong demonstrated* anti-cancer effect, or which have been shown to help defeat this disease.

c) *Garlic and onions* - These have been shown to inhibit the growth of tumours in both human and animal experiments.¹⁴⁵

d) *Green Tea* – Many epidemiological studies (that is studies that compare various population groups) demonstrate that green tea reduces risk for many cancers. Drinking green tea in place of tea and coffee as a general dietary strategy cannot hurt.

e) *Raw beetroot juice* - Beetroot juice in large amounts (the juice of 1 to 2kg of beetroot per day) has been demonstrated to stop many cancers dead in their tracks. In some cases, as little as 250 grams of raw beetroot per day was enough to do it!¹⁴⁶ And by the way, this has been suspected from anecdotal evidence since at least the early 1950’s and the method by which beetroot achieves this has been demonstrated scientific fact since 1959/60,

and confirmed by 1965.¹⁴⁷ So why aren't the drug companies interested? The almighty dollar reigns supreme. You cannot patent beetroot juice, so you cannot make a financial killing from it.

There is a product available called "BioBeet", a powder made from beetroot juice using a process that preserves the nutrient integrity. It is distributed in Australia by "Nutralife Health and Fitness (NZ)", 9 Canon Place, Pakuranga, Auckland New Zealand. As a matter of record, I HAVE ALWAYS STRONGLY RECOMMENDED THIS PRODUCT TO MY CANCER PATIENTS.

f) *Other juices* - should be added to this regime, just based on the above analysis of the wide variety of cancer fighters found in fruits and vegetables. Especially use any juices rich in either *beta-carotene*, found most richly in *green leafy vegetables* and *orange coloured soft fruits* such as apricots, mangoes, cantaloupe/rock melons, broccoli, dandelion and fennel leaves, or *lycopene*, found in tomatoes, apricots, red grapefruit and watermelon.

g) *Green barley juice extract* - at ten teaspoons per day. As a matter of record, I HAVE ALWAYS STRONGLY RECOMMENDED THIS PRODUCT TO MY CANCER PATIENTS.

h) *Laetrile (also called B17, nitriloside)* - This molecule is composed of three smaller molecules chemically bonded together, these being *benzaldehyde*, *hydrogen cyanide* and *glucuronic acid*. In the presence of an unlocking enzyme, namely *beta-glucosidase*, the cyanide is released. This is a deadly toxin that will kill cells into which it is released.

Only cancer cells have appreciable amounts of the unlocking enzyme. So this natural food substance/vitamin is actually a "smart bomb" that targets cancer cells for extinction. A diet rich in laetrile increases survival chances in cancer victims. The richest sources are found in kernels and seeds, legumes, nuts, berries, edible seeds, sprouts and grains.

- (i) These include the kernels or seeds of apple, apricot, cherry, nectarine, peach, pear, plum and prunes.
- (ii) Amongst the legumes it is found in broad beans, chick peas, sprouted lentils, lima beans, sprouted mung beans, and scarlet runner beans. Sprout the limas, broad beans and chick peas before using them. This increases the laetrile content and removes the digestive enzyme inhibitors.
- (iii) Nuts with a rich supply are bitter almonds and macadamias.
- (iv) Almost all wild berries are rich in laetrile, including blackberries, cranberries, elderberries, and strawberries.
- (v) Flax seeds (linseeds) and sesame seeds are rich in laetrile.
- (vi) Of the grasses, alfalfa sprouts, wheat grass, and white clover are rich in laetrile.
- (vii) Grains rich in laetrile include oats, barley, brown rice, buckwheat, millet, rye, and wheat. These are all best sprouted, for the same reasons as for legumes above.
- (viii) Miscellaneous foods rich in laetrile include bamboo shoots, fuchsia plant, and sorghum.¹⁴⁸

i) *Pawpaw (papaya) leaves* - The leaves of the papaya plant have helped some terminally ill people overcome cancer. Papaya leaf extracts can be

purchased from herbal therapists, but if you have access to the plants themselves, see the recipe given in appendix 12.

j) *Shark Cartilage* - Extracts of shark cartilage have been found to inhibit “angiogenesis”.¹⁴⁹ Shark cartilage has been used for years to treat many cancers, and it likely works because of its ability to inhibit angiogenesis, because by doing this it will reduce the ability of tumours to develop the blood supply they need to grow.

k) *Colloidal Silver* - This has a history of use for *all* types of cancers. It is available from “S.A.F.E.” See appendix 14.

l) *Very high fever* - High fevers have caused many spontaneous remissions of cancer. Cancer cells are damaged at 39° Celsius and are killed at 42° Celsius. Ordinary cells are not damaged until 43° Celsius and don't die until 46° Celsius. A good 40° Celsius fever can be a life saving experience, even in terminal cancer. A good fever once in a while offers some protection.

Some years ago a cancer patient came to see me, having had cancer in the liver and lungs. He had gone into hospital to die. He developed a fever of 41° Celsius that lasted for a week, which the doctors had been unable to control despite all intervention. At the end of the week his liver cancer had disappeared, and he was left with only one small cancerous lesions on his lungs about 3 to 4 cm in diameter. I explained the role of fever to him. He listened with a glazed expression, obviously believing I was stupid. He refused to take any of my advice, and did not return for follow up. His cancer returned, and three months later he was dead. This man was given a second chance to live, but he didn't take hold of it. Was he stupid? No. Just brainwashed by the medical machine.

Candida albicans

This is the organism that causes oral and vaginal thrush. See “Women's Problems” for the treatment of vaginal thrush. *Candida albicans* is a natural yeast that exists on the surface skins of just about every part of our bodies. *Candida* may be found on skin, in the nose and lungs, in the vagina, and throughout the whole digestive tract. Most of the time it is kept in check by the immune system and by the presence of friendly bacteria. Certain external and internal conditions may lead to a change in this balance and that has two results.

- (i) The numbers of *Candida* organisms increase and overrun the natural balance.
- (ii) The organism itself converts from a yeast form into a fungal form, which is the dangerous form.

The fungal form penetrates the surface tissue. For example in the bowel, it penetrates the bowel epithelium (i.e. the lining). It is after these changes have occurred that a problem exists. There are precipitating factors to this, which according to the conventional wisdom include the following.

- (i) Antibiotic use, especially if prolonged.
- (ii) Prolonged medication with corticosteroidal drugs.
- (iii) Use of the contraceptive pill
- (iv) Multiple pregnancies.

(v) Refined carbohydrate diet. Candida feeds off sugars.

The symptoms of oral and vaginal thrush are obvious. The symptoms of so called “systemic” Candida infestation are so diverse as to mimic just about any medical disorder and then some, but the presence of a number of these symptoms together may indicate a Candida overgrowth.

(i) Chronic tinea or “jock itch”.

(ii) Recurring urinary tract infections.

(iii) Depression, chronic tiredness, inability to concentrate, poor memory, premenstrual syndrome, headache.

(iv) Cravings for sweets, bread, cheese, yeast extracts (vegemite), malt extract or alcohol.

(v) Persistent digestive upsets such as bloating, indigestion, alternating constipation and diarrhoea.

(vi) Symptoms are worse on damp humid days.

From my perspective the symptoms look like a depressed immune system in combination with a congested liver, and I believe long term high fat/oil diets in conjunction with the consumption of some food or other which is irritating the bowel lining (usually gluten containing grains and/or dairy foods, especially cheese) are two key factors which are usually overlooked. Here is the therapy I have used with many patients successfully.

a) Diet - Follow the general regime as recommended. Despite the high quantities of natural sugars found in the dietary regime I have recommended, long term relief from “Candidiasis” is often achieved without doing anything else at all. Raw fruits and raw vegetables contain things that promote the growth of the friendly bugs.

b) Liver - Clean it! See appendix 8.

The combination of dietary adjustment and liver cleansing allows the immune system to improve in function and restores the natural balance of the bugs in the gut. If this is not enough the following is usually all that is required to beat the problem.

c) Acidophilus - Take a supplement of a strain that is designed both to survive the stomach acid and bile unscathed, and which can colonise the bowel so that it will establish itself permanently. Otherwise constant supplementation is required. See the health store.

d) Zinc & Biotin - These reduce the ability of the Candida yeast to convert into the dangerous fungal form.

e) Caprilate - Two tablets with each meal. This is directly toxic to Candida.

f) Garlic - This is lethal to Candida, and encourages the growth of friendly bacteria. See “Important Supplements” in appendix 5.

g) Tea Tree Oil - This is active against Candida, but the safe dose for internal use is not established. I have made comments to this effect and given warnings under the heading “Infections”.

But remember the basic tenet of the whole book. Your system has been created to be in balance. Fix the basics and most things spontaneously remit. Only rarely have I needed to advise a patient to do more than a) and

b), and then it is usually because they refuse to change the diet or stick to the liver cleansing program.

Carpal Tunnel Syndrome

See your doctor if the problem persists, but I have had excellent results by prescribing the general diet as recommended, plus:

- a) *Vitamin B complex* - one high potency tablet daily.
- b) *Vitamin B6* - 250mg to 500mg daily.
- c) *Chelated Magnesium* - 500mg tablets. One tablet twice daily.

Cervical Dysplasia

This disorder is the stage before cervical cancer. See “Cancer”. I have reversed cases using Vitamin A, at much higher than the recommended dose. The dose used was 60,000 IU per day for two months, then 25,000 IU daily thereafter. I WOULD NEVER HAVE PRESCRIBED SUCH A DOSE DURING PREGNANCY.

Other nutrient deficiencies implicated include folic acid (take 10mg daily) and vitamin C.¹⁵⁰ I suspect that multiple deficiencies are involved. Get the diet right.

Cholesterol, Too High

Unless there is a sufficient supply of those accessory food factors that are protective in the diet, elevated cholesterol eventually leads to *atherosclerosis* and all of the consequent problems. Hence refer to the heading “**Atherosclerosis**”.

Chronic Fatigue Syndrome

Chronic fatigue syndrome often follows infection with Epstein Barr virus, Cytomegalovirus or Ross River fever and may carry on for years.

- a) *Diet* - Follow the general guidelines on diet.
- b) *Liver cleansing* - essential here. The lipotropic factors choline, inositol and methionine are crucial. The Musashi formula found in appendix 8 is recommended.
- c) *St John’s Wort* - St John’s Wort is active against Epstein Barr virus and cytomegalovirus. Use it to clear any smouldering infection. See the notes under “Infections” below.
- d) *Food Allergy/Intolerance* - check for this using the pulse test, see appendix 2.
- e) *Leaky Gut Syndrome* - Persistent problems need the attention of a competent practitioner. See the discussion in “Allergies” above.
- f) *Depression* - Aside from the possibility that in a small number of cases depression may be the actual cause of Chronic Fatigue Syndrome since depression compromises immune function, it is rare not to find depression as a secondary problem to the disease process itself. St John’s Wort is an excellent antidepressive herbal, and it has other benefits in the treatment of

Chronic Fatigue Syndrome, so it would be the herb of choice. See the discussion under “Depression” below.

Circulation Problems

General

See “**Atherosclerosis**”.

Haemorrhoids and Varicose Veins

a) *Flavonoid supplements* - 1000mg of mixed flavonoids three times daily will stop the damage worsening.

b) *Butcher’s Broom* - a specific for varicose veins. Health stores offer a number of formulae with this herb in them. BUT NOT DURING PREGNANCY.

c) *Vitamin E* - relieves the heavy achy feeling caused by varicose veins in the legs. 500 to 1000 IU’s daily.

d) *Anthocyanidins and proanthocyanidins* - These strengthen the vein walls, and they are richly found in red grapes and dark red grape juice, red apples, cherries, and hawthorn berries.

e) *Liver Cleanse* - crucial if the varicose veins are haemorrhoids. And good diet is essential to reduce straining to empty the bowels.

Excepting Butcher’s Broom, which must never be used during pregnancy, the above supplements may go some way to preventing the damage done during pregnancy.

Raynaud’s Phenomenon

a) See “*Haemorrhoids and Varicose Veins*” above. Points a) to d) under that heading are relevant.

b) *Food Allergy/Intolerance* - Check using “The Pulse Test”, see appendix 2.

c) *Ginger, cayenne pepper* - These are circulatory stimulants as are curries and the herb “Prickly Ash”. They all help.

d) *Vitamin E* - Two case studies showed symptoms disappear in 3 to 8 weeks with 100 IU to 400 IU of vitamin E (d-alpha tocopherol) two to three times daily.¹⁵¹

Colds

a) *Vitamin C* - in large doses. 1000mg hourly.

b) *Hot lemon drinks* - Juice of half a lemon in a cup of hot water with a teaspoon of honey. Grate the lemon rind. Add 1 teaspoon of the rind to the hot water.

c) *Peppermint* - The lemon drink may be made in a cup of hot peppermint tea.

Cold Sores

See “**Herpes Viruses**”. See also *St John’s Wort* and *Lemon Balm* under the heading “**Infections**”.

Coronary Disease/Coronary Artery Disease

See “**Atherosclerosis**”.

Crohn’s Disease

See “**Inflammatory Bowel Disease**”.

Cystitis

See “**Urinary Infections**”.

Cytomegalovirus (CMV)

The symptom picture is very similar to Epstein Barr virus (i.e. glandular fever or infectious mononucleosis). The treatment is the same. See “**Glandular Fever**”.

Depression

This may be due to a wide range of factors. See the section on stress.

a) *Diet* - as suggested generally. High protein diets inhibit *serotonin*,¹⁵² which regulates many aspects of mood. It is calming to the anxious and lifts the gloomy out of despair. Low levels are implicated in depression. So the low protein diet recommended in this book is ideal. In fact this sort of diet triggers the *release* of serotonin.

b) *Food Allergy/Intolerance* - This can be checked using the pulse test, see appendix 2.

c) *Leaky gut syndrome* - A possibility.

For the above three factors, imbalance may lead to biochemical imbalance. Many patients have their depression simply evaporate after changing the diet and cleaning the liver.

d) *Exercise* - 20 minutes of moderate aerobic exercise 4 to 5 times per week has been shown to be superior to drugs in elevating mood.¹⁵³

e) *Calcium, Magnesium, Potassium, Vitamin B* - These are the main nutrients involved in nervous system control. Supplements may be needed. Deficiencies of all of them have been associated with depression.¹⁵⁴

f) *Rest & Relaxation* - Many nervous system problems amount to no more than sleep deprivation. We often don’t get enough. Rest and relaxation tapes may also help.

g) *St John’s Wort* - is an excellent antidepressive, having been shown to be superior to many prescription drugs, except in cases of severe psychosis.¹⁵⁵ There are a variety of supplements available through health food stores.

h) *Valerian* - One controlled double blind study has shown the superiority of the combined use of this herb with *St John’s Wort* over the drug *trypstanol*, with far fewer side effects.¹⁵⁶

i) *Kava* - One controlled double blind study showed Kava equal to the benzodiazepine antidepressants in therapeutic effect, but superior in that it had fewer side effects.¹⁵⁷

j) *Counselling* - Professional help is sometimes required. *Learned Optimism* by Martin E. P. Seligman and *Feeling Good - The New Mood Therapy* by David D. Burns are two books which contain a great deal of useful information on correcting the faulty thinking processes which lead to depression.

Diabetes Mellitus

Most people know this as “Diabetes” or “Sugar Diabetes”. This disorder needs supervision by a qualified practitioner. See the comment on Albert Schweitzer’s recovery from insulin dependent diabetes in “Good Oils, Bad Oils?” under the heading “Problem Myths and Problem Foods”.

a) *Diet* - High fat diets are implicated. Many cases of diabetes undergo “spontaneous remission” on the sort of diet recommended in this book.

b) *Liver* - Clean it! **THIS IS ABSOLUTELY CRUCIAL!** See appendix 8, and follow the advice meticulously.

c) *Chromium* - 400 micrograms of chromium picolinate once daily.

Digestive Upsets

General

Heavy foods lead to all sorts of digestive troubles, from indigestion to wind. If grains, legumes and dairy foods are a small component of the diet, and raw food is a large component of the diet, less trouble is experienced. But please note that *any* sudden change of bowel action, unless due to a simultaneous sudden change in diet, may be indicative of *cancer*. Medical expertise may be needed.

Constipation

If the onset is sudden with no apparent explanation, have your doctor check you to rule out cancer. Otherwise lack of roughage, too many high protein and high fat foods, and liver congestion are the key causes.

a) *Diet* - More raw fruits and vegetables, fewer animal proteins.

b) *Liver Cleanse* - See appendix 8.

c) *Psyllium, Slippery Elm, Linseed* - These bulk up the stool. Available from most health food stores.

d) *Herbal Laxatives* - These are available through most health food stores, but use them only if essential. Dependence upon them is just as big a problem as dependence on medical laxatives.

Diarrhoea

As for constipation, if the onset is sudden and the problem continues with no apparent other ill health, have your doctor check you to rule out cancer. Many health problems have diarrhoea associated, but in most of these cases

the problems will persist in spite of usual treatment. If this is the case, insist on further investigation. An over-consumption of gluten containing grains can also cause diarrhoea even in those without full blown coeliac disease.

a) *Diet* - reduce grains and legumes. More raw vegetables until the problem is over. Reintroduce fruit after the episode is finished. Garlic helps.

b) *Liver Cleanse* - See appendix 8.

c) *Food Allergy/Intolerance* - Check suspect foods using the pulse test. See appendix 2. These will be those the sufferer feels they cannot do without, and which they are generally eating in large amounts.

d) *Herbs* - If there is no improvement from points a) to c), advice may be sought from a competent herbalist or naturopath. The approach will likely include consideration of the following sorts of herbs.

(i) Antimicrobials such as Golden Seal, Echinacea and Garlic.

(ii) Astringents such as Cranesbill and Agrimony.

(iii) Demulcents (soothing herbs) such as Marshmallow, Psyllium and Slippery Elm.

Dyspepsia & Indigestion

This can be due to hiatus hernia, gastritis or peptic ulcer. Get it checked. Simple dyspepsia (also commonly called indigestion) is due to faulty diet. It should disappear if the general guidelines are followed. When dietary guidelines are ignored and the inevitable problems develop, the following may help

a) *Herbal teas* - Peppermint, Chamomile.

b) *Ginger* - even glace ginger helps. A little ginger powder can be added to herbal tea.

Gastritis & Peptic Ulcers

Gastritis and peptic ulcers may be precipitated by stress, but stress is not the key factor. The real culprit is infection in the stomach and small intestine by a bug called “*Helicobacter pylori*”. Infection is passed from parent to child, which is a key reason peptic ulceration runs in families. It needs to be cleared up because long term *Helicobacter* infection increases the risk of stomach cancer, and believe me, you don’t want that. I watched my father die of it. Aside from that, chronic infection with this organism is associated with increased incidence of Coronary Heart Disease.¹⁵⁸

DO NOT SELF MEDICATE. The expertise of a qualified practitioner is needed. Medical practitioners who are up to date with this idea use a combination of three antibiotics to clear the infection up. Spouses and children need to be treated to eradicate the problem. Infection rates in children seem to be increasing.¹⁵⁹ Naturopathic/Herbal practitioners have used herbs that are natural antibiotics to treat peptic ulcers long before it became in vogue medically. The following information is for interest only.

a) *Flavonoids* - Some inhibit *Helicobacter* growth.¹⁶⁰ Poncirtin is the most active. Others include hesperidin, naringenin, dosmetin. So diets rich in

raw fruits and raw vegetables will help control the problem. See point c) below.

b) *Olive leaf extract* - This is active against *Helicobacter pylori*. See “**Infections**” for the dose and suppliers.

c) *Raw Vegetables* - In a study of Japanese men, infection load with *Helicobacter* was lower in those who consumed raw vegetables daily. Lower infection loads were also correlated with tofu consumption.¹⁶¹ Another study showed a lower incidence of infection with *Helicobacter pylori* in children who ate fruits and vegetables daily.¹⁶²

d) *Garlic and other Allium family vegetables* - One study quotes previous studies which show that high consumption of garlic, onions, shallots and other Allium family vegetables leads to a lower incidence of stomach cancer, and that consumers of garlic have a lower incidence of *Helicobacter pylori* infection. It then reports on experiments that show that garlic has an antibiotic effect against *Helicobacter pylori* bacteria.¹⁶³ See the heading “**Infections**”, for other research confirming this. Another study shows that high consumption of *onions*, another Allium family vegetable closely related to garlic is also associated with lower incidence of stomach cancer.¹⁶⁴ It is therefore most likely that onion, like garlic, is active against *Helicobacter pylori*.

e) *Breast Feeding* - There is a factor in human breast milk called k-casein that stops the *Helicobacter pylori* bacteria from adhering to the stomach lining, so preventing infection. The similar k-casein found in cow’s milk *does not do it*. Breast feeding of infants, as against bottle feeding therefore provides some protection.¹⁶⁵

f) *Alcohol* - High alcohol consumption increases the risk of *Helicobacter pylori* infection dramatically.¹⁶⁶

g) *Bee Propolis* - Taken orally, it has some anti-peptic ulcer activity, so it may be active against *Helicobacter pylori*. The dose varies from 100mg to 300mg taken three times daily.¹⁶⁷

h) *Golden Seal & Echinacea* - These have been traditional natural remedies in the treatment of peptic ulceration. There is no available data to support the idea that they treat *Helicobacter*, but each has strong antimicrobial actions, so lack of data may be no more than lack of appropriate research, not lack of efficacy.

