

This book provides advice and informative guidance on maintaining optimum health and well-being by tackling the constraints of modern living and offering holistic solutions for all. Important advice is given on the criteria for choosing and buying herbal products and it describes Integrative Medicine and its role within modern healthcare. Also lists the A-Z of common ailments and effective herbal treatments with a comprehensive review of the health essentials including diet, sleep, mood and energy.

**Modern Living, Holistic Health & Herbal Medicine - improving health & well-being with herbs and lifestyle changes**

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# MODERN LIVING, HOLISTIC HEALTH & HERBAL MEDICINE

Improving  
health & well-being with herbs  
and lifestyle changes

Yaso Shan

With contributions from Dr. Catherine Whitlock and a  
Foreword by Jenny Seagrove

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## INTRODUCTION

An increasing number of people are becoming aware of health issues that affect them. As individuals take responsibility for their own health and being more proactive in ensuring their optimum well-being, there is a growing demand for products and services to reflect this trend. An example of this can be seen by the numerous health campaigns instigated by national and local organisations in addition to independent health agencies and charities. The proliferation of private health and fitness clubs is another example of the general level of interest shown and the responsibility taken by the public regarding their health and well being.

Equally of course, there have been recent controversies such as those surrounding the long-term health risks of GM foods, the concerns raised over the use of anabolic-type hormones, antibiotics and other potent chemicals in food preparation techniques. This is particularly the case for meat, poultry and fish, which may, to some extent account for the substantial market growth for organic produce. However, the cost implications of purchasing organic foods exclusively remain a huge consideration for the average household. The popular consensus is that given the choice, most people would prefer to purchase organic produce and primarily for health reasons than for any other. Similarly, other medical issues that have been highlighted in the media in recent times such as the concerns over the MMR vaccine, the health risks of certain vitamin and mineral supplements, the associated health risks of HRT, have all inadvertently favoured natural alternatives to preventing and treating illness in addition to the strategies adopted for optimising health and well-being.

Paradoxically, the growth in the health supplements market appears to contradict any concerns that the public may possibly have over supposed health risks with certain specified vitamin and mineral supplementation. Campaigners for consumer choice argue that the public retain the right to make well-informed decision regarding their health as well as the right to choose whatever is safe and effective. Additionally, responsible and objective reporting of controversial health issues is equally warranted so as not to unnecessarily alarm the public, through hidden agendas of large corporations, pharmaceutical companies and government policies. Fortunately, in a society where impartial and substantial information on health matters is readily available, especially now with internet service provision in most homes across the country, an increasing level of accountability and an increased access to information, individuals can realistically make well-informed choices regarding what is best for their own health and well being.

The health patterns in our society have also changed over the years and people are living longer. Current disease prevalence patterns reveal a recurrence of illnesses previously eradicated such as TB all show worrying signs of increase (especially in the UK). Equally worrying is the frequency of new strains of infectious organisms or 'superbugs' that are quite resistant to routine conventional treatment. It is perhaps one area where natural remedies such as herbal medicine may highlight their therapeutic potential in optimising health through increasing immune function in a climate where

over-prescription of antibiotics has rendered the body rather incapable of resisting infection naturally. It becomes more pronounced in a hospital healthcare setting where the spread of such virulent superbugs that have become resistant to some of the more standard broad-spectrum antibiotics commonly prescribed for hospital acquired infections (eg. MRSA; (methicillin-resistant *Staphylococcus aureus*), *Clostridium difficile* (or *C.difficile* for short). Outbreaks of other infections such as *E.Coli* have also been a problem. Hospital-acquired illnesses are an acute problem and a serious cause for concern within primary health care. The problem may well be reflective of our reduced immune function and hence an increased susceptibility to disease; we no longer place our systems under important, necessary, and regular immunological challenges particular when our immediate domestic environment and lifestyles are too ‘sterile’. This is the view argued by some of the leading medical immunologists and appears to be acknowledged and highly respected amongst other medical specialists too.

Technological advances in the 21st Century, particularly in the biomedical sciences, such as a stem cell therapy, gene cloning and gene therapy, have revolutionised medicine. Moreover, the applications of such techniques have transformed the quality of life of patients in respect of treating certain illnesses and diseases for which there was previously no effective treatment, alternatives or cure. Highly controversial in some instances (eg. hybrid embryo research) such techniques however, have profoundly altered the lives of many individuals for the better. The research potential in these new areas of medical science will continue to persist as long as illness and disease exists.

Notwithstanding the benefits of new medical technologies and as much as one may marvel at the pace of advancement in medical research and application, it is often the case that such developments and innovations directly conflict with public opinion and demand. Concerns over these issues seem to impact on the fundamental concept of what is considered healthy. As more and more people question conventional medical practices, particularly the indiscriminate prescription of drugs, public dissatisfaction in this practice has been paralleled by growing popularity in Complementary and Alternative Therapies. Many people are increasingly disenchanted with modern drug therapy and are becoming more open to traditional methods of treatment that is in keeping with nature, both in its design, effectiveness and principles. Many have also realised that science and conventional medicine does not have all the answers to all of the modern health problems and want to address the acute absence of spiritual health and well-being that exists in our societies which is directly linked to many of these health problems, particularly within mental health.

Moreover, some people are frustrated and disillusioned at the general level of medical service preferring to pay for the privilege of a lengthy discussion into their specific health problem with a diagnosis and treatment that is carried out within a holistic context. In spite of these differences however, medical science does have much to offer and in some cases, continues to provide the best and most effective treatment choice for the patient. Its role and purpose in these instances must be

given due credit and respect.

Despite best intentions, there are many of us who are constrained by the modern lifestyle culture and it becomes extremely impractical, almost impossible to follow a relatively healthy lifestyle. The pressures of juggling work and family, particularly for working parents, means that the long term effects are undoubtedly going to have its toll on health and well-being. Reassuringly, the 24-hour culture similar to that of the US appears to be fast-growing in Britain and employers are more open to suggestions of flexible working patterns. The leisure industries including public and private gyms, health clubs and fitness centres now have extended opening hours enabling many to achieve a practical and realistic approach to adopting healthier lifestyles. Opportunities to address individual and specific health needs have never been better in terms of choice, flexibility, cost and convenience.

Diseases of the 21st Century such as heart disease, stroke, late onset diabetes (type 2 diabetes), clinical obesity and certain cancers look set to rise. Worryingly, some of these diseases, which are more commonly associated with age and decline show alarming signs of increase among the younger population. In a culture that perpetuates 'quick fixes' it is often tempting to address common health problems within our society with radical regimes. A classic case in point would be the previously popular Atkins Diet, which has divided medical opinion and has concerned many nutritionists, and alternative medical practitioners such as herbalists.

It is perhaps important to note that the Atkins Diet, when viewed in its entirety was intended to address the serious issue of Syndrome X, a clinical presentation which is characterised by chronic obesity, raised glucose levels (a form of type 2 diabetes) and other associated symptoms with potential health risks. It also proved to be effective at addressing the widespread problem of chronic obesity in America as a consequence of Western dietary practices and poor nutritional habits through excessive consumption of convenience foods. In the short term, it aimed to limit the potential life-threatening complications that result from excessive weight. Despite the risks of this diet, such as kidney failure and the possibility of cancer, it does provide a short-term, yet effective remedy to the altered metabolism that has resulted due to a prolonged exposure to poor dietary habits. However, only one aspect of the Atkins Diet was ever adopted and marketed on a wide scale therefore its full potential and its long-term benefits never materialised.

In raising important fundamentals on good nutritional practices and in encouraging better eating habits, particularly in the young, this book aims to better educate the public on such matters. In placing emphasis on making better choices regarding basic nutrition, perhaps the demand for such potentially risky 'quick fixes', though effective when administered and practiced correctly, would not be embraced with such fervour as it has been of late. Nor would it be that widespread especially amongst those who would benefit more from 'sensible' eating, balanced with moderate aerobic exercise. In advocating healthier lifestyle choices, particularly at a younger age, it is hoped that such diseases of the 21st Century that present with alarming statistics of fatalities and medical concerns

could be addressed much earlier within our society. This would certainly halt some of the more fad diets that appears to capture public attention *en masse* but tends to resemble very much the approach of 'closing the stable door once the horse has bolted'.

This book caters for the person who has concerns about their general state of health, fitness and well-being. It caters for those who share concerns with other like-minded individuals about the indiscriminate use of prescription drugs for a number of common ailments that can be treated and most certainly prevented through natural and alternative methods including diet and lifestyle changes. It caters for those who want to improve their overall health and nutritional status. It is also for those who want to follow a more natural regime in respect of diet and lifestyle, in order that they can cope better with the numerous demands of modern living. Essentially, the book proposes to inform on the fundamentals of Western herbal medicine; its principles and practices within a holistic context giving due regard to the pressures and health consequences of modern living. It aims to introduce some basic concepts of treating with herbal remedies using the examples of a few of the more popular herbs. It aims to make suggestions for addressing some key aspects to good health and optimising well-being, such as improving digestion and liver function, boosting immunity and resistance to infection, regulating sleep, improving mood and increasing energy levels. There are suggestions of how herbal remedies can be incorporated into daily routines and practices in addition to some essentials on good nutrition, one of the foundations of maintaining optimum health.

In short, this book is aimed at those, like myself who share mutual concerns about the increasingly unnatural way in which we live, in addition to the long-term health risks of many conventional drugs that are routinely prescribed for a number of common ailments. It also aims to inform the public on the many simple measures that can be taken in order to counterbalance the enormous stresses that we are faced with on a daily basis owing to the pressures of work, family and home. It aims to provide a better understanding of health and ill-health through education on the basic and essential workings of the human body.

The complex undertaking of addressing all aspects of health and illness is beyond the scope of this book and it does not propose to replace some fundamental aspects of conventional medicine, which in context has an important remit and serves a crucial role in patient care, treatment and management. However, the book does discuss the many benefits of healthy living, practical measures for adopting healthier lifestyles and the many pressures of modern living that give rise to the multitude of symptoms so commonly seen and which can be easily prevented. It does offer a herbal alternative to most common problems and how to improve nutrition and make simple lifestyle changes in order to prevent and improve general health & well-being and ultimately improve quality of life.

Herbal Medicine is however, an Alternative form of medicine and hence should not be regarded in conjunction with conventional medicines as a complement to drug therapy. However, in some

instances and under proper medical supervision, herbal medicine can serve as adjunct therapy to some chronic conditions, such as arthritis, hypertension or diabetes. I believe that there is a role for every kind of practitioner, be it conventional or alternative. In the current policy of improving services within the NHS there has come a time for seriously considering the role of the Medical Herbalist within the primary healthcare setting, particularly when through appropriate management and education, preventing illness and disease is one of the areas when the absolute effectiveness of Herbal Medicine can be viewed at its best. This can ultimately realise significant cost savings for the NHS through improving health & well-being, preventing illness and treating common problems with effective herbal medicines rather than prescribing strong and expensive drug treatments, or worse still, surgery.

It is my opinion that the discerning public are poorly informed about the therapeutic effectiveness, impact, usefulness and application of herbal remedies in the context of illness, both in its prevention and in treatment. This is one of the primary reasons for writing this book.

In placing the role of herbal medicine in relation to human form and function, I hope to enable individuals to better understand the basic workings of the body in respect of resistance to infection and improving major functions that are critical to preventing illness. It is envisaged that this, in time, will make clear how herbal medicine can enhance the natural healing process that exists as inherent mechanisms within our systems. In reviewing the biological fundamentals that govern health, well-being, illness and disease, and in advocating natural approaches to optimising health, the importance of herbal medicines can be easily identified.

Finally, it is intended that an exploration of the health trends and behavioural patterns in our society that directly impact on health and well-being can make clear the role of the medical herbalist in identifying many of the underlying causes of common physical problems. This is particularly the case when diagnosis is conducted within a holistic framework; very much in public favour when frequently, symptoms are mere manifestations of stress-related issues pertaining to the pressures of modern lifestyle and practices. All such factors will be closely examined in this book.



# CHAPTER 1 –HEALTH & ILL-HEALTH

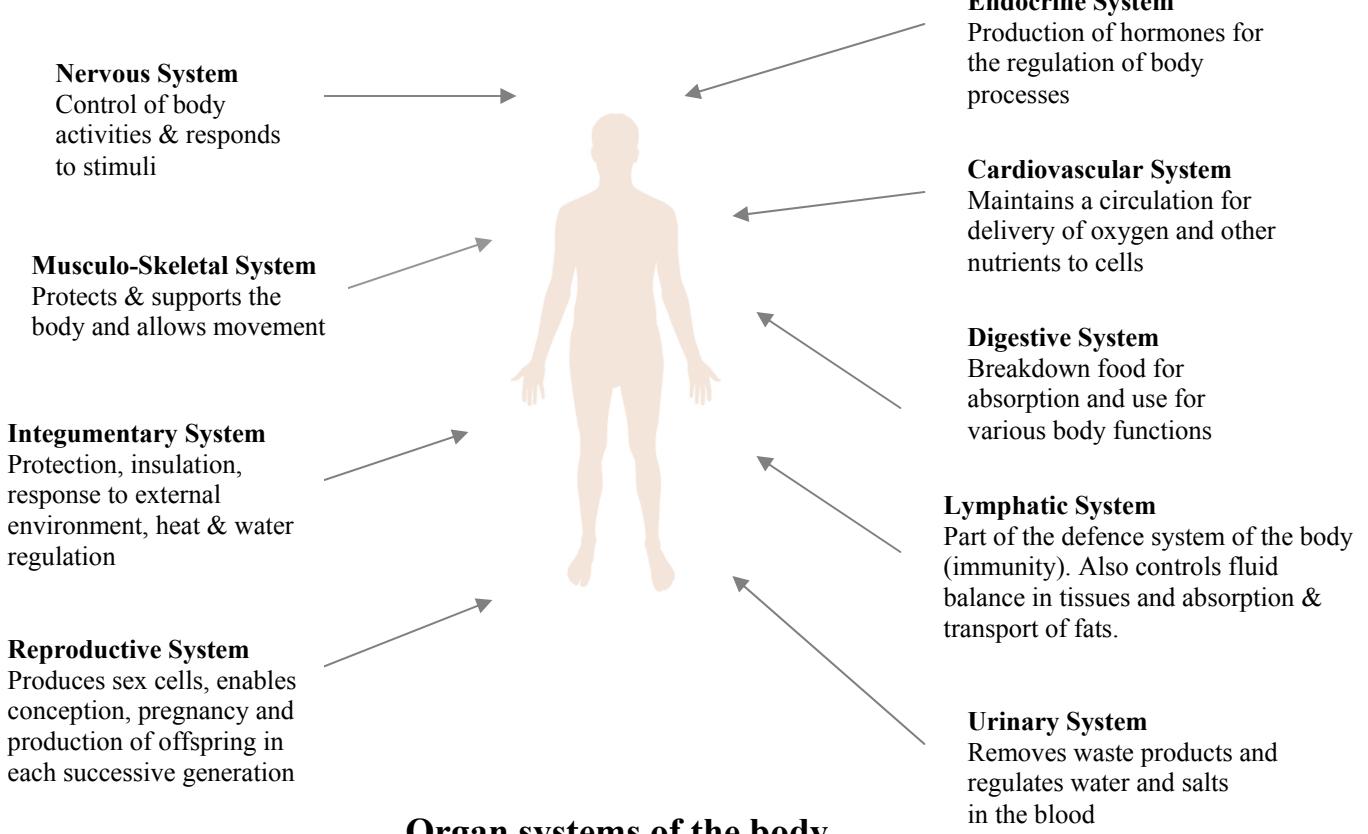
- (i) The Co-ordinated Body (*by Dr. Catherine Whitlock*)
- (ii) Understanding Illness (*by Dr. Catherine Whitlock*)
- (iii) Resistance to disease (*by Dr. Catherine Whitlock*)
- (iv) Modern lifestyle and disease/Symptoms of modern living (importance of sleep, mental health & wellbeing, mind-body link or PNI)

