



**HEALTH AND WELLNESS**

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***Introduction***

Nutritional and Life style Medicine is the study of the interactions of nutritional and life style factors with human physiology, biochemistry, pathology and anatomy and the clinical application of these interactions in the optimisation of health and the prevention and treatment of disease.

It is a system of therapeutics and counselling that favours dietary changes and the use of nutrient substances in appropriate doses to encourage physiological balance.

**There are three legs to this programme.**

- 1. Mastery of mind or life,**
  - 2. Release of stress**
  - 3. Support from family, relationships, friends and community.**
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## **The three legs to health and Wellness**

### **Nutrition is a key determinant of health**

**Eliminate age accelerating, cognitive depleting and life shortening habits**, e.g. quitting smoking, drinking alcohol in moderation, wearing a seat belt, avoid inhaling second-hand smoke, avoid breathing polluted air, avoid exposure to ultra violet rays, avoid eating processed food, avoid being exposed to X Rays, avoid being exposed to low levels of electromagnetic fields such as those produced by high power wires, computers, clock radios, hair dryers, electric shavers, etc.

**Weight Loss** Over 50% of Australians are either obese or over weight and are inactive. It is essential to eat a low fat, complex carbohydrate, high fibre diet, replete with at least 40 varieties of different kinds of foods a week, including a lot of vegetables, salads and fruits with over 1 and half litres of distilled or filtered water a day. Also, it is important to eat a omega 3 unsaturated fatty acids of fish oils with plenty of fish dishes, or at least 3 fish dishes a week. The fish chosen should be especially salmon, sardine, mackerel or tuna.

**Establish a regular programme of exercise.** The latest research shows that incremental physical activity is as important as sustained exercise, as long as e.g. one hour of walking a day. This will help to enhance the functioning of the cardiovascular system and decrease fat.

A good way of measuring activity, is to use a pedometer which is set to a 1 metre stride and to ensure there are at least 7 and half thousand metres or strides done a day. If a person does 10,000 strides this is guaranteed to lose weight and fat. There can be a pyramid of exercise where incremental activity of walking is increased to 30 minutes of accumulated, moderate intense activity on most days, and then to regular vigorous activity 3 to 4 days a week. This is on top of the pyramid and includes the other components already mentioned.

**Control excessive free radical reactions.** Left unchecked, free radicals contribute to aging and age-related disease. A variety of antioxidant and nutrients like vitamins A,C, and E, the mineral selenium and other substances like proanthocyanidin, lycopene, lipoic acid, green tea extract and N-acetyl Cysteine can inhibit free radical reactions and help slow the aging process.

**Maintain a nutritional supplementation programme**, which includes at least a multi nutrient formula, a multi mineral formula and a phyto nutrient formula.

**Use a nutritional, hormonal supplement** dependent on the degree of cognitive defect. Such a formula would include melatonin and DHEA as well as growth hormone.

### **Megabrain nutrients or Smart drugs include:**

1. The use of nootropic to boost the intuitive areas of the brain, i.e. paraceteman.
2. The use of cholonegic nutrient to stimulate activity of acetylcholine(1)DMAE (2)phosphatidyl serine or phosphatidyl choline.
3. Use of cerebrovasordilators to increase blood flow and therefore oxygen flow to the brain, e.g. ginkgo biloba.

### ***RELEASE OF STRESS & MASTERY OF MIND***

**Relaxation exercises** including connected breathing, yogic stretching, yogic postures, autogenic relaxation, and guided visualization for relaxation of the parasympathetic nervous system, to decrease stress reaction and enhance relaxation.

**Chanting meditation.** To boost up the immune system by stimulating the biomeridians of the body and also to increase relaxation and release stress .**Chant "Nam Myoho Renge Kyo"**.

**Encouragement of brain wave attunement to alpha or theta** through neuro biofeedback machine, neuro data software, sound light machine, sound light bio feedback, subliminal tape recordings.

***Support from family, relationships, friends and community.***

**Enhancement of positive reinforcement and self esteem** through support groups which enhance a person's wellbeing and enjoyment of life with laughter and a sense of creativity and awe. This will include any form of art, music, literature, and brain stimulation to enhance the connections of the dendrites between the nerve cells in the brain, and will also include such things as crosswords and mental exercises. This will also include attuning to nature and walking in nature, and that includes walking in botanic gardens, forests and the wilderness, and experiencing the real forces of nature directly, including air, earth, fire and water.

**The key to wellness and prevention of illness,** is change and variety. It requires an effort to maintain a lifestyle change which includes mind over matter and matter over mind. It includes going into new avenues of experience and challenging the self in order to take the limits off the self. It espouses the unlimited potential of the mind and the assumption that the mind has unlimited ability to absorb information, and to be able to express itself in a way that is revitalizing and functional for the whole biological wellbeing of the body.