Diverticular Disease Of The Bowel

This is a disease in which the lining of the bowel “blows out” between the muscular bands that encircle the tube of the bowel, a bit like a tyre tube blowing out through the tyre. The pockets (which are called “diverticula”) formed can become infected. That is what causes the pain, the fever and the discomfort.

a) *Diet* - Symptoms will be alleviated if the general dietary advice is adhered to.

b) *Slippery Elm powder* - This helps relieve symptoms. Years ago one patient of mine claimed to have barium enema x-ray evidence that the condition had reversed itself, which defies conventional medical wisdom, and all she did was to take one dessertspoon of slippery elm powder daily. It

needs to be flavoured in some way, because its taste and texture leave a lot to be desired. Mix it with a mashed banana, or mix it with water, add some cinnamon, and leave to stand overnight to set like a jelly.

c) *Grated raw beetroot* - I have no idea why this works. But it is marvellous for symptom control. It is used with salad the same as carrot would be.

d) *German Chamomile* - is reputed to help ease symptoms.

Eczema

a) *Diet* - as per recommendations. No citrus fruits. Reduce animal products, especially red meat and dairy in order to reduce the levels of arachidonic acid in the system. This substance is the substrate from which the inflammatory products involved in irritating the skin are made. Many flavonoids have been found to inhibit the inflammatory reactions that produce the skin irritation of this disorder, and the diet recommended in this book is rich in flavonoids.

b) *Clean the liver* - See appendix 8.

c) *Food Allergy/Intolerance* - See the discussion under “**Allergies**”. A common problem. Use the pulse test in appendix 2 to check it. Wheat is a common one.¹⁶⁸ In infants, milk is the most common one.¹⁶⁹

d) *Nutrients*

(i) Evening primrose oil - large doses are needed, at least 1000mg three times per day.

(ii) Eicosapentanoic acid (EPA, Fish oil) - this also helps. See the health food store.

(iii) Linseed oil - this is rich in omega 3 fatty acids, similar to those in fish oil. The dose is one to four teaspoons daily.

(iv) Zinc - 50mg of elemental zinc per day.

Endometriosis

See “**Women’s Problems**”. I have fixed many cases with the advice given under that heading, plus a herbal formula. A key herb is Chasteberry (see the notes on PMS) in large doses. You’d best see your practitioner for this one, but it is curable naturopathically speaking.

Epstein Barr Virus

See “**Glandular Fever**”.

Fibrocystic Breast Disease

See “**Women’s Problems**” for general information. Aside from the hormonal imbalance caused by the western diet that needs attention there are some specific factors.

a) *Avoid Methylxanthines* - These are the stimulant chemicals found in coffee, tea, chocolate and cola. Avoid them. Half to two thirds of women with this disorder can eliminate it just by taking this step.¹⁷⁰

b) *Vitamin E* - 600 IU per day helps most women.¹⁷¹

c) *Evening Primrose Oil (EPO)* - 1500mg twice daily helps relieve the pain in about half of women sufferers.¹⁷²

Fibroids

Excessive levels of oestrogen stimulate the growth of the fibroids. So see “**Women’s Problems**” for general advice. The treatment is similar to that for endometriosis. Blue Cohosh is a key herb. See your practitioner.

Flooding (Heavy Periods)

See “**Women’s Problems**” for general advice. This is usually fixed with diet and liver cleanse. Make sure the lipotropic factors methionine, inositol and choline are not neglected in the liver cleanse.

There are key herbs a practitioner will use, such as Blue Cohosh & False Unicorn Root.

a) *Vitamin A* - This is often helpful in large doses. 25,000 IU twice daily for 2 weeks.¹⁷³

b) *Vitamin C* - 200mg with bioflavonoids three times daily helps most women.¹⁷⁴

c) *Iron Supplements* - Deficiency may be both a result *and* cause of flooding. Take these under medical supervision.

Flu

See “**Influenza**”.

Gall Stones

If this is a medical emergency, surgery cannot be avoided. If this is a chronic problem, the following has helped others.

a) *Diet* - As found in the general dietary guidelines.

b) *Bitters* - for example “Swedish Bitters”, available at health food stores, to stimulate bile flow and improve the quality of bile. 5ml with each meal.

c) *Lecithin* - to improve the quality of bile. One to two dessertspoons daily.

d) *Liver Cleanse* - Use the lipotropic factors - see appendix 8.

e) *Apple juice & Olive Oil* - This must only be attempted after a) to d) have been followed for one to two months. The procedure is as follows:

(i) Drink two litres of apple or pear juice daily for 7 days. This softens the stones.

(ii) On day 7, skip the evening meal.

(iii) At bedtime, mix up ½ cup of olive oil with ½ cup of lemon juice. Drink this through a straw to stop the taste from causing gagging. This causes the stones to be expelled from the gall bladder, provided they aren’t too big, which they shouldn’t be if a) to d) were followed properly.

In the morning, when the bowels are emptied, you will see the soft stones in the stool.

Glandular Fever

Also called infectious mononucleosis. It is due to the “Epstein Barr” virus. The symptom picture of “cytomegalovirus” is very similar and the treatment regime is the same.

a) *St John’s Wort* - see the discussion re St John’s Wort under the heading “**Infections**” below. St John’s Wort makes Epstein Barr virus and Cytomegalovirus (CMV) more “visible” to the immune system. 2000mg every 2 hours in the acute phase, reducing to three times daily as recovery progresses, tapering off to nil about 4 weeks after recovery seems to have been completed.

b) *Diet and Juices* - When hungry, high raw food diet and plenty of juices.

c) *Liver cleanse* - treat the liver *both* herbally and using lipotropic factors. See appendix 8.

I have personally treated a case very recently where there was liver abnormality that was verified by medical liver function test, which was due to Epstein Barr virus (blood test verified), and it improved sufficiently in two and a half to three weeks for the client to go back to work. By 5 to 6 weeks, the problem was in remission. It hasn’t returned.

d) *Echinacea* - boosts the activity of many types of white blood cells (see “**Infections**” below). 500mg every 2 hours.

Glaucoma

DO NOT TREAT YOURSELF WITHOUT MEDICAL SUPERVISION. YOU MAY GO BLIND. The following is for information only.

a) *Check for food allergy/intolerance* - One study involving 113 people indicates that this has an influence.¹⁷⁵ Identifying the problem food(s) may influence the medical treatment required. See appendix 2.

b) *Vitamin C* - at 500mg 4 times daily¹⁷⁶ has been shown to give some improvement after one week.

c) *Rutin* - One of the bioflavonoids, at 20mg three times daily¹⁷⁷ has been shown to give some improvement after 4 weeks.

The diet as recommended is rich in vitamin C, bioflavonoids and related compounds. Glaucoma may be partly genetically determined, but good diet reduces the impact of the genetic predisposition.

Gout

There is a genetic predisposition. Sufferers have a reduced ability to clear uric acid from the body.

a) *Diet* - Low protein diets of the type I have recommended usually clear the problem.

b) *Juices* - Any of these, or make a mix. String beans, celery, cucumber, carrot, beetroot, apple, grapefruit.

c) *Cherries* – Four ounces (120 grams) daily fixes most cases. Even tinned cherries with all their refined sugar will do it!

Grey Hair

I've tried everything to make my hair return to its youthful colour, and believe me I've had access to the best information available. NOTHING WORKS EXCEPT HAIR DYE! You go grey when nature has programmed you to go grey. Having said that you may go grey *earlier* than you need to if you are nutrient deficient. If that is your situation then certain nutrients are more implicated than others. Supplements of PABA, pantothenic acid, and trace elements plus brewer's yeast, blackstrap molasses and seawater may help you.

Hayfever

This is generally a reaction to plant pollens, usually grass pollens, but others may be involved.

- a) *Diet* - as outlined generally. Especially keep grain consumption low. Grains are grasses and high consumption seems to set people up for reaction to pollens of other grasses.
- b) *Pineapple* – Some studies have shown that one slice of raw pineapple daily relieves symptoms a great deal. The slice must be ½ an inch thick.
- c) *Liver* - Clean it!
- d) *Nutritional Supplements* - Follow the supplemental and specific foods mentioned for "**Asthma**".
- e) *See the notes* - on "Bee Pollen" and "Vaccine" under the heading "**Asthma**".
- f) *Oils* - Oils such as evening primrose oil (EPO), EPA or MaxEPA and linseed oil alter eicosanoid metabolism to reduce inflammation. EPA or MaxEPA and EPO can be taken at 2000mg to 4000mg of each daily but the cheapest alternative is linseed oil. The dose is 5 to 20 ml daily. See the comments in "Good Oils, Bad Oils?" in part B of "*Part 3: Nutrition*". The full effects won't be seen for 4 to 6 weeks.

Headaches

There are many factors that produce headaches. If you suffer with migraines, see that heading. Some quite serious disorders are accompanied by headache. If you do not usually suffer from headaches, and if you have visual disturbance, nausea or vomiting, and a headache is so severe it feels like you have been hit in the head with a brick, get to the hospital quickly. It may be meningitis or sub-arachnoid haemorrhage, which are life threatening. Or if a blinding headache is accompanied by any high fever, consult your doctor or get to the hospital. But if you are a known headache sufferer, these may simply disappear by following the dietary advice given and cleaning the liver.

If they do not, tension may be a problem. Refer to the stress management strategies in this book, get some mild exercise and adequate recreation and sleep.

- a) *Nutrients* - Magnesium, Calcium, Potassium and vitamin B are all involved in nervous system management. Take a balanced supplement.

b) *Herbs* - Of those that you may purchase from a health food store or enlightened pharmacy, valerian on its own may help. Formulae that contain valerian plus other calming herbs such as passion flower, skullcap, hops, vervain, wood betony and also nervous system tonics such as oats and St John's Wort, are available across the counter. If these do not help, consult your herbalist/naturopath.

c) *Peppermint oil* - A drop rubbed into each temple often gives relief.

d) *Problem Foods* - Some non-migraine headaches are still nevertheless precipitated by food intolerance. See the information given regarding this under the heading "**Migraines**".

Head Lice

Wash the hair and dry it. Rub tea tree oil into the hair and scalp, making sure it is thoroughly wet with the oil. DON'T GET IT IN THE EYES. Wrap the head in a towel and leave it for half an hour. Wash out the hair and use a fine tooth comb to take out the eggs. Repeat as necessary.

Heartburn

See "**Dyspepsia & Indigestion**" under "**Digestive Upsets**".

Heart Disease

See "**Atherosclerosis**".

Heart Failure

a) *SEEK MEDICAL ADVICE.*

b) *Refer to the heading "**Atherosclerosis**".*

c) *Hawthorn berries and leaves* - Commence at 500mg once daily. Each week add 500mg until the total dose is 1000mg twice daily.

Heavy Periods

See "**Flooding**".

Herpes Viruses

L-Lysine - helps with herpes simplex (cold sores). 800 to 1000mg daily during attacks and 300 to 500mg daily as a preventive. For the full benefit, the treatment may need to continue for some months.¹⁷⁸

See also "**Infections**", *St John's Wort* and *Lemon Balm*.

High Blood Pressure

See "**Hypertension**".

Hot Flushes

See “Women’s Problems” for general advice. You may need to see your practitioner, but try three cups of Sage tea per day first. Give it a few weeks to work.

Hypertension (High Blood Pressure)

Most high blood pressure problems are due to increased resistance in the small arteries.¹⁷⁹ This is caused by *atherosclerosis* due to too much fat in the diet, by *blood with a high viscosity* because of too much fat in the diet, and by the *narrowing of the smaller blood vessels* due to contraction of these vessels, which is caused by certain types of the “mini-hormones” called prostaglandins. The prostaglandins that contract the blood vessels are produced when there is too much *saturated* fat in the diet. A low fat diet as recommended in this book is crucial to resolving the problem.

a) Refer to the heading “**Atherosclerosis**”.

b) *High juice diet* - will help control blood pressure, but the single most effective juice is *celery juice*. The juice of two stalks of celery daily with other juices will lower blood pressure by 20-30 points.

c) *Garlic and onions* - are very effective here.

(i) You can *juice onion* - the juice of one per day will help - but it tastes foul, so flavour it with pineapple juice or make a banana smoothie to help disguise it.

(ii) *Garlic sandwiches* - One client of a colleague of mine had blood pressure so high he was in danger of a stroke. After being advised to increase his garlic consumption he went overboard, eating bread and butter covered with sliced garlic 5-6 times per day. Within a week he went back to see my colleague, complaining of being giddy. His giddiness was due to the fact that his blood pressure was now so low he really shouldn’t have been able to stand up!

d) *Oils* - Oils such as evening primrose oil (EPO), EPA or MaxEPA and linseed oil alter eicosanoid metabolism to reduce smooth muscle contraction, so reducing the resistance of the arteries to blood flow. EPA or MaxEPA and EPO can be taken at 2000mg to 4000mg of each daily but the cheapest alternative is linseed oil. The dose is 5 to 20 ml daily. See the comments in “Good Oils, Bad Oils?” in part B of “*Part 3 Nutrition*”. The full effects won’t be seen for 4 to 6 weeks.

I advised one client of mine to take a little *linseed oil* (one to two teaspoons daily) as part of a blood pressure lowering regime. He misunderstood. He thought I said *tablespoons* instead of *teaspoons*, and he further reasoned that if a little would do him some good, a lot would do him a lot of good (not always true). So he took linseed oil either in tablespoon doses, or if he felt lazy in swigs straight from the bottle about six times per day! When he came back for his next appointment a month later, his blood pressure problem (which had been severe) had disappeared!

e) *Weight Loss & Mild Exercise* - These have both been shown to lower blood pressure.

f) *Food Intolerance/Allergy/Addiction* – There is no doubt that this can lead to high blood pressure. Use “The Pulse Test” in appendix 2 to identify problem foods. And see the story of my own struggle with high blood

pressure in “Identifying Food Addiction/Allergy/Intolerance” under the main heading “Changing Your Diet” in part B of “*Part 3: Nutrition*”.

Hypoglycaemia

Faulty diet and congested liver are the key factors. It used to be thought that complex carbohydrates kept the blood sugar more even than simple carbohydrates. Now that the effects of foods on blood sugar levels and insulin response have actually been compared by measurement this has proven to be false. The *relative* effect of various foods on blood sugar can be found by referring to the Glycaemic Index (“GI”) for those foods. The higher the GI, the greater the rise in blood sugar for a given number of Calories of the food consumed, and the lower the blood sugar will go when it rebounds due to excessive insulin release. Many factors determine the rate of sugar release into the blood stream. Contrary to common sense, apple juice is less likely to cause problems than a slice of wholemeal bread! If you are interested in the exact GI figures for foods many books have tables of them. Just go to any good book store and browse the health section. But if you follow the recommended diet you won’t need to know the GI values of specific foods.

a) *Diet* - as per general advice given. Over all a diet rich in raw fruit and raw vegetables will maintain blood sugar levels more evenly than other diets.

b) *Liver* – Clean it! The liver stores glucose and if it is congested the release of such stores into the bloodstream between meals is compromised. See appendix 8.

c) *Chromium Picolinate* – 400 micrograms once daily. Chromium works with the insulin molecule to enhance its action.

Impotence

Most cases of impotence are *not* psychological in nature as was once believed to be the case. Most cases are due to blocked arteries in the penis due to atherosclerosis. Erections happen when the penis becomes engorged with blood, because blood is getting in, but the neuro-physical reaction to sexual stimulation closes the “exit” so that the blood is kept there. If blood cannot get in due to blocked arteries, no erection. Inability to have an erection is now regarded as an early warning sign of impending coronary artery disease. For treatment, see the section on atherosclerosis.

Infections

The whole immune system will be functioning better if the general dietary advice is followed, so susceptibility will be low. But for interest, these are some things that help. I include only those things that you can find at home or obtain from health food stores.

a) *Propolis* - A product of the bee hive. It has a broad spectrum antibiotic effect against a wide variety of fungal, bacterial and protozoal infections. The dose is 100mg to 300mg three times daily. It can be used on the skin, but a 1:10 tincture must be obtained and then diluted a further 1:10.¹⁸⁰

b) *Garlic and onions* - contain antibiotic substances that are effective against many bacteria, viruses, worms (including roundworms and hookworms) and

fungi, including those causing common skin infections such as tinea. Garlic is more potent than the drug *Nystatin* in the treatment of *Candida albicans*. Consume them as part of your food. Cloves of garlic can be crushed and swallowed like a tablet if necessary. Or alternatively, purchase “00” sized empty gelatine capsules from your pharmacy and fill them with garlic powder that is available from your supermarket. Take one to two capsules daily. Cut cloves of garlic between the toes treat tinea effectively. In a major Chinese hospital, garlic was used successfully as the only treatment in cryptococcal meningitis, an often fatal disease. In addition it is anti-inflammatory, thins the blood, reduces cholesterol, lowers elevated blood sugar, and inhibits cancer.¹⁸¹ Garlic is also active against *Helicobacter pylori*¹⁸² (see “*Gastritis & Peptic Ulcers*” under “Digestive Upsets”). NEVER UNDERESTIMATE THE POWER OF GARLIC FOR ANY INFECTION. Onion is not as strong against infection, but it can be consumed in much larger amounts, which increases its relative effectiveness. The other benefits of garlic are found in onion also.¹⁸³

c) *St John’s Wort* - This has been shown to be active against many viruses that have an envelope surrounding them, but not against those that do not. Although the action of this herb has not been studied on *all* enveloped viruses, since it works by removing the envelope, making them more visible to the immune system, it seems reasonable to suppose its action will be very broad. Enveloped viruses include all herpes viruses, which includes the viruses that cause cold sores, chicken pox and shingles, HIV, Epstein Barr virus (EB virus, glandular fever) and cytomegalovirus (CMV). In clinical practice I have found it to be particularly effective for cold sores, chicken pox and shingles, EB and CMV viruses. I have not had the opportunity to treat HIV infection with it, but it would be interesting to do so.

Other enveloped viruses against which it should act include smallpox, German measles and measles, some forms of encephalitis, yellow fever, dengue fever, influenza types A, B, & C, hepatitis B, para-influenza, mumps, rabies, and some common cold viruses, although the most typical cold virus, which is a rhinovirus, does not have an envelope.¹⁸⁴

d) *Lemon Balm* - A cream made with this common herb has been shown to be effective in healing both oral and genital cold sores.¹⁸⁵

e) *Pau D’Arco* - This herb has shown activity against many parasites, bacteria, fungi, and viruses including herpes viruses and the polio virus.¹⁸⁶ Recurring fungal infections such as tinea may be treated orally with this herb. It is available from health food stores.

f) *Tea Tree Oil & Other Volatile Oils, also called Essential Oils or Aromatic Oils*

All volatile oils, which are responsible for the distinctive aromas of many plants such as jasmine, peppermint, eucalyptus, tea tree, aniseed and many others are somewhat antiseptic, although depending on the oil, they have a wide range of actions. Actually some are brilliant antiseptics, such as tea tree oil, eucalyptus oil, lavender oil and oil of thyme. They are particularly useful for infections on the surface of the body, but some of them are quite irritating to the skin, so care needs to be taken. *Thymol* is the key active antiseptic ingredient in the oil found in the herb thyme, and at one time it was the standard antiseptic used in hospitals. And good old Aussie tea tree oil is just as strong as oil of thyme! Aside from their direct antiseptic action they stimulate the production of white blood cells, augmenting the body’s own defence system.

Volatile oils are eliminated from the body through all major “skin” surfaces, so if taken internally they will appear in lungs and bronchi, urine, the secretions like sweat, saliva and tears or the vaginal fluids. So at the right dose, they are effective treatment for almost any bacterial or fungal infection anywhere in the body.¹⁸⁷ A good example of the wide application to infection of these oils is the oil found in “Buchu” leaves (*Agathosma betulina*). Today it is used as a urinary antiseptic, and it is the essential oil that does the job. Historically however, it was used to treat lung complaints, although it is hardly ever used for this purpose today.

Those who are old enough may remember the good old fashioned Aussie remedy for anything that ails you; a drop of eucalyptus oil on a teaspoon of sugar; and it worked! But tea tree oil is a better remedy. It is a stronger antiseptic and it is less irritating, provided care is taken to purchase a reputable brand. In fact tea tree oil appears to be the *strongest* of all the volatile oil antiseptics. The efficacy of tea tree oil is now well established for use externally in infections of the skin, including fungal infections such as tinea, jock itch and scabies. Apply it twice daily. Thursday Plantation provide a handout that reviews much of the research.