## (i) The Co-ordinated Body

The human body is one of the most remarkable natural machines witnessed in the animal kingdom. Some of its inner workings are still a mystery, but scientists and clinicians are continually revealing information that helps us understand how diseases arise. In its simplest terms, the body operates on a structural (anatomical) level and on a functional (physiological level). Thus, the body becomes increasingly complex.

Chemicals → Cells → Tissues → Organs → Systems → Functioning Organism

One of the most important features of the human body is its ability to coordinate the multitude of systems contained within it. Cooperation between these is vital to a healthy body.



Although these can be classified into different systems there is some overlap. For example, the ovaries form part of the endocrine and female reproductive systems. Each system interacts with others to ensure a healthy body. So, the endocrine glands release hormones directly into the cardiovascular system or bloodstream where they are transported directly to organs and tissues throughout the body. These hormones regulate metabolism, growth and sexual development. The endocrine and nervous systems work in tandem with each other to maintain effective communication of many of the body's processes, although they work at quite different speeds. Nerve signals (referred to as impulses) travel from the control centre, the brain, along the nerves of the nervous system at up to 250 miles per hour, while the endocrine system may take hours to respond with hormone production and the immune system days or even weeks to mount an appropriate response to an infection.

The lymphatic and cardiovascular systems are another example of closely related systems, joined by capillaries. 'Lymph' is a milky body fluid that contains both the cells of the immune system and proteins and fats. Lymph seeps outside the blood vessels into the spaces of body tissues and is stored in the lymphatic system to flow back into the bloodstream. The lymphatic system is important, not only to the immune system, because it drains excess fluids and protein so that tissues do not swell up.

Synergy is the key to optimum functioning of all these systems and the maintenance of health and well-being requires a careful balance or homeostasis. The holistic approach to diagnosis and treatment aims to examine the root cause of ill health by examining the levels of function and the context in which the person has fallen ill.

## **(ii) Understanding illness**

Illness can be due to a number of factors and causative agents. For most people, the cause of illness is usually due to an infective agent. However, for this agent to cause illness requires a number of factors:

1. how powerful (or virulent) the infectious agent is (eg, bacteria, virus, fungus etc..)
2. the body's natural resistance to infection (natural immunity)
3. complication or secondary infections (following the primary infection or illness) which may be more serious or debilitating than the initial illness
4. the body's ability to fight the infection (immune defences)
5. the environment for recovery and aftercare

When one or more systems are thrown off balance, illness or disease can occur. A number of factors can cause disease, but the end result is a state in which the body's functions are disturbed.

Classifying individual diseases can be difficult but the following influences need to be considered when we consider why and how a disease develops and whether we can control this:

- Our **genetic** inheritance plays a big part in our susceptibility to whether we are likely to develop a disease or indeed how our bodies respond once a disease occurs. Some have a strong genetic component where a disease is caused directly by inheriting a gene from one or both parents e.g. sickle cell anaemia, cystic fibrosis, muscular dystrophy or haemophilia. Many diseases do not have such an obvious genetic linkage, but their dominance in some families, compared to others, suggests there is a strong genetic component. e.g. high blood pressure, certain cancers, asthma, multiple sclerosis, schizophrenia and Alzheimer's disease.

Similarly, some conditions have a sex linkage so that only one sex gets the disease. For example with haemophilia, females acts as carriers for the gene and males inherit the condition. In the cases of diseases like rheumatoid arthritis, females are more likely to develop it.

- **Congenital** disorders arise after chromosomal abnormality (in the genetic make up), abnormal development in the womb, or by an inherited genetic abnormality, but always results in a child being born with the condition. Examples of these are Down's syndrome, spina bifida and cystic fibrosis respectively.
- **Degenerative** disorders occur as our bodies age and there is a progressive deterioration of a tissue or organ. Osteoarthritis, osteoporosis, Alzheimer's and Parkinson's disease are all directly related to this ageing process.
- **Environmental** triggers are instrumental in the development of many diseases. Industrial pollutants can be associated with disease development, asbestos exposure and the chronic lung disease asbestosis being a good example. But, there are more everyday examples where environmental pollution e.g. the widespread use of agricultural pesticides has been related to the increase in asthma and bronchitis. Similarly, lung cancer is predominantly associated with smoking. In considering the environment, our diets play a significant role in the development of a number of diseases. These range from deficiencies in our diets that can be responsible for conditions such as anaemia and a weakened immune response through to the numerous problems associated with high fat, highly processed western diets and obesity – heart disease, type 2 diabetes and cancer.
- **Metabolic** disorders are often related to diet, in particular in the strong link between obesity and the development of type 2 diabetes. The use of the term 'metabolic' describes any condition that is caused by an abnormality in the conversion or metabolism of one set of substances in the body to an end product. It can be congenital due to an inherited enzyme abnormality or acquired due to disease of an endocrine organ, such as the pancreas in type 2 diabetes. Phenylketonuria (PKU) is an inherited metabolic disorder which prevents the normal breakdown of protein foods. Unless treated by dietary restrictions, this results in a fatal build up of an amino acid (the building block of proteins) in the brain and babies are now routinely tested at birth for this disorder.

- **Infectious** diseases are caused by entry of a pathogen (infectious agent) or foreign organism/invader into the body. There are four main groups of infectious agents: viruses, bacteria, parasites and fungi. Examples of common or well known infectious diseases are given in the table below.

### Characteristics of some common, or well known, infectious diseases

Pathogen		Disease	Route of infection	Symptoms
Type	Name			
Bacteria.	<i>Salmonella typhi</i>	Food poisoning	Food and water	Vomiting/Diarrhoea
	<i>Chlamydia trachomatis</i>	Chlamydia infection	Sexually transmitted	Often symptomless, but may result in mild irritation and pain and discharge in both sexes. Can cause pelvic inflammatory disease and result in blocked fallopian tubes and hence infertility.
	<i>Staphlococcus aureus</i>	Impetigo	Skin contact	Red itchy patches turning to crusty yellow skin lesions
Virus	<i>Influenza virus type A, B or C.</i>	Flu	Airborne water droplets	Fever, muscle pain, fatigue, headache and other cold-like symptoms.
	<i>Herpes simplex I or Herpes simplex II</i>	Mouth or genital cold sores.	Mouth or genital contact	Tingling painful sores or lesions occur after the primary infection and also every time the virus, which lies dormant in the skin, is triggered to replicate.

**IMPROVING HEALTH & WELL-BEING WITH HERBS AND LIFESTYLE CHANGES**

	<i>Varicella zoster</i>	Chicken pox. Shingles	Contact with infected person. Initial infection results in chicken pox. Life long immunity to chicken pox recurrence, but virus persists in nerve endings and can reactivate as shingles.	Chicken pox - Itchy red spots that crust over as the disease progresses.  Shingles – painful rash often localised on the trunk.
Fungus	<i>Tinea pedis</i>	Athelete's foot	Picked up in warm damp areas, such as swimming pool changing rooms.	Itchy, white, flaky rash in moist areas eg. between the toes
	<i>Candida albicans</i>	Thrush	Direct contact esp. during sexual contact (genital thrush) or breastfeeding (oral thrush in infants)	Genital thrush, particularly vaginal thrush in women involves itching, and a white discharge.  Oral thrush presents as white patches in the mouth
Parasite	Threadworm <i>Enterobius vermicularis</i>	Gut infection	Oral route as worm eggs under the finger nails are transferred into the gut to complete the life cycle	Itchy anus often at night as adult emerges to lay eggs
	<i>Plasmodium</i> - 4 types	Malaria	Complex life cycle with mosquito and human as the 2 hosts. Parasite passes between the	Several forms of disease, but recurrent fevers and flu-like symptoms common.

			hosts, as the saliva of a biting mosquito is transferred into the human bloodstream.	<i>Plasmodium falciparum</i> form of the disease infects the brain and can be fatal.
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It is obvious that in considering why and how diseases develop there are many components. Cancer is often multifactorial in origin, that is, a number of different factors may cause or contribute to the disease. Many cancers have a strong genetic component, with predisposition to breast cancer and bowel cancer for example running in families. Others are linked to environmental exposure to mutagens such as a lung cancer and smoking, and diet and bowel cancer. Heart disease is another example where diet, genetic inheritance and smoking for example are all risk factors.

In many diseases, particularly those caused by infections, the immune system plays a part in controlling the outcome and an understanding of how this works is vital to our treatment of those conditions.

### (iii) Resistance to disease

The function of the immune system is to protect the body from damage caused by invading organisms – bacteria, viruses, fungi and parasites. This defensive function is performed by white blood cells and a number of accessory cells, which are distributed throughout the body, but are found particularly in lymphoid organs, including the bone marrow, thymus, spleen and lymph nodes. Large accumulations of these cells are also found at sites where pathogens enter the body, such as the mucosa of the gut or lung. Cells migrate between these tissues via the blood stream and lymphatic system. As they do so they interact with each other to generate coordinated immune responses aimed at eliminating pathogens or minimising the damage they cause.

The principle at the heart of the immune system is its ability to distinguish self from non-self. This is an ancient property of organisms and some sort of primitive immune response can be traced back in evolution to the earliest simple organisms like sponges. These contain immune cells that engulf and kill bacteria.

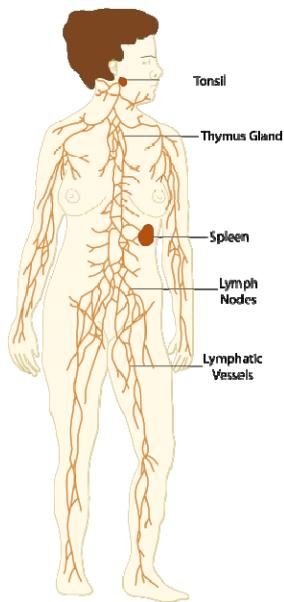
Each of us is born with a natural or innate immunity, the earliest evolutionary form of immunity. The cells and molecules that make up this initial response to a pathogen are neither specific to that organism nor improved by repeated encounters with the same agent. This is in contrast to adaptive or acquired immunity, which is specific for that particular pathogen and to the individual who generated it and is marked by an enhanced response on re-exposure. We are born with natural immunity, but adaptive immunity occurs over time as we are exposed to pathogens. A newborn baby gets a helping hand in this process if a mother breastfeeds.

So, the important features of the adaptive immune response are memory and specificity. In practise there is considerable overlap between the two arms of the immune response, but the principal of vaccination relies heavily on the adaptive immune response. Vaccinations contain a form of the pathogen that will not cause the disease, but does stimulate the immune cells; they are primed to react more quickly and to a greater degree when they encounter that pathogen in the future, thus fending off the illness.

The immune system consists of a multitude of molecules and cells that operate in a network, with many feedback and control mechanisms in place. This coordinated system is akin to solid organs like the kidney or a liver, but immune cells are unique in their ability to traffic or travel around the body. This is central to their patrolling, vigilant nature and has important implications for the development of subsequent, rapid and efficient immune responses. If a white blood cell encounters the flu virus in the lungs, for example, it will develop certain properties, a form of molecular memory that will allow that cell to immediately home back to the lung if it encounters that infection again.

The respiratory tract is one of the most common ways infections can enter the body. Airborne infections such as the cold and influenza virus are transmitted in water droplets contained in a person's sneeze or on infected hands. But there are other systems that infectious organisms can gain entry into, such as the digestive system and the reproductive systems, where for example Salmonella food poisoning and sexually transmitted diseases such as HIV AIDS can strike respectively. One of the many functions of the skin, and the mucous membranes such as those in the mouth, is to act as a barrier against infection. Bites, scratches, or puncture wounds that break the skin can increase the risk of infection, or be a direct route of entry such as the malaria parasite in the saliva of a biting mosquito.