## ***Ten social determinants of health - Sir Michael Marmot***

### **Social and economic circumstances strongly effect health throughout life.**

1. Stress harms health.
2. The effects of early development in the neo-natal period and infancy last a lifetime.
3. Social exclusion creates suffering and morbidity.
4. Stress in the workplace increases the risk of disease
5. Job security increases health, well-being and job satisfaction. Unemployment is deleterious to health.
6. Social support, friendship, good social relations and strong supportive networks improve health at home, work and in the community.
7. Addiction to drugs and alcohol is influenced by social determinants.
8. Nutrition is a key determinant of health.
9. Transport through the use of walking and exercise in a sustainable environment enhances health.

### ***DISCUSSION - The Morbidity Data***

The future of our planet lies not so much in hardware, but in software, particularly in genius and creativity, and that requires new kinds of individuals who are open and cosmopolitan in nature. Albert Einstein said, "If humankind is to survive, there has to be a substantially new manner of thinking." A more rounded culture seeks to unlock the powers of the mind and the brain in order for people to speak from their hearts.

The morbidity from illness in our world is at crisis level There is an epidemic of obesity throughout the world, particularly in America and Australia this is associated with an epidemic of diabetes. We have failed to deal with the degenerative diseases of Western society, the epidemic of AIDS, and the spread of new diseases and new resistant bacteria due to climate change and the wide use of antibiotics.

The greatest killer in our society is cardiovascular disease. In Australia one person dies of a heart attack every ten minutes. One in ten people with end up with cancer of the colon. In Australia, two out of three people will end up with skin cancer. Fifty percent of adult Australians have hypertension and thirty percent have raised cholesterol.

Sixty three percent of people attending general practice have some evidence of mental disorder. Twenty five percent are disabling. Young people with mental disorder are particularly poorly served by our current general medical practice system. This is a remarkable finding as eighty percent of the Australian population attend general medical practices. The major killers in our society, which are cardiovascular disease, cancer, diabetes, obesity, osteoporosis and arthritis are all related to stress, and this often has its origins in the very early developmental years of our patients. A quarter of Australian men do not reach the age of 65. The majority of these die of heart attacks and cancer. The average Australian male aged between 25 and 45 has a one in ten chance of having a

heart attack, or getting cancer and a four in ten chance of being disabled by an accident or illness by the age of 65.

The cost of our health service is enormous and it cannot continue to rely on band-aid approaches, particularly as the mass of the populace is becoming more aware of the importance and significance of holistic medicine and the way that rapport and understanding from a genuine health professional can help them heal. It is predicted that by the year 2015, one in three people will be suffering from a form of depression which will be severe enough to require medication. It has been said quite simply by Professor Montgomery at Bond University in Queensland, that depression can also be treated by psycho-social means, without the use of drugs whatsoever. Surely this would be a better option. (And exercise has been shown to be more effective than anti-depressants - possibly somewhat due to the 'social aspects' of exercise, but also due to the exercise itself - English study.

Medicine is tremendous in its ability to cater for the acute emergency or illness, but when we see that the majority of our population is suffering from degenerative diseases, and will, as they age suffer from more chronic problems, such as dementia, we realise that there must be other ways of healing.

Epidemiology data from Australia and the USA show that there has been no improvement in cancer mortality in males and females in the last fifty years. In fact in males, there has been an increase in mortality over the past fifty years.

Men have 1.3 times more cancer incidents than women. The survival of the commonest cancers has not altered for many years. Five year survival of lung cancer is ten percent, bowel is thirty five percent, breast is sixty five percent, pancreas is two percent and stomach is ten percent. John Bailar who is a very reputable professor of Epidemiology in the USA has stated that the increase in cancer death rates by seven percent during 1975 and 1999 cannot be explained by aging. "A decade of wars against cancer has been a qualified failure."

We cannot solve the problems of society with minds and intellect alone. We have to use our hearts, and use the new wisdom of functional medicine, psycho-social-neuro-endocrine-immunology and the life sciences. Cardiovascular disease, cancer, diabetes, obesity, suicide, road traffic accidents, AIDS, infectious diseases in the developing world, war, poverty and famine are killers of our society worldwide. Unless we can create a more equitable, sustainable, cooperative and caring society, how can we survive?

### ***The Evolution of Medicine***

In medicine, the phenomenon of healing as seen in holistic approaches, is lost. It is the most serious indictment on our conventional approaches. In its reduction of the body for analysis to smaller and smaller fragments, the patient as a human being is lost and health is reduced to a mechanical function.

The rise of modern scientific medicine began in the nineteenth century, but Descartes introduced the conception of the separation of mind and body. In looking at the relationship between medicine and health, we have to look at the health of the individual and the health of our society.

Although there has been an increase in life-expectancy, this does not give an indication of quality of health. It is the dramatic development in the history of public health that led to the sharp decline in infectious diseases in the nineteenth century.

Haggerty has done experiments which show that medical technology alone is unable to bring about significant changes in diseases. The conclusion from many studies is that conventional medical interventions although extremely helpful in individual emergencies have very little effect on the health of entire populations. This is despite the exorbitant cost of modern medicine.

The health of human beings is predominantly determined, not by medical intervention, but by their behaviour, their nutrition and the nature of their environment. 25% of our population are sufficiently troubled psychologically to need therapy. There is an alarming rise in alcoholism, violent crimes, accident and suicides ..... all symptoms of a social illness.