But the safe *internal* dose of tea tree oil has not been established by research. However in the past I have taken internally 1 to 2 drops (from an eye-dropper) three times daily for many different infections with success. I have always taken a small piece of biscuit or bread, used a dropper to put the oil on to it, and swallowed it like a tablet. Although I have found it to work I do not make any recommendation on this because as stated before the safe dose is not established, and high doses of *any* volatile oil definitely cause liver damage.

g) Echinacea - This herb has many uses. It stimulates wound healing, has been shown to have anti-inflammatory properties, specific antiviral action against herpes and influenza viruses, and acts in various ways to increase the activity of a wide range of white blood cells including neutrophils, monocytes, eosinophils, macrophages, and T-Lymphocytes. Echinacea does not have much direct action against bacteria, but it is active against the organisms responsible for Golden Staph and Diphtheria. Echinacea has also been demonstrated to inhibit the growth of some cancers, including Walker carcinoma and lymphocytic leukaemia.¹⁸⁸

h) Golden Seal, Barberry, and Oregon Mountain Grape - Golden Seal is available from the health food store, but all of these plants contain a class of biochemicals called *isoquinoline alkaloids*. The one most studied is called *berberine*. Golden Seal has the greatest concentration of it. Although not as potent as prescription antibiotics, Berberine has been shown to be a very broad spectrum antibiotic, to stimulate the immune system, and to activate macrophages, which “eat”¹⁸⁹ invading organisms. It also acts to reduce convulsions, is a mild sedative (calming), helps reduce blood pressure, is a tonic to the uterus, a stimulant to the gall bladder, and reduces the irritability of the intestines.

For the purposes of fighting infection, berberine is active against a wide variety of bacteria, fungi and yeasts, and amoeba. *It is effective against most organisms causing diarrhoea, including the cholera organism.* Berberine is a slower but more effective treatment for *trachoma* than the most potent antibiotics. Trachoma is an eye disease common in the third world that leads to blindness if untreated. The rate of relapse after treatment with

berberine is much lower than with the synthetic drug. And for all of that, berberine and the plants that contain it have very low toxicity.¹⁹⁰

i) *Olive Leaf Extract* - This has been adopted by the Hungarian Government as the antibiotic of choice for the general population, since it has been shown to be effective against 120 bacterial and viral infections that have been tested including respiratory conditions of all sorts, tonsillitis, pneumonia, bronchitis, herpes simplex (cold sores) herpes zoster (shingles and chicken pox), Epstein Barr virus (EBV), cytomegalovirus (CMV), and a variety of other herpes viruses,¹⁹¹ the common cold, HIV, malaria (superior to quinine), TB, hepatitis B, gonorrhoea, encephalitis. It is also an effective remedy for gastric and duodenal ulcers that have been initiated by *Helicobacter pylori*. The dose is 1000mg of olive leaf extract three times daily. Olive leaf extract has at least five different pathways by which it acts against both viruses and bacteria, ranging from prevention of replication or growth of the organism through to activation of components of the immune system.¹⁹² If you grow olives, try strong cups of olive leaf tea. Commercial olive leaf extract is available from “S.A.F.E.” See appendix 14.

j) *Lactoferrin & Infopeptides* - This is not generally available yet, but supplements may enter the market at any time. It is produced by the body in small amounts, but the richest supply is in *colostrum*, the first milk produced by a mother. Commercial preparations will be extracted from cow's milk, but the harmful proteins in cow's milk will be absent from the extract. Lactoferrin has a general immune boosting action so it is active against all types of micro-organisms. It also reduces inflammation and inhibits tumour growth and metastasis.¹⁹³ Another similar product from colostrum is *infopeptides*, which regulate the immune system, dampening it if it is overactive and stimulating it if it is underactive.¹⁹⁴ Watch out for these two products.

k) *Vitamins* - Vitamin C is always important. In active infection large quantities may be required and powder forms are best. And use one that has the bioflavonoid cofactors in the mix. The way to take it in this situation is to start at one teaspoon each hour until the bowels become loose. Then reduce the dose slightly until the bowels firm again. This is the maximum does your body can utilise, and this process is called taking vitamin C to “bowel tolerance”.

But when there are repeated infections one after another, so that there is little time between the recoveries from one infection before another one strikes vitamin A is usually the deficient nutrient, especially in children. For short periods of up to two weeks children may need 5000IU of vitamin A daily to remove the deficiency that is predisposing them to infection. When this situation arises in adults they may require up to 20,000IU of vitamin A for up to four weeks.

l) *Colloidal Silver* - This has a long history of use for *all* types of infections; bacterial, viral and fungal. It is available from “S.A.F.E.” See appendix 14.

Infectious Mononucleosis

See “***Glandular Fever***”.

Inflammatory Bowel Disease

This is a general term for a number of inflammatory disorders of the bowel. The two most common are Crohn's disease and ulcerative colitis and although they are different disorders they have much in common. Ulcerative colitis tends to affect the large bowel but may involve the small intestine. Crohn's disease tends to affect the small intestine but may involve the large bowel. Ulcerative colitis is more common, but for both disorders females are more often afflicted, and onset is generally between ages 15 and 35 years. You need a medical diagnosis to confirm the presence of either. Both disorders manifest non-bowel symptoms such as arthritis, skin problems such as erythema nodosum (red nodules on the skin, usually the legs but sometimes the arms et al areas), mouth ulcers, thrombophlebitis (inflammatory clotting in blood vessels), inflammation of the eye, kidney stones, gall stones and in 3-7% of patients serious liver disease. Hence the disorders involve the entire system. They are not a localised problem. There is a genetic predisposition. Some believe these diseases are auto-immune in nature whilst others believe there is an infective agent involved; still others believe food allergy/intolerance is a factor.

From the naturopathic viewpoint there is an interaction between each of these factors combined with bowel toxemia and liver congestion. It is unlikely you will overcome either of these disorders without the care of a practitioner, but the following information may be helpful.

- a) *Refer to the topic "Auto-immune Diseases".* All that is said there is relevant.
- b) *Diet* - Follow the diet as recommended in this book.
- c) *Clean the liver and the bowel* - Refer to the heading "Cleansing The Bowel And The Liver" at the start of this section "VI Health Disorders", and refer to appendix 8.
- d) *Food Addiction/Allergy/Intolerance* - This *must* be checked. Read the section "Identifying Food Addiction/Allergy/Intolerance" under the heading "Changing Your Diet" in part B of "III Nutrition". And see "The Pulse Test" in appendix 2.
- e) *Nutrients* - Aside from those mentioned under the heading "Auto-immune Diseases" almost any nutrient might be deficient because the natures of these diseases means that nutrient absorption is compromised. High potency multivitamin and mineral supplementation would be an expected minimum until the disorder is under control.
- f) *Herbs* - A competent practitioner will select from a wide range of available herbs, the purposes of which will be the following:
 - (i) Fight infection and strengthen the immune system - Herbs to be considered may include such things as wild indigo, echinacea, golden seal and poke root.
 - (ii) Soothe, tighten and heal the bowel lining - Herbs to be considered may include marshmallow, cranesbill, slippery elm and if the drug companies haven't succeeded in having it banned in your country yet, comfrey.
 - (iii) Digestive stimulation - This may include herbs such as gentian and centaury.
- g) *Raw cabbage juice* - This has a reputation for healing of the bowel.

Influenza

Warning! Influenza is *not* the common cold! Amongst other things like headaches, stuffed up nose and a high fever that is less severe mornings and worse later in the day, flu is characterised by *aching muscles*. Your heart is a muscle, and like your other aching muscles, it is under attack by the virus. IF YOU EXERCISE DURING THE FLU, YOU MAY DO PERMANENT DAMAGE TO YOUR HEART.

a) *Herbs* - If you can obtain them, a herbal tea mixture of yarrow, elder and peppermint with a dash of ginger is very helpful. If you can obtain a herb called “Boneset” all the better. It helps with the aching.

b) *Echinacea* - Yes I know this is a herb, but you can purchase it separately. Take 500mg every 2 hours.

c) *Vitamin C* - Take at least 1000mg each hour.

d) *FR Tablets* - Made by Blackmores, this is a mineral combination (containing iron phosphate and potassium chloride) which is marvellous for controlling symptoms and shortening the duration of the flu. Take one or two, preferably chewed whilst sipping warm water, each 2 hours or when symptoms return. Years ago these tablets enabled my brother to get through his wedding day with ease despite a severe bout of flu.

Insomnia

a) *Lettuce juice* - 2-3 tablespoons half an hour before bed.

b) *Epsom salts* - in very small doses to make sure you have enough magnesium in your system (magnesium is a natural nervous system calmer). The amount that will fit on an old threepenny bit once per day is the right amount.

c) *Valerian* - This herb has a time honoured use for insomnia, and not only does it work, research verifies the truth of the claims. The dose required is 2500mg taken once half an hour before bed.¹⁹⁵ Unlike drugs, which induce a sleep type that has unusual and abnormal brain wave patterns valerian induced sleep is near perfect in its brain wave profile. As such the sleep induced by valerian is both much more natural and much more refreshing than is drug induced sleep.

Irritable Bowel Syndrome

Contrary to medical opinion, this is *not* primarily a stress disorder. It is due to irritation of the bowel by long chain proteins that are difficult to digest. These are found in nuts, legumes, grains and dairy. The main culprit is gluten, found in wheat, rye, triticale (a cross between wheat and rye), barley, and oats. Remember this rule of thumb, “All irritable bowel syndrome is gluten intolerance until proven otherwise.” Try eliminating gluten from the diet and see what happens.

a) *Diet* - As per above. Follow the general dietary advice as given elsewhere in this book.

b) *Peppermint oil* - This helps. Alternatives include drinking peppermint tea, or purchasing the proprietary medicine called “Mintec”, which is available

across the counter at pharmacies or from the health section at supermarkets. It has a standardised dose of pure peppermint oil.

Kidney Stones

Most kidney stones will slowly dissolve on the sort of diet I have recommended. SURGERY IS RARELY JUSTIFIED. But there are things that can be done to accelerate the dissolution of the stones. Avoid caffeine, sugar, rhubarb and silverbeet (chard or Swiss chard).

a) *Vitamin B6* - My own clinical experience suggests a dose of 500mg three times daily, in conjunction with a B-complex vitamin tablet.¹⁹⁶ B6 is essential for the normal metabolism of oxalic acid.

b) *Chelated Magnesium* - Most chelated forms will provide 100mg of elemental magnesium for each 400mg of the chelate. The dose needed is 200mg of elemental magnesium twice daily.¹⁹⁷

c) *Herbs* - I have used herbs to dissolve kidney stones many times. It takes 2-12 weeks, depending on the severity.

NB. The household herb *parsley*, whose official name is “*Petroselinum crispum*”, from the Greek “*petros*” – meaning “rock”. It has such a name due to its traditional use for urinary stones. Similarly the normally uneaten green aerial parts of carrot help dissolve stones. A strong tea combining the two drunk three times daily may be enough for small stones, if B6 and magnesium are taken as indicated above.

If this is not the case you may need to consult a herbalist/naturopath, who will combine a selection of “stone breakers” like Gravel root (*Eupatorium purpureum*), Pellitory of the wall (*Parietaria diffusa*), Seven barks (*Hydrangea arborescens*), Stone root (*Collinsonia canadensis*),¹⁹⁸ and Parsley Piert (*Aphanes arvensis*, it is not parsley), along with diuretics such as Clivers (*Galium aparine*), demulcents such as Marshmallow (*Althaea officinalis*), and urinary anti-inflammatories like Cornsilk (*Zea mays*).

Lice

See “**Head Lice**”.

Memory - Poor

When a high proportion of the diet is refined food from which most micro-nutrients have been removed, IQ is actually lowered considerably.¹⁹⁹ The implication is that a wide variety of micro-nutrients are involved in brain function. The whole nervous system including the brain needs vitamin B complex, calcium, magnesium and potassium for proper function. Choline for example (a B vitamin) is used as a substrate in the manufacture of acetyl choline, a key messenger molecule (called a *neurotransmitter*) that relays signals from one nerve cell to the next.

But more interesting are relatively recent discoveries of other natural substances called *nootropics* that enhance brain function. There are very few known as yet but they include *pyroglutamate* and its derivatives (such as *piracetam*). Pyroglutamate is a non-essential amino acid found richly in fruits and vegetables. In animal experiments memory was enhanced quite dramatically with combined supplementation of choline and piracetam.²⁰⁰

The answer to failing memory is to eat a diet rich in fruits and vegetables. All of the nutrients involved in brain function are richly supplied by the dietary regime I am recommending. Is it worth taking supplements? If your diet is right I don't think so. But there will always be times when extra nutrients are required.

- a) *Vitamin B complex* – Take a high strength formula designed for people under stress.
- b) *Multimineral* – Take one that is rich in calcium, magnesium and potassium.
- c) *Lecithin* – This is rich in choline. The amount needed is about one tablespoon daily.
- d) *Juices* – Use the juices of raw fruits and raw vegetables to raise your consumption of both the known and as yet undiscovered nootropic nutrients.

Menopause

See “Women’s Problems” for general advice. Exactly what is required depends upon the specific problem. Please see the appropriate heading such as “Flooding” or “Hot Flushes”.

Migraine

There are a number of factors. Tension, faulty diet, liver congestion and hormonal imbalance (in women) are the chief ones. Fix the diet and clean the liver for a start.

- a) *PMS* - For women who still suffer, treat it. As the hormone balance associated with that is resolved migraine may disappear. See “Women’s Problems”.
- b) *Feverfew* - This herb has a demonstrated ability on its own to reduce or remove symptoms in most people.²⁰¹ Feverfew *controls* migraine but is not a cure. It takes 4-6 weeks to start working and will continue to work for 4-6 weeks after treatment ceases. The dose is 100 to 200mg of the herb once per day. Proprietary formulae are available, but they do not work as well as the fresh plant. Obtain one from the nursery. Chew up only *one* small leaf per day. My own clinical experience suggests that this herb *on its own without any other therapy* is effective in approximately 70% of cases, but it needs back up with other treatment in approximately 30% of cases.
- c) *Ginger* - This works as an adjunct to feverfew. You can make your own capsules by purchasing “00” sized empty gelatine capsules from your pharmacy and filling them with ginger powder that is available from your supermarket. If you wish, proprietary tablets are available from the health food store. They will be placed under remedies for motion sickness.
- d) *Nutrients* - High doses of vitamin B2, B6, and magnesium may help. Feverfew, ginger and the nutrients are best used together for optimum results.
- e) *Problem Foods* - Some foods cause headaches in susceptible people. The best strategy is to stick to a diet of raw fruits, raw vegetables and their juices and sprouted seeds for two weeks. Using the Pulse Test (appendix 2), test

for reactions to the following foods, which I list in order from most likely to cause the problem, to least likely to cause the problem; dairy foods, eggs, chocolate, citrus fruits, corn, wheat. An offending food will usually be something consumed regularly, and which the sufferer enjoys or feels they cannot do without.

f) *Oils* - Oils such as evening primrose oil (EPO), EPA or MaxEPA and linseed oil alter eicosanoid metabolism to reduce inflammation. EPA or MaxEPA and EPO can be taken at 2000mg to 4000mg of each daily but the cheapest alternative is linseed oil. The dose is 5 to 20 ml daily. See the comments in “Good Oils, Bad Oils?” in part B of “*III Nutrition*”. The full effects won’t be seen for 4 to 6 weeks.

Morning Sickness

See “***Women’s Problems***” for general advice.

a) *Vitamin B6* - 500mg three times daily. Must be taken in conjunction with a strong multi-B vitamin.

b) *Ginger* - has proven effective even in “Hyperemesis Gravidarum” (which is morning sickness so severe life may be threatened). One gram per day is effective in most women.²⁰² You can make your own capsules by purchasing “00” sized empty gelatine capsules from your pharmacy and filling them with ginger powder that is available from your supermarket. If you wish, proprietary tablets are available from the health food store. They will be placed under remedies for motion sickness.

Mouth Ulcers

Also called “Aphthous Stomatitis”. The problem is often multifactorial. Aside from following the general dietary guidelines, one or more of the following may be involved.

a) *Liver* - Clean the liver. See appendix 8.

b) *Food allergy/intolerance* - The chief offenders are wheat and dairy foods, but other foods may be involved. See appendix 2.

c) *Nutritional deficiency* - High potency B-complex, plus B12 and folic acid at 100 micrograms of each three times daily, plus a trace element supplement, adding extra zinc and iron.

d) *Infection* - See the headings “*Candida albicans*” and “*Herpes Viruses*”. These two infectious organisms are the most likely culprits.

Multiple Sclerosis

Low fat diets have been used to stop the progression of this disease for 50 years, yet most of the medical system ignores this. The exact nature of the disorder is unknown. Most evidence favours the idea of it being an auto-immune disorder, but there is some evidence that there may be an infective organism behind it.²⁰³ Since some auto-immune diseases have been shown to be associated with infective agents, the two possible causes do not contradict each other. See the discussion under the heading “***Auto-immune Diseases***”.

- a) *Diet* - As recommended in this book. The closer to the ideal of only raw fruits, raw vegetables and raw sprouted seeds the better. This low fat regime may be all that is required.
- b) *Food Allergy/Intolerance* - Refer to appendix 2, elimination diet and “**The Pulse Test**” to identify problem foods.
- c) *Liver* - Cleaning the liver is crucial in all auto-immune disorders. See appendix 8.
- d) *Herbs* - See the discussion under the heading “**Infections**” for immune regulators and anti-infective herbs.

Nail Infections - Fingernails and Toenails

Use straight tea tree oil. If possible, soak the nail in it for 1 to 5 minutes twice daily.

Osteoporosis

This is *not* just a women’s problem and calcium supplements alone will *not* keep bones strong. Nor will dairy foods. An analysis of 57 studies which purported to demonstrate the value of dairy foods for bone health showed that the results as a whole do *not* support the recommendation that dairy foods be consumed daily to promote bone health. Rather, the authors concluded that osteoporosis was more a problem of calcium loss than inadequate calcium intake.²⁰⁴ In fact it can be demonstrated that the highest rates of osteoporosis occur in countries with the highest calcium intakes.²⁰⁵ Calcium intake has little to do with the problem.

In fact high protein diets are *the* key factor in the development of osteoporosis.²⁰⁶ This is because the acidity in blood due to by products of protein metabolism must be neutralised, and calcium is withdrawn from the bones to do so. Other factors that exacerbate the problem of calcium loss are caffeine,²⁰⁷ sugar, aluminium containing antacids,²⁰⁸ alcohol²⁰⁹ and high grain consumption.²¹⁰

Medically speaking for women, hormone replacement therapy is used to combat bone loss but the doses required have severe side effects and increase the risk of breast cancer and cancer of the ovaries. Lower doses stop menopausal symptoms but don’t stop osteoporosis. There is significant evidence that the medical profession is simply using the wrong female hormone to combat the problem. Natural progesterone (but *not* synthetic progesterone) has been shown to reverse osteoporosis and actually *protects* against the cancers.

But there is a better way still than taking hormones of any sort. The key thing to know is firstly that the low protein diet recommended in this book will reduce the need for calcium, and many fruits and vegetables such as leafy green vegetables, figs and dates are rich in absorbable calcium, so that the net effect is that the basic building blocks are there to build strong healthy bones. Secondly, many flavonoids have a weak oestrogenic effect,²¹¹ and may help prevent and even reverse osteoporosis. One such flavonoid has been demonstrated to do just that in more than 60 studies. It is called *ipriflavone*.²¹² And ipriflavone is only *one* such flavonoid. *Green Tea* is worth considering as a replacement for tea or coffee because it is rich in *phytoestrogens* (ipriflavone is an isoflavone type of phytoestrogen). Women

who drink tea have higher bone density than non-tea drinkers, so the phytoestrogen component may be increasing calcium uptake. But what about all of the other plant chemicals as yet unstudied? Of what benefit in osteoporosis might they be?

And the fact is that even at the current state of knowledge, it is known that more nutrients than calcium are required for healthy bones. For example Vitamin D is needed for calcium to be used to build bones. So is magnesium. And certain trace elements such as silicon, fluoride, copper, manganese, zinc and boron are equally essential. And studies have shown that women who eat a lot of foods rich in vitamin K have a 30 per cent lower risk of hip fractures resulting from osteoporosis. Good sources of vitamin K are dark leafy green vegetables such as brussels sprouts, broccoli and spinach, plus turnips and green tea. Since green tea is also rich in phytoestrogens (see above) it helps on two counts!

The truth is that a wide variety diet of raw fruits, raw vegetables and raw sprouted seeds will provide these other nutrients involved in building healthy bones in abundance. Research studies show that people who stick to strict vegetarian diets have a lower incidence of osteoporosis than those who eat the more common omnivorous²¹³ diet. This is true of full vegetarians as well as those who consume eggs and dairy foods as well.²¹⁴ Stick with the diet as recommended and problems will gradually resolve. But if you are desperately determined to take supplements, soy isoflavone tablets are available from health food stores, and ipriflavone is available without prescription from New Zealand. Doses for the trace elements are found under the appropriate headings in part A of “*III Nutrition*”. Calcium will be needed at 1500mg of elemental calcium per day and magnesium will be required at 400mg of elemental magnesium per day. Take chelated forms. These are the easiest form for the body to absorb.