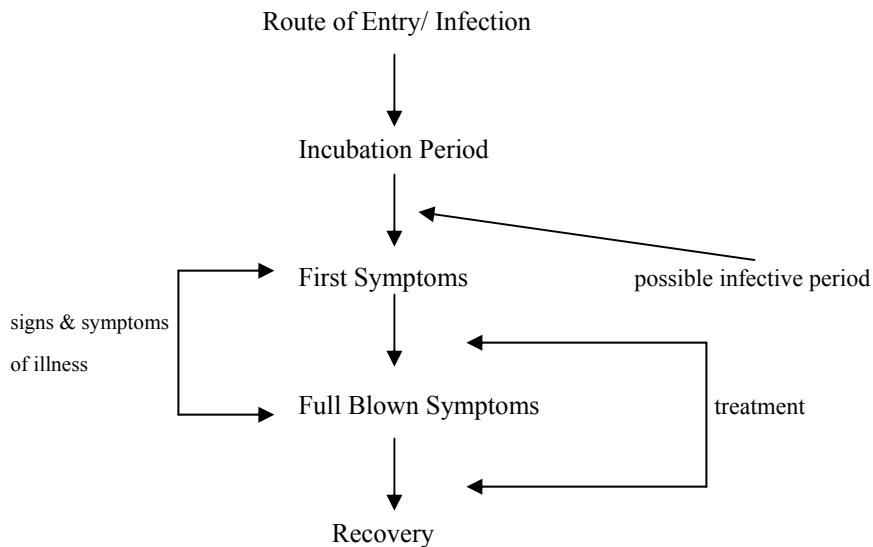
As pathogens/infectious organisms can gain entry into the body in so many places, the body has to be prepared and the lymphatic system and its associated lymphoid tissue are vital to the functioning of a healthy immune system. The lymphoid organs are comprised of the bone marrow and thymus where the immune cells first develop and then the spleen and lymph nodes, where these cells are programmed to deal with an infection. The lymph nodes are dotted all over the body (see diagram below) as more than 100 tiny oval structures, packed full of white blood cells.



## The lymphatic system

These cells are numerous in their type and function, but three types are worthy of mention here: dendritic cells, T and B lymphocytes. The immune system responds to invading pathogens in a number of ways to try and rid the body of the infection. But we can use an example to illustrate the types of processes that take place. If a cut in the skin gets infected with bacteria, the dendritic cell found just below the skin's surface will engulf that bacteria, travel to the lymph node that drains that site and there it will present the bacteria in a form that can be recognised by T lymphocytes. These then 'help' B lymphocytes to make antibody to deal with the infections. If the initial infection is with a virus, T cells that kill the virally infected cell will be activated by the dendritic cell, and so on. The immune system has a whole armoury of mechanisms at its disposal.

The immune system takes time to mount the immune response and in that incubation period (which varies from hours to weeks depending on the pathogen), there may not be any symptoms but a patient may be highly infective. This is particularly true in the case of viruses as they replicate in the cells of the body, often shedding large quantities of virus e.g. the cold virus emerges in water droplets every time someone sneezes. How effective the treatments are, conventional or alternative, will partly depend on what stage the infection is caught. There's no doubt that most treatments are at their most effective just before or just after the person is infected, where levels of the pathogen are low in the body.



**Simple schematic diagram showing the infection process and the pattern of disease**

This is where herbal medicine may have a part to play in boosting the natural immune defences. Equally there are a number of important immune boosters contained in herbal preparations that combat infections directly, through their anti-microbial or anti-viral activity, helping to destroy and aid the removal of pathogens.

In dealing with infectious diseases, the immune system is behaving as our friend. But there are circumstances where the immune system works against us and as such it becomes our foe. This is what occurs when autoimmune diseases such as rheumatoid arthritis, systemic lupus erythematosus (SLE), multiple sclerosis (MS) and the autoimmune form of diabetes (type 1 diabetes) develop. There may be a genetic component and/or an infection that triggers their development, but what lies at the heart of the autoimmune disease process is the body attacking itself. The body produces antibodies or immune cells that react against the body's own components. There is a fundamental breakdown in that key feature of the immune system, to distinguish self from non-self.

Allergies can also be seen as a way in which the immune system acts against us. An allergic response occurs when the immune system reacts to a substance that is basically harmless or does not cause an immune response in everybody. Common allergens are often air borne such as pollen. In susceptible individuals, on encounter with these allergens, the immune system goes into overdrive producing antibodies and soluble molecules such as histamines. It is these histamines that are responsible for the sneezing, itchy eyes and sore throat that characterises many a summer for hay fever sufferers. Other allergens are contained within food products e.g. nuts, and in the most severely infected individuals, anaphylaxis can take place. This reaction is at the extreme end of the allergic spectrum and adrenaline injections are needed to control the symptoms of difficulty in breathing or swallowing and the drop in blood pressure that can often take place.

The prevalence of allergies is rising in the Western world. A number of scientists believe that the so-called hygiene hypothesis may explain this. As we have seen, the immune system exercises itself eliminating harmful pathogens but our increasingly clean lives means that we are not stimulating the immune system appropriately. The hygiene hypothesis proposes that exposure to allergen early in life reduces the risk of developing allergies by boosting immune system activity. A study that backs this up is that of children on German farms who regularly encountered a range of potential pathogens in the farmyard and who were found to have a significantly lower incidence of allergies such as hay fever.

Balance in the types of immune cells activated is crucial to understanding these ideas. When we encounter infectious diseases and when autoimmune diseases occur, a type of helper T lymphocyte is activated called the Th1 cell. Conversely, allergies are associated with a Th2 response. When the hygiene hypothesis was first proposed in the 1980s, it did not explain the rise in incidence of autoimmune diseases. The alternative explanation is that the developing immune system must receive stimuli (from infections) in order to prime a third type of T cell, described recently as the regulatory T cell. If this cell is not adequately stimulated, the body will be more susceptible to both autoimmune diseases and allergies, because neither the Th1 or Th2 responses are sufficiently repressed by this regulatory T cell.

There are of course some obvious exceptions to this theory in the form of the problems in hospitals of bacteria that are resistant to antibiotics, such as methicillin resistant *Staphylococcus aureus* (MRSA), reminding us that we need to strike a balance. Cleanliness is imperative in a hospital environment, when illness is prevalent and the immune system of patients may be suppressed and vulnerable to attack.

Balancing the stimulation of the immune response is very important. In the developing world, allergies and autoimmune diseases are rarer than in developed countries. The immune system is too busy fighting off dangerous pathogens, those organisms that cause malaria, AIDS, tuberculosis, schistosomiasis and leishmaniasis. The trade off here is that many of these diseases can and often are fatal.

Scientists are increasingly realising that the immune system, like every system in the body, does not act in isolation. Examples abound of clear links between mind and body at a molecular level. Immune molecules called cytokines can initiate brain actions. There are direct contacts between nerve fibres and lymphoid organs. And scientists have shown that a chemical signal which normally allows nerve cells to communicate with each other (to alter sleep cycles) can also redirect actions of the immune system. Similarly, the endocrine system works closely with the immune system so that chemicals that disrupt the endocrine system may also decrease resistance to disease. These examples all serve to remind us that focusing on our lifestyle provides an opportunity to influence our immune responses for the better. Our immune responses are strongly influenced by our genetic inheritance, our previous exposure to a pathogen, and how virulent or powerful that particular pathogen is. But, there are other factors that affect their efficiency – diet, stress, sleep (or lack of it), exercise and increasing age. A cold virus will infect a body when it is exposed to it, regardless of all these factors, but how the body deals with it, is related to all of them.

#### (iv) Modern Lifestyle and Disease/ Symptoms of Modern Living

Over the past few years, our lifestyles have become increasingly busy, with many of us juggling home and work within the demands of a family, financial commitments and friends. Priority for health is probably the last thing on most people's minds and the concept of good nutrition and maintaining a work-life balance is often overlooked amidst these pressures and the 'daily grind'.

Quite often I see patients exhibiting the typical pattern of what I describe as 'symptoms of modern living'. These symptoms are often numerous and quite insidious in nature, that is, it takes some time for the person to notice them and when they do, it has manifested after a number of years. Many of us can probably relate to the effects of poor sleep and mood disorders, particularly depression which is currently a big problem in modern, western society. Symptoms such as frequent headaches, skin rashes, anxiety, panic attacks and digestive problems are becoming increasingly common. Many of these will be discussed later in the book.

In addressing the health conditions within a holistic context it is important to examine our diet, our lifestyle, stress, sleep and the notion of a mind-body link. Our mental well-being is inextricably linked to our physical state (and *vice versa*) and modern science has made it possible for us to better understand the influences of factors such as stress on our physical and mental well-being.

The table below lists some common examples of symptoms people frequently suffer from but may not have attributed them to the way they live or describe any aspect of their life being possible causal factors.

Symptom	Possible cause(s) linked to a modern lifestyle	Comment
Headache	Stress, computer glare	Long hours on the computer causes eye strain and combined with work stress is a guarantee for an instant headache
Acne & other skin complaints eg. eczema	Stress, diet, hormonal imbalance	Stress plays havoc on hormone production and balance. This can lead to a variety of skin disorders, particularly acne which has an established hormonal link
Digestive symptoms (various) eg. heartburn,	Stress, diet, lifestyle	The classic picture of stress & anxiety coupled with a poor diet over a period of time leading to a host of digestive

		symptoms (can be acute or chronic)
Mood disorders eg. depression, irritability, aggression	Stress, lifestyle, food	Many causes & predisposing factors. Also consider the 'junk food junkie' which can explore the link between food & behaviour
Anxiety	Stress, depression, debt	Personality type has some bearing on those affected by everyday stressors but in other cases, there are outside factors and stress management and herbal anxiolytics can help a great deal in coping
Insomnia & other sleep disorders	Stress, anxiety, lifestyle	Can lead to irritability, fatigue & depression
Irritable bowel syndrome (IBS)	Diet, lifestyle, stress	Personality type & stress management must be considered as part of the treatment
Premenstrual Syndrome (PMS)	Stress, diet	Hormonal imbalances can be brought on through poor diet and stress
Fatigue	Long working hours, travel stress	A host of causes but simple fatigue or extreme tiredness through overwork and travel can deplete the body's energy reserves. Proper rest & recuperation is essential in repair, regeneration and rejuvenation of vital body functions

It is unsurprising to see that stress appears to be a predominant feature in all of the common symptoms listed above. Almost all of us are affected by stress in our daily lives and most adopt practical measures to cope with the effects of stress. Learning to manage stress and the daily stressors we face is the only way to achieve an adequate sense of well-being, both physically and mentally. The importance of the mind-body link cannot be sufficiently emphasised. Recent advances in the field of psychoneuroimmunology (PNI) has elucidated much in the manner in which the mind and body are linked and the intricate interrelationship between the two. The holistic philosophy would very much subscribe to this notion and many would say this is common

sense. However, to have our suspicions and long-held beliefs confirmed by scientific evidence reinforces opinion and can profoundly influence the manner in which disease and illness is viewed and treated.

The study and understanding of psychoneuroimmunology (PNI) has resulted in innovative ideas and concepts to emerge regarding the biological basis of disease. The mind-body link has been shown to be influential in a number of disorders with physical and psychological manifestations. Crucially, the reduced immune responses following nervous and hormonal activation significantly increase the risk of infection and disease. It has been demonstrated that our normal coping mechanisms and adaptation following exposure to stress is substantially altered or disrupted in disease states. Such disease states have important influences from the higher centres in the brain (the limbic system and the higher cortical centres). Many of the alternative and complementary therapy principles enable a truly integrated approach to diagnosis and treatment which is very much limited in the Western medical model. In this respect, cognitive behavioural therapy (CBT) is of clinical value especially in cases associated with problems of social or personal adjustment rather than of organic disease (ie. mental rather than physical origin). This is also relevant where established patterns of behaviour have overwhelming emotional triggers. The schematic diagram on page 22 illustrates the role of the limbic system, a specific part of the brain which dictates our emotional and physical responses to various stimuli. The diagram also highlights where CBT could help.

Exploration of the human self at all levels of being must give due recognition to the subtle energies or anatomy, in addition to the implicate order of matter that consolidates the mind, body and spirit, as one. PNI attempts to seek scientific reasoning behind energy medicine but it is probably the case that the latter is more complex than can be quantified or proven within accepted scientific criteria. A truly integrated approach to medical conditions (disorders) would consider the multidimensional aspects of a person (or the subtle anatomy) utilising scientific discovery to enhance therapeutic effectiveness within a holistic framework.

### **Stress, Conditioning and Immunity**

Immunologists have suspected an association between stress and immune function for many years but it is only relatively recently (with the advances in scientific research and technology) that the biological basis of a link has been established. However, the nerve and hormonal pathways involved in the behavioural alteration of immune responses are not yet known. There are a number of theories on both conditioning and stress-induced effects which involve a range of important biological compounds such as adrenocortical steroids, opioids and catecholamines, amongst others. Indeed, all of these have been implicated in the mediation of some immunological effects observed under some experimental conditions.

Based on the complexity of the network of connections and regulatory feedback loops between the brain and immune system, these processes appear to involve both nervous and hormonal signals to the immune system. Signals to the immune system that are received by the nervous system provoke further adjustments in the nervous and hormonal systems. Repeated stress exposure can lead to habituation of a physiological response. However, this does not mean that the ability to react to a new stimulus has declined. Despite stress exerting

direct effects on brain anatomy, determining whether such anatomical changes alters the subsequent response to stress needs to be established. Moreover, human studies reveal that a subject's early experiences with stress and degree of coping skills will influence the effect of either acute or chronic stress on immune function. Equally, further studies are needed to determine whether chronic stress is associated with a predisposition to disease that involves the immune system.

Conditioned responses as demonstrated in 1975 by two scientists working in the field of PNI research (Robert Ader & Nicholas Cohen) showed that it is possible to adapt behaviour in a conditioned manner following a particular stress. In respect of gut pathologies and using the 'taste-aversion conditioning model' in animals, they demonstrated that the conditioned response may explain the association of some of the bowel disorders to chronic stress exposure. Immune adaptation may alter normal gut function over time, making the body more susceptible to disease via alterations in immune-mediated responses. The question is in determining the predisposed state rather than the immune association which has previously been established.

### **Personality and Disease Risk**

The concept of personality type and disease risk has been speculated for some time and generates much discussion within psychology, particularly when there is significant crossover with biosocial factors and early childhood events. The psychological focus of personality will not be discussed here but it is fair to say that through observational studies, strong correlations are in fact present between the following: repressed emotions and hopelessness in cancer, hostility and aggression in heart disease, higher prevalence of neurotic and introverted types in ulcerative colitis (UC) and alexithymia (the inability to talk about feelings due to a lack of emotional awareness) in Inflammatory Bowel Disease (IBD). Previous studies have lacked scientific rigour, primarily due to the time constraints involved in conducting research; most studies were carried out over a 10-40 year period. The main stumbling block is very much in repeating such experiments over the same timescale (a true acid test!). At present therefore, one can only surmise and note the obvious observational links that occur between personality type and disease risk. There may be a generic 'disease-prone personality' where imbalances in personality may function like diet predisposing the individual to a host of diseases.