We are in the midst of a profound social crisis, and the only way to gain a more caring and integrated society is by changing our attitudes to ourselves and to one another. We have to look at ourselves as being basically positive and healthy, rather than innately destructive, suffering and fearful.

Conventional medicine is, in my opinion, a mirror of society, representing in its practice, more than any other profession, the mechanistic and technological aspects of society. It also mirrors the repressive, authoritarian, restrictive conditioning aspects of society. This is because there is a mutual conspiracy between doctor and client in that the patients expect to be told what to do. They see themselves as having no part of play in the therapy and see the illness as separate from them. In this conspiracy, ethical and legal responsibility is placed on the doctor to cure.

Illness, diseased organs and systems are treated without regard to the patient who wants instant cures, like he wants instant food. Treatments are mainly allopathic - with experiments made often on live animals to prove the efficacy of modern drugs. Despite the so-called proof of efficacy, a certain percentage of hospital beds are consistently peopled with individuals with iatrogenic illness (illness caused by the drugs themselves). 16% of patients who are treated in hospitals either come out worse or are deceased due to medical mismanagement. Despite the glaring inadequacies of the biomedical system, governments refuse to do anything about it. In fact in the United States, the cost of medical care is so huge - it is almost unmanageable.

The pharmaceutical industry is a huge commercial institution - very profitable to governments. Tranquilizers and sedatives are the most abused drugs and also I would

add, antibiotics. We still do not know the long term effects of the use of antibiotics - particularly on the immune system of the body. The G.P.'s are the unpaid servants of the pharmaceutical industry. In the western world apart from the United States, their pay is insufficient to give them the opportunity to spend time on preventative medicine.

They are forced to prescribe instant cures or allopathic bandaids which have no bearing on truly healing the individuals they see.

We need a profound renaissance in western medical care which follows Osler's dictum. Osler, the brilliant physician who lived a hundred years ago said that medicine is an art which considers the constitution of the patient and has principles of action and reason in each case [Plato]. We have to bring back value and quality into medicine and that means value and quality in both the lives of the doctors as well as the patients they treat. So many hospitals treat morbidity like generals deal with civilian casualties in war i.e. collateral damage.

### ***"reculer pour mieux sauter"***

We have to create a "reculer pour mieux sauter" to revalue the human psyche and human being and to bring commitment, compassion and caring back into hospital wards and general practice. This means that doctors need to spend more time with their patients and patients need to take some responsibility for their general health.

The enormous advances in technology have created a user-friendly society where it would seem that all our desires can be satisfied by the press of a button or the flick of a switch. It is a society geared to the satisfaction of our desires and the fulfillment of our addiction potential.

The flexing of our technological muscle seems to give us more domination over nature and science seems to be discovering the very nature of our essential biological makeups. Instant food, instant communication via mobile phone or Internet, fast transport, and robotic services in the home and at work. We seem to have everything to the extent that our physical activity has become limited as more and more things are being done for us by technology.

This seeming dreamlike utopia is the veneer or the tip of the iceberg because underneath we see a society alienated and out of touch with an environment that is being destroyed to such an extent that we are losing the biodiversity of species on the planet. Globally and nationally we see the results of our labours including increased social disintegration, failure to cure the degenerative diseases of our time, an increase in wars on a global scale, and with the mass of population, a vast increase in stress and depression to the extent that it has been predicted that by the year 2020, one in three people will be suffering from depression.

The problems of overpopulation, the global military machine, and the destruction of living and nonliving resources on the planet were never properly discussed at the UN

conferences including the Rio Summit in 1992. Despite this constant need to control nature and exploit nature, we have no understanding of the effect of destruction of the finite resources on our planet, and economic rationalism compels us towards an imperative which is self destructive.

In the past, people relied on what is now considered to be hidden or unproven potential in human beings to heal themselves through mind over matter. Thus the Shamans had the ability to heal by channeling the life force to heal themselves and their patients. The Yogi was able to master his bodily functions through a conscious biofeedback that enabled him to monitor his health. The Buddhist Monk could change the phenomena of life around him and pray for the wellness of all beings, and send out loving kindness. There was a knowledge of the interconnectedness between the person and the environment, and with the advent of the thinker Descartes, in Western religion, there was a division between God and Man, i.e. Deus ex Machina, so God became separate and objective.

Science became pre-eminent. William Harvey discovered the anatomy of the heart and circulation and the whole body was mapped with precision so medicine became objectified and people were classified as organs and systems. People became diseases. Thus there is the heart victim, and the cancer victim, and the soul and the essential spirituality within the individual was lost to medicine, and we now have a situation whereby modern medicine reduces everything to illnesses and systems, and forgets that wellness is an integration between the body, the mind, and the environment.

Perhaps this lack of understanding is the reason why the major diseases in our society are not really being cured, because scientists are still looking for solutions in reductive methods, e.g. They think they can cure an illness by changing the genetic structure of a person without realizing the abnormality may have arisen from the abnormal environment, based on stress, disordered human values, and pollution.