Period Pain

See “***Women’s Problems***” for general advice. See your practitioner. Blue Cohosh, Cramp Bark, Black Haw, Wild Yam and Ginger are key herbs the practitioner may consider. In addition to these:

a) *Magnesium & Vitamin B6* - High doses may help. It is best to use the chelated forms of magnesium. Research studies have demonstrated that 100mg of both magnesium and B6 every two hours during the pain and four times daily during the rest of the cycle progressively improves many cases over a period of 4 to 6 months.²¹⁵

b) *Niacin* - 100mg twice daily as a daily routine and 100mg every 2 to 3 hours during the pain, with both 60mg of rutin and 300mg of vitamin C daily is research proven to help 90% of women. Therapy must commence 7 to 10 days prior to the period to be effective.²¹⁶

c) *Oils* - Oils such as evening primrose oil (EPO), EPA or MaxEPA and linseed oil alter eicosanoid metabolism to reduce both inflammation and smooth muscle contraction. EPO can be taken at 2000mg to 4000mg daily but the cheapest alternative is linseed oil. The dose is 5 to 20 ml daily. See the comments in “Good Oils, Bad Oils?” in part B of “*III Nutrition*”. The full effects won’t be seen for 4 to 6 weeks.

d) *Feverfew* - For the same reason as EPO. See the notes under “***Migraine***”, but take three leaves per day of the live plant.

e) *Ginger* - Use it liberally in the diet and in juices. Or you can make your own capsules by purchasing “00” sized empty gelatine capsules from your pharmacy and filling them with ginger powder that is available from your supermarket. If you wish, proprietary tablets are available from the health food store. They will be placed under remedies for motion sickness. Ginger is a potent controller of prostaglandin synthesis,²¹⁷ and these mini-hormones are involved in the inflammation and the contraction of the muscles which are involved in the cramping process in period pain.

Premenstrual Syndrome

See “**Women’s Problems**” for general advice.

a) *Diet* - is a key factor. The modern western diet negatively impacts the balance between oestrogen and progesterone. It may be true that each of these is within normal range, but in women who suffer with PMS, oestrogen levels are towards the high end of normal, and progesterone levels are at the low end of normal. Follow the general advice given and the problem may disappear.

b) *Clean the liver* - If change in diet is not enough, this is the next step. See appendix 8.

c) *Nutrients* - The key nutrients are vitamin B6, magnesium, and zinc. Several proprietary formulae found in health food stores contain all of these.

d) *Herbs* - The herbal of choice is called by a variety of names - Chaste Tree, Chasteberry, Vitex, Agnus, Vitex agnus castus. The dose is 1000mg three times daily for however many cycles it takes to bring it under control. Then take 1000mg once daily for one cycle, then 1000mg only once daily and then only for the second half of the cycle.

Prolapse - Uterus and/or Vagina

See “**Women’s Problems**” for general advice. Nothing is currently available from the health food stores that will fix this problem. Symptoms include frequent urination and painful intercourse. However it can be fixed with herbal medicine, and only in rare cases is surgery actually justified. I have had one case that was due for surgery in 3 weeks become totally symptom free in 2 weeks! The herbs involved are Blue Cohosh, False Unicorn Root and True Unicorn Root. I am disclosing this information, because I am sick to death of women being carved up without adequate reason. You will need a good practitioner who knows what dose and mixture of the herbs is required. Don’t neglect the diet, and clean the liver.

Prostate Cancer

Please refer to the general notes under the heading “**Cancer**”.

a) *Hormone Therapy* - Medically speaking part of the treatment is to give oestrogen to block the stimulation of the cancer by the male hormones.

b) *Plant Steroids* - See the list of foods involved under the heading “**Cancer**”, sub-heading b) part (xiii). Diets rich in *plant steroids* that are hormone analogues assist the medical hormone therapy. Soy isoflavones are available in tablet form from health food stores and may be worth consideration. And drink green tea. It is rich in phytoestrogens (one kind of plant steroid).

c) *Diet* - Follow the general guidelines as described elsewhere in this book because low fat diets reduce the production of testosterone to more manageable levels, once again reducing stimulation of tumour growth. The sort of diet I am recommending in this book is also rich in the phytoestrogens that inhibit tumour growth.

d) *Epilobium* - This herb is reputed to help, and in some cases PSA readings have dropped dramatically. It is available at health food stores.

BUT PLEASE SEE YOUR PRACTITIONER.

Prostatic Enlargement - Non-Malignant

(i.e. **Benign Prostatic Hyperplasia, “BPH”**)

An enzyme called “5-alpha reductase” converts the male hormone *testosterone* into “5-alpha-dihydro-testosterone” (DHT), a related hormone that stimulates the growth of the prostate much more than does testosterone itself. There are other hormonal factors involved including prolactin, which if in excess can stimulate prostate growth but DHT is the key one.

a) *Zinc* - inhibits the conversion of testosterone. Zinc supplements have proven to be beneficial in reducing the size of the prostate.²¹⁸

b) *Saw Palmetto (Sabal serrulata or Sabal repens)* - Many studies show the therapeutic action of this herb on the enlarged prostate. Early studies seemed to indicate it worked by inhibiting “5-alpha reductase”, but later studies have shown its action in this area is too weak to explain its clear therapeutic value. Some studies suggest it may inhibit the action of DHT,²¹⁹ others that it inhibits the effects of prolactin.²²⁰ However it does the job, it works. Study after study shows it helps in milder versions of this condition.²²¹

c) *Pygeum africanum (Prunus africanum)* - The precise action of this herb is unresolved but many trials vindicate its therapeutic value, including so called “double blind” type studies.²²² One study showed a reduction of prostate size by 11% in only 60 days.²²³ More recently a review of 18 controlled trials that involved 1562 patients showed night time urination was reduced by 19% and peak urine flow increased by 23%.²²⁴ These results are a significant improvement. In other words, this herb does what you want it to do!

The above three are often found combined with other natural medicines in proprietary formulae available from health food stores.

d) *Green Tea* – Drink green tea instead of tea or coffee. Like the herbs that are generally used to treat this problem it is rich in phytoestrogens and it is likely these compete for the receptor sites that the hormones involved in enlarging the prostate latch onto, so preventing their negative effect. There are no studies yet confirming its action in prostatic enlargement but drinking a few cups per day cannot hurt.

Psoriasis

This is a skin disorder in which skin cells are proliferating above the normal rate. Toxins in the blood from a leaky gut are generally present,²²⁵ and the

liver may be overwhelmed and unable to clean the system quickly enough to keep up with the load. Congested liver is common.

a) *Diet* - Many cases simply disappear on the general diet I have recommended, and I have known some people who have improved their condition markedly by simply *boiling* their meat rather than grilling, frying or casseroles it.

b) *Liver cleanse* - See appendix 8. If diet is not enough, this is the next step. Use the elimination diet and check for food intolerance as well. When selecting your herbal liver tonic, make sure it contains St Mary's Thistle (*Silybum marianum*).

c) *Herbs* - The two herbs of choice are St Mary's Thistle and Sarsaparilla (*Smilax sarsaparilla*). St Mary's Thistle is an excellent liver tonic and cleanser, and Sarsaparilla has long history of use for this disorder, now backed by research, probably due to its demonstrated ability to bind *endotoxins*²²⁶ produced by bowel toxemia.²²⁷

Ringworm

See "**Tinea**"

Scabies

Wash the bed linen daily until the infection is under control.

a) *Tansy* (*Tanacetum vulgare*, *Chrysanthemum vulgare*) - boil the flowers and leaves of the tansy plant. Use directly on the skin.

b) *Aniseed Oil* - at 1% in an ointment, may be used directly on the skin.

c) *Sassafras Oil* - as for aniseed oil.

d) *Lavender Oil* - as for aniseed and sassafras oils.

e) *Tea Tree Oil* - The fact is that just about all volatile scented oils are natural antiseptic agents. Tea tree oil seems to be the strongest.

Apply any of the oils (or a combination) twice daily until the scabies is resolved.

Shingles

St John's Wort - See under "**Infections**" above. I am reminded of a lady to whom I gave the advice to take 5ml (5ml equals one normal teaspoon) doses of St John's Wort fluid extract 3 to 4 times daily for her shingles pain. The doctors had been unable to give her relief at all, even with the strongest of pain-killers. I advised St John's Wort because it contains a natural pain-killer that is marvellous for nerve pains (such as shingles pain), and it also contains a substance that attacks and disables herpes viruses (of which the virus involved in shingles is one example). But she became confused and took it in *tablespoon* doses instead of *teaspoon* doses, and she took it every couple of hours instead of four times per day, using up the month's supply that I had provided for her in just a few days. But the shingles rash and pain disappeared in a couple of days!

Sinusitis

In my experience the basic problem is excessive consumption of dairy foods and gluten containing grains, but overconsumption of any protein will do it. Little progress will be made without both a radical change in diet along the lines I have advocated, and a liver cleanse and food allergy/intolerance check using the elimination diet and challenge along with **“The Pulse Test”**. See appendices 2 & 8.

a) *Pollen Vaccine* - Sometimes allergic reaction to pollens is involved. See appendix 13.

b) *Volatile Oils* - Eucalyptus, peppermint both help. They act to clear the airways and are antibiotic. Peppermint tea is always helpful.

c) *Anti-infective herbs* - A variety of anti-infective herbs may be required during actual infection. Echinacea is a key one, but see **“Infections”**.

Sprains and Strains

See **“Wound Healing”**.

Stomach Cancer

Helicobacter pylori infection is probably a key factor in the development of both peptic ulcers and stomach cancer. See the heading **“Cancer”** and also **“Gastritis & Peptic Ulcers”** under the heading **“Digestive Upsets”**.

Strokes

There are basically two types of event that are called “stroke”, and both cause damage or death to brain cells.

(i) The first is a burst blood vessel. That is generally due to a combination of weakness in the vessel wall and high blood pressure. The strength of the vessels is related to the strength of collagen, and collagen fibres are strengthened by silicon, sulphur, flavonoids, anthocyanidins and related accessory food factors. The high blood pressure is usually due to *atherosclerosis*. Because the diet as recommended is both rich in these nutrients and inclined to lower blood pressure because it clears up *atherosclerosis* it is a good preventive measure against stroke.

(ii) The second type of event called stroke occurs when a blood clot formed in another part of the body travels through the circulation and lodges in the brain and blocks blood supply to brain cells. Clots are formed if the blood is too viscous (“sticky”) due to too much fat/oil in the diet, and when turbulence of the blood is increased due to roughness on the inner walls of the arteries. Smooth flow of blood is important for prevention of clotting. Increased turbulence leads to increased clotting. And the roughness on the inner walls of the arteries is caused by *atherosclerosis*, which means that fatty plaques (“deposits”) have formed on the inner artery walls due to high fat/oil diets and lack of accessory food factors such as flavonoids and anthocyanidins that help prevent the development of these plaques. And this is due to a failure to consume sufficient raw fruits and raw vegetables in the diet. Once again the diet as recommended is a good

preventive measure against stroke. And it is clear that atherosclerosis generally precedes stroke.

a) *Prevention of stroke* - Refer to the advice given under the heading “**Atherosclerosis**” AND DO WHAT IT SAYS. One interesting study conducted over 20 years showed that eating three extra pieces of either fruit or the equivalent in vegetables daily decreased the risk of stroke by 22%! Six pieces decreased the risk by 44%!²²⁸

b) *Treatment of stroke victims* – If the brain cells are dead little can be done. But sometimes brain cell function is compromised due to *reduced* rather than *terminated* circulation to those cells. In this case some apparently miraculous recoveries are possible. But such recoveries are not to be expected as a matter of course. Nevertheless after any stroke it is advisable to act as if it is possible that circulation is merely reduced and that brain cell function may recover. When these miracles have occurred, it has always been with patients of mine who have been given large doses of herbs such as bilberry, Ginkgo biloba and hawthorn.

But you need to get to an herbal practitioner quickly if there is to be any hope.

AND DON'T COUNT ON MIRACLES THAT MAY NOT HAPPEN. Most especially with stroke, AN OUNCE OF PREVENTION IS BETTER THAN A POUND OF CURE.

Tinea

Undistilled apple cider vinegar applied directly to it twice daily is usually all that is required. But see also “**Infections**”.

Tonsillitis

Firstly, make sure it is not glandular fever.

In acute cases:

a) *Herbal Gargle* - Gargle with a strong tea made of a mixture of *sage*, *rosemary* and *thyme*.

b) *Garlic* - Take large doses of garlic.

c) *Echinacea* - 500mg 2 hourly.

d) *Refer to the discussion under “Infections” for other anti-infective information.*

In chronic cases :-a) *Clean the liver* - see appendix 8. b) *Diet* - A strict diet of raw fruits, raw vegetables and raw sprouts is needed until the problem clears.

c) *Vitamin A* - 20,000IU per day for one month, then reassess.

Travel or Motion Sickness

Ginger has been shown to equal the action of Dramamine, the commonly prescribed medical drug. Some companies produce standardised ginger capsules specifically manufactured for motion sickness. Enquire at the health food store. Or you can make your own capsules by purchasing “00”

sized empty gelatine capsules from your pharmacy and filling them with ginger powder that is available from your supermarket.

Ulcerative Colitis

See “***Inflammatory Bowel Disease***”.

Urinary Infections

Firstly, urinary tract infections in any male need medical investigation. Secondly, a sudden apparent infection in a woman with no history of such needs medical investigation. But if there is a recurring problem, and the doctor is saying things like, “Well, some women just seem to have this problem”, then something else needs to be done!

a) *Cranberry Juice* - Of the things freely available across the counter, *cranberry juice* is unequalled. 300ml per day will reduce chronic problems for most women in 4 to 8 weeks.

b) *Thyme tea* - This old fashioned cooking herb is a good urinary antiseptic. Three cups of strong thyme tea daily or as required. It is the volatile oil in the herb that does the job.

You are best to refer to a practitioner for this one but for your interest refer to the discussion on the antiseptic qualities of volatile oils in the section “***Infections***”.

Vaginal Candida

See “***Women’s Problems***” for general advice. Vaginal Candida is usually a sign of something else. Refer to the heading “***Candida albicans***” and treat accordingly. And remember that males can be silent carriers of this infection, so your sexual partner may need treatment. However there are some useful things that can be applied directly to the infection.

a) *Garlic tea* - Works well for some women. Let it cool first!

b) *Live Culture Yoghurt* - replaces the irritating Candida bug with more friendly ones!

c) *Tea Tree Oil* - Use the micellised Tea Tree Oil which is a 30% solution and dilute it 15 to 30 times with water. Wash with this solution.

Warts

There are external and internal medicines that your herbalist or naturopath can provide, but many people have had success with the old fashioned remedy of taping the cut surface of a clove of garlic directly onto the wart. Change it daily until the wart is gone. Warts will be less of a problem if you follow the diet as recommended, and especially if you take garlic internally as directed under “Important Supplements”. See appendix 5.

Women’s Problems

Almost all women’s problem stem from either hormone imbalance or overproduction due to the typical western diet. In addition to this problem xeno-oestrogens²²⁹ are high in the western diet. So how to fix the problem?

a) *Diet* - The diet I have recommended does two things to help.

(i) It reduces female hormone levels to manageable levels because it is low in fat.

(ii) The diet is rich in phytoestrogens such as isoflavones, lignans and coumestans, and these inhibit the negative effects of excessive hormone levels (whether natural or synthetic) by competing for the hormone receptor sites on the cells found within hormone sensitive organs. They also protect against calcium loss from bone and increase its uptake into bones. Pay particular attention to alfalfa, all cabbage family vegetables such as broccoli, brussels sprouts, cauliflower, radish, turnips and swede turnips, but also to linseeds (see NB. just below), cucumbers, squash, yams, tomatoes, eggplant and peppers.

NB. Linseeds are an *excellent* and cheap food supplement rich in lignans, but they need to be ground up in a food processor or a coffee grinder to gain the full benefit. And please note also. As a separate issue I have recommended linseed oil for some women's disorders and it is helpful for them. But this discussion is about the phytoestrogens in the form of lignans that linseeds contain. There are no lignans in the oil. Whole seeds are required. One tablespoon per day would not be too many.

(iii) Remember the green tea that I advised in place of tea or coffee in the section "Important Supplements" within part B of "*Part 3 Nutrition*"? That is also part of the dietary advice. And green tea contains phytoestrogens. This is an important beverage for women.

b) *Liver cleanse* - Congested liver is always a problem in these cases. See appendix 8.

On many occasions making the changes suggested in parts a) and b) are all that is required to re-balance the system and clear up the difficulty. If it is not, the following may be considered.

c) *Vitamins and Minerals* - If a) and b) are followed carefully nothing further may need to be done, but the key nutrients involved in balancing the female system are Vitamins A and B6, and the minerals zinc and magnesium. Blackmores produce an excellent combination product called *Bio-Zinc*.

d) *Isoflavone tablets* - Soybeans are a rich source of isoflavones (see (ii) above) and tablets of soy isoflavones are now available from health food stores. They may be worth considering if change in diet and cleaning the liver are not sufficient to resolve the problem. Substantial doses much higher than are advised on the bottle may be required.

e) *Herbs* - There are many herbs that balance the female system and combination formulae are available from the health store. In addition good formulae for specific problems such as menopausal problems etc are now on the market.

Having said the above further action may be required by some women. See the following disorders discussed under their headings; Endometriosis, Fibrocystic Breast Disease, Fibroids, Flooding, Hot Flushes, Morning Sickness, Painful Periods, Premenstrual Syndrome, Prolapse - Uterus and/or Vagina, Vaginal Candida.

Worms

There are a number of natural remedies that are easy to obtain.

a) *Wormwood* - Why do you think common garden *wormwood* (*Artemisia absinthium*) is called *wormwood*? It works for threadworm (pinworm) and for roundworm. The dose is 1 to 2 grams of the herb made into a tea three times daily for a week or two.

b) *Tansy* - The common garden *tansy* (*Tanacetum vulgare*, *Chrysanthemum vulgare*), at the same dose as wormwood, or at half dose with half dose of wormwood, also works.

DO NOT OVERDOSE ON THESE HERBS. THEY ARE TOXIC.

In children, cool tansy tea may be administered as an enema.

c) *Garlic* - By far the safest home remedy is garlic, which has demonstrated efficacy for all sorts of worms including threadworm, roundworm and hookworm.²³⁰ The only disadvantage is the smelly breath which results from the large doses required. Chop up a clove into small pieces, and take the pieces as if they were tablets. Or alternatively, purchase “00” sized empty gelatine capsules from your pharmacy and fill them with the garlic powder that is available from your supermarket. If there is active worm infestation, you will need about two capsules with each meal for a week. For prevention, take garlic as I have recommended in “Important Supplements”. See appendix

5. If that is done, worms should not be a problem.

Wound Healing

When the diet is balanced and the system is clean wound healing is usually quick. But there are some things that accelerate recovery and the regeneration of tissue.

a) *Sprains and Strains* - Rue cream.

b) *Bruising* - Arnica cream.

Note on a) and b). An effective aid to recovery from injuries of all sorts is to *rub just one ice cube* directly on the skin over the injured area until it has melted. Do this two or three times daily. The therapeutic effect of this is as good as ultrasound treatment, and it costs next to nothing!

c) *Burns* - Aloe vera cream or juice. Cool pennywort tea applied reduces scarring. See below.

d) *General wounds, tissue regeneration*

(i) Colloidal silver - is reputed to accelerate the regeneration of damaged tissue. It is available from “S.A.F.E.” See appendix 14.

(ii) Pennywort (*Gotu kola*, *Centella*, *Centella asiatica*, *Hydrocotyle asiatica*) - This herb, which is native to much of Asia including Australia, has been used in India as medicine since prehistoric times. *It is useful for the healing of all damaged tissue*. It has a wide range of regenerative actions; too many to be discussed within the scope of this book. It may be taken orally. The best way is to grow your own plant. Yes, this is the same pennywort used to treat arthritis. See the reference in the footnote under the headings

“**Arthritis**”, “*Pennywort*”. Take 2 leaves three times daily.

Wrinkled Skin

Eighty-year-old skin cannot be changed into 20-year-old skin. But the process of skin wrinkling that accompanies aging can be slowed down. Wrinkles are mainly due to sun damage, and that damage is a combination of the sun's rays and the body's inability to completely repair the damage. If antioxidants are plentiful in the system damage will be minimised. And what sort of diet builds antioxidant levels in the system? The sort of diet I am recommending. And one study shows that people who eat diets rich in fruits and vegetables are protected from skin wrinkling in comparison with those who eat few of these things. The same study shows that low intakes of margarine, milk products and sugar products are also protective, but high intakes of these plus high intakes of meat increase the extent of skin wrinkling.²³¹

These results are consistent with all that I have said about foods that promote health and foods that destroy it. After all that you have read so far in this book are you surprised by the results of that survey?

SECTION SEVEN:

APPENDICES

Appendix 1 - Yoghurt Recipe

You can buy a yoghurt maker if you like, but if you do not wish to go to that sort of length, here are two recipes that work well.