Following appropriate stressors, the higher centres in the brain and associated nerve pathways are undoubtedly activated. The consequential immunomodulatory effects may be implicated in many gut disorders of unknown mechanism. With reference to cancer development and immunity, strong evidence links the influence of catecholamines (such as adrenaline) and glucocorticoids (such as cortisol) on the distribution and functional capacity of a particular type of immune cell called the Natural Killer (NK) cell. Stress in particular, was shown to suppress NK cell activity in all established stress studies. Additionally, stress was also shown to affect other factors that may facilitate tumour development and spread; such unknown characteristics of the host may determine whether factors other than NK cells play a role in initiating the spread of cancer (a long held suspicion is that it does). Similar studies add to a growing body of

evidence that makes a unique contribution towards understanding the effects of stress on NK cell activity and its role in cancer.

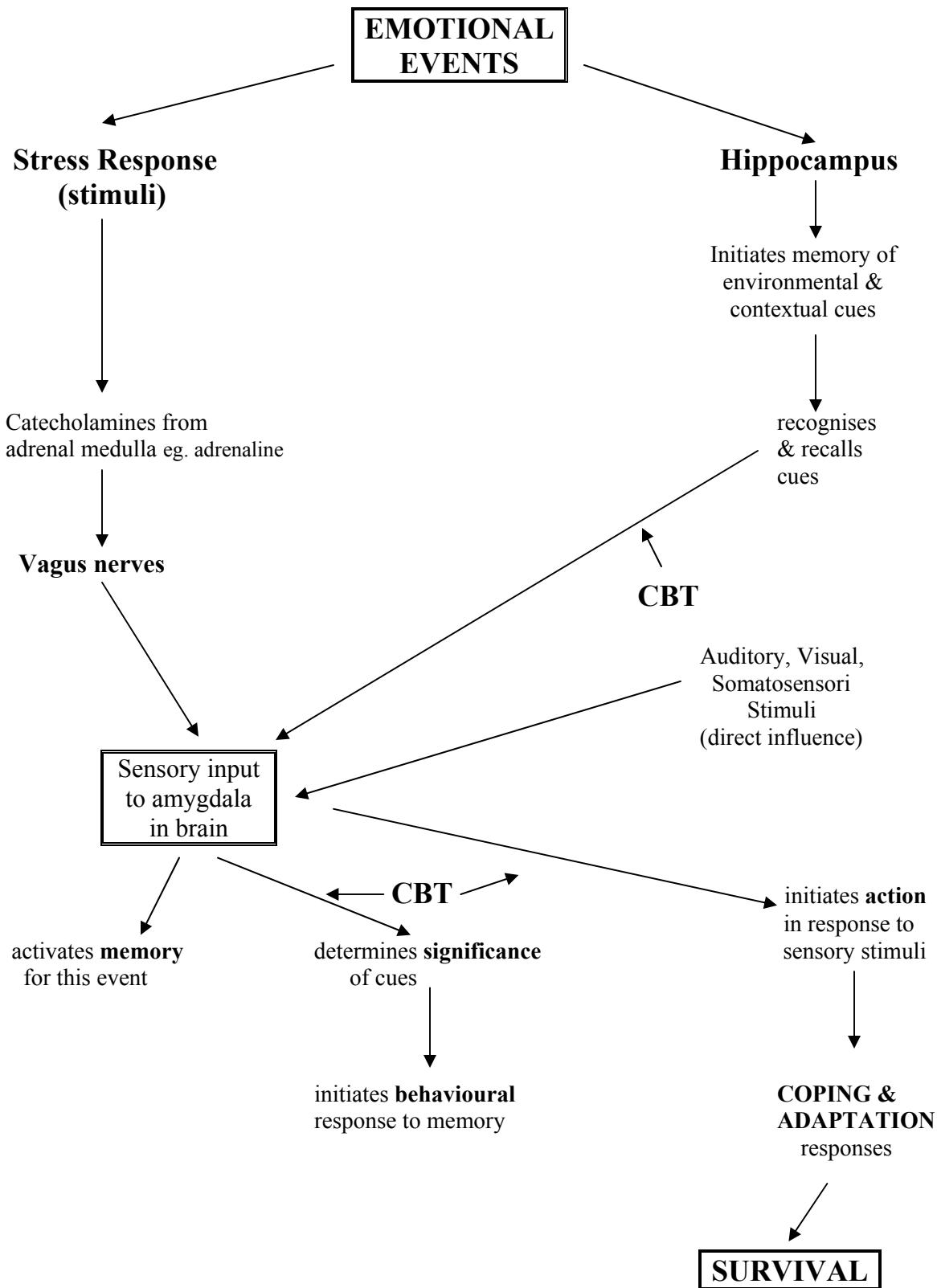
### **Emotional Aspects in Gastroenterology**

The focus here has been on gut pathologies because the disorders are so common and it is where the link between the mind and body is best illustrated. Emotion covers a substantial and significant area of psychology and by definition alone it encompasses both the mental and the physical. The limbic system and the hypothalamus in the brain are in essence the mediators of emotional expression and feelings, with the external expression of emotional content being represented by the ‘affective’ state. Repressed emotions (as previously mentioned in cancer risk) are in fact associated with psychosomatic disease; the most important in this context are anger, sense of dependency and fear.

Negative emotional states have been strongly implicated in illness and it is of significance in gut pathologies owing to the established mind-gut axis. The amygdala and hippocampus are important structures within the limbic system which provides a biological basis for some of the physical manifestations with overriding emotional associations. Of relevant discussion here is that the amygdala and hippocampus which can both be influenced by psychological intervention. CBT principles are based very much on this aspect of treatment. Though the memory of past events remains constant in the amygdala, the response to it (following appropriate triggers) can change over time. The part of the brain controlling voluntary behaviour is therefore crucial in overriding this. In altering the response manner to emotional triggers, CBT can influence the amygdala to discern the relevance of the stimuli (stress response) whenever evoking the same response (see schematic diagram below).

### **Alternative and Complementary Therapies in PNI**

A clearer understanding of principal pathways in PNI has enabled the application of a variety of alternative and complementary therapies that operate either at the level of the mind, the neurendocrine (nerve signalling and hormonal) level or at the immune level. Such therapies may have indirect consequential effects or conversely, directly intervene key mechanistic PNI pathways. Concepts and approaches are essentially dependent on the fundamental principles of each therapy, and too broad to address within this book.



Schematic representation of the role of the brain's limbic system in emotional and physical responses in the normal physiological state

Exploration of mind-body pathways and the biological mechanisms that operate within PNI has provided fresh perspectives to current disorders within gastroenterology. A truly integrated approach will combine aspects of these together with fundamental concepts within the Western medical model in the diagnosis and treatment of such disorders. Equally, respecting the subtle energies at work in individual presentations of illness should give latitude to influences that fall outside the reductionist viewpoint. Purporting the mind-body-spirit concept with emotional and behavioural consequences draws comparables to traditional Eastern medical paradigms that appear to be embraced with fervour in the West.

Mere amelioration of physical manifestations (symptoms) is simply insufficient if true harmony between the physical body, the psychological (behaviour and emotion) and spiritual being (subtle anatomy) is to be considered in its entirety. Lack of empirical data on an interdependent interaction between all three aspects does not preclude its existence. Neither should the mind-body-spirit be regarded as an autonomous concept devoid of scientific reasoning or principle. In fact, disease is very much an imbalance of these 3 aspects of 'being'. Examining primitive behaviour patterns, basic instinctive reactions, gender bias and environment can all provide vital clues in the relative preponderance of current disease states. Deviation from our natural tendencies within the context of our 'civilised' societies and modern lifestyles should undoubtedly be a significant consideration in any clinical assessment.

The holistic management will thus account for these factors in addition to emphasising the unequivocal importance of the therapeutic relationship. This may require deep introspection on both sides that imbues a conducive environment for healthy, interactive dialogue, thus providing a safe and effective forum for healing at all levels of the human self.

## **Sleep**

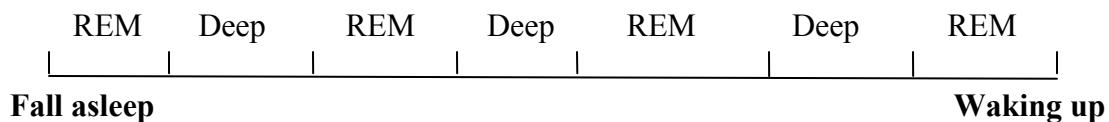
Modern lifestyle can also affect sleep, another very important aspect of our well-being. So many of us are not getting the right amount or quality of sleep. This is not surprising since the impact of stress and modern living can make it impossible to mentally 'switch off' until our bodies are physically exhausted. By that stage of course it may well be too late and the impact of sleep deprivation may have started to kick in. The symptoms of inadequate sleep can vary from irritability, mood swings and depression to recurrent colds, decline in mental alertness and acuity plus a host of other problems. The clinical picture will vary for each person depending on the susceptibility of their bodies to these symptoms and addressing these problems will require a close assessment of lifestyle, diet, the impact of stress and other factors such as the environment, relationships and personal circumstances.

### **The purpose of sleep**

The physiological importance of sleep is essentially to restore, regenerate, rejuvenate and revitalise. It is also the time for growth and repair, a crucial aspect for optimum health. In higher animals such as humans, the nervous system is very advanced and requires considerable rest and restoration, particularly if the cells have been active throughout the day.

## The Sleep Cycle

The sleep cycle is just that, a cycle of events. It alternates between stages of deep sleep and periods of arousal or wakefulness called REM or the rapid eye movement stage. REM is described as a state of wakefulness or a state of arousal because sleep is potentially dangerous for animals such as humans and this alternating pattern is crucial because it forms the basis of survival; prolonging the deep sleep stage can make the person go into a coma and ultimately death. The diagram below shows a simple representation of the cyclical events during the sleep cycle.



**Schematic diagram of The Sleep Cycle highlighting the alternating and repeating pattern of deep sleep and REM which is characterized by rapid eye movements**

Invariably, dreams occur during the periods of REM. The duration of the REM stages increases as the night progresses and it is common to wake up in the middle of a dream. People are able to remember their dreams more vividly when they happen at the latter REM stages rather than those earlier in the night. We only require about 2 stages of deep sleep and the longest of these happen at the early stages of sleep, more or less as soon as we fall asleep. Most of the rest, regeneration, repair and growth occur during these deep sleep stages. On average, a healthy adult would need about 7-8 hours of sleep, children requiring more and the elderly requiring less.

Sleep is dependent on hormones and the control of nerve signaling. This means that it is regulated by hormones, particularly melatonin (which is secreted at night) and the nervous system (which is controlled and activated by the brain or higher centres).

## The symptoms of sleep deprivation

The symptoms of a lack of adequate sleep, particularly the deep sleep can vary from mild or moderate to severe. Prolonged bouts of sleep disturbances or lack of sleep has a detrimental effect on the body, particularly in the long-term. It is important to address the root cause of any sleep abnormalities to prevent these symptoms and as the table below highlights, they can be numerous and can have a damaging effect on our well-being and function.

- Poor concentration and attention span
- Reduced mental alertness
- Reduced mental acuity
- Confusion
- Lack of energy
- Fatigue & exhaustion
- Emotional & psychological symptoms eg. depression, melancholia, anger, irritability
- Headache
- Reduced immune function & increased susceptibility to infection
- Visual disturbances
- Reduced memory
- Reduced problem-solving abilities
- Poor co-ordination & balance

## Sleep pathologies

The main problem that people encounter with sleep is not getting enough of it! Some find it difficult to get to sleep but will sleep well thereafter. Others will wake up in the middle of the night and find it difficult to get back to sleep. This can leave them feeling unwell and un-refreshed the following morning. Some will drift in and out of sleep all night and again, this will also leave the sufferers feeling un-refreshed and groggy in the mornings.

Taking prescription sleeping tablets (eg. barbiturates and tranquilizers) provide little long-term solution especially in those with chronic sleep disorders. These drugs will suppress both deep sleep and REM phases of sleep which is one reason why people feel even more sleepy the next day. Examining the root causes of insomnia is essential if the problem is to be successfully tackled. Further aspects of sleep and the role of herbal sedatives and hypnotics will be discussed in the chapter 5, Health Essentials.

## Mood

Sleep is inextricably linked to mood and as indicated earlier, a lack of sleep, particularly on a regular basis will profoundly affect our outlook on life and general mood. The description of mood is somewhat subjective and some aspects of it are largely determined by personality, upbringing and life experiences. However, a sense of well-being is linked to a positive approach to things and many factors other than a lack of sleep will also influence mood. Some of these other factors have been listed below.

- Work pressures and unemployment
- Environment (home or work)
- Relationships (family, partner or friends)
- Poor diet

- Alcohol
- Lifestyle (eg. lack of exercise)
- Sexual problems

Mental health is a significant aspect of our well-being and optimum health. A healthy mind is just as important as our physical health.

## **Energy**

The concept of energy is a complex one and its definition has many dimensions. In its metaphysical sense, it is defined as the ability of any particulate matter to do work. Its property is such that it cannot be created nor destroyed, merely to change from one form to another. This describes the first law of conservation and something that forms the basis of all living things and matter.

Most of us have some understanding that in order for the human body to function effectively, then it must be fuelled by energy. Modern life can deplete vital energy resources through poor diet, stress, illness, our environment, lack of exercise and poor sleep. These are just a few of the many factors that govern our body's ability to do work and determine whether it is efficient or indeed effective in its many physiological functions. Having an abundance of energy is a goal that most of us share and we equate it to a kind of vitality that represents positive health.

However, modern living can make this impossible. This is why most of us feel lethargic, exhausted, and lack enthusiasm for life. To restore this 'lost' energy we need to take a long hard look at what is not working in our lives and to either discard it or to change it. Equally, it is important to examine all that is positive and good, and then find ways to embrace it, to enhance it or to improve it.