### **The enhancement of healing requires three things:**

**Mastery of life**

**Reduction and release of stress**

**The support of family, friends and community.**

Our modern society is overwhelmed with stress, alienation, competition, and exploitation. Stress also comes in the form of pollution, denatured food, electromagnetic frequency and the latest form of stress being the dangers of genetically engineered food. People need some say in their environment, and some say in what they are exposed to. They also need to be given the information to optimize their health and wellbeing, and this education should start in the schools.

## *Integrative Medicine*

Just as the body is composed of mind, body and spirit and works in an integrated fashion, the various illnesses, which people suffer have a common cause. Medical science is now beginning to define this cause but unfortunately because of the kind of education that doctors receive, (the bio-medical model), this means that most of the profession are not willing to open their eyes to a holistic approach.

The problem is further inflamed by the fact that medical schools seek out students who although may be very intelligent are not being educated for life itself. This is seen as such a problem in England that there is now thought of introducing arts education into the domain of medical science. The most successful medical school in Germany chooses its students on the basis of intellect and passion and also includes within its curriculum a host of complementary, holistic and nutritional education. Once the students have enrolled, their only requirement is to pass. Despite this, the university achieves the highest results in Germany.

Of course, this sentiment is being echoed by the public at large, seventy percent of whom are now also turning to naturopaths and alternative practitioners. People are looking for more than just therapy. They know that therapy can often be painful and in hospitals they are treated as anonymous numbers. People increasingly are seeking for something extra which I would term 'quality of life'.

In the New England Journal of Medicine on July 13th 2000, a paper was published estimating the overall contribution of inherited genes to the development of cancer. The paper was the combined data on 44,788 twins in Sweden, Denmark and Finland that enabled the researchers to assess the risks of cancer in twenty eight anatomical sites.

The conclusions provided remarkable information. In particular, it showed that environmental factors were the dominant determiners of site specific cancer. From this perspective, environmental exposure, particularly in regards to foods, and environmental toxins (xenobiotics) and stress is paramount in the causation and treatment of cancer.

Dean Ornish's work at San Francisco's Preventive Medicine Research Centre is impressive. Over the past ten years, Ornish has demonstrated that a comprehensive group approach which includes an extremely low fat diet, aerobic exercise, smoking cessation, yoga and meditation as well as group support can unclog plaque narrowed coronary arteries.

He published a paper in the Journal of the American Medical Association (JAMA) in 1988, in which two groups of a total of 48 patients with cardiovascular disease were trialed, the control with conventional treatment and the other group with a comprehensive lifestyle approach. The result showed massive differences in cardiovascular morbidity and mortality. At a five year follow up, coronary stenosis was increased 11.8% of controls and stenosis had decreased in 3.1% of the treatment group.

It has also been shown that regular meditation increases the diameter of the coronary artery and reduces the intima media thickness meaning that the coronary artery vessels are wider and better perfused.

The Dean Ornish program in America is supported by forty insurance companies and costs \$10,000 compared with an average cardiovascular surgical intervention which costs at least \$40,000-\$50,000.

We live in a society which is overtly stressed. There are rapid changes in lifestyle based on new technologies and also uncertainties of our future due to the irreversible destruction of our living and non-living resources and the threat of massive climatic change. There is increasing inequality between the wealthy and the poor to the extent that poverty and socio-economic deprivation is endemic even in the so called developed countries of America, England and the USA.

More and more quality of life is judged in terms of wealth rather than in terms of such immeasurable faculties such as happiness, creativity, well being, generosity of spirit and a sense of compassion and connectedness. Even the education system is focused on the needs of big business and children are narrowly focused on aims which do not enhance their health or create a wider knowledge of their understanding of their place in society or the nature of life itself.

The basic needs of freedom of poverty expressed by such people as Galtung, Rawls, Max-Neef and Lasswell and Maslow are not addressed for people even in higher socio-economic groups in the developed world. Such needs would address the needs specifically for affection, understanding, participation, leisure, creation, identity and freedom.

The society is so stressed that by 2010, one in three people will be suffering from depression which psychiatrists consider needs medical treatment by drugs. So we come to the brave new world of Aldous Huxley where the workers are placed on soma to blunt their conception of what freedom or real quality of life is.

The scientific work in medicine done on the effects of a stressed society on disease really started with the work of Dr David Spiegel at Stanford University. In 1989, his very significant work on the effect of psychosocial treatment on the survival of patients with metastatic breast cancer was published in the Lancet. 86 patients were split into two groups. Both groups had routine cancer therapy. However, the treatment group had a one year intervention consisting of a weekly supportive group therapy. The study showed survival time for the intervention group was 36.6 months compared with 18.9 months for the controlled group. This means that psychosocial treatment increased the survival of breast cancer patients twice.

The kind of information, I have given you regarding cancer, cardiovascular disease and lifestyle change has been all but ignored by the medical profession at large. But, it does point to the way stress and the release of stress has on the management and treatment of

both cancer and cardiovascular disease and probably most diseases of western society.