You will need

1. A thermos flask or equivalent heat-retaining container that will hold one litre of liquid.

2. Some yoghurt starter.

a) For the first batch you'll need to buy some plain unflavoured and unsweetened commercial yoghurt. Any of the brands that contain live culture are acceptable. I have used Jalna brand myself.

b) For subsequent batches you can keep some yoghurt from the previous batch and use that as your starter. So long as you keep everything sterile, the culture will be able to be passed on to the next batch indefinitely. As I type this up, I have been using my own recycled yoghurt as my starter for more than 2 years with no problem at all.

Preliminary tip

Homemade yoghurt tends to separate out into the more liquid fraction (the whey) and the more solid fraction (the curd). This process of separation is called "whey out". The separation is never complete, but it does mean that homemade yoghurt is not quite as smooth as commercial yoghurt. If you want your yoghurt to be as smooth as commercial products, do what they do to prevent the "whey out". Add gelatine at the rate of 0.2% to 0.4% by weight. What that means in practical terms is this. If you want to prevent "whey out" and make your yoghurt super smooth, dissolve ½ teaspoon of plain gelatine crystals and add it to your mix. You can put it in with the milk after it's heated for recipe one, or you can dissolve it in a little of the boiling water you need to add to the mix for recipe 2. Whether you add the gelatine or not, the yoghurt will be delicious. Myself? I prefer it with the gelatine.

Recipe 1

For this recipe, you will also need :-

1. A saucepan in which to heat the milk.

2. A thermometer.

3. Milk. You can use whole milk or skim milk, but skim milk doesn't "set" quite as well as whole milk.

Method

1. Heat one litre of milk to a temperature between 85° and 90°C.

2. Allow the milk to cool to 44°C. That is the appropriate temperature for yoghurt making. This will take 10 to 40 minutes depending on room temperature.
3. Pour the milk into the thermos flask, and add one heaped tablespoon of yoghurt containing live culture. Mix thoroughly, seal the container with the lid. Yoghurt is an anaerobic organism. It will grow without you allowing air into the container for the bacteria.
4. Allow it to change the milk into yoghurt. This takes about five hours if you've used commercial yoghurt to provide your starter culture, and four hours if you've used your own fresh yoghurt. You'll know when it is ready because if you tip the container on its side a little, the yoghurt will come away cleanly from the side.

DO NOT DEFROST IT IN THE MICROWAVE. DO NOT USE EXCESSIVE HEAT TO ASSIST IN DEFROSTING IT. IF YOU DO, YOU WILL DESTROY THE CULTURE. If you wish to speed the process, make up warm water to about skin temperature and sit the container holding the yoghurt culture in that.

Recipe 2

This recipe uses powdered milk, and takes only a few minutes to get ready. No waiting for the milk to cool. It is much more time-efficient and convenient than recipe 1, and still produces magnificent yoghurt. If you mix the milk up as instructed, the milk will be at the correct temperature to produce superb yoghurt.

For this recipe, you will also need :-

1. Something in which to boil water, for example an electric kettle.
2. Cold water from the inside of your fridge.
3. 5 gigantic heaped tablespoons of milk powder. You can use whole milk or skim milk, but skim milk doesn't "set" quite as well as whole milk, and the yoghurt produced is much more acidic. So if you want reduced fat yoghurt, either use 4 tablespoons of whole milk powder and 1 tablespoon of skim milk powder, or use only skim milk powder but add a tablespoon of linseed oil to the mix. The yoghurt bacteria need essential fatty acids to grow properly.

Method

1. Put on the electric kettle so it will be boiling while you get the other things ready. You will need about 600ml of boiling water.
2. Place 400ml of cold water from the fridge into your yoghurt-making container. Make sure the water you use has been in the fridge long enough to actually reach the temperature of the inside of your fridge.
3. Add the milk powder and mix thoroughly. Now is the time to add the linseed oil if you are doing it that way.

4. Add one heaped tablespoon of yoghurt containing live culture. Mix thoroughly.
5. Now and only now, add the boiling water. Add enough water to make the mixture up to 1 litre. Seal the container with the lid. Yoghurt is an anaerobic organism. It will grow without you allowing air into the container for the bacteria.
6. Allow it to change the milk into yoghurt. This takes about five hours if you've used commercial yoghurt to provide your starter culture, and four hours if you've used your own fresh yoghurt. You'll know when it is ready because if you tip the container on its side a little, the yoghurt will come away cleanly from the side.

DON'T KEEP CHECKING THE YOGHURT TO SEE HOW IT IS GOING. WAIT AT LEAST FOUR HOURS.

ADDED WARNING FOR RECIPE 2. If you mix the milk powder in the boiling water and then add the cold water, the yoghurt turns out very "grainy", rather than being smooth. Stick with the recipe! Start with the cold water!

Saving Your Culture

Whichever recipe you have used to make your yoghurt, if it will be a while before you make your next batch of yoghurt, obtain a very small jar and freeze one tablespoon of yoghurt. When you want to make your next batch, then if you allow it to come to room temperature naturally, it will work well as your starter for new yoghurt.

DO NOT DEFROST IT IN THE MICROWAVE. DO NOT USE EXCESSIVE HEAT TO ASSIST IN DEFROSTING IT. IF YOU DO, YOU WILL DESTROY THE CULTURE. If you wish to speed the process, make up warm water to about skin temperature and sit the container holding the yoghurt culture in that.

Appendix 2 - The Pulse Test

If you have a food addiction to one or more solid or liquid foods²³² then each time you consume that food you get an adrenalin hit. It gives you a lift. When you need another hit, the way that will manifest is either as *hunger* that isn't satisfied until that food is eaten, or as *thirst* that isn't satisfied until that liquid food is drunk. So if you cannot seem to satisfy your hunger or thirst *without* a particular solid or liquid food, be suspicious. You may have a food addiction or a food allergy or food intolerance. But the foods you are reacting to can be identified, whether there is immune mediated allergy involved or not because the adrenalin boost given by them *raises the pulse rate*. This can be used as a measuring stick to find them. And if you want to be healthy, you *must* identify them. Here is how to do it. There are two stages.

Stage 1

The first stage is to eliminate reactive food components from the system. The elimination diet that I have used with success consists of eating nothing but raw fruits and their juices (but no strawberries or citrus fruits), raw vegetables and their juices (but no tomatoes), and sprouted seeds for 14 days. EAT NOTHING ELSE.

Stage 2

The next stage is to reintroduce suspect foods one at a time, and use the pulse test to check on their effect.

The Most Likely Culprits

Test the most likely culprits first, the least likely last. The foods most likely to cause problems in order of greatest to least likelihood are these; dairy foods, wheat, corn, rye, barley, oats, legumes (soy beans and other dried beans such as adzuki, mung, lentils, split peas etc), nuts (especially peanuts, which are in fact a legume not a nut) and seeds (sesame, sunflower etc), red meat (lamb, beef, turkey), poultry, fish, chocolate, strawberries, citrus fruits, and solonacae family vegetables (tomatoes, potatoes, capsicum and eggplant).

N.B. ALMOST ALL OF THE FOODS WHICH WILL CAUSE CHRONIC OR MAJOR HEALTH PROBLEMS INCLUDING AUTO IMMUNE DISEASES ARE FOODS CONTAINING LONG CHAIN PROTEINS WHICH ARE DIFFICULT TO DIGEST, as found in dairy, grains, legumes, nuts and seeds, meats, poultry and fish. So test those first.

Other food allergies/intolerances, such as those to strawberries, citrus fruits, chocolate, and solonacae family vegetables often clear up spontaneously when "long chain protein" offenders are eliminated from the diet. So test those last.

The Test

1. Having eaten nothing for four hours, sit quietly for 5 minutes and take your pulse for 60 seconds. This is your reference pulse.

See the next page for a table in which to record the results.

[illegible]

Appendix 3 – Food Rank List

Staples

Raw fruits - the most important of all

Raw vegetables

(Cooked fruits and vegetables)

Sprouted seeds

Fish, Meat Poultry & Eggs

Non-Essential add ons

Nuts (walnuts, almonds etc) and edible seeds (e.g. - sunflower, sesame, pumpkin kernels)

Legumes

Grain products and legume products, in the following order from least to most dangerous:-

- millet
- rice
- *corn
- oats
- barley
- rye
- triticale
- wheat and *corn

Dairy foods

- These are best avoided but if you must have them, use yoghurt.

**Note on corn.* Some people handle it well, and it sits between rice and oats. Others do not, and for them it is as bad as wheat.

Guideline Summary

The above guidelines can be neatly summarised in the following two guidelines:

1. The more food you consume from towards the top of the list the better, and the less from lower down the list, the better.
2. Use lots of fresh juices.

If you have some definite disease or other, you may need to be much more strict than this until you have control of it, but this advice will improve the health of almost everyone quite dramatically.

Appendix 4 - Calorie Content Of Raw Fruits & Raw Vegetables

N.B.1 All juices are unsweetened.

N.B.2 Chard, Swiss Chard and Silverbeet are the same vegetable. There are different names for it in different parts of the world.

N.B.3 Beetroot is called “beets” in some parts of the world.

N.B.4 Where an asterisk appears, data for the raw food were unavailable. So I have inserted the data for cooked samples. Raw foods generally have higher levels of Calories overall.

Food	Calories per 100 grams
Alfalfa sprouts	41
Apple	53
Apple juice	117 per cup
Apricot	48
Apricot - dried	260
Apricot nectar	143 per cup
Asparagus	26
Avocado	334
Bamboo shoots	29
Banana	85
Beans - green	32
Beans - lentil sprouts	104
Beans - mung sprouts	35
Beans - soy sprouts	46
Beetroot	43
Beetroot greens	24
Blackberries	58
Blueberries	62
Boysenberries	48
Broccoli	32
Brussels sprouts	45
Cabbage - Chinese	15
Cabbage - common	24
Cabbage - red	31
Cabbage - savoy	24
Cantaloupe/Rockmelon	30
Carrots	42
Cauliflower	27
Celery	17
Chard	25
Cherries	63
Chives	30
Crabapple	68
Cranberries	68
Cress	30
Cucumber	15
Currants	54

Food	Calories per 100 grams
Dates, pitted	274
Eggplant	25
Endive	20
Figs	80
Figs - dried	274
Garlic	133
Ginger root	49
*Globe artichoke	44
Gooseberries	39
Grapefruit	41
Grapes	68 average
Guava	62
Honeydew melon	33
Kale	38
Kohl rabi	29
Kumquats	60
Leeks	52
Lemon	18
Lemon juice	50 per cup
Lettuce - Cos	18
Lettuce - loose leaf	18
Lime	24
Lime juice	50
Loganberries	62
Loquats	37
Lychees	39
Lychees - dried	277
Mango	51
Mushrooms	29
Nectarine	59
Okra	36
Olives - green	115
Olives - ripe	185
Onions	38
Orange	36
Orange juice	112 per cup
Papaya (Pawpaw)	39
Parsley	43
Parsnip	76
Passionfruit	90
Peach	33
Peach - dried	262
Pear	61
Pear - dried	268
Peas	84
Peppers - green	23
Peppers - red	31
Persimmon	77
Pineapple	52
Plums	66
Pomegranate	35

Food	Calories per 100 grams
Potato	76
Prickly Pear	42
Prunes	220 to 340
*Pumpkin	33
Quince	57
Radish - red	16
Radish - oriental	19
Raisins	289
Raspberries - red	57
Rhubarb	16
Rockmelon/Cantaloupe	30
Rutabaga	11
Shallots	70
Silverbeet	25
Spinach - English	25
Spinach - New Zealand	19
Squash	19
Strawberries	37
*Sweet potato	110
Swiss Chard	25
Tangelo	23
Tangerine	34
Tomato	22
Tomato juice	46 per cup
Turnips	30
Turnip greens	28
Water chestnuts	80
Watercress	20
Watermelon	26
Yeast - brewers	288
Yeast - torula	282

Appendix 5 - Important Supplements

I am not a fan of vitamin and mineral supplements in general, even multivitamin and mineral supplements, with a couple of exceptions listed below. They all fall so abysmally short of the complex nutrient make up of natural foods that it hardly seems worth it, even for those on a poor diet. I prefer supplements derived from *whole* foods **known** to be rich sources of *many* essential nutrients and accessory food factors. So in addition to the general dietary advice I would recommend the following supplements.

1. *Kelp* - 1000 mg daily.
2. *Seawater* - 1 tablespoon daily, which is about the amount in your average ice cube, taken with juice.
3. *Alfalfa* - Grow a little patch of alfalfa in your back yard, and use it in salads.
4. *Brewer's Yeast* - Take one rounded teaspoon daily in juice. "Soland" brand is my taste preference. The flavour is like vegemite.
5. *Lecithin* - One dessertspoon of the granules daily.
6. *Juices* - Use juices freely.
7. *Use garlic, onion and ginger liberally.* Even glace ginger is better than no ginger. Or put ginger in your juice. Use a piece of fresh ginger about half the size of the end of your thumb, measured from the end knuckle to the tip, and do that each time you make juice. Garlic can be taken by chopping up a clove and taking the pieces as you would a tablet. One clove daily. Or alternatively, purchase "00" sized empty gelatine capsules from your pharmacy and fill them with the garlic powder that is available from your supermarket. Take one to two capsules daily. If you cannot stand the taste of ginger, buy the gelatine capsules and fill them with ginger powder, and take one to two capsules daily. And use onions freely both in salads and as a cooked vegetable. Both garlic and onion may be juiced, but juice them *first* and then juice the other things you are using to hide their flavour or the taste of them will linger in your juicer forever!
8. *Green Tea* - Green tea is worth considering as a replacement for tea or coffee. It reduces the risk of cancer, heart attack and osteoporosis. It reduces inflammation in arthritis and helps control weight. It is also rich in *phytoestrogens*, which are those plant chemicals that help a great deal in balancing the female system and controlling prostate trouble in men. Very few things you can consume will have such wide application.
9. *Food Extracts* - It is possible to purchase a range of products that are extracts of natural foods known to be rich suppliers of plant nutrients. Those available include extracts of wheat grass, barley green, alfalfa (all in powder form), kelp, and spirulina, chlorella and lactobacillus bacteria. One company that supplies quality products along this line is the "S.A.F.E." company. See appendix 14 for the contact details.

10. *Chromium Picolinate* - 200 to 400 micrograms (µg or mcg) once daily, if over 45 or family history of diabetes, or difficulty controlling blood sugar or blood lipids (fats), or past heart by-pass surgery.

11. *Zinc* - If you are a male over 50 take a zinc supplement for one year until the recommended diet gives the full health benefits, and eat plenty of pumpkin kernels to help with impending prostate problems. And believe me if you are male and in that age bracket they are impending problems, not maybe!

Appendix 6 - Growing Your Own Sprouted Seeds

Equipment

You will need an assortment of jars, large ones are less fiddly, some old stockings or muslin cloth, and some rubber bands. Keep everything *very clean*. And use glass jars. Food leaches chemicals from plastic jars, and these have oestrogenic effects, but in a negative way.

Method

1. Place some seeds in the bottom of the jar. Don't fill it up. Just cover the bottom with the seeds, leaving plenty of room for the seeds to sprout and grow.
2. Stretch the cloth or stocking over the top of the jar, holding it in place with one or two rubber bands.
3. Fill the jar with water, and leave the seeds to soak for the appropriate time. See "*Soak Time*" below.
4. Pour off the water and rinse them once.
5. As the seeds are growing leave them in a warmish place in the house, preferably in some light, although they will grow in the dark if the only warm place is in the dark. If this is the case bring them into the sunshine for a day or so to green them up once they are large enough to eat.
6. Rinse the seeds by filling the jar with water, then turn the jar upside down and drain off the water. The cloth or stocking will prevent the seeds from falling out.
7. Rinse the seeds at least twice per day. Three to four times per day is better and the more you rinse the faster they will grow. If you work do it in the morning, when you get home, and before bed.

The sprouts will be ready to eat in 3 to 6 days; three days for the smaller seeds, six days for the larger. When they are ready, store them in the fridge. This will stop them growing.

Soak Time

1. The following seeds need a minimum of 6 to 8 hours of soaking; alfalfa, fenugreek, unhulled millet, mustard, radish, and sesame. It won't hurt to soak them a little longer, so overnight is okay.
2. These seeds need 10 to 15 hours of soaking, but to be honest, if they are left 24 hours, it won't hurt; adzuki beans, chick peas, lentils, lupins, mung beans (Chinese bean shoots), barley, oats, rye and wheat.
3. Soy beans definitely need 24 hours of soaking.

Appendix 7 - How To Consume Juices

Base Mix

Carrot, celery, apple, in equal parts plus a piece of fresh ginger about half the size of the end of your thumb, measured from the end knuckle to the tip. Add anything else you like to that base.

General Rule

Use smaller quantities of juice from pungent strongly flavoured foods such as onion and parsley, larger quantities of juice from less pungent or strongly flavoured foods.

Foods That Will Not Juice

Bananas, passionfruit, avocados and paw-paws. Place them in a vitamiser with a little juice to make a kind of “smoothie” drink.

If You Juice Garlic Or Onion

If you juice garlic or onion you must follow them with a lot of other juice to take the lingering odour out of your juicer, unless you want it to flavour everything you juice with garlic or onion forever and ever and ever amen!

How Much Juice, And When?

If ill, 2 litres or more daily. Otherwise, ½ litre to 1 litre per day.

“Not Really” Juices

Instead of extracting the juice, use a “slender blender” type of mixer or a vitamiser to reduce a mixture of fruits to a liquid pulp. Any fruits may be used, but apples don’t really work very well at all. If you are going to make ginger one of the ingredients, you will need to peel it.

Hot Day Treat

Puree chilled watermelon in a vitamiser, seeds and all. Not really a juice, but refreshing on a hot day.

Juices For Illness

Refer to the references listed in appendix 15.

Appendix 8 - Liver Cleansing

Introduction

Firstly, even if you do not wish to become fanatical about raw fruit, raw vegetables and sprouted seeds, if you want to have vibrant health you *must* clean the liver. So you will need to follow the general dietary guidelines as have been previously stated. In addition to that make use of the following information. Give yourself one to three months on this program.

Problem Foods For The Liver - Avoid Them

1. Coffee.
2. Tea (green tea in small quantities is okay).
3. Chocolate.
4. Dairy foods.
5. Citrus fruit except lemons and grapefruit.
6. Eggs.
7. All gluten containing grain products (wheat, rye, triticale, barley and oats). Use rice as your grain, but use it sparingly.
8. Peanuts and peanut butter.

Foods To Be Used Very Sparingly

1. Nuts.
2. Oils.
3. Legume products of any sort except green peas and green beans.

Food Exchange Items - Best Use These Alternatives

1. Fish in preference to meat or chicken
2. Soy products in place of dairy, but use them sparingly. And some people do have an allergy/intolerance to them. So be careful.

Foods that Help the Liver - Use Liberally

1. Apples.
2. Pears.
3. Any bitter or sour foods such as :-
 - (i) Dark leafy green vegetables like broccoli and brussels sprouts, silverbeet, the dark leaves of lettuce, lemons and grapefruit.

(ii) Radish & Cucumber.

Anything that has a bite to the taste stimulates the liver in a positive way. During active liver cleansing it helps to start the day with *either* the juice of one lemon *or* one tablespoon of apple cider vinegar taken in a glass of water.

Liver Tonic and/or Cleansing Herbs

A good herbal liver tonic will contain a selection of the following herbs.

1. Dandelion Root.
2. St Mary's Thistle.
3. Globe Artichoke.
4. Chionanthus (Fringe Tree).
5. Chelidonium (Greater Celandine).
6. Berberis (Barberry).

Greenridge Botanicals produce a good liquid herbal liver tonic that is available from health food stores.

Lipotropic Factors

These assist in cleaning the system and liver of fatty deposits, including atherosclerotic plaques in the arteries. The key factors are the following.

1. Choline.
2. Inositol.
3. Methionine.

The Musashi company make a formula that consists of equal parts by weight of these ingredients. It is called "Huan" the "Dispersion" formula, and is labelled "Fat Metaboliser". For many health problems it works absolute magic. It is particularly useful for people who are having difficulty losing weight, even when they are doing everything else properly.

As part of a general approach to liver cleansing, if finances mean you must choose between the herbal combination and the Musashi formula, choose Musashi. It is expensive but well worth every cent. This formula comes in three sizes, 66 grams, 150 grams and 300 grams. The largest size is by far the most cost efficient.

Maintenance

When the liver is cleaned out, I would suggest the following.

1. Follow the general dietary guidelines.

2. Drink an occasional cup of Dandelion root tea. “Symingtons” make one that is quite palatable.
3. Include apple, pear, lemon and grapefruit juices in your choice of juices.
4. Take one dessertspoon of *lecithin* daily. It is fairly tasteless, and is rich in both choline and inositol, which are two of the lipotropic factors.

Appendix 9 - Stress Management Strategies

Introduction

Stress is both a natural and essential part of life. When it becomes excessive, it moves into the arena of “dis-stress”, and that is the problem. It is then that some form of stress management is required. For a wider understanding refer to the literature in appendix 15.