As explained earlier in the chapter, the mind has a profound influence over the body so examining all aspects of one's life must focus on the mental, physical, emotional, spiritual and psychological. A positive attitude to health can work miracles on our energy levels. In aiming to achieve this positive state of mind, we must attempt to do the following:

- Identify factors in our lives that deplete our energy resources
- Identify factors in our lives that cause negative stress
- Maximize our energy potential and sense of well-being
- Examine the way in which we view our bodies. We must learn to view our body not as a sum of different parts but as an integrated whole with a mind, body and spirit connection
- Learn to view the changes in our health status, fluctuating between positive and negative influences in the environment
- Be aware of warning signs that the body sends out. A lack of energy is a classic sign of many physiological disorders. Signs and symptoms are the body's way of communicating

to us that something is wrong. We cannot afford to ignore it as it is a guaranteed way to ask for trouble. Taking affirmative action at the critical time will avoid problems later on.

**Some of the influences on our energy reserves:**

**Sleep** – as explained earlier, poor sleep, particularly as lack of deep sleep deprives the body of its ability to repair and regenerate. This in turn, will impact on how the body can restore its energy reserves.

**Diet** – having an unhealthy diet, particularly one that is loaded with saturated fats and simple carbohydrates will not nourish the body or fuel the body sufficiently for work.

**Mood** – profoundly influences the energy levels in the body (*and vice versa*). Can be a very complex issue to address and getting the right professional help for some of the mental health disorders can sometimes be the only way forward

**Environment** – toxins, pollutants, chemicals, water and even medication can all lead to ‘toxic overload’. This in turn will deplete our energy reserves and impact on our basic body functioning

**Illness** – medication can make us tired, as can illness itself

**Lifestyle** – the way we live has a powerful influence on our energy levels eg. excessive alcohol consumption, smoking, lack of exercise, inadequate sleep all have a detrimental effect on our energy and ultimately on our health in general

**Stress** – we all want to achieve the perfect ‘work-life balance’ and very few of us actually achieve it. The impact of stress cannot be sufficiently stated. The adverse effects of stress have a significant impact on our energy and ultimately our general health and well-being. Combating the negative effects of stress is part of the work of many holistic therapists in attempting to achieve the ultimate work-life balance and in examining the person in the context of their illness.

## CHAPTER 2 – HOLISTIC HEALTH

- (i) Definition & philosophy of (Western) Herbal Medicine (synergy of active ingredients etc..)
- (ii) Treating the ‘whole person’ – a holistic approach to diagnosis and treatment
- (iii) A brief history of herbal medicine & cultural contexts of practice
- (iv) Prevention, cure and herbal medicine (helping the body to heal itself)

### **(i) Definition and philosophy of Western Herbal Medicine**

Herbal Medicine is an ancient worldwide practice of using plants to prevent and cure disease. Records dating as far back as 2000BC suggest the use of healing plant remedies and some of the more traditional cultures in the world still practice herbal medicine as the main form of treatment in infection and disease. In more recent and scientific times, attempts have been made to recognise the true importance and value of medicinal plants; after all, two thirds of all conventional drugs are from plant origin. Analysing chemical constituents of medicinal plants and conducting experimental trials has led to a better understanding of their actions. From such studies, it becomes clear that it is the synergistic action of their active ingredients that plays a crucial role in explaining their effectiveness. That is to say, the sum of these active parts in the plant as a whole, has a greater therapeutic effect than any of the isolated active ingredients on their own.

Despite the fact that much of the medical and popular literature on herbal medicines is difficult to interpret, we should keep an open mind and accept that although a substance may lack evidence of effectiveness, it does not imply that it is ineffective. Neither does it mean that it cannot be useful in any medical condition or illness. A lack of *evidence* of effect is not the same as lack of effect and an unproven herb can nevertheless be beneficial for many patients and for many disorders. Although the overall evidence for many herbal medicines is often markedly deficient or of unacceptably poor quality, the efficacy and safety of an increasing number of potentially useful herbal products have been evaluated in well-designed clinical studies, including randomised controlled trials and systematic reviews.

Encouragingly, the trend for conducting large-scale trials is changing, particularly in the US where the National Center for Complementary and Alternative Medicine (NCCAM) at the National Institutes for Health (NIH) has dramatically increased their budget for research in recent years. The NCCAM now funds large-scale randomised controlled trials on:

St. John’s Wort  
Ginkgo  
Echinacea  
Saw palmetto

Botanical research is also being conducted on a host of other herbal supplements such as:

- Soy
- Red clover
- Black cohosh
- Ginger
- Turmeric
- Boswellia
- Grape polyphenols
- Green tea

The fundamental philosophy of Western herbal medicine is essentially one of promoting good health and treating illness through the use of medicinal plants, either in their whole form or as concentrates of their active ingredients. The healing process is carried out within a holistic context and utilises the principle of enabling the body to heal itself. So the focus can be on enhancing liver function, boosting circulation or improving immune responses, all of which are natural biological functions in the maintenance of good health and vitality.

### **Basic Principles & Practice of Western Herbal Medicine**

Western cultures have embraced traditional medical practices such as herbal medicine with fervour. The increasing acceptance of alternative therapies marks a profound change in attitude towards health and the body. This has resulted in a significant proliferation of alternative and complementary therapy practitioners as the disenchantment with modern drug therapy has increased. Moreover, the over-prescription of medication that can render drugs ineffective (eg. antibiotic resistance) has been a major contributory factor in the popularity of herbal remedies, as have the often numerous, unpleasant and undesirable side-effects experienced with large doses of synthetic drugs. Such trends in the West contrast with other parts of the world, such as the Caribbean, parts of Africa, regions of South America, India and China which have used herbal remedies as an integral way of living. It is in fact conventional medicine and modern medical thinking that is regarded with scepticism amongst such traditional cultures.

The fundamental difference lies in how illness and disease is viewed. Modern medicine emphasises the symptoms whereas traditional therapists such as medical herbalists adopt a more holistic approach to diagnosis and treatment, considering aspects of the patient's circumstances and the context in which they have fallen ill. This has proved more successful than conventional medicine in cases where certain conditions are mere manifestations of an underlying or deep-rooted cause.

An examination of the state of health in Western societies, show that despite the vast expenditure on health care, large numbers in the population remain relatively unhealthy. Chronic illnesses such as respiratory disorders, heart disease and diabetes are on the increase; approximately 50% of the population in Western countries are prescribed drugs for conditions as diverse as asthma, arthritis, depression and high blood

pressure. Countries that practise Herbal Medicine (despite abject poverty, deprivation and limited resources for medical provision, not to mention climatic conditions that favour the spread of infection) remain relatively healthy by comparison. Physical ailments experienced so frequently in Western societies appear to be more symptomatic of age and decline in the poorer nations, rather than inherent health problems of a particular culture.

The preference for herbal alternatives over conventional medication in treating a wide variety of illnesses, either acute or chronic continues to remain a matter of choice in a culture of quick fixes and time constraints. Herbal treatments are more gentle remedies and usually take longer to have an effect than modern drugs.

### **(ii) Treating the ‘whole person’**

Conventional doctors are trained to make a clinical diagnosis based on symptoms and findings from an examination. Sometimes, tests are carried out that will make or confirm a diagnosis based on these initial findings. Treatment is based on these symptoms, clinical findings and the diagnosis. This has great value in certain medical conditions and we are living in an age of great medical and technological advancements. Due credit must be given to the great work that is done within conventional medical practices today.

However, most of us will see a GP for conditions that are probably preventable, recurring or chronic and so requiring a focus on managing the condition. Herbal Medicine, when incorporated can be used to prevent illness in the first instance by optimising health, for example, improving the immune function and so making it more robust at fighting infection. Equally, it can be an effective treatment in a number of acute and chronic conditions. The main difference in these two medical practices lies in how illness and disease is viewed. Modern medicine focuses on the symptoms whereas traditional therapists such as medical herbalists also consider the context in which illness has occurred. This also holds true for the treatment. Often, herbs are used as a preventative measure in fighting infection or illness and it is popularly used to enhance or maintain optimum health and well-being. The demand for natural ingredients over synthetic is evidenced by the vast array of herbal proprietary brands and products ranging from toiletries to herb teas and foods. Even the cosmetic industry is slowly gaining insight into the traditional beauty secrets of Africa and the far-east and other cultures that value natural plant products in skin care regimes.

The word holistic comes from the Greek work ‘*holos*’ meaning whole. Viewing a person’s illness in a holistic context is all about seeing them as a whole and not just focussing on the part of the body that is not working or is damaged. Taking into account a person’s well-being must give due consideration to their psychological as well as their spiritual aspects of health. A holistic approach to physical problems would attempt to identify the cause(s) of the condition or illness having taken the initial steps to address the symptoms in order to alleviate any discomfort or pain. By taking a simple case history, the herbal practitioner will be able to gather the most important points regarding the patient and the outside influences which may be contributing to the illness. Examples of these factors could include bereavement, stress, divorce, work pressure (eg. staff appraisal, performance-related incentives), moving house etc... Some of the

symptoms of stress and how it can affect our health has been explained briefly in Chapter 1. Stress-related disorders are numerous and diverse. Stress can affect each person in a unique manner and whilst some will cope remarkably under the most stressful situations, many others simply ‘fall apart’ displaying physical and mental signs and symptoms. The real purpose of holistic healing is to examine these factors in close detail but importantly, to see if there is a real discernable difference between these outside factors and a connection to illness compared to the signs and symptoms of mere organic disease.

### **Stress-related illness and the holistic diagnosis**

Most people would not consider it ‘rocket science’ to work out that whatever factor is causing them stress (called the stressor) could also be making them ill. However, due to the body’s remarkable capacity to cope with stress, this connection between the stressor and their symptoms is not always so glaringly obvious. Insidious and subtle manifestations are difficult to diagnose but very often, examining the wider influences on the person and identifying any contributory factors will make diagnosis and treatment that much more effective.

Symptom	Possible organic cause(s)	Likely stressor(s)
Headache	Eyesight problems, eyestrain through computer overuse & screen glare	Anxiety, worry
Sinusitis	Bacterial infection of the sinuses	Sinus congestion from reduced immune responses. Decreased resistance to infection can arise from persistent stress
Recurring colds	Virulent viral infection	Reduced immunity from prolonged or sustained stress
Palpitations	Early warning signs of heart disease	Anxiety (many outside factors)
High blood pressure	Dietary causes	Stress, anxiety
Skin disorders eg psoriasis	Immune disorder	Made worse through stress
Hair loss	Nutritional deficiency esp B vitamins, genetic (male pattern baldness), medication	Worry, anxiety, stress

## Herbs and holistic healing

Strictly speaking, herbal medicine as it is practised in the West today is considered an alternative form of medicine. That is, herbal remedies are used instead of conventional drugs to treat or manage illness or medical conditions. However, the term ‘alternative’ used in this context can be sometimes be misleading and confusing because although it is often used instead of taking conventional drugs, it does not mean than herbs cannot be used to complement conventional medical treatment. In some cases, the use of herbal medicines can form the basis of adjunct therapy. That is, it can enhance the effectiveness of conventional treatments with results being more profound than with either therapy used on its own. However, herbal medicine as a complement to conventional drug treatment is quite rare because in reality, there are all sorts of issues with herb-drug interaction that does not permit this kind of practice. Equally, most people invariably seek herbal alternatives when their bodies do not respond readily to conventional drugs or they are opposed to taking strong drugs when they would rather try a more natural and effective alternative that has been used traditionally in other parts of the world for many years.

As mentioned earlier, much of the success in herbal medicine can be attributed to healing within a holistic context in as much as the effectiveness of the herbs themselves. The unique medicinal properties of a number of herbs will be discussed in more detail later on in the book. The symptoms of the current problem are addressed in relation to the whole person by examining the social and cultural context in which the illness has occurred and in which the healing process takes place.

Moreover, some herbal preparations (known as tonics) can be used to enhance and promote good health and vitality by maintaining essential body systems and their functioning at a peak. So, relatively ‘healthy’ individuals may choose to take herbal tonics for a short period of time to boost their immunity for example or to stave off a cold. Some may choose to take a tonic to improve their digestive function and to improve bowel movement. Others may choose to take a tonic to improve liver function or to improve circulation. The use of herbal tonics in this manner can be fundamental not only in maintaining a sense of well-being but more importantly, in preventing disease and illness. This does not mean that herbal tonics should replace a well balanced diet based on good nutritional practises. However, such tonics can promote the health and function of important organs and systems such as the liver, kidneys, circulation etc.... all of which optimise vital body functioning and getting the most from our diet. Herbal tonics can be a great supplement to a healthy well balanced lifestyle that would include things like adequate exercise, relaxation, recreational pursuits and hobbies, in addition to good nutrition. In essence though, herbal medicine is about restoring balance and its applications can be particularly effective in supporting the cleansing and detoxifying action of organs that are responsible for eliminating wastes from the body. This would involve the bowel, the kidneys, the skin and the lungs, all assisted by a healthy circulatory system.

The main focus of herbal medicine in the context of holistic healing is to provide treatments that will encourage the body to heal itself. This may involve a preparation of a single herb or a more commonly, a combination of herbs as many different areas may need to be targeted. The mechanisms for herbal action are

not fully understood for all medicinal herbs although there is ample evidence on mode of action for some ingredients in some of the more popular herbs. This is the subject of much research in many countries worldwide including, the US, China, Germany and India as well as the UK. Since two thirds of conventional drugs are derived from plant origin. There is strong drive to develop new and effective drugs from plant sources. Research into more effective treatments is increasingly based on existing herbal cures in an attempt to discover new drugs. Those remedies that represent a long tradition of use in many parts of the world may ultimately hold the clue to finding a breakthrough cure for some of the more debilitating and destructive killer diseases of the 21<sup>st</sup> century such as cancer and AIDS.

The fundamental difference between conventional medicine and traditional herbal medicine lies very much in the treatment. Extensive research has shown that some medicinal plants used in their whole state have a greater therapeutic effect than the equivalent dosage of isolated active ingredients. It is widely believed that the natural combination of these key constituents in some whole plants works in synergy with each other, maximising their effectiveness and exerting a medicinal effect. This medicinal effect cannot be reproduced by one or more of the active ingredients on their own, as is so often preferred in conventional medicine. This is the basis of conventional drug treatment and although necessary in some instances where potency is the requirement, the side effects are very much the down side of this form of treatment.