I therefore feel that powerful psychosocial changes need to be implemented for the general population if we are to create a more co-operative and healed society. Most doctors seek for a band-aid approach and instant cures.

The treatment of illness is considered more significant than prevention. There should be a new medicine based on the creation of health rather than the treatment of illness.

### ***psycho neuro immunology***

Altering a sick individual's state or mood and beliefs alters the individual's immune system. Mind technology is simply a modern way of applying ancient wisdom techniques. The field of psycho neuro immunology shows that the body is far more responsive to mental influence or mind than has been previously thought especially through neuro biofeedback where voluntary control can be established over virtually any biological process. Mind technology can enhance the feats that only ancient yogas used to be able to do. By producing profound relaxation and ways of releasing stress, mind tools free up the body's self-regulating, self-healing and self-regenerating power, and the body is given freedom to restore homeostasis and health.

### ***mind and matter***

A further way of stating this is to say that, in fact, mind and matter are essentially the same process. If we use this concept from a biological scientist's point of view, we would say that mind is but an epiphenomenon of the brain, and with appropriate mental exercises the brain can be enhanced and interconnections increased even though it is failing.

However, if we look at this from the point of view of physics, and particularly quantum mechanics, where we know that the consciousness of the observer, influences the experiment, or where the position of an electron in a cloud chamber can only be statistically realized, then there is an uncertainty principle or enigma here which perhaps is a key to revitalization.

The enfolded or implicate order of the Universe David Bohm, the physicist, talks of the enfolded or implicate order, the key feature of which is, in his words, "the whole universe is in some way enfolded into everything and that each thing is enfolded in the whole". In other words, there are two sides to the reality - the reality of the universe and the reality of our biological selves, but these two realities are linked by active information, and it is this common pool of information which enables us to be alive and functioning in a seemingly homeostatic universe. The conclusion is if we use this information correctly, enhancing our wisdom, we can then rejuvenate and revitalize ourselves. We enhance our wisdom by techniques and ways which are far from contemporary but are found in the wisdom of indigenous peoples of the world and in the ancient wisdom of humanity.

Perhaps the one of the major differences between being a complete human being and being an animal is the fact that such a human being can modify their aging process as they wish, by the development of enlightenment or wisdom.

### *Happiness*

The way our media and commercial advertising tend to define happiness is in terms of our material possession- whether it be financial wealth, the size of our house, the number of luxury items we own, the type of car we drive, and all the goods that we can buy in our consumer society. But this really does not tell us anything about the individual's inner life. The media hype implies that a person who has all of these desirable material things will have his needs met and will be a happier and more popular person. We still do not know about the inner life of the person. We do not know whether such things actually make him or her happy and promise quality of life.

Freud said that humanity is defined by difficulty in delaying the satisfaction of desires and the need to always have more and more desires to be satisfied. He also defined the two major driving forces within the essence of humanity as being the drive for life, or eros, and the drive for death, or thanatos. He felt that because of the human predicament of the need to satisfy desires, it is very difficult to attain a sustained equilibrium, unless one has the maturity to delay desire. For many people, there is no ability to be able to control desires, or control suffering, and desires and suffering are part of the one spectrum that is exhibited by all life which is motivated to survive at all costs.

People are constantly changing because their environments change. They meet new people, there may be loss or there may be gain. More than three thousand years ago, the Buddha noted the impermanence of all things, and the temporary nature of all phenomena. For people in this day and age, phenomena change very rapidly, and in a rapidly changing society, people do not know how to cope. Stress is definitely on the increase, to such an extent that by the year 2015, one in three people will have experienced some form of severe depression in their lives requiring a degree of medication.

Although people differ constitutionally and genetically in their predisposition to stress, neurosis and psychosis, within all conditions there is an unknown factor, that I would call the mystical factor, which can be called upon by many people in times of extreme stress, or the dark night of the soul, or in times of severe suffering, which can often bring about miraculous change and improvement.

Happiness is, to be creative, to be optimistic, to be full of joy, to be steadfast in the face of suffering, to have strength, vitality and spirit.

I think this kind of super quality has in it the ingredients of wholism, self-responsibility and inspiration. The purpose of antiaging is the search for life extension with quality of life and happiness.

## ***The Evolution of the Brain and the Bio-mind***

### **Three lifestyle factors for life extension and revitalisation.**

#### **Mastery of life, release of stress and support of the community.**

Our brain and our total sensorium evolves within and with the environment as our body grows. We are physically attuned to the environment in an inextricable way which both moulds our bodies and our perceptive faculties. In this respect, the total substance of our body contains memory of all trauma and all experiences just as much as the physical structure of the brain does. Although the number of neurones do not increase, the interconnections between them increase at an exponential rate throughout life. There are more neuronal connections in the brain than the number of stars in the universe.

#### ***Attunement to the Environment***

Thus we are attuned to our environment and the moving stimuli in it, particularly the electromagnetic and vibrational stimuli and patterns that impinge on our total sensorium as we grow and evolve.

The human brain undergoes two rapid bouts of re-mapping, or re-shaping. The one already mentioned is during the neo-natal period. The other occurs during puberty, around the ages of seventeen and eighteen, when 20% of the brain is remodelled, and neurons are lost and replaced, and further connections are made.