Strategies

1. Take control of your thinking. Focus on the uplifting, loving things of life, rather than the negatives. A lot of stress is due to faulty thinking. Typical examples of faulty thought patterns are these.

(i) All or Nothing Thinking - Believing that if something isn't perfect, it is therefore totally useless.

(ii) Over-Generalisation - Generalising a single and specific negative event as an indicator of an ongoing pattern of failure and defeat.

(iii) Filtering Out The Good - This means filtering out or ignoring positive feedback and concentrating on negative feedback.

(iv) Jumping to Conclusions - Jumping to negative conclusions when the evidence doesn't warrant it.

(v) Believing Feelings - Assuming that your feelings are a good indicator of the way things really are. The fact is that feelings do not necessarily give a true indication of how things really are. You need to take notice of your feelings. But if you believe them as a matter of habit, you cannot fail to be stressed.

(vi) “Shoulding” On Yourself - Telling yourself that you “should” or “shouldn't” be doing this or that. Other people put enough pressure on you. Why do it to yourself?

(vii) Self Labelling - This means to habitually label yourself in a negative way.

(viii) Blaming Yourself - As a matter of habit, accepting blame for things when you are accused even if it is not your fault. We all need to take responsibility for what is our responsibility. But don't buy into what *isn't* your responsibility!

(ix) What If... - Worrying about things that may never happen is a waste of time. Worry is a sign of a very creative mind! But it is *negative* creativity. “Worry” *positively*, not negatively and enjoy your creative energy instead of directing it towards destroying your joy.

(x) Comparisonitis - This means comparing yourself with others, and usually in a negative light. But all people are equally

valuable in the universe regardless of the faulty measuring sticks that people use which seem to show differences. End of story.

Learn to be optimistic and tell that critic sitting on your shoulder to take a hike! Learn to argue back!

2. Eat a healthy diet as outlined elsewhere in this book.
3. Take Korean (Chinese) Ginseng *or* Siberian Ginseng at a dose of 100mg once per day.
4. If stress is producing anxiety, herbs such as vervain, skullcap, hops, wild lettuce, passionflower, chamomile, oats, wood betony and valerian may help. Several different combinations are available from your health food store.
5. Take up a stress releasing hobby. If you respond to stress in a *physical* way you will need a physical release. If you respond to stress *cognitively* (that is in a more mental way), you need a mental outlet. If your stress response is both physical and cognitive, you need both sorts of outlet.

a) Physical Responders

(i) Symptoms

Feeling jittery in the body, diarrhoea, tense in the stomach, nervously pacing the floor, becoming physically immobilised, elevated levels of perspiration.

(ii) Release Mechanisms

Exercise, dancing, having sex, sun bathing, sport, holidays, warm baths, hobbies, massage, sight seeing.

b) Cognitive (Mental) Responders

(i) Symptoms

Difficulty concentrating because of uncontrollable thoughts, worrying over things that don't really matter, imagining of terrifying scenes, can't keep anxiety provoking pictures or thoughts out of the mind, unimportant things bother you, a sense that you are losing out because you can't make up your mind more quickly.

(ii) Release Mechanisms

Prayer and meditation, art, music, reading, theatre and movies (*not* including action, thriller or horror movies!), TV (same provisos as for movies), relaxation tapes, flotation tank sessions, talking and debating.

6. Use humour.

(i) Read humorous books and watch humorous movies. Laughter is one of the best stress control mechanisms. We do not laugh because we are happy. We are happy because we laugh!

(ii) Learn to see the funny side of things. If you develop your sense of humour in the face of adversity no-one will be able to take the joy of life away from you! Nor will your health suffer as a result of external stresses.

7. Avoid being too focussed on “self”. Modern western culture is obsessed with the self. It is okay to want to be the best “you” that you can be, and to work towards it. But the modern tendency to self-absorption or self-obsession is bad and unhealthy. Self-obsession or self-centredness is the opposite to love and ends up increasing stress, not decreasing it.

In other words the road to stress reduction and to fulfilment and happiness, is to forget about self and to serve others.

The fact is that happiness is a by-product, not an end product.

If you aim at it, you’ll miss it. If you forget yourself and look after others, you’ll achieve it as a by-product.

Ten Commandments For Reducing Stress

1. Thou shalt not be perfect or even try to be.
2. Thou shalt not try to be all things to all people and spread thyself too thin.
3. Thou shalt leave things undone that ought to be done.
4. Thou shalt not criticise thyself for decisions that were made without the benefit of hindsight.
5. Thou shalt learn to say NO!
6. Thou shalt schedule time for thyself and thy supportive network.
7. Thou shalt switch off and do nothing regularly.
8. Thou shalt be boring, untidy, inelegant and unattractive at times.
9. Thou shalt never ever feel guilty for taking the time to look after thyself, or for things that are the responsibility of others.
10. ESPECIALLY Thou shalt not be thine own enemy, but be thy best friend.

Appendix 10 - Isometric Memory Jogger - By Exercise Station

1. **DON'T HOLD YOUR BREATH. IT IS DANGEROUS.** Expel your breath slowly as you perform each exercise.
2. Slowly build each contraction to maximum effort and then reduce that to about 60% of capacity. Then hold it for six seconds. Count “one thousand and one, one thousand and two...”, up to “one thousand and six”. Then slowly release the tension.

A. Free Standing

1. *Front Neck Press*
2. *Back Neck Press*
3. *Side Neck Press* :- a) Right side b) Left side
4. *Monkey Grip Pull*
5. *Chest Press*
6. *Curls*
7. *Reverse Curls*
8. *Stomach Suck*
9. a) *Thigh-Hand Push*
b) *Alternate Thigh-Hand Push*

B. Doorway

1. *Doorway Chest Press*
2. *Overhead Doorjamb Press*
3. *Sideways Doorjamb Press*
4. *Abdomen Side Press*
5. *Doorjamb Thigh Push* - type a)
6. *Doorjamb Hamstring Push*
7. *Leg Press*

C. Using Walls

1. *Wall clap*
2. *“Doorjamb” Thigh Push* - type b) - done on the walls of a narrow hall
3. *“Doorway” Pulldown* - actually easier to use the walls of a narrow hall
4. *Sideways “Doorjamb” Press* - again using the walls of a narrow hall

D. Using Chair (& Table)

1. *Chair Triceps*
2. *Chair Biceps*
3. *Table Arm Press*

4. *Abdomen Push*
5. *Cross Leg Pull-Apart*
6. *Cross Leg Push-Together*
7. *Inner Thigh Press*
8. *Outer Thigh Press*

E. Floor

1. *Back Arch*
2. *Prone Press*

Appendix 11 - General Information On Exercise

1. You need both aerobic training and resistance training for maximum health.

2. There are some pre-packaged combined programs available which incorporate both types. These include the “5BX plan for men”, the “XBX plan for women”, and “Total Fitness in Thirty minutes per week” plan for both sexes. Refer to appendix 15 for publishing details.

If you wish to separate the two training types the information may be summarised thus.

Aerobic Training

1. A 30 minute brisk walk daily will provide most of the health benefits.

2. If you wish to run, swim, cycle or row etc, 20 minutes of these 4 to 5 times per week will give every benefit short of the ability to compete at first class athletics carnivals. Even *ten minutes* 3 times per week will give *significant* health benefits although it will not make you an athlete.

Resistance Training

Weight training or isometrics will provide what you need.

1. Weight training gives superior results but needs more equipment and takes more time.

2. Isometrics will provide most of the health benefits for busy people. See the summary in appendix 10.

For those who wish to take it further than isometrics without being obsessive, the following are weight training options, discussed in order from least time required to most time required.

General Weights Program

1. Recent research suggests that one set of 8 to 12 repetitions completed as little as twice per week gives 90% of the benefits of a program using 3 sets of 8 to 12 repetitions completed twice per week.

2. Other research suggests that one set of 15 repetitions completed 3 times per week gives significant gains in strength.

3. Obviously much less training is required than has previously been thought. I recommend training as in number 1 above.

The following program covers every major muscle group of the body.

A. Warm up thoroughly - skipping for a minute or two followed by stretches.

B. Exercises - keep the rest time between each exercise to 30 seconds where possible.

Warning! - Have someone show you how to do these exercises properly, or you could injure yourself!

1. Lower Back - Low back hyperextensions.
2. Legs - Squats, *plus* calf raises *or* donkey calf raises.
3. Chest - Bench press.
4. Shoulders - Upright rows *or* roll presses.
5. Triceps - Triceps push down (this is a triceps extension using the bar on a lat machine) *or* triceps dip.
6. Abdomen - Crunches *or* bent knee leg raises *or* bent knee jack-knives.
7. Upper back - Lat pulldowns *or* machine rows.
8. Biceps - Barbell curls.

C. Warm down - consisting of stretches

If you are short on time exercises 4, 5 and 8 may be left out because those muscles receive a degree of work in exercises 3 and 7. But it is better to do them.

I have set up some training record sheets for your use that take the variety of exercises into account. They are on the following pages. Work through them in order, cycle 1, cycle 2, and cycle 3. If you do the program twice per week, three weeks will complete it. Then start again.

The Matrix System

This body building training system reputedly yields the same results that would be achieved in other training systems but with only $\frac{1}{4}$ to $\frac{1}{3}$ of the training time. I have used this system and it works well. At the time I was using it, it did cut my training time down to $\frac{1}{3}$ of that previously required. Please refer to the following books.

1. *12 Weeks To A Better Body For Men* - Ronald S. Laura & Kenneth R. Dutton, Allen & Unwin, St Leonards, 1994.
2. *The Matrix Principle* - Ronald S. Laura & Kenneth R. Dutton, Allen & Unwin, North Sydney, 1991.

I have also used the training sheets as produced on the next three pages in conjunction with the principles of repetitions as espoused by the matrix system and found such a program to be very effective. But don't try doing that until you have been training for at least three months. Refer to the references above for a more complete explanation of the principles used in the matrix system.

Cycle 1

Day -

Date - / /

Warm Up - 30 seconds rest

		Weight	Done
Low Back	<i>Floor Hyperextensions - 30 sec</i>		
Upper Leg	<i>Rear Squat - 30 sec</i>		
Lower Leg	<i>Donkey Calf Raise - 20 sec</i>		
Shoulders	<i>Upright Row - 20 sec</i>		
Chest	<i>Bench Press - 30 sec</i>		
Triceps	<i>Triceps Dip - 20 sec</i>		
Midsection	<i>Crunch or V sit ups - 30 sec</i>		
Lats	<i>Lat Pull - 20 sec</i>		
Biceps	<i>Barbell Curls - Finish</i>		

Day -

Date - / /

Warm Up - 30 seconds rest

		Weight	Done
Low Back	<i>Floor Hyperextensions - 30 sec</i>		
Upper Leg	<i>Rear Squat - 30 sec</i>		
Lower Leg	<i>Standing Calf Raise - 20 sec</i>		
Shoulders	<i>Roll Press Front of Neck - 20 sec</i>		
Chest	<i>Bench Press - 30 sec</i>		
Triceps	<i>Triceps Push Down - 20 sec</i>		
Midsection	<i>Reverse sit ups - 30 sec</i>		
Lats	<i>Machine Rows - 20 sec</i>		
Biceps	<i>Barbell Curls - Finish</i>		

Cycle 2

Day - Date - / /

Warm Up - 30 seconds rest

		Weight	Done
Low Back	<i>Floor Hyperextensions - 30 sec</i>		
Upper Leg	<i>Rear Squat - 30 sec</i>		
Lower Leg	<i>Donkey Calf Raise - 20 sec</i>		
Shoulders	<i>Upright Row - 20 sec</i>		
Chest	<i>Bench Press - 30 sec</i>		
Triceps	<i>Triceps Dip - 20 sec</i>		
Midsection	<i>Bent Knee Jack-knives - 30 sec</i>		
Lats	<i>Straight Arm Lat Pull - 20 sec</i>		
Biceps	<i>Barbell Curls - Finish</i>		

Day - Date - / /

Warm Up - 30 seconds rest

		Weight	Done
Low Back	<i>Floor Hyperextensions - 20 sec</i>		
Upper Leg	<i>Rear Squat - 30 sec</i>		
Lower Leg	<i>Standing Calf Raise - 30 sec</i>		
Shoulders	<i>Roll Press Behind Neck - 20 sec</i>		
Chest	<i>Bench Press - 30 sec</i>		
Triceps	<i>Triceps Push Down - 20 sec</i>		
Midsection	<i>Bent Knee Jack-knives - 30 sec</i>		
Lats	<i>Lat Pull - 20 sec</i>		
Biceps	<i>Barbell Curls - Finish</i>		

Cycle 3

Day - Date - / /

Warm Up - 30 seconds rest

		Weight	Done
Low Back	<i>Floor Hyperextensions - 20 sec</i>		
Upper Leg	<i>Rear Squat - 30 sec</i>		
Lower Leg	<i>Donkey Calf Raise - 30 sec</i>		
Shoulders	<i>Upright Row - 20 sec</i>		
Chest	<i>Bench Press - 30 sec</i>		
Triceps	<i>Triceps Dip - 20 sec</i>		
Midsection	<i>Crunch or V sit ups - 30 sec</i>		
Lats	<i>Machine Rows - 20 sec</i>		
Biceps	<i>Barbell Curls - Finish</i>		

Day - Date - / /

Warm Up - 30 seconds rest

		Weight	Done
Low Back	<i>Floor Hyperextensions - 20 sec</i>		
Upper Leg	<i>Rear Squat - 30 sec</i>		
Lower Leg	<i>Standing Calf Raise - 30 sec</i>		
Shoulders	<i>Roll Press Front of Neck - 20 sec</i>		
Chest	<i>Bench Press - 30 sec</i>		
Triceps	<i>Triceps Push Down - 20 sec</i>		
Midsection	<i>Reverse sit ups - 30 sec</i>		
Lats	<i>Straight Arm Lat Pull - 20 sec</i>		
Biceps	<i>Barbell Curls - Finish</i>		

Appendix 12 - Pawpaw (Papaya) Leaf Extract Recipe

Use

Some people have used this recipe with success in the treatment of cancer.

Recipe

Pick as many leaves from the Pawpaw (papaya) tree as will fit into the largest cooking pot you can find. Lightly scrub them to remove any impurities and pollution. Place them in a large cooking pot and cover them with cold water and cook with the lid on. Bring them to the boil and boil them slowly for 2 hours. (This you might like to do on a BBQ outside as it has a very strong, pungent odour). Set the liquid aside until cold. Strain through a muslin cloth several times until all the liquid is clean. Divide the liquid into daily quantities and pour it into small bottles. Freeze what you do not need for the day. Each day take out another bottle for the next day. This way you only have to cook the brew once a week or so.

Dose

Take 5oz (150ml) of the Pawpaw liquid with 1 tablespoon of molasses (made into a hot molasses tea) 3 times each day until a cure is gained. Then as a maintenance dose take 5oz (150ml) of the Pawpaw liquid with the molasses daily for as long as you can.

Side Effects

Rotten bowel wind is to be expected, but it is the only known side effect.

Appendix 13 - Pollen Vaccine

Equipment

1. Three clean 100ml glass bottles. NO PLASTIC. You may need to persuade your pharmacist to sell you these.
2. A one millilitre measuring eye-dropper. Pharmacies stock these.
3. Some vodka or brandy, preferably vodka. You'll need at least 300ml.
4. Collect 1 to 2 flowers from each of any flowering shrubs or trees, and the flower heads of different sorts of grasses that are in bloom near your home or work or both.

Method

1. Try to shake as much pollen from each flower as you can into a small container. You may need to put the whole flower heads of the grasses in, but chop them up and crush them first.
2. Add 100ml of the alcoholic beverage.
3. Stir it up and transfer the mixture to one of the 100ml glass bottles.
4. Seal the bottle and shake the mixture like crazy for a full minute, hitting the bottle on the palm of the resting hand on each downward stroke. Don't neglect this. It is an important step no matter how ridiculous it sounds. Label this bottle "Stock".
5. Using the measuring eye-dropper, place *1ml* of liquid from the bottle labelled "Stock" into another glass bottle with 100ml of the alcoholic beverage. Seal the bottle and shake the mixture like crazy for a full minute, hitting the bottle on the palm of the resting hand on each downward stroke. Label this bottle "First Dilution".
6. Using the measuring eye-dropper again, place *1ml* of liquid from the bottle labelled "First Dilution" into another glass bottle with 100ml of the alcoholic beverage. Seal the bottle and shake the mixture like crazy for a full minute, hitting the bottle on the palm of the resting hand on each downward stroke. Label this bottle "Second Dilution".

The process is now complete and you have enough stock to share with relatives, neighbours and friends if you find this helps you.

"Second Dilution" is your medicine. The pollen in this bottle is now diluted to about 1 part per million, and is quite safe to use. The worst that can happen is that it won't work. When the bottle is empty, use "First Dilution" to make up some more "Second Dilution" with some alcoholic beverage. When first dilution is empty, use "Stock" to make up some more.

Dose

Stir 1ml of “Second Dilution” into half a glass of filtered or distilled water. Drink slowly. You may take this 3 to 6 times per day. If you think you need more than that, it is probably not working for you.

Comment

Hayfever sufferers tend to respond better to this medicine than do asthma sufferers, but it is always worth a try. Some hayfever suffering clients and friends of mine swear by it, claiming it relieves symptoms better than medical drugs *with no side effects*.

Appendix 14 - Suppliers

1. “S.A.F.E.” - *Sustainable Agriculture & Food Enterprises*, 56 Junction Rd, P.O. Box 2233, Burleigh Junction Qld, Australia, 4220. Phone (07) 5593 4566. Fax (07) 5593 4877.

“S.A.F.E.” are suppliers of a wide range of nutritional, herbal and agricultural products.

Appendix 15 - Recommended Reading For Health

General References

1. *Improving On Pritikin* - Sub-titled “You Can Do Better” - Ross Horne - Happy Landings Publishers, Sydney, 1988.
2. *The Health Revolution, 5th Edition* - Ross Horne - HarperCollins, Sydney, 1997.
3. *Health & Survival In The 21st Century* - Ross Horne - HarperCollins, Sydney, 1997.
4. *The New Raw Energy* - by Leslie & Susannah Kenton - Vermillion Press, Random House Publishers, Sydney, 1984, 1994.
5. *Lean Revolution* - Leslie Kenton - Vermillion Press, Random House Publishers, Sydney, 1994, 1998.
6. *Fit For Life* - by Harvey & Marilyn Diamond - Warner Books, London, 1985.
7. *100% Health* - Patrick Holford - Piatkus, London, 1998.
8. *The Optimum Nutrition Bible* - Patrick Holford - Piatkus, London, 1997.
9. *Sea Energy Agriculture* - Dr Maynard Murray - Valentine Books, Winston-Salem, 1976.
10. *Health from the Sea and Soil* - Charles B Ahlson - Exposition Press, New York, 1962.
11. *None Of These Diseases* (Millennium Three Edition) - S.I. McMillen, M.D. & David E. Stern, M.D. - Fleming H. Revel, a division of Baker Book House Co., Grand Rapids, 2000.

On The Dangers Of Trusting Your Doctor

1. *Confessions Of A Medical Heretic* - Dr Robert Mendelsohn - Contemporary Books, 1979.
2. *What The Medical Profession Won't Tell You That Could Save Your Life* - Michael Culbert, PhD - Downing Publishers, Norfolk in Vancouver, 1983.
3. *Don't Call A Doctor* - John Kerr - Veritas Publishing, Australia, 1987.

Juices

Almost any book on juices contains a section showing the juices recommended for various ailments.

1. *Juice Power* (Pocket Reference Series) - Helen E. Hartley - Hartrade Pty Ltd, Mt Gravatt, 2000. An excellent recent publication. It gives an analysis of individual juices with their key benefits.
2. *The Complete Raw Juice Therapy* - Thorsons Editorial Board - Thorsons Publishing Group, Suffolk, 1989. This contains tables of the protein, carbohydrate, fat, vitamin, mineral and where available the trace element contents of a wide range of fruits and vegetables. This book is worth having as a reference just for this reason alone.

3. *The Uses of Juices* - C.E. Clinkard - Pitman, Melbourne 1960, 1989.
4. *Raw Juice Therapy* - John B. Lust - Thorson's Publishers Ltd, 1959. This one is an absolute classic, but I think it is out of print. If you can find it in a second hand book store, **buy it!**
5. *Juicing For Health* - Julie Stafford - Penguin Books Australia Ltd, 1994. This is a great book with over 200 recipe ideas for juices, smoothies and sorbets.