This is not to say that commercial preparations of herbal supplements do not contain individual active constituents (AC). On the contrary since the more reputable brands are prepared from whole herbs in such a manner as to ensure that the preparation contains known quantities of the active ingredients. They have therefore been standardised to contain known levels of the active ingredients which has been shown to exert a therapeutic effect at the quantity specified. These preparations are often labelled and marketed as 'standardised extracts' and many people find this a convenient and effective way to take herbal medicines. The more traditional herbalists would subscribe to the notion that standardised is getting away from whole herb preparations and in some cases, moving away from traditional practices. Both forms are effective and the varying viewpoints are very much dictated by the differing opinions of practitioners, the patients and the relationship between the two. Ultimately, the healing process is the most important factor here and a successful outcome is strongly influenced by what the patient best responds to, depending on his or her constitution in addition to the condition being treated.

### **(iii) A brief history of herbal medicine and cultural contexts of practice**

The development of herbal medicine and its practice throughout the world has a strong history, with each country forming its own tradition of herbal pharmacy. This has become incorporated into its culture and what is unique to each tradition has developed through many years of knowledge, skill and practice. Some of the older traditions remain very much intact throughout history and herbal medicine here continues to be practised in a manner of their ancestors and passed on through generations of healers.

Western herbal medicine as it is today is largely influenced by such history but is also influenced by other practices from other traditions through travel, folklore, colonisation and settlement. The relatively recent revival of herbal medicine in the West is really from the back of a decline in interest, partly due to the reputation and associations it once had with witches and witchcraft, astrology, mystical spirits and magical powers. Fortunately, modern science and drug development and the need to find new cures reignited interest in some of the traditions as well as to explore the rapidly expanding field of phytopharmacology (study of how plant chemicals can exert an influence in the body) and phytochemistry (study of the chemical constituents of plants, particularly medicinal herbs) in addition to current developments in modern medical science. Modern herbal medicine in the West is now very much a science and the art of good practice is to fully understand and respect these traditions as well as to respect the potency of some of the greatest medicinal herbs to benefit mankind.

Putting all this into context, it is important to start at the beginning and to examine the earliest records of how herbal medicine all began. Wild plants have been used for food and medicines long before records were kept. Medicinal and other uses were undoubtedly uncovered by trial and error, which may not have always been pleasant with probably some disastrous and tragic consequences for some. The plants explored would have been mainly native to the country at first before any ‘foreign’ species being cultivated in herb gardens specifically for the medicinal use (the basis for some of the commercial business now). Establishing when all this began is somewhat difficult since early documented evidence of medicinal use is sparse.

The earliest indication of herbal medicine is suggested from Babylonian records dating as far back as 2000BC which gives instructions for the preparation and administration of medicinal herbs. After that, the ancient Egyptians, renowned for their skills in embalming, started recording the use of herbal remedies on papyrus paper as early as 1600BC. Much of this is still in evidence today with a strong industry in distillation of perfume and medicinal oils as well as other notable products. Some of the herbs of that time included juniper, thyme and fennel, all of them used in Western herbal medicine today.

Other parts of the world like China, India and Native America were developing their own herbal practice, some of which survive to this day. China (Traditional Chinese Medicine or TCM) and India (Ayurveda) have the oldest written traditions, dating from around 1000BC. Some of the traditions of the Native Americans (Shamanism) have sadly been lost due to the European settlers who colonised the land. Much of the herbal knowledge that was passed on through generations by word of mouth rather than by a written record of it was wiped out through war and destruction. It is known however that these traditional practices were less scientific and influenced by a belief in magical powers, spirits and rituals. In some rural parts of South America, shamanism is still widely practised and there continues to be great interest within modern science to research into some of the medicinal benefits of certain indigenous plants especially of the rainforests.

In Australia, some aspects of traditional herbal medicine practice still exist in the native Aborigine culture although much of original traditions and knowledge has been lost due to the invasion of the European settlers. In a similar manner to Shamanism, the Aborigines believed that certain spirits held the power over

health and disease. Much of this belief system continues to exist in their culture and ritualistic practices of today and though this is less scientific, the native Aborigines have extensive knowledge of the landscape and the indigenous plants of Australia, particularly those possessing medicinal properties.

The history of African herbal medicine has solid foundations in the traditional healers of the time passing on vital information about indigenous plants and those used as medicinal herbs. Most of this information was heavily influenced by the Middle—East and India which had an established trade for more than 3000 years. Again, colonial conquests wiped out much of this foundation knowledge and what remains has been misrepresented or replaced by Western medical principles for solutions to healthcare and hygiene. Traditional practices were not permitted to evolve or flourish. The demonisation of the African traditional approach is supported by the notion that much of it is dominated by voodoo and witchcraft, so much so that even the African people themselves have become somewhat distanced from it. Equally, it could be argued that in much of rural Africa, medical provision is sparse and not accessible to high tech services of modern hospitals and clinics. There is a heavy reliance on such traditions and use of medicinal herbs for many of the common disorders and diseases. Despite this however, in certain parts of Africa, the implementation of health programmes and initiatives from the West have modernised healthcare provision even though the ancient magical and spiritual beliefs of herbal traditions are still evident. As a consequence, what remains today is the coexistence of herbal practitioners who work closely with conventional doctors. It is probably one of those uncommon situations where the integrated approach to healthcare is best illustrated. With modern scientific influences, we are slowly becoming informed about the medicinal uses of the plants that have been used for centuries in Africa and finally understand how they work in curing illness and disease.

Herbal medicine in most of the Caribbean islands originates from the African traditions who brought their practices to the islands during the slave trade. This has survived as part of their long history and herbal medicine continues to be practised as a inherent part of their culture and tradition. Many of the Caribbeans have a high respect for this form of medicine. Herbal knowledge and skill is not confined to the healers or medical practitioners. The most notable herbal practitioners from the Caribbean was a Jamaican woman called Mary Seacole (1805-1881), a pioneering nurse and inveterate traveller who brought her skills as a nurse and herbal healer to the battlefields of the Crimean war to treat the sick and injured British soldiers. Using her own unique herbal formulations and remedies passed on through generations of traditional African healers, she became a real heroine of the war, along with her English counterpart, Florence Nightingale.

The Greeks also have a long tradition in herbal medicine, influenced by considerable knowledge on their cultivation and use. Around 400BC, Hippocrates (the ‘father of medicine’) lists a number of herbs with medicinal properties and makes many recommendations for his patients. The Ancient World honoured Hippocrates as the father of medicine because he considered all aspects of health and illness, some of which form the basis of conventional medicine as it is practised today. This is very much supported by scientific reasoning, research and evidence. Even medical students including qualified practitioners of herbal medicine honour Hippocrates by taking the ‘Hippocratic Oath’ upon completion of their training to signify a rite of passage as a practitioner of healing, whether conventional or herbal.

The Roman invasion resulted in the spread of herbal medicine in the regions and lands that they conquered because they brought with them the knowledge and uses of the healing plants. As many as 200 different species of herbs may have been introduced to Britain as a result of the Roman influence. This period also witnessed the influential work by the Greek physician Galen (130AD) who characterised medical wisdom at that time with his theories on the humors: "*In men, all diseases are caused by bile and phlegm. Bile and phlegm give rise to diseases when they become too dry or too wet or too hot or too cold in the body*". This was later referred to as Galenical medicine and together with the incorporated wisdom of the Arab practitioner Avicenna (980-1037) formed the basis of conventional medical practices throughout the Middle Ages. After the collapse of the Roman Empire, much of the herbal knowledge and practice in Europe was sadly lost but what remained was continued by the Christian monks who grew herbs in their gardens that were attached to their monasteries. This is still very much in evidence today in some of the rural French and Italian monasteries. Physicians such as Paracelcus (1493-1541), marked their own individual stamp on the practice of herbal medicine on the whole. At this time, herbal remedies were very much part of medicine per se and most physicians were also alchemists. They therefore had great skill in investigating natural substances including plant materials and transforming them. They practised this with an early philosophical and spiritual discipline, combining elements of chemistry, metallurgy, physics, medicine, astrology, semiotics (study of human communications especially signs and symbols), mysticism, spiritualism and art.

The period of the Renaissance and the New World were exciting times for herbal medicine which saw the application of a more scientific approach to the study of herbs and medicinal plants. They were periods in time that were hugely influential in shaping the knowledge and practice of Western Herbal Medicine as it is today. Key players such as the English astrologer and physician Nicholas Culpepper (1616-54) and the American herbal practitioner Samuel Thomson (1769-1843) were instrumental in making herbal medicine more accessible to the common people rather than it being exclusive to the elite rich and upper classes. Equally, travellers to and from other parts of Europe, the Americas and the rest of the world also influenced the cross-fertilisation of herbal knowledge between countries, traditions and cultures.

The decline of herbal medicine from the late 18<sup>th</sup> century saw the persecution of 'witches' who came to be synonymous with the practice of witchcraft, the possession of evil spirits, magical powers and the use of herbs. This reputation became hard to shift and coincided with the development and rapid progress of allopathic (conventional) medicine. Modern drug therapy however, is really based on this strong history of herbal medicine (as outlined above) and the study of the chemical constituents of medicinal herbs. Many of the common drugs are synthetic versions or derivatives originating from natural plant chemicals. Examples include aspirin (from salicylic acid extracted from the bark of the willow tree), the chemotherapy drugs vincristine and vinblastine (from the Madagaskar periwinkle herb). Vinblastine is mainly useful for treating Hodgkin's disease, advanced testicular cancer and advanced breast cancer. Vincristine is mainly used to treat acute leukemia and other lymphomas. Another anticancer drug, taxol is from the yew tree and the heart drug digitoxin is from the foxglove. More recently however, there has been a revival of herbal medicine as the long-term effects of conventional drugs is being realised in addition to the unpleasant side-effects of some of

the more potent drugs. The gentle nature of herbal remedies and the holistic context in which it is practised is very much in favour as an increasing number of people are becoming disenchanted with modern drug treatments. This is especially the case for conditions that are preventable and are minor and particularly appealing if a natural form of therapy can be more effective in some instances.

#### **(iv) Prevention, Cure and Herbal Medicine**

The impact of any illness can have far-reaching consequences with psychological and emotional effects than just the mere physical unpleasantness that is experienced. Efforts being made by the various organisations and professional bodies through the implementation of health initiatives and programmes to adopt healthier lifestyles has emphasised the importance of prevention in as much as addressing specific health problems. Good health means different things to different people but we can all find ways of improving our quality of life which includes the prevention of minor illnesses through to the onset of major disease.

Many of the ailments and conditions often experienced by so many are simply symptomatic of age and decline. Age-related disorders are often unavoidable as much as the ageing process itself which increases the risk of age-related conditions (eg. arthritis, memory loss etc...). However, with sensible precaution and preventative measures which promote the maintenance of good health and vitality, the risk of onset of many of these conditions can be minimised and delayed. Importantly, the progression onto major disease can be significantly reduced by taking appropriate measures that reduce their risk.

The factors that influence illness are as diverse and numerous as the variety of diseases themselves. Cultural differences have highlighted the need for a deeper understanding of the person and the context in which they have fallen ill. This encapsulates not only the holistic philosophy of treating illness but it also demonstrates the immense power of the mind over body concept in addition to the outside influences that determine onset and progression of disease. This is not to say that addressing the physical manifestations of illness is less important, far from it. However, clear links between the mind and body illustrates the equal importance of the attitudes towards ill-health and the psychological approaches that are necessary for total recovery.

To change attitudes, whatever the issue is by no means an easy task. To assert positiveness despite overwhelming factors that engulf the mind, way of thinking, feeling, behaving and functioning seems almost impossible. However, time and time again, there have been numerous examples of how a change in attitude and way of thinking has led not only to radical improvements in the quality of life but in some instances, the beginning of the recovery process in illness. Preventing illness can be achieved by ensuring a well-balanced diet, adequate exercise and adopting healthy lifestyle choices. Anything that is not promoted as a ‘healthy choice’ for eg. alcohol, can be taken in moderation and very little at that. Many people have a tendency to be lazy. The temptation is to eat all the tasty foods (invariably those that are considered bad for you) and do as little exercise as possible. To compound matters, most people want quick fixes and get into bad habits with diet and exercise. Poor habits from a young age is also an important element since many of the taste patterns for food and lifestyle choices are determined pretty early on in life and much of my work as a herbalist is

really to educate the parents on fundamentals of good nutrition and healthy lifestyles in order to prevent the pattern of poor habits being passed on to their children.

In respect of maintaining optimum health and vitality, the following aspects describe how herbal medicine can assist, particularly in preventing illness and disease. Herbs have demonstrated their immense medicinal value not only in the treatment of disease but also in maximising health and well-being. Such ‘herbal tonics’ as they are referred to, can be incorporated quite simply into a daily routine or as part of a specific health regime. . Moreover, herbal tonics may be individually formulated depending on the part of the body requiring special attention eg. kick-starting a sluggish liver or improving digestive function. Tonics may also be taken for general aid to gently invigorate the body systems. Such preventative measures are becoming quite popular and coincides directly with the increasing demand and sale for natural health products and herbal supplements. Tonics may serve the purpose of maintaining body systems in optimum condition such as:

- a) Revitalising and body conditioning
- b) Detoxification
- c) Elimination
- d) Boosting immunity/increasing resistance to infection

### **Revitalising and body conditioning**

Taking herbal tonics is a gently way in which the body systems are strengthened, toned and enlivened, ensuring their peak functioning. The whole body can benefit as well as individual systems that require special attention. In this instance, specific herbs can be prescribed, for eg. kick-starting a sluggish liver into action or tonics to improve digestive function in order to enable the body to make the most from nutrients from the diet, or indeed to extract the essential nutrients from the food itself. Moreover, tonics such as these will enable the body to utilise the energy far more efficiently consequently improving body functioning on the whole. Additional areas for consideration in revitalising the body would be to examine the nervous system (which also includes mood, emotion and thinking), the circulation and immune function.