It therefore seems that the human brain is a very powerful determinant and expression of socio-cultural factors. In fact, it is very clear that once the brain is mapped in a certain way, it is very difficult to change the mapping. Unless children are able to obtain a sense of self esteem and self-worth during the early years of their lives, it is very difficult to achieve this later.

A famous experiment has shown that if a child is born with a cataract, the child will still not be able to see with that eye even though the cataract has been removed in the neo-natal period. This is because the appropriate "brain-wiring" for sight has not been allowed to occur in the earlier stages of development.

When the brain models itself, it models the apperceptive pointers within the total environment. It is the fusion of the individual and the environment that creates the person. We are not isolated individuals. We are interconnected with, and are intrinsically a part of our society. The key to the future is a society which is positively interconnected with co-operation and compassion. This is a cultural precedent for a successful nation.

#### ***The Threat of Loss***

One of the greatest sociological and psychological factors facing an individual child is the threat of loss. The threat of loss or separation is one of the greatest emotional traumas

that a human being can face. It may be the threat of separation from parents, family, peers, teacher, friends, from familiar surroundings, from society, and ultimately from life itself. This threat of loss, or feeling of hurt, which is innate in all individuals, is expressed and determined in certain ways depending on early childhood rearing.

The child who is nurtured, touched and loved is able to cope with these feelings. But a lot of children are not able to do this and end up with feelings of hurt, shame, guilt, aggression and fear, and this is the basis on which psychoanalysis and psychotherapy function.

What a society in rapid change and renaissance, or rebirth, needs, is to give everyone the opportunity to connect with each other at a core level which transcends all differences. We would be thus connecting with the basic life giving attributes of the self, which Freud called the Eros. This is a universal form of orientation and devotion based on true value within the community at large.

### ***The Search for Truth and Authenticity***

Currently there is a change occurring in the way people view themselves and society. There is a sense in which there is an urgent need for love and truth. This is not necessarily a religious process, but it is certainly based on the deepest recesses of the bio-mind matrix and its connection with the universe itself.

Vaclav Havel, President of Czechoslovakia has said, "Without a global revolution of human consciousness, nothing will change for the better in the sphere of being as humans and the catastrophe towards which this world is headed, be it ecological, demographic, social or the general breakdown of civilisation, will be unavoidable."

In some indigenous communities, which still use natural forms of medicine, the ill person is seen as expressing guilt, and there is a need for atonement, or at-one-ment, in order to resolve the illness. This atonement is based on the libation paid to the ancestors, so the entire community can assuage the feeling of guilt. It is with the consensus of the tribe that the individual is then forgiven, the guilt resolved, and the illness cured. The individual is not treated as an isolated entity, but part of the community, because his illness also affects the community.

The basic healing process occurring in the above example is faith. The success of many non-traditional approaches is dependent upon the recipients of the treatment believing that it will work. A more wholistic approach to the treatment of human disease, understanding the power which thought processes and expectations can have on the course of the disease combined with traditional medical approaches will yield increasing dividends to medical research and be very cost-efficient.

## ***The Placebo Effect***

Prof. Hans Eysenck, Professor of Psychology at the University of London, and Professor Herbert Benson, the Harvard Physician, have said that the placebo effect plays an enormous part in the cure of illness, accounting for up to 50% of cures. The patient's belief that the placebo will cure them is another form of faith.

Herbert Benson has said that the brain is "hard-wired" for faith, and that if people have a belief in something, they have passion for themselves and for others. This creates a tremendous generative force within the context of their own minds and bodies, as well as in the context of the hearts and minds of others.

Dr Candice Pert, one of the pioneers of psycho-neuro-immunology has done innovative research into the mind-body connection. Her research has shown that there are numerous lines of communication between the brain and the body in addition to synaptic nerve connections. Peptides, including hormones, neuro-transmitters, neuro-modulators, growth factors, gut peptides, cytokines and chemokines, are informational substances distributing information throughout the organism. They are found in the body organs and systems as well as in the brain, and are also the basis of emotions, behaviours and memory.

What we don't realise is the power of faith. Not enough research has been done into the significance of placebo response. Henry Beecher, Prof. Of Anesthesiology at Harvard reviewed available medical literature and found that placebos are on the average 55% as powerful as the drugs being tested or the condition being treated. Herbert Benson, Physician, Harvard Medical School has said the brain is hard wired for faith. Suzanne Ouellete, New York City University found that people who stay healthy under significant stress have three factors of stress hardiness namely, control, commitment and challenge. I may further add that the basis of health lies in lifestyle factors rather than the biomedical values of contemporary medicine. These lifestyle factors are based on three legs of a stool. Mastery of life, release of stress and support of the community. Adding these to the factors of stress hardiness gives us a way of coping with the current crisis that humanity is undergoing.

We have to understand that education perse is not the answer to survival. We need new kinds of human beings who use the new ways of healing, self-responsibility and understand the nature and workings of a human body and soul.