Stress Management

1. *The Bible*. The Contemporary English Version is the best translation for Aussies at the moment. It is quite an accurate translation, and it does not require the vocabulary of an Oxford scholar to be understandable!
2. *Feeling Good - The New Mood Therapy* - David D. Burns - C/- Information Australia Group, Melbourne, 1980.
3. *Learned Optimism* - Martin E. P. Seligman - Random House Australia, Sydney, 1990.
4. *10 Dumbest Mistakes Smart People Make And How To Avoid Them* - Dr Arthur Freeman & Rose DeWolf – Harper Perennial, a division of Harper-Collins, New York, 1992.
5. *Don't Sweat the Small Stuff - And It's All Small Stuff* - Richard Carlson - Bantam Books, Sydney.
6. *Boundaries. When to Say YES. When to Say NO. To Take Control of Your Life* - Dr Henry Cloud & Dr John Townsend - Strand Publishing, Sydney, 1992.
7. *Keep Life Simple Therapy* - Linus Mundy, illustrated by R. W. Alley - Abbey Press, St Meinrad Indiana, 1993. This is succinct and to the point. An excellent little read which takes less than five minutes.
8. Find comic strip books that make you laugh and read them! I read things like "Garfield", "B.C.", "The Wizard of Id", "Hagar", "Andy Capp" and "Peanuts".

Exercise

1. *12 Weeks To A Better Body For Men* - Ronald S. Laura & Kenneth R. Dutton, Allen & Unwin, St Leonards, 1994.
2. *The Matrix Principle* - Ronald S. Laura & Kenneth R. Dutton, Allen & Unwin, North Sydney, 1991.
3. *Physical Fitness - 5BX - 11 minute a day plan for men, XBX - 12 minute a day plan for women* - Developed by the Royal Canadian Air Force, Penguin Books, 1958, 1980.
4. *Total Fitness In 30 Minutes A Week* - Laurence E. Morehouse & Leonard Gross, Mayflower, Granada Publishing, Sydney, New York et al.
5. *Maximum Performance* - Laurence E. Morehouse & Leonard Gross, Mayflower, Granada Publishing, Sydney, New York et al, 1977.

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SECTION NINE:

ENDNOTES

¹ Bile is made in the liver, and then stored and concentrated in the gall bladder.

² The protein digesting enzymes are *trypsin*, *chymotrypsin*, *carboxypolypeptase*, *ribonuclease* and *deoxyribonuclease*. The starch digesting enzyme is *pancreatic amylase*. The fat or oil digesting enzymes are *pancreatic lipase* and *cholesterol esterase*. The pancreas also secretes *bicarbonate ions* into the small intestine to neutralise the stomach acid.

³ What most people call “glands”, which for example swell up along the neck during a throat infection are in fact the lymph glands, enlarging to do their job.

⁴ Most farm produced meats and poultry are fed or injected with hormones to promote growth, and antibiotics to stop the spread of animal or poultry diseases.

⁵ And then there are other T-Lymphocytes called “suppressor cells”, which make sure that not too many antibodies are produced.

⁶ These sorts of white blood cells are collectively called “phagocytes”.

⁷ The alveoli are the air sacs, only one cell thick, where the exchange of oxygen and carbon dioxide takes place. When these are destroyed in large enough numbers by cigarette smoking, the result is *emphysema*.

⁸ Please note that the cholesterol manufactured by the body is the HDL type, which is quite safe. It is the *dietary* cholesterol (LDL type) that clogs up the arteries, and since most medical drugs that are designed to control cholesterol do so by reducing production by the liver, they are clearly worse than useless in the fight against cardio-vascular disease. They are worse than useless because not only do they *not* do what they are supposed to do, which is to provide protection, but also they create a false sense of security.

⁹ *Smooth* muscles are those muscles not under voluntary control, such as the muscles in the reproductive tract or those lining the arteries. Muscles that are under voluntary control with which you are familiar such as the leg muscles and other muscles attached to the skeleton are called *striated* muscles, because under the microscope they show *striations* across the fibres. The one exception to the rule is the heart muscle, which is striated but involuntary (to a large extent). Heart muscle is generally given its own category, “cardiac muscle”, because although striated it is a little different to normal skeletal muscles.

¹⁰ The irritation of the bowel by these two long chain proteins, which is well documented to be the case in varying degrees for virtually the *entire* population, causes the bowel to “open up”, allowing much larger amounts of incompletely digested food particles into the blood stream. As an exaggerated analogy, it is similar to the difference between the filtering capacities of a silk screen as compared with a fish net.

¹¹ A.L. Warshaw, W.A. Walker & K.J. Isselbacher, “Protein uptake by the intestine: Evidence of intact macromolecules,” *Gastroenterol.* 66 (1974): 987-992.

And A.L. Warshaw, C.A. Bellini & W.A. Walker, “The intestinal mucosal barrier to intact antigenic protein,” *Am. J. Surg.* 133 (1977): 55-58.

And W.A. Walker & K.J. Isselbacher, “Uptake and transport of macromolecules by the intestine: possible role in clinical disorders,” *Gastroenterol.* 66 (1974): 987-982.

¹² See Warshaw, Bellini & Walker.

¹³ A review of the literature has been given by Patrick Donovan, N.D., in *A Textbook of Natural Medicine*, First ed., s.v. “Bowel Toxaemia, Permeability and Disease: New Information to Support and Old Concept,” IV BwlTox -1.

¹⁴ In fact these enzymes have many properties, see later discussion, but one of them is that they reduce the tendency of platelets to clot, so reducing the risk of stroke. This highlights the greater importance of the digestive system in comparison with the cardio-respiratory-circulatory system.

¹⁵ As a rule of thumb however, it can take up to a month of liver treatment for each year a patient has had a problem. Results are quicker if the person is prepared to make radical dietary changes.

¹⁶ Paavo Airola, *How to Get Well* (Phoenix: Health Plus Publishers, 1974), 162. I’ve tried it, and to be blunt, it didn’t work for my own grey hair, but my health generally improved.

¹⁷ Some bacteria use “D” forms.

¹⁸ If you are interested in the chemical structure and function of the individual amino acids, see the excellent summary by Sean Goss, in *The Amino Acid Book* (Australia: The Book Printer, 1988), 9-15. I disagree with his high estimates of human protein needs, but his book is excellent.

¹⁹ This is called the “amide group”.

²⁰ Bill H. McAnalley, PhD; Eileen Vennum, RAC, "Introduction to Glyconutritionals," *GlycoScience & Nutrition* Vol 1, No.1 (January 1, 2000): 2.

²¹ Jane Ramberg, MS; Robert K. Murray, MD, PhD; Eileen Vennum; and Bill McAnalley, PhD, "Dietary Carbohydrates in the Human GI Tract: The Established and Emerging Science," *GlycoScience & Nutrition* Vol 6, No.6 (December 1, 2005): 3.

²² *Gut*. 48 (2001): 587-589.

²³ Jane Ramberg, MS; Robert K. Murray, MD, PhD; Eileen Vennum; and Bill McAnalley, PhD, "Dietary Carbohydrates in the Human GI Tract: The Established and Emerging Science," *GlycoScience & Nutrition* Vol 6, No.6 (December 1, 2005): 1.

²⁴ M. R. Naghii, "The significance of dietary boron, with particular reference to athletes," *Nutr. Health*. 13 (1999): 31-37.

²⁵ J. H. Beattie & H. S. Peace, "The influence of a low boron diet and boron supplementation on bone, major mineral and sex steroid metabolism in postmenopausal women," *Br. J. Nutr.* 69 (1993): 871-884.

²⁶ F. H. Nielsen, "Boron – an overlooked element of potential nutritional importance," *Nutr. Today*. Jan/Feb (1988): 4-7.

²⁷ Remember that I began my working life as a maths and science teacher.

²⁸ Carlisle, "Silicon as an Essential Element," *Fed Proc* 33 (1973).

²⁹ Almost the most dangerous thing you can do for your health is to cook your food. There is a phenomenon called *digestive leucocytosis* in which white blood cells rush to the bowel when we eat, to protect us against foreign invasion. This happens with cooked food, but *not* raw food. Quite obviously, the body sees cooked food as the enemy.

³⁰ J.E. Pizzorno & M.T. Murray, *A Textbook of Natural Medicine* (Seattle: John Bastyr College Publications, 1987), various pages, too many to list.

³¹ R.G. Cutler, "Carotenoids and retinol: Their possible importance in determining longevity of primate species." *Proc. Natl. Acad. Sci.* 81 (1984): 7627-7631.

³² a) R. Peto, R. Doll, J.D. Buckley et al, "Can dietary beta-carotene materially reduce human cancer rates?" *Nature* 290 (1981): 201-208.

b) National Research Council, "Diet, Nutrition and Cancer," *National Academy Press, Washington D.C.*, 1982.

³³ A.V. Rao & S. Agarwal, "Role of antioxidant lycopene in cancer and heart disease," *J. Am. Coll. Nutr.* 19(5) (2000): 563-569.

³⁴ M. Alexander, H. Newmark & R.G. Miller, "Oral beta-carotene can increase the number of OKT4+ cells in human blood," *Immunol. Letters* 9 (1985): 221-224.

³⁵ Joseph E. Pizzorno, Jr N.D. & Michael T. Murray, N.D., *A Textbook of Natural Medicine*, First ed., s.v. "Vitamin A, Beta-Carotene and Other Carotenoids," V:VitA-4.

³⁶ D. Talwar, Ha T.K.K., H.R. Scott et al, "Effect of inflammation on measures of antioxidant status in patients with non-small cell lung cancer," *Am. J. Clin. Nutr.* 66 (1997): 1283-1285.

³⁷ E. Okajima, M. Tsutsumi, S. Ozono et al, "Inhibitory effect of tomato juice on rat urinary bladder carcinogenesis after N-Butyl-N-(4-hydroxybutyl) nitrosamine initiation," *Jpn. J. Cancer. Res.* 89 (1998): 22-26.

³⁸ J.F. Dorgan, A. Sowell, C.A. Swanson et al, "Relationships of serum carotenoids, retinol, alpha-tocopherol and selenium with breast cancer risk: results from a prospective study in Columbia, Missouri," *Cancer Causes and Control* 9 (1998): 89-97.

³⁹ M. Karas, H. Amir, D. Fishman M. Danilenko et al, "Lycopene interferes with cell cycle progression and insulin-like growth factor 1," *Nutr Cancer* 36(1) (2000): 101-111, S. Hursting, S. Strom, P. Pillow et al, "A case-control study of diet and prostate cancer progression," *Am. J. Epidemiol.* SER Abstracts S48 (1997): 189.

⁴⁰ L Kohlmeier, J.K. Kark, E. Gomez-Garcia et al, "Lycopene and myocardial infarction risk in the EURAMIC study," *Am. J. Epidemiol.* 146(8) (1997): 618-626.

⁴¹ *J. Nutr.* 131 (2001): 1449-1451.

⁴² This is a process in which "mast cells", a kind of white blood cell, commit suicide and release their highly inflammatory insides (including histamine) into the local area. It is a deliberate attempt to create inflammation to contain an invader, but it does go wrong and in that case causes health problems such as urticaria, hayfever and asthma.

⁴³ For completeness, these other substances include *slow-reaction substance of anaphylaxis* (SRSA), *eosinophil chemotactic substance*, *lysosomal enzymes* and other less important substances. It is the SRSA that causes the bronchoconstriction in asthma, restricting breathing, and sometimes this can be fatal.

⁴⁴ A severe and itchy red swollen skin rash.

⁴⁵ Joseph E. Pizzorno, Jr N.D. & Michael T. Murray, N.D., *A Textbook of Natural Medicine*, First ed., s.v. "Carotenoids and Flavonoids: Antioxidant and Tissue Specific Activities," V:CarFla-4.

⁴⁶ This is a bit like the way railway sleepers stabilise the tracks, holding them in alignment.

⁴⁷ Joseph E. Pizzorno, Jr N.D. & Michael T. Murray, N.D., *A Textbook of Natural Medicine*, First ed., s.v. "Carotenoids And Flavonoids: Antioxidant And Tissue Specific Activities," V:CarFla-4.

⁴⁸ J. Wegrowski, A.M. Robert & M. Moczar, "The effect of procyanidolic oligomers on the composition of normal and hypercholesterolemic rabbit aortas," *Biochem. Pharmacol.* 33 (1984): 3491-3497.

⁴⁹ Author Not Specified, *Eagle Research Papers*, published by Eagle Pharmaceuticals Pty Ltd, 2002, 1-25.

⁵⁰ J.F. Hammerstone, S.A. Lazarus & H.H. Schmitz, "Procyanidin content and variation in some commonly consumed foods," *Journal of Nutrition* 130 (2000): 2086-2092.

⁵¹ This engine is the *mitochondria*. See earlier discussion on the make up of cells.

⁵² See the article by Alan R. Gaby in Joseph E. Pizzorno, Jr N.D. & Michael T. Murray, N.D. editors, *A Textbook of Natural Medicine*, First ed., s.v. "CoEnzyme Q10" V:CoEnzQ1-9.

⁵³ The aforementioned biochemicals are found in herbal medicines, and are discussed in that role by David Hoffman, *The Holistic Herbal - Revised Edition* (The Park, Forres, Scotland: The Findhorn Press, 1986), 126-134. But they are also found in foods in smaller concentrations.

⁵⁴ This is the rate at which energy is produced by the cells just to stay alive and keep warm.

⁵⁵ These nitrogenous (nitrogen based) waste products are derived from the "amine" component of the various "amino acids", which you may remember are the building blocks of protein. The amine group must be "chopped off" the amino acid before the remaining carbon chain can be used for energy. The amine group must then be removed from the body.

⁵⁶ In areas of the world where calcium consumption is low, osteoporosis is virtually unknown, yet in the west, where we are emphasising the need for calcium, and where levels of consumption are quite high, osteoporosis is almost epidemic in the elderly due to lifelong high protein diets. The development of osteoporosis has *nothing whatsoever to do with dietary calcium*. See S.A. Schuette et al, "Studies on the mechanism of protein-induced hypercalciuria in older men and women," *J. Nutr.* 110 (1980): 305-315, and G.H. Allen et al, "Protein-induced hypercalciuria: A longer term study," *Am. J. Clin. Nutr.* 32 (1979): 741-749. The consumption of sugar, caffeine, alcohol and aluminium containing antacids also contribute to the development of osteoporosis.

⁵⁷ By way of explanation for the capitalisation of the word "Calorie", please note. What most people call "calories", is really "Calories" and one "Calorie" is in fact one "kilo-calorie". That is, one "Calorie" equals 1000 "calories".

⁵⁸ Lemons.

⁵⁹ Figures quoted have been derived from calculations made from data tables provided in John D. Kirschmann - Director, *Nutrition Almanac - Revised Edition* (New York et al: McGraw-Hill, 1979), 212-216, 226-233, and using the accepted data that each gram of protein provides 4.35 Calories of energy. See Arthur C. Guyton, M.D., *Textbook of Medical Physiology*, Sixth ed., s.v. "Dietary Balances, Regulation of Feeding; Obesity and Starvation," 899. Along similar lines and also from Guyton page 899, each gram of fat provides 9.3 Calories and each gram of carbohydrate releases 4.1 Calories.

⁶⁰ *Am J. Clin Nutr.* 66S (1997): 1006S-1010S.

⁶¹ *Lancet.* 346 (1995): 1245-1246.

⁶² *Lancet.* 357 (2001): 746-751.

⁶³ *Am J. Clin Nutr.* 66S (1997): 1548S-1556S.

⁶⁴ Many studies now link dairy consumption and ear infections. See *Otolaryngol. Clin. North. Am.* 25(1) (1992): 197-211.

⁶⁵ Volume 41, 1985, page 254.

⁶⁶ Joseph E. Pizzorno, Jr N.D. & Michael T. Murray, N.D., *A Textbook of Natural Medicine*, First ed., s.v. "Obesity," VI:Obese-8.

⁶⁷ This information was provided by Simon Mills at a seminar in Melbourne 26-30th of August 1994. Simon is a British herbalist, and the author of a number of books including *The Dictionary of Modern Herbalism* (Melbourne: Lothian Publishing Company, 1985). At one time he was President and Director of Research of the National Institute of Medical Herbalists in Britain.

⁶⁸ J.A. Arnason, H Gudjonsson, H. Freysdottir et al, "Do adults with high gliadin antibody concentrations have subclinical gluten intolerance?" *Gut* 33 (1991): 194-197.

⁶⁹ H. Hin, G. Bird, P. Fisher et al, "Coeliac disease in primary care: case finding study," *Br. Med. J.* 318 (1999): 164-167.

⁷⁰ That means the body weight you *should be*, not the body weight that you *are*.

⁷¹ This is about 145 to 190 kilojoules per kilogram of body weight, or about 65 to 85 kilojoules per pound of body weight.

⁷² It is also called "Purple Medick" in Britain.

⁷³ John D. Kirschmann (Director), *Nutrition Almanac (Revised Edition)* (New York et al: McGraw-Hill Book Company, 1979), 176.

⁷⁴ For non-Australian readers, vegemite is a yeast extract. If you have tried it and don't like it, it is probably because you spread it on as thickly as you do honey or jam(jelly). Don't do that! Spread it on very thinly, so thinly that it is almost as though you are scraping it off, not putting it on. That is the way to eat vegemite!

⁷⁵ C. Krumdieck & C.E. Butterworth, "Ascorbate-cholesterol-lecithin interactions: Factors of potential importance in the pathogenesis of atherosclerosis," *American Journal of Clinical Nutrition* 27 (1974): 866-876.

⁷⁶ *Nutrition Almanac - Revised Edition* (1979), 31, 33, 34, 195.

⁷⁷ *Nutrition Almanac - Revised Edition* (1979), 35.

⁷⁸ I have even heard health professionals who should know better, say that the enzymes are "broken". Still, I suppose it communicates the belief of such people that the enzymes are rendered useless.

⁷⁹ Joseph E. Pizzorno, Jr N.D. & Michael T. Murray, N.D., *A Textbook of Natural Medicine*, First ed., s.v. "Zingiber," V-Zingi-1.

⁸⁰ These include, reducing inflammation where it is excessive by inhibiting prostaglandin synthesis and thromboxane synthesis, and on top of all that, it will prevent motion sickness better than Dramamine! See Pizzorno and Murray as above, and read "**The Hormone-Messenger System**" as a subheading of "**The Body As A Synthesis of Interdependent Systems**".

⁸¹ Compare cow's milk in which it is mainly casein. Not suitable for human consumption.

⁸² Anger and hostility are a luxury we cannot afford. These emotions raise LDL cholesterol, and LDL cholesterol is the dangerous one! See J.C. Richards, A. Hof & M. Alvarenga, "Serum lipids and their relationships with hostility and angry affect and behaviours in men," *Health Psychol.* 19(4) (2000): 393-398.

- ⁸³ See chapters 22 to 24 in McMillen & Stern for a thorough discussion, pp 205-223.
- ⁸⁴ Specific references for these actions by Korean Ginseng have been given by Kerry Bone, in "Ginseng - The Regal Herb Part 1," *Mediherb Professional Review* 62 (May 1998): 2.
- ⁸⁵ See Arthur Smith, "High On Exercise," *Australian Wellbeing* 25 (1988): 20-21. Exercise has been shown to relieve depression, elevate mood and promote optimism. The amount needed is 20 minutes of moderate aerobic activity three times per week.
- ⁸⁶ Ronald S. Laura & Kenneth R. Dutton, *12 Weeks To A Better Body For Men* (St Leonards: Allen & Unwin, 1994).
- ⁸⁷ This is a 400 km canoe and kayak race along the Murray River (Australia) conducted over the five days from the 27th of December to the 31st of December inclusive each year, to raise money for the Red Cross.
- ⁸⁸ O. Lindahl, L. Lindwall, A Spangberg et al, "Vegan diet regimen with reduced medication in the treatment of bronchial asthma," *J. Asthma* 22 (1985): 45-55.
- ⁸⁹ This "fingerprint" is called the *antigen* or *antigenic determinant*.
- ⁹⁰ This is called *immunological cross reactivity*. See the excellent review of the research which supports this by Patrick Donovan N.D., in Joseph E. Pizzorno, Jr N.D. & Michael T. Murray, N.D., *A Textbook of Natural Medicine*, First ed., s.v. "Bowel Toxaemia, Permeability And Disease: New Information To Support An Old Concept," IV-BwlTox-3, 4.
- ⁹¹ Donovan, IV-BwlTox-3, 4.
- ⁹² E. Kyo, N. Uda, M. Kakimoto et al, "Anti-allergic effects of aged garlic extract," *Phytomedicine* 4(4) (1997): 335-340.
- ⁹³ Joseph E. Pizzorno, Jr N.D. & Michael T. Murray, N.D., *A Textbook of Natural Medicine*, First ed., s.v. "Alzheimer's Disease," VI-Alzhei-3.
- ⁹⁴ See J. A. Edwardson et al, in the *Lancet* 342 (1993): 211-212.
- ⁹⁵ See *American Journal of Clinical Nutrition* 63 (1996): 306-314, *Gerontology and Biological Science* 52(2) (1997): M76-79, and *American Journal of Clinical Nutrition* 65 (1997): 20-29.
- ⁹⁶ See the discussion under "**Atherosclerosis**".
- ⁹⁷ One of the most important and convincing trials was conducted by psychiatrists in the USA. See P. L. Le Bars et al, in *Journal of the American Medical Association* 278 (1997): 1327-1332.
- ⁹⁸ *Am. J. Obstet Gynaecol.* 161 (1989): 1228.
- ⁹⁹ See the article in *Revue Du Rhumatisme English Edition* 62 (2) (1995): 121-126.
- ¹⁰⁰ See *Journal of Rheumatology* 19(2) (1992).
- ¹⁰¹ Ken Danz & Martin Milner N.D., editors, *Underground Cures* (Baltimore: Agora Health Books, 2000), 18. 93.
- ¹⁰² Quoted by Simon Mills during a seminar he conducted in Melbourne Australia on 27/8/94.
- ¹⁰³ See the review of the research papers in Joseph E. Pizzorno, Jr N.D. & Michael T. Murray, N.D., *A Textbook of Natural Medicine*, First ed., s.v. "Curcumin" V-Curcum-1, 2.
- ¹⁰⁴ See the review of the research papers in Joseph E. Pizzorno, Jr N.D. & Michael T. Murray, N.D., *A Textbook of Natural Medicine*, First ed., s.v. "Zingiber" V-Zingi-1.
- ¹⁰⁵ See the review of the research papers for bromelain in Joseph E. Pizzorno, Jr N.D. & Michael T. Murray, N.D., *A Textbook of Natural Medicine*, First ed., s.v. "Bromelain" V-Bromel-1, 2.
- ¹⁰⁶ See the review in Joseph E. Pizzorno, Jr N.D. & Michael T. Murray, N.D., *A Textbook of Natural Medicine*, First ed., s.v. "Tanacetum Parthenium" V-TanaPa-1.
- ¹⁰⁷ *Proc. Natl. Acad. Sci. U.S.A.* 96 (1999): 4524-4529.
- ¹⁰⁸ McAlindon, M.P. LaValley, J.P. Gulin et al, "Glucosamine and chondroitin for treatment of osteoarthritis: a systematic quality assessment and meta-analysis," *JAMA* 283(11) (2000): 1469-1475.
- ¹⁰⁹ Danz & Milner N.D., 79.
- ¹¹⁰ Joseph E. Pizzorno, Jr N.D. & Michael T. Murray, N.D., *A Textbook of Natural Medicine*, First ed., s.v. "Centella Asiatica," V:Centel-2.