### **Important aspects of Western Herbal Medicine**

#### Diet & Lifestyle

The importance of good nutrition cannot be sufficiently emphasised. Many of the disorders, illnesses and diseases witnessed today in modern society can be directly linked to poor dietary practices, often prolonged or in severe cases, malnutrition.

The herbalists’ approach to treatment or management of any condition will invariably consider aspects of the patient’s diet, very often in some detail. Nutritional Therapy is fast gaining value as an important tool in tackling symptoms of modern living, in addition to ensuring optimum nutrition for all individuals.

Lifestyle choices can have a significant impact on health and well-being. In aiming to address symptoms within a holistic framework, herbalists invariably consider the lifestyle choices of the patient in addition to suggesting changes or areas for improvement. Factors such as smoking, alcohol consumption, lack of exercise, work patterns, stress management, recreational pursuits etc.... are all aspects of lifestyle that is considered in some detail. In advising patients of a work-life balance, herbalists often consider the lifestyle choices of their patients and try to advise of modifications, particularly where it has been shown to be inexorably linked to their symptoms.

## **Detoxification**

Toxins are poisons which manifest in the body at varying levels of potency. They are constantly introduced into the body through the food that is consumed, through the air and through water.

Additionally, our bodies also produce a variety of toxins as waste products or as by-products of the various metabolic processes. Gradual build up of these unwanted, and quite simply, poisonous substances can lead to ill-health (infection) or even disease. Despite this onslaught of toxicity, the body has a remarkable capacity to detoxify such toxins, that is, to break them down in such a manner that they become either less toxic to the body, or are converted into innocuous substances that are eventually excreted. The role of the liver is fundamental in keeping the toxins in the blood at a minimum level such that we remain illness-free. The immune system is also a key player in this detoxification process, as are the circulatory systems that assist in the removal of the toxins to the excretory organs. In this respect, the blood and lymphatic system are vital systems in supporting the crucial role of the liver and associated detoxifying organs in maintaining optimum health. Herbal tonics that revitalise these organs help a great deal, especially if they have been neglected (through poor diet, or damage). This particularly applies to the liver since it is the first port of call for detoxifying any toxic substances that have entered the body (through the gut or via the bloodstream).

Toxic build up is an inevitable part of all metabolic processes that occur in the body, although the liver's ability to make them less harmful is very impressive. In this respect, it is worth noting, not the actual number of times we fall ill but in fact, the periods of time in which we remain symptom-free. Without this vital function we will continually suffer illness and disease. Poor dietary habits over a long time can impair the vital detoxifying function of the liver and some of the more harmful substances that we consume (like alcohol and prescription drugs) can even damage the liver cells, making them less able to cope over time. This explains why so many with poor diets and lifestyles are perpetually run down, lacking in energy, have lost their vitality and are prone to infections. Herbs which are notable in assisting the functions of the liver are dandelion (*Taraxacum officinale*), milk thistle (*Silybum marianum*) and fringetree (*Chionanthus virginicus*) amongst others. Some of these herbs are commonly included in herbal tonics for this particular purpose. Equally, they are also prescribed by herbalists for conditions that have a metabolic basis.

The eastern philosophy of fasting is now also commonly practised by some in the West as an active choice in adopting a healthier lifestyle. Some of the world's major religions such as Hinduism, Buddhism and Islam

have well established traditions in fasting and with scientific knowledge, it now appears that regular fasting is an effective way of cleansing the system of toxins and optimising health & well-being. Provided that it is done sensibly, vital body systems, particularly the digestive system, the liver and the kidneys have an opportunity to rest, preventing not only their exhaustion (when illness can set in) but eliminating any potentially infective agents that are lying dormant within the systems.

### **Herbs for Detox**

Much has been written about and publicised on the subject of detox and detox diets. Commercial interest must be viewed with some caution and much of what passes for ‘detox’ is simply good nutrition, sensible eating combined with a healthy lifestyle.

Considering the amount of ‘invisible’ toxins in the environment, common medications, lifestyle habits and toxins consumed in food, it is perhaps easy to see how almost everyone in a Western society can expect to suffer from some degree of toxicity. In the worse case scenario, the toxic burden on these vital organs has been known to be a major contributory factor for some forms of cancer, particularly cancer of the bowel.

The body has its own natural detoxifying organs: the liver, the kidneys, the digestive system and associated organs and structures. The elimination of toxins from our cellular environment, including those from foods must consider the efficient functioning of all these organs systems in addition to a good circulatory system. Proper nutrition, a well balanced diet and a healthy lifestyle are all factors that will assist this process and prevent toxic overload on these vital structures.

Our diet has a very important part to play in detoxification. Consequently, what we consume can assist our organs and there is some excellent literature on the foods that are recommended for this purpose (*see recommended reading at the end*).

I focus on the liver here as it is central to ‘detox’. It is essential to appreciate that the health of the liver is directly dependent on the type and quality of the food that is consumed. Though it carries out essential detoxification, like any other vital organ, it has its own nutritional requirements in order to perform its function of repair, regeneration and rebuilding.

In a nutshell, foods to cut out are those that are rich in refined sugars (such as cakes, biscuits, chocolates, sweets etc...), pre-prepared or ready-made meals, foods containing hydrogenated and trans fats, alcohol and drugs (including tobacco). Examples of the kinds of foods that are beneficial to the liver in its health and hence, its proper function are listed below. These include plenty of fresh fruit and vegetables.

FRUITS		VEGETABLES	
Lemons	Contains an important chemical which assists in the breakdown of gallstones. Also contains pectin, a soluble form of fibre which is good for bowel health (prevents constipation) and lowers blood cholesterol. A good source of vitamin C too	Artichoke	Helps reduce cholesterol and other fats in the blood. Improves the detoxification, repair and regeneration capacity of the liver. Also protects against liver damage
Apples & Oranges	Both contain pectin which prevents constipation. Also helps reduce cholesterol in the blood. Apple contains a host of important nutrients incl. antioxidants which can help protect against cancer. Oranges are a good source of vitamin C	Brussels sprouts	Part of the brassica family (other examples are cabbages, turnips, broccoli, cauliflower and swedes) so helps in the detoxification processes of the liver. Increases oestrogen metabolism and excretion so thought to confer protection against some of the oestrogen-dependent cancers, particularly breast and uterine cancer
Grapes	Excellent for preventing heart disease (contains important chemicals called proanthocyanidins) which are also antioxidants so will help prevent cancer as well	Cabbage & turnip	Cabbage, one of the oldest of the brassicas, and the ancestor of broccoli and cauliflower. Cabbage, like other brassicas, is high in sulphur, so excellent for liver health. Helps in the detoxification processes and confers protection against cancer through its antioxidant activity. Similar benefits from consuming turnips but both the leaves and root need to be eaten.
Pineapple & Papaya	Both contain naturally-occurring enzymes that help breakdown protein from food so will help digestion. Also contains cancer preventing antioxidants	Broccoli	Broccoli, another popular member of the brassica clan has similar benefits to the liver
Grapefruit	Contains important nutrients, antioxidants and pectin. A key player in liver detox reactions	Leeks	Highly nutritious and contains key antioxidants such as the bioflavonoids. Also contains sulphur compounds which assist in the detoxification role of the liver
Berries esp	Contain high levels of	Watercress	Rich in the antioxidant beta-carotene.

dark red, blue or black	proanthocyanidins and bioflavonoids that help protect against major diseases like heart disease and cancer also contains other important nutrients such as vitamin C and carotenes (both have antioxidant properties)		Also contains sulphur. Both are excellent for the liver
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Herbs and spices are also beneficial to the liver. Some of the more common ones which are great in any detox programme include the following:

Garlic  
Onions  
Fennel  
Radish  
Dandelion

More on good nutrition later in the book.

### **Therapeutic agents in the biotransformation of toxins**

The body's ability to make toxic substances less toxic or harmless to the body is referred to as biotransformation. The liver is critical in this function and contains key enzymes which break down these poisonous by-products of metabolism (or metabolites) and convert them into harmless substances. Part of this biotransformation process involves a key enzyme system in the liver known as the cytochrome P<sub>450</sub> enzyme system, which is found in the liver. Another key liver enzyme in this regard is known as glutathione S-transferase (or GST for short). In fact, the liver function tests that are carried out to assess liver function often determine levels of these key enzymes as an indicator of liver damage, disease or dysfunction. Any herb that can support the liver in boosting the biotransformation processes will indirectly assist in detoxification. Hepatics are herbs that promote liver function but can also protect liver cells from harmful toxins or indeed repair liver cells once damage has already occurred.

***Schisandra chinensis* (schisandra)**↑ glutathione status ie. induces GST activity. Contains 2 key active constituents (Schisandrin B and Gomisin A). They have the following characteristics:

- Schisandrin B    - ↑ microsomal cytochrome P<sub>450</sub> enzymes  
                    - ↑ GST activity
- Gomisin A      - ↑ bile acid synthesis & metabolism  
                    - stimulates liver regeneration  
                    - ↑ GST activity

***Curcuma longa* (turmeric)**

- Chemopreventive of carcinogenesis (alters the activation/detoxification of carcinogen metabolism)

***Silybum marianum* (milk thistle)**

- Protects intact liver cells that have not yet been irreversibly damaged by preventing the entry of toxins through their cell membranes (acts on the cell membranes themselves)
- Stimulates protein synthesis thereby accelerating the process of liver cells regeneration and production of new cells

**Culinary Herbs and Foods**

**Rosemary** and **Sage** contain CARNOSOL which has antioxidant properties ie. it induces important liver enzymes (GST and NADPH-quinone reductase)

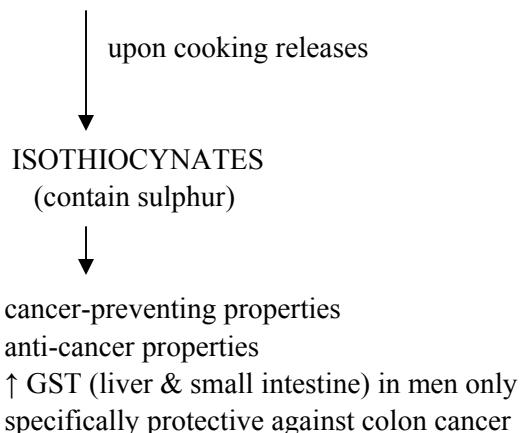
**Garlic** - chemoprotective against carcinogenesis  
- induces liver activity (biotransformation)

**Parsley leaf oil** contains MYRISTICIN which induces GST activity

**Citrus fruit oil** increases GST activity

**Green tea** - contains POLYPHENOLS which are chemoprotective against carcinogenesis  
- increases liver enzyme activity  
-blocks cigarette-induced genetic damage in cells. Chromosomal or genetic damage can result in abnormal cell proliferation & differentiation – a classic hallmark of malignant change

**The Brassicas** eg. brussel sprouts, cabbage, broccoli, horse radish  
Contain GLUCOSINOLATES (S-glycosides)



Some herbs are particularly useful for the 3 key organs involved in detoxification:

**The Liver:** Dandelion – root & leaf

Milk Thistle

Beetroot

Red clover

Fennel

Green tea

Lemon and Lime

Carrots

Tomatoes

**The Gut (esp colon):** Green leafy vegetables

Bio-yoghurt

Figs, Prunes, Dates

Olive Oil

Porridge

**The Kidneys:** Water (and plenty of it!!)

Grapefruit

Flaxseeds

Walnuts

Blueberries

Soy beans

## **Weight Loss regimes and Herbal Medicine**

There is no substitute for a well balanced diet combined with adequate exercise and a healthy lifestyle. There are no wonder drugs or herbs for reducing weight. The popularity of some herbal supplements as slimming aids has some basis if viewed in context with a broader and more sensible weight loss regime. However, some of the herbs are extremely potent and can have adverse reactions and side-effects. They must be taken with caution and with advice from a medical herbalist.

### ***Ephedra sinica* (Ephedra or ma huang)**

Ephedra, also known as ma huang, is a strong stimulant and found in some popular weight loss supplements. Despite its widespread use in over-the-counter weight loss pills, there is no firm evidence that it promotes weight loss. Ephedra reduces appetite and stimulates fat metabolism, making it very effective as a weight-loss supplement. The active compound in Ephedra (*Ma Huang*) is ephedrine. Ephedrine increases the metabolic rate, so that your body burns fats and sugar more efficiently. By mobilising stored fat and carbohydrate reserves, ephedrine reduces appetite.

However, the Food and Drug Administration (FDA) in the US has received over 800 reports linking ephedra with dizziness, headaches, chest pain, psychosis, seizures and strokes. It has been previously banned by the FDA in some states and restricted for sale in the UK. This is because when ephedra is taken regularly in weight loss supplements, your body stays in an unnaturally high gear and there is risk for heart palpitations and heart attacks.

In the UK, the sale of ephedra is already restricted so products containing less than 1,800 milligrams can only be sold following a consultation with a herbal medicine practitioner.

Products containing higher doses of ephedra can only be sold in pharmacies.

### ***Yerbe Maté* (*Ilex paraguariensis*)**

Yerbe Maté is a tea derived from the South American holly tree (*Ilex paraguariensis*) with a long tradition of use in Native America. It has only recently been marketed commercially in the West as a stimulant, dietary supplement and as an aid to weight loss owing to its reputed property as an appetite suppressant. The dried leaves are brewed and taken as a daily stimulant to invigorate the mind and body as well as a promoter of optimum health.

Yerbe Maté possesses a plethora of health benefits from being a rich source of important nutrients to its effects on the immune system, cardiovascular system, nervous system and gut. It contains polyphenolic compounds that exert very powerful antioxidant properties thus conferring protection against disease and cancer. Its most popular use is as a stimulant in weight loss by promoting thermogenesis (generating heat through the breakdown of fat stores) and as an appetite suppressant. It is taken as a suitable alternative to coffee and ordinary tea, and like them, is a diuretic.

The most notable active constituent in Yerbe Maté is mateine, a xanthine compound of which caffeine is another. The effects of mateine are more desirable than any of the related compounds since it exhibits the best combination of xanthine properties without side effects. It is an effective bronchodilator and therefore very useful in asthma. It stimulates the CNS (central nervous system) without being addictive and induces better attributes of sleep. It also relaxes peripheral blood vessels being clinically beneficial in reducing blood pressure.