## ***The Control Factor***

The other facility for enabling people to lead secure and fulfilling lives is the matter of control. Professor Michael Marmot did the famous Whitehall study, in which he looked for the reasons for illness in a relatively stable population of civil servants. He found that there was a definite gradient of morbidity based on the position of the individual civil servant within the hierarchy. This gradient was associated with stress indicators such as serum fibrinogen, serum cholesterol, hypertrophy of the heart, obesity and diabetes. It was also related to factors such as lifestyle, and support of family and friends. However,

beyond all of this was an extra factor, making up around 60% of the morbidity, which could not be identified. The statistical information was complete when the missing X factor was found to be the degree of control the employees felt they had in their work situation. In fact, the civil servants on level 2 hierarchy were twice as likely to suffer from a life threatening disease than those on level 1; level 1 being the top level. Marmot therefore has defined a new factor in the incidence of stress in adults as being control of destiny.

What this means is that if people have a sense of mastery in their lives, and the commitment to their job, without feeling imposed upon, enforced or restricted by their superiors, they are much more likely to be successful and healthy.

Repressive institutions and bureaucracies that label people as numbers, rather than as human beings, and force people into moulds and do not allow them to express their individuality, destroy the creative ability of a workforce and the economic success of a nation.

### ***Ten social determinants of health:***

Professor Marmot produced ten social determinants of health for the World Health Organisation, which are:

1. Social and economic circumstances strongly effect health.
2. Stress harms health.
3. The effects of early development in the neo-natal period and infancy last a lifetime.
4. Social exclusion creates suffering and morbidity.
5. Stress in the workplace increases the risk of disease.
6. Job security increases health, well-being and job satisfaction. Unemployment is deleterious to health.
7. Social support, friendship, good social relations and strong supportive networks improve health at home, work and in the community.
8. Addiction to drugs and alcohol is influenced by social determinants.
9. Nutrition is a key determinant of health.
10. Transport through the use of walking and exercise in a sustainable environment.

### ***Stress***

The incidence of stress in our society is rising, and scientists in general, and doctors in particular, do not understand the effect the mind can have on reducing and controlling stress. They do not understand the significance of early childhood rearing, and the fact that the pointers to a person's destiny are found within the way they are reared in the first twelve months of life. These pointers are not only to educational attainment, but also to delinquency, criminality and morbidity.

The problem of stress is further compromised by the stresses that occur within the context of society, as previously discussed, particularly in the work situation. If people are forced

to work in situations which are controlling and restrictive, and in which they are not allowed to contribute to decisions and management, they will get sick!

### ***Dementia***

Vast amounts of money are being spent for research into cognition-enhancing drugs, by huge, wealthy, pharmaceutical companies. There is a race to develop patentable memory enhancement drugs. To the winner will go tremendous wealth. The problem is that the drug authorities will only approve drugs that treat illness. They will not approve drugs that improve people's memories or boost intelligence. Also, the big pharmaceutical companies have little interest in exploring cognition enhancement properties of substances, such as herbs, vitamins and other substances which cannot be patented.

Dementia is defined as a chronic or persistent upset of mental process due to organic brain disease and is characterized by:

- Memory loss
- Personality change
- Lack of interest in personal care
- Impaired reasoning ability
- Disorientation.

Alzheimer's Disease is a progressive form of dementia occurring in middle age or later. The exact course is not yet known. It is characterized by neurofibrillary tangles specifically in the cerebral cortex and the hippocampus. Senescent astrocytes and cell death commence in the hippocampus and amygdala. It has been speculated that Alzheimer's maybe an auto immune disease. It affects 5 to 7% people over 65 and 20% of people over 80 and is more prevalent in females than males. There is also a genetic predisposition. Diseases of the cardiovascular system, the excretory system, the immune system, are also associated with dementia.

Age associated memory impairment, also known as AAMI is memory decline of people 50 and over.

The practical pharmacological approaches currently available for treatment of Alzheimer's Disease include, cholinesterase inhibitors, antioxidants, e.g. Vitamin E, anti inflammatory agents, estrogen, seligiline, vasoactive agents and ginkgo biloba.

In the Commentary Combination Therapy for early Alzheimer's Disease "What are we waiting for?" Doraiswamy and Setffens, Dept of Psychiatry and Behavioural Sciences, Dukes University Medical Centre recommend a combination of the aforementioned substances most of which would include cholinesterase inhibitors. They also make the point that the widespread use of multi-drug therapies, for Alzheimer's Disease, without the evidence-based support, reflects a desperation of families and providers. This article was written in 1998, and appears to be totally unaware of the work of Dr Dharma Singh Khalsa, who had already provided a treatment protocol for patients with either brain degeneration or associated memory impairment, or dementia. His protocol included a

combination of herbs, vitamins and pharmaceuticals, together with meditation, yogic and mental exercise programme.

## **APPENDIX**

### ***The Hormonal Cascade:***

The body ages from the brain downward, from the pineal to the limbic system, to the pituitary, to the end organs. The cascade of hormones from the pituitary determines sexuality, emotions, intelligence and immunity. To offset aging and degeneration of the hormonal system hormones need to be replaced from the brain downward.