¹¹¹ S.C. Woldenberg, "The treatment of arthritis with colloidal sulphur," *J. Southern Med. Assoc.* 28 (1935): 875-881, and A.R. Neligan, "Sulphur in rheumatoid arthritis," *Lancet* 2 (1934): 209, and A.E. Osterberg, "Absorption of sulphur compounds during treatment with sulphur baths," *Arch. Derm. Syph.* 20 (1929): 156-166.

¹¹² A Review by Kerry Bone, "Rethink on Asthma Drugs," *Mediherb Monitor* (June 1992): 3.

¹¹³ Contained in a report on recent research by Kerry Bone ed, in "An Onion A Day Keeps Asthma Away", *Mediherb Monitor*, (September 1992): 3.

¹¹⁴ For a full account of the value of these vitamins in asthma read Marian Shepherd Slee, *Give Asthma the Big A. How One Australian Woman Beat Asthma.* (Melbourne Australia: Bookman Press, 1996). If you or one of your children suffers from severe asthma this book is a **MUST READ!**

¹¹⁵ P.J. Collip et al, "Pyridoxine treatment of childhood bronchial asthma," *Ann. Allergy* 35 (1975): 93-97, E. Zuskin et al, "Inhibition of histamine induced airway constriction by ascorbic acid," *Allergy Immunol.* 51 (1973): 218-226, R.A. Simon et al, "Sulfite-sensitive asthma," *Res. Instit. of Scripps Clinic Scientific Report* 39 (1982-1983): 57-58, S.W. Simon, "Vitamin B12 therapy in allergy and chronic dermatoses," *J. Allergy* 2 (1951): 183-185, M. Caruselli, "Upon therapy for asthma using vitamin B12," *Riforma Medica* (August 2, 1952): 849-851.

¹¹⁶ You may remember previous references to these mini-hormones, which act very locally and are involved in inflammation processes.

¹¹⁷ Reported by M. G. L. Hertog et al, in the *Lancet* 342 (1993): 1007-1011.

¹¹⁸ J. Wegrowski, A.M. Robert & M. Moczar, "The effect of procyanidolic oligomers on the composition of normal and hypercholesterolemic rabbit aortas," *Biochem. Pharmacol.* 33 (1984): 3491-3497.

¹¹⁹ Methionine is an amino acid, one of the building blocks of protein, and it is found in both animal and vegetable protein sources. Methionine is essential to liver health and function, being one of the key lipotropic factors, along with choline, inositol and betaine. See Sean Goss, *The Amino Acid Book* (Australia: The Book Printer, 1988), 36.

¹²⁰ See Danz & Milner N.D., 54-55.

¹²¹ C. Hunt et al, "Hyperlipoproteinaemia and atherosclerosis in rabbits fed low-level cholesterol and lecithin," *Brit. J. Exp. Path.* 66 (1985): 35-46, M.T. Childs, "The contrasting effects of a dietary soya-lecithin product and corn oil on lipoprotein lipids in normolipidemic and familial hypercholesterolemic subjects," *Atherosclerosis* 38 (1981): 217-228.

¹²² P. Knekt, R. Jarvinen, A. Reumamen, J. Maatela, "Flavonoid intake and coronary mortality in Finland: a cohort study," *Br. Med. J.* 312 (1996): 478-481.

¹²³ T.T.C. Yang & M.W.L. Koo, "Chinese green tea lowers cholesterol level through an increase in fecal lipid excretion," *Life Sciences*, 66(6) (2000): 411-423.

¹²⁴ *Am. J. Epidemiol.* 149 (1999): 162-167.

¹²⁵ M.R. Malinow et al, "Alfalfa," *Am. J. Clin. Nutr.* (1979): 1810-1812, and see the report of regression of plaques in the arteries of monkeys fed alfalfa by the same author in *Atherosclerosis* 30 (1973): 27-43.

¹²⁶ Quoted by Patrick Holford, in *100% Health.* (London: Piatkus Publishers Ltd, 1998), 79.

¹²⁷ See the literature review by Kerry Bone in "Crataegus - More Than The Heart? Parts 1 to 4," *Mediherb Professional Newsletters* (Feb, Mar, Apr & May 1992).

¹²⁸ David M. Colquhoun MB, BS, FRACP, Consultant Cardiologist, Wesley Medical Centre, 40 Chasley St. Auchenflower, Qld, Australia 4066, "Niacin for the Treatment of Hyperlipidaemia (Nicotinic Acid, Vitamin B3)," *International Clinical Nutrition Review* 9(1) (Jan 1989): 7-9.

¹²⁹ Melvyn R. Werbach, M.D., in *Nutritional Influences On Illness* (Tarzana: Third Line Press Inc., 1987, 1988), 40.

¹³⁰ Werbach, 51-73.

¹³¹ Werbach, 41.

¹³² A.Z. LaCroix et al, "Coffee consumption and the incidence of coronary heart disease," *New Eng. J. Med.* 315(16) (1986): 977-982, S.M. Haffner et al, "Coffee consumption, diet and lipids," *Am. J. Epidemiol.* 122(1) (1985): 1-12.

¹³³ That is, evidence gathered by the study of social and population groups.

¹³⁴ This "fingerprint" is called the *antigen* or *antigenic determinant*.

¹³⁵ This is called *immunological cross reactivity*. See the excellent review of the research which supports this by Patrick Donovan N.D., in Joseph E. Pizzorno, Jr N.D. & Michael T. Murray, N.D., *A Textbook of Natural Medicine*, First ed., s.v. "Bowel Toxaemia, Permeability And Disease: New Information To Support An Old Concept," IV-BwlTox-1.

¹³⁶ The research papers to back these claims up are again reviewed by Patrick Donovan N.D., in Pizzorno & Murray, N.D., IV-BwlTox-1, 2.

¹³⁷ Donovan, IV-BwlTox-2, 3.

¹³⁸ Quoted by Simon Mills during a seminar he conducted in Melbourne Australia on 27/8/94.

¹³⁹ S. Ayers, R. Mihan, "Is vitamin E involved in the autoimmune mechanism," *Cutis* 21 (1978): 321-325.

¹⁴⁰ T.H. Lee et al, in *New Eng. J. Med.* 312 (1985): 1217.

¹⁴¹ D.F. Horrobin, *Med. Hypotheses*. 7(7) (1981): 891-906.

¹⁴² Cited in Thorsons Editorial Board, *The Complete Raw Juice Therapy* (Wellingborough, Northamptonshire, England: Thorsons Publishing Group, 1989), 29.

¹⁴³ Michelle Morgan & Kerry Bone, "Soya Bean," *Modern Phytotherapist* 5(1) (1999): 15-17.

¹⁴⁴ A characteristic of cancer cells is that they are *de-differentiated*. So by being differentiation agents, these substances prevent the conversion process involved in normal cells becoming cancer cells. See also (iii) Carotenoids.

¹⁴⁵ S. Belman, "Onion and garlic oil inhibit tumour growth," *Carcinogenesis* 4(8) (1983): 1063-1065, and F. Kroning, "Garlic as an inhibitor for spontaneous tumours in mice," *Acta Unio. Intern. Contra Cancrum* 20(3) (1964): 855.

¹⁴⁶ Robert Buist, "BEETROOT - a food for cancer patients," *The Health Professional* (April 1991): 1-4.

¹⁴⁷ When normal cells de-differentiate and become cancer cells, they cease using oxygen to produce their energy, and become primitive anaerobic cells. The purple pigment of beetroot has been demonstrated to normalise the respiratory processes of cancer cells. See insert in Buist, 2.

¹⁴⁸ Information on laetrile is from Dr Richard A. Passwater, *Cancer And Its Nutritional Therapies* (New Canaan: Keats Publishing, Inc, 1978), 175, 176. He devotes an entire chapter to laetrile. If you have cancer it is worth reading.

¹⁴⁹ E. Dupont, P.E. Savard, C. Jourdain et al, "Antiangiogenic properties of a novel shark cartilage extract: potential role in the treatment of psoriasis," *J. Cutan. Med. Surg.* 2(3) (1998): 146-152. Angiogenesis is the process of growing new blood vessels in new tissue.

¹⁵⁰ See the research review in Werbach, 134-135.

¹⁵¹ Werbach, 374.

¹⁵² *Am. J. Obstet Gynaecol.* 161 (1989): 1228.

¹⁵³ See Arthur Smith, "High On Exercise," *Australian Wellbeing* 25 (1988): 20-21.

¹⁵⁴ See the review of the research in Werbach, 155 and following.

¹⁵⁵ An extensive review of the research literature was conducted by Kerry Bone in "Hypericum - New Uses For An Old Wort," *Mediherb Professional Newsletter* 45 (May 1995): 1-4.

¹⁵⁶ Kerry Bone reviewed a clinical trial in "Herbal Alternatives to Psychoactive Drugs," *Mediherb Monitor* 18 (Sept 1996): 3.

¹⁵⁷ Kerry Bone reviewed a clinical trial in "Herbal Alternatives to Psychoactive Drugs," *Mediherb Monitor* 18 (Sept 1996): 3. Many other studies verify the efficacy of Kava in the treatment of anxiety.

- ¹⁵⁸ P. Patel, M.A. Mendall, D.P. Strachan et al, "Association of Helicobacter pylori and Chlamydia pneumoniae infections with coronary heart disease and cardiovascular risk factors," *Br. Med. J.* 311 (1995): 711-714.
- ¹⁵⁹ H.H. Pelser, K.C. Househam, G. Joubert et al, "Prevalence of Helicobacter pylori antibodies in children in Bloemfontein, South Africa," *J. Pediatr. Gastroenterol. Nutr.* 24(2) (1997): 135-139.
- ¹⁶⁰ E.A. Bae, M.J. Han, D.H. Kim, "In vitro anti-Helicobacter pylori activity of some flavonoids and their metabolites," *Planta Med.* 65 (1999): 442-443.
- ¹⁶¹ K. Shinchii, H. Ishii, K. Imanishi & S. Kono, "Relationship of cigarette smoking, alcohol use, and dietary habits with Helicobacter pylori infection in Japanese men," *Scand. J. Gastroenterol.* 32 (1997): 651-655.
- ¹⁶² K.J. Goodman, P. Correa. H.J. Tengana et al, "Diet and Helicobacter Pylori infection in Colombian children," *Am. J. Epidemiol.* 145(11) (1997): SER Abstracts 301.
- ¹⁶³ G.P. Sivam, J.W. Lampe, B. Ulness et al, "Helicobacter pylori - in vitro susceptibility to garlic (*Allium sativum*) extract," *Nutr. Cancer.* 27 (1997): 118-121.
- ¹⁶⁴ E. Dorant, P.A. van den Brandt, R.A. Goldbohm, F. Sturmans, "Consumption of onions and a reduced incidence of stomach carcinoma," *Gastroenterology* 110 (1996): 12-20.
- ¹⁶⁵ M. Strömqvist, P. Falk, S. Bergström et al, "Human milk k-casein and inhibition of Helicobacter pylori adhesion to human gastric mucosa," *J. Pediatr. Gastroenterol. Nutr.* 21 (1995): 288-295.
- ¹⁶⁶ M. Paunio, J. Höök-Nikanne, T.U. Kosunen et al, "Association of alcohol consumption and Helicobacter pylori infection in young adulthood and early middle age among patients with gastric complaints," *Eur. J. Epidemiol.* 10 (1994): 205-209.
- ¹⁶⁷ See the review of the literature by Kerry Bone in "Propolis: A NATURAL ANTIBIOTIC," *Mediherb Newsletter* (December 1988): 2.
- ¹⁶⁸ See the seven studies confirming negative reactions to food in eczema sufferers in Werbach, 187-188.
- ¹⁶⁹ A. Jacobs, "Atopic Dermatitis: Clinical expression and management," *Pediatr. Ann.* 5 (1976): 763-771.
- ¹⁷⁰ See the article by J.P. Minton in *JAMA* (March 23, 1979), and J.P. Minton et al, "Clinical and biochemical studies on methylxanthine-related fibrocystic breast disease," *Surgery* 90 (1981): 299-304.
- ¹⁷¹ See R.S. London in *Nutr. Res.* 2 (1982): 243-247, and G.S. Sundarum et al, "Serum hormones and lipoproteins in benign breast disease," *Cancer Res.* 41 (1981): 3814-3816.
- ¹⁷² Werbach, 196.
- ¹⁷³ D.M. Lithgow, W.M. Politzer, "Vitamin A in the treatment of menorrhagia," *S. Afr. Med. J.* 51 (1977): 191-193.
- ¹⁷⁴ J.D. Cohen, H.W. Rubin, "Functional menorrhagia: Treatment with bioflavonoids and vitamin C," *Curr. Ther. Res.* 2 (1960): 539.
- ¹⁷⁵ L.F. Raymond, "Allergy and chronic simple glaucoma," *Ann. Allergy* 22 (1964): 146-150.
- ¹⁷⁶ E. Linner, "The pressure lowering effect of ascorbic acid in ocular hypertension," *Acta. Ophthalmol.(Copen.)* 47 (1969): 685-689.
- ¹⁷⁷ F.W. Stocker, "New ways of influencing the intraocular pressure," *NY State J. Med.* 49 (1949): 58-63.
- ¹⁷⁸ R.S. Griffiths et al, "A multicentred study of lysine therapy in herpes simplex infection," *Dermatologica* 156 (1978): 257-267.
- ¹⁷⁹ Referred to medically as "increased peripheral resistance".
- ¹⁸⁰ See the review of the literature by Kerry Bone in "Propolis: A NATURAL ANTIBIOTIC," *Mediherb Newsletter* (December 1988): 1, 2.
- ¹⁸¹ Joseph E. Pizzorno, Jr N.D. & Michael T. Murray, N.D., *A Textbook of Natural Medicine*, First ed., s.v. "*Allium sativum*," V-*AlliumS*-1-3.
- ¹⁸² G.P. Sivam, J.W. Lampe, B. Ulness et al, "*Helicobacter pylori* - in vitro susceptibility to garlic (*Allium sativum*) extract," *Nutr. Cancer* 27 (1997): 118-121.

- ¹⁸³ Joseph E. Pizzorno, Jr N.D. & Michael T. Murray, N.D., *A Textbook of Natural Medicine*, First ed., s.v. "Allium cepa," V-AlliumC-1, 2.
- ¹⁸⁴ Kerry Bone, reporting on clinical trials in "The Herbal Treatment of Viral Infections- Part 2," *Mediherb Professional Newsletter* (June 1991): 1, 2.
- ¹⁸⁵ Kerry Bone, reporting on clinical trials in "The Herbal Treatment of Viral Infections- Part 2," 2.
- ¹⁸⁶ Terry Willard Ph.D., *A Textbook of Natural Medicine*, s.v. "Tabebuia Avellanadae," V:Tabeb pages 1 to 7.
- ¹⁸⁷ David Hoffmann, *The Holistic Herbal* (The Park, Forres, Scotland: The Findhorn Press, 1983), 128-129.
- ¹⁸⁸ Joseph E. Pizzorno, Jr N.D. & Michael T. Murray, N.D., *A Textbook of Natural Medicine*, First ed., s.v. "Echinacea," V-Echin-1, 2.
- ¹⁸⁹ This process is called phagocytosis.
- ¹⁹⁰ Joseph E. Pizzorno, Jr N.D. & Michael T. Murray, N.D., *A Textbook of Natural Medicine*, First Ed., s.v. "Hydrastis canadensis, Berberis vulgaris, Berberis aquifolium, and other berberine containing plants," V-Hydras-1-4.
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- ¹⁹² See M. Walker, "Harvesting olive leaf antimicrobials and the infectious diseases they act against," *Townsend Letter* 204 (2000): 92-96, and Danz & Milner N.D., 4-5.
- ¹⁹³ Metastasis is the process whereby cancer cells relocate to another part of the body. The new tumours are labelled "secondary tumours". Also see Danz & Milner N.D., 7-9.
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- ¹⁹⁵ Kerry Bone reviewed a clinical trial in "Valerian Effective for Insomnia," *Mediherb Monitor* 16 (March 1996): 1.
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- ²⁰³ James B. Wyngaarden, M.D. & Lloyd H. Smith, jr., M.D., editors, *Cecil Textbook Of Medicine - 17th Edition* (Philadelphia: W. B. Saunders Company, 1985), 2143.
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- ²⁰⁶ There have been many studies but see G.H. Allen et al, "Protein induced hypercalciuria: A longer term study," *Am. J. Clin. Nutr.* 32 (1979): 741-749, and A. Licata et al, "Acute effects of dietary protein on calcium metabolism in patients with osteoporosis," *J. Gerontol.* 36 (1981): 14-19.

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- ²¹² See Danz & Milner N.D., 81-82.
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- ²²⁰ Reported by P. Vacher, N. Prevarskaya, R. Skryma et al, in *J. Biomed. Science* 2(4) (1995): 357-365.
- ²²¹ For example in the study by J. C. Carraro, J. P. Raynaud, G. Koch et al, reported in *Prostate* 29(4) (1996): 231-240, which compared the results of Saw Palmetto use with a leading medical drug treatment, namely "Proscar" (finasteride).
- ²²² Painful urination, frequency of night-time urination, daytime frequency of urination and sense of urgency all improved dramatically in the trial conducted by P. Bassi et al and reported in *Minerva Urole Nefrol* 39 (1987): 45.
- ²²³ Reported by R. M. Scarpa et al in *L'estratto di Pygeum africanum nell'ipertrofia prostatica benigna* Stampa Medica, Roma (1989).
- ²²⁴ A. Ishani, R. MacDonald, T.H.Wilt et al, "Pygeum africanum for the treatment of patients with benign prostatic hyperplasia: a systematic review and quantitative meta-analysis," *Am. J. Med.* 109 (2000): 654-664.
- ²²⁵ Joseph E. Pizzorno, Jr N.D. & Michael T. Murray, N.D., *A Textbook of Natural Medicine*, First Ed., s.v. "Psoriasis," VI-Psori-1-2.
- ²²⁶ Endotoxins are the breakdown products of unfriendly bacteria in the bowel (specifically cell wall components of gram negative bacteria). Such bacteria are found in the bowel when the digestive system and the liver are out of balance due to faulty nutrition. These and other breakdown products can enter the blood stream through the bowel wall and wreak havoc in many ways. Psoriasis is just one manifestation of the trouble they cause.
- ²²⁷ Pizzorno N.D., Murray, N.D., s.v. "Psoriasis," VI-Psori-3.
- ²²⁸ Kerry Bone, "Fruit & Vegetables May Protect Against Stroke," *Mediherb Monitor* 14 (Sept 1995): 4. Kerry reported on a study conducted by M.W. Gillman et al and published in *JAMA* 273, 1113-1117, 1995.
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²³⁰ See the review of the research in Joseph E. Pizzorno, Jr N.D. & Michael T. Murray, N.D., *A Textbook of Natural Medicine*, First Ed., s.v. “Allium Sativum,” V-Allium-2.

²³¹ *J. Am. Coll. Nutr.* 20 (2001): 71-80.

²³² Milk is an example of a liquid *food*. It is *not* a thirst quenching drink.

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