As an alternative to coffee, Yerbe Maté is the preferred choice since observational studies show that it produces similar, if not, better clinical effects without the undesirable side effects that accompany most natural stimulants. Limited clinical trials have been conducted on this herb, and therefore its effectiveness is unclear but there has been much interest shown in North America in the last decade since its commercial marketing. Exceeding recommended

doses can increase the risk of oesophageal cancer due to the high binding capacity of the tannins and polyphenols in the tea.

### ***Hoodia gordonii* (Asclepiadaceae family)**

*Hoodia gordonii* has been used by the South African San tribe for thousands of years who used it when they went on long hunting expeditions. Hoodia helped to prolong their hunting trips by suppressing hunger, and increasing their energy levels.

There are various species of Hoodia but the *gordonii* variation is the only one that contains the natural appetite suppressant. Hoodia pills kills the appetite and attacks obesity, is organic with no synthetic or artificial appetite control agents and has no side effects. Researchers have identified the active ingredient as P57, which suppresses the appetite. P57 is currently being considered for marketing as a commercial slimming pill.

Hoodia is a natural substance that literally takes your appetite away. Aside from using it to stop hunger, it provides unperturbed energy and combats stress. The San also use it to treat diabetes and hypertension. It's even said to cure hangovers and upset stomachs too.

Some manufacturers claim that when Hoodia is combined with a healthy eating plan and exercise, it can help to bring about tremendous changes in body fat, and can greatly improve a person's health.

Double blind clinical trials have not yet been completed with Hoodia. Even those interested in trying Hoodia without waiting for clinical trials to be completed may have difficulties, since Phytopharm®, the only licensed producer of Hoodia as a weight loss aid, does not yet market the product. Any other brands need to be viewed with caution since the relative scarcity of Hoodia means that the ingredient is hard for manufacturers to acquire. It is therefore hard to imagine how dozens of firms now claim to sell weight loss supplements containing Hoodia. There is as yet no conclusive evidence that Hoodia is a safe and effective appetite suppressant.

### **Elimination**

Prevention of illness is also dependent upon the adequate elimination of waste products and toxins within the body. Organs that are instrumental in this function are the gut and the kidneys as well as the skin and the lungs but to a lesser extent. The blood has a secondary, yet vital role in assisting the main organs of excretion. Poor functioning of these organs (and systems) of elimination can not only affect health and well-being but more importantly, be symptomatic of a more serious underlying disorder. This does not even venture anywhere towards mentioning the complications that could arise from dysfunction in these organ systems. Toxic build up to abnormal proportions has damaging consequences for the body.

Herbs that can enhance the elimination function of the body include all the herbal laxatives which will work directly on the bowels. They vary in potency and are chosen carefully depending on the severity of the

problem being treated. However, long-term prescription of herbal laxatives is not usually common practice since prescription of any herbal medicines will be accompanied by comprehensive dietary advice, modifications and recommendations. Notable herbal laxatives such as senna (*Cassia senna*), rhubarb (*Rheum palmatum*) and buckthorn bark (*Rhamnus frangula*) are very useful in enhancing the elimination process in the gut and herbal diuretics such as celery (*Apium graveolens*) can be added to most herbal tonics. They serve an important purpose in achieving the main objective in preventative medicine.

### **Boosting immunity/increasing resistance to infection**

Additional benefits of herbal tonics include the assistance and support of the body's natural defence mechanisms in the fight against infection and disease. Many would have heard of Echinacea (*Echinacea purpurea*) although its effectiveness is yet to be proved. Despite this, many have sought relief from the common cold in addition to preventing the onset of it. Its ability to do this has been postulated and a number of theories exist on its immune enhancing properties although endorsement from the medical profession is still not forthcoming. In contrast, many doctors and healthcare professionals have a high regard for garlic (*Allium sativum*), not only in boosting immune defences and combating infection but also in its cardiovascular and circulatory benefits. There is a significant body of evidence to prove its effectiveness for a number of conditions and as a prophylactic supplement. The holistic approach to treatment is to enhance and improve the body's own immune responses, thereby enabling the body to rely on its own system to resist infection rather than resorting to a heavy reliance on conventional drugs as a combative measure.

Additionally, other herbs are also useful in combating infection such as the ginsengs (Korean and Siberian ginseng, *Panax ginseng* and *Eleutherococcus senticosus* respectively) but they are probably more renowned for their tonic and strengthening properties rather than as anti-infective herbs. Equally, diet is fundamental in maintaining a healthy immune system so ensuring adequate intakes of crucial micronutrients is strongly advised, for eg. vitamin C. The current recommended dietary intake for vitamin C is 90 mg for men and 75 mg for women (add an extra 35 mg for smokers). There is no credible evidence to suggest that megadoses of vitamin C improves health although a daily intake of 200 to 300 mg would be ideal. A good diet or a standard multivitamin can achieve this easily. The trace mineral zinc is another nutrient that is important in boosting immunity. A recommended daily intake of 15mg should be more than adequate and any dose larger than 25mg may cause anaemia and copper deficiency. It is strongly recommended that professional advice and assistance from either a medical herbalist or a clinical nutritionist is sought prior to any self-medication on vitamin/mineral or herbal supplementation.

### **The gentle actions of herbs**

The medicinal value of herbs is best illustrated by looking at the manner in which they affect the body. Compared to conventional drugs, herbal remedies are on the whole, very gentle on the body but only if taken sensibly, with proper advice from a medical herbalist. Equally, their therapeutic value is highlighted when combined with a good diet because this symbiotic relationship works on the basis that without a good diet,

the herbs cannot be effective and without herbs, the body cannot derive the best nutrition from food. The gentle, yet effective nature of herbs has also minimised the side effects commonly experienced from conventional drugs which appeals to most people.

Herbal tonics by their very nature is made up of herbs with gentle actions. They target specific organs and systems in an attempt to carry out four of the important actions that constitute holistic health; that is revitalisation, detoxification, elimination and resistance to infection. The following gives common examples of herbs that can be used for each body system, and although not exhaustive by any means, it does provide a general guideline as to the types of herbs that are used to rejuvenate and tackle the body system in question.

<b>Body System</b>	<b>Comment</b>
Skin	The skin should be regarded as an organ in itself as it carries out a number of important functions. Herbs such as cleavers, nettle and red clover gradually restore proper functioning of the skin to improve health and vitality.
Liver	Bitter tonics containing milk thistle, aloe or blue flag all aid the functioning of the liver. They tone and strengthen the organ as well as increasing the flow of bile into the digestive tract. This will enable a better breakdown of fats and prevent some of the more common problems associated with poor fat digestion.
Immunity	To combat minor infections, garlic and echinacea can be taken. For more resistant infections, more specific herbs such as goldenseal or barberry are good and bearberry is particularly good for urinary tract infections.
Nervous	Tonic remedies containing herbs such as skullcap, oats, St. John's Wort all assist the nervous system by toning and strengthening it. Science has a very difficult time of understanding what 'toning' and 'strengthening' means but in essence, the herbs either stimulate it or depress (relax) it thereby influencing their activity in this way. According to the condition being treated, herbs can target specific parts of the nervous system which exert control over a particular organ or system responsible for that condition. Most systems are affected by stress so some of the ginsengs particularly Siberian and Indian ginseng are particularly good at dealing with this.
Urinary	Various actions can be achieved by horsetail (astringent action of key constituents tighten and protect the main functioning part of the kidneys called the kidney tubules or nephrons). Other notable herbs can also help tone and strengthen the kidneys and

	associated structures such as cornsilk and bearberry both of which have diuretic properties. This will flush out any lingering toxins in the systems and prevent possible infection.
Digestive	Bitter tonics contain herbs that taste bitter (as the name implies) and via a reflex action involving the taste buds and automatic nerve control possibly to the brain, stimulate the digestive system (eg. to secrete more enzymes so that food can be better digested). Our digestive function declines with age and our diets need to be modified accordingly through the various life stages. Equally, there are other causes of poor appetite and digestion. It is critical to have good digestive function for all sorts of reasons, but mainly because we need to derive essential nutrients and energy. Restoring poor digestive function will help absorb vital nutrients and so prevent illness in this way. Herbs such as wormwood, gentian, dandelion and agrimony are all good at promoting digestive function in this way. Equally, bitter herbs such as bogbean, cumin and coriander are a good combination to increase appetite and stimulate digestion.
Respiratory	Poor respiratory function can leave a person prone to persistent coughs and colds. Build up of mucus (various causes) also increases the risk of chest infections so clearing this will be important in keeping this system functioning at its peak. Herbs such as elderflower and thyme are marvellous at working on this system as are elecampane, mullein and coltsfoot in clearing the chest of mucus.
Endocrine (hormonal)	This system covers a broad area and must be addressed specifically. For eg. Ginseng is good for stress and enabling the body to cope with it by adjusting to external pressures. It works directly on the adrenal glands (the organ responsible for producing adrenaline). Another example is the hormonally-active herb chaste berry (also known as agnus castus) which has a stimulating and normalising effect on the pituitary gland functions, in particular progesterone secretion. In this respect, it is often included in prescriptions for regulating the menstrual cycle and in PMS. However, because hormones cover such a wide spectrum, it is best to seek professional and comprehensive advice from a medical herbalist.
Heart & Circulation (Cardiovascular)	A number of different herbs have been attributed to improving the cardiovascular system which starts at the most important organ, the heart. Strengthening heart muscle can produce a more

	powerful heartbeat and blood can be pushed out more effectively. The heartbeat can also be regulated – Adonis (pheasant's eye or false hellebore) can be useful here. To improve localised and central circulation a number of herbs are useful including hawthorn berries, cayenne pepper, motherwort, ginger and ginkgo. For this system in particular, self-medication is not advised (not least because most of these herbs are not available for sale to the public) so a consultation with a medical herbalist is strongly recommended.
Musculo-skeletal	Joints and muscles require special attention, especially as we get older because of the risk of injury and symptoms that creep up due to wear and tear. To strengthen bones and connective tissue, horsetail, centella and comfrey can be used. To relax tense and cramped muscles, arnica, cramp bark or valerian can be used. Arnica is also known for its ability to reduce bruising. However, a consultation with a medical herbalist can identify specific areas for attention and they can prescribe the most suitable combination that is individually tailored.

### Preventing illness – the cleansing action of herbs

Many advocates of alternative health measures believe that most illnesses can be avoided by not only adopting healthy lifestyles but that illness is caused by the inadequate removal of waste products and poor functioning of one or more of the body systems. Worse still, the longer it continues to malfunction, the greater the likelihood of toxins being reabsorbed back into the bloodstream and cells presenting a fresh challenge to the immune system and a whole new cycle of clearing the system of these substances begin. The cleansing action of specific herbs in eliminating such waste products and toxins have merit in being fundamental in the preventative measures taken to enhance and maintain optimum health and well-being.

The cleansing action of certain herbs on specific organ systems may take many forms but notably they are either eliminating, toning or defending. Each herb has a unique set of properties and actions all of which contribute to the overall health status of the person. The actions of such herbs can be briefly categorised as follows and described below.

Eliminating	Cleansing & Toning	Defence
Laxatives	Alteratives (deputatives)	Anti-microbials
Diuretics	Lymphatic tonics	Immune boosters
Diaphoretics	Other tonics	Diaphoretics
Expectorants	Adaptogens	

### Elimination and Cleansing

<b>Herb action</b>	<b>Definition</b>	<b>examples</b>
Laxatives	Promotes increased bowel movement	buckthorn, rhubarb, senna
Diuretics	Stimulates the production & flow of urine	Celery, dandelion (leaf), cornsilk
Diaphoretics	Promotes sweating by the skin. Indirectly, they can also be useful in reducing fever by cooling the body down through increased sweating	Cayenne, angelica, boneset
Expectorants	Removes excess mucus from the respiratory system incl the lungs by stimulating coughing	Thyme, licorice, coltsfoot, white horehound, elecampane
Hepatics	Assists in the many functions of the liver incl its detoxifying role	Dandelion, milk thistle, <i>Schisandra</i> (Chinese magnolia vine)

### Toning

<b>Herb action</b>	<b>Definition</b>	<b>examples</b>
Alteratives	<p>Gradually restores balance to the body by working specifically on the areas out of balance which may be the cause of illness.</p> <p>Increases vitality and a good overall tonic for the body systems.</p> <p>Removes toxins from the cells and releases them into the bloodstream to be subsequently eliminated from the body.</p> <p>Accumulation of toxins leads to illness so its removal is vital to health</p>	Yellow dock, red clover, nettles, heartsease, blue flag

	& well-being. This will gradually restore balance.	
Lymphatic tonics	Specifically promotes the healthy functioning of the lymphatic system (one of the systems involved in clearing the body of toxins)	Marigold, cleavers, burdock, echinacea
Specific tonics	Herbal formulations designed specifically to promote the healthy functioning of specific organs or systems	Specific herbs chosen for the organ or system being addressed
Adaptogens	Assists the body in coping with external pressures incl stress. They also support the normal functioning of body systems	Siberian ginseng, Indian ginseng

## Defence

<b>Herb action</b>	<b>Definition</b>	<b>examples</b>
Anti-microbials	Combat infection directly by destroying the infective agent or inhibiting its effects within the body. Not all anti-microbial mechanism of action are fully understood	Garlic, goldenseal, wormwood, thyme, echinacea
Diaphoretics	Promoting the sweating process encourages the removal of the infective agents or their toxins through the skin	Boneset, cayenne, ginger all promote the sweating process
	Increased sweating can indirectly promote the cooling of the body and thus reduce fever. This will subsequently	Elderflower berries, peppermint, thyme, angelica

	eliminate infections	
Immune boosters	Boosts the body's natural defence mechanisms and protect the body against infection or disease	Siberian ginseng, wild indigo

This book provides advice and informative guidance on maintaining optimum health and well-being by tackling the constraints of modern living and offering holistic solutions for all. Important advice is given on the criteria for choosing and buying herbal products and it describes Integrative Medicine and its role within modern healthcare. Also lists the A-Z of common ailments and effective herbal treatments with a comprehensive review of the health essentials including diet, sleep, mood and energy.

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