### ***Replacement Substances***

<b>Level on Cascade</b>	<b>Replacement Substance</b>
Pineal Gland	Melatonin
Hypothalamus	Deprenyl
	Acetyl-Carnitine
Pituitary	Growth Hormone
Adrenals	DHEA
Testes	Testosterone
Ovaries	Estrogens
	Progesterone

Women suffer more from Alzheimers than men. They also live longer than men, and their life span is increasing significantly. Although women lose over 90% of their estrogen at menopause, men do not show much estrogen decline, with aging, as they have sufficient testosterone to convert to estrogen if required. Estrogen deficit reduces intelligence and memory and contributes toward dementia. Dr A Paganini-Hill and Dr. Victor Henderson in Los Angeles, found that women who were on estrogen replacement therapy had a much lower incidence of Alzheimers. A huge number of prescription drugs, produce impotence as a side effect and drugs interfere with the hormone cascade.

The multiple causes of testosterone decline are rarely a problem of the testes alone. The birth pill appears to increase the risk of breast cancer and causes libidinal and emotional suppression.

Human Growth Hormone is rarely required for rejuvenation or anti-aging. It has been flagrantly promoted and widely abused. It is the most powerful anabolic hormone and its side effects include carpal tunnel syndrome, fluid retention, joint pain, pancreatitis, hypoglycaemia, and onset diabetes. Exercise increases growth hormone and IGF-1. Also, DHEA raises IGF-1.

Acetyl-L-carnitine is an antioxidant that prevents peroxidation of the brain and reduces the buildup of lipofuscin. Multiple studies show improvement in Alzheimers with acetyl-L-carnitine supplements. Clinical studies show it benefits dopamine directly and also stimulates acetyl-L-choline. Acetyl-L-carnitine preserves both the brain and libido. The L-carnitine has to be acetylated in order to get through the brain blood barrier. It then has its potent effect of increasing acetyl-L-choline levels as well as dopamine levels. Acetylcholine and dopamine are key neurotransmitters. Dopamine controls sexual functions in the sexual areas of the brain, and deprenyl is the most popular anti-aging substance used, in Europe.

***IN THE MANAGEMENT OF BRAIN LONGEVITY, IT IS IMPORTANT NEVER TO REPLACE ANYTHING AT ANY POINT ON THE HORMONAL CASCADE UNLESS IT IS ENSURED THAT CONTROLLING HORMONES, AND OTHER CHEMICALS UPSTREAM HAVE ALSO BEEN RESTORED TO YOUTHFUL LEVELS, SO THAT THEY CAN WORK IN SYNERGY WITH THE NEW DOWNSTREAM INFLUX.***

Dr Dharma Singh Khalsa believes that excessive cortisol production is one of the primary causes of death of brain cells. He says that cortisol is so toxic to the brain that it kills and injures billions of brain cells. He says when cortisol is released in a stressful situation, it inhibits blood sugar utilisation by the hippocampus, so that the brain cannot lay down a memory. Cortisol overproduction also interferes with the function of the brain's neurotransmitters and inhibits mental concentration. Cortisol also kills brain cells through the production of free radicals by causing excess calcium to enter the brain cells. Gin Seng stops excessive cortisol release by decreasing demand for cortisol, and Khalsa quotes many studies showing that e.g. Gin Seng helps people resist stress-related diseases and increases cognitive function.

We have witnessed a spectacular increase in the average life span in this century, which has increased from 40 to 50 years in the last century, to more than 78 years now. In the year 2000, those over 60 years old will represent 15 to 20% of the total population of the planet. In the 1950's there were 200 million people over 65, in 1985 there were 400 million - in the year 2000 there will be 600 million.

### ***Healing the Stressed Society***

Complex technologies have tremendous potential for harm. The most under used resource on the planet is the human mind.

Although we may have finite resources, we have one infinite resource which is the human mind and this faculty is the least understood aspect of humanity on the planet, and should encompass the term bio-mind which means the complete or self actualised human being.

This has particular significance in terms of the pre-eminence healing as an impact on creating a more successful, dynamic and sustainable society. If people can understand the intimate connection between the mind and body they could then realise how the power in

each of us has the ability to affect not only how we feel, but indeed how to affect the course and outcome of illnesses.

Only recently in all medical schools in the Western world, the connection between mind and body, that was the cornerstone of Hippocratic medicine, was ignored. It was in the 1930's that Cannon discovered the bodily fight and flight syndrome, a reaction to any perceived threat by a living organism. Subsequently Canadian, Hans Selye defined stress as the non-specific response of the body to any demand. In the 1970's researchers began to understand the flight and fight and stress responses were related to a variety of human disease states and more recently with the work of George Solomon, Stanford University, Robert Aider, University of Rochester and Candice Pert at John Hopkins, a new field has been mapped called psychoneuroimmunology emphasizing the interconnection between the mind, brain and the immune system.

George Engel a Professor of Medicine at the University of Rochester, has studied hundreds of patients with chronic disease over a period of twenty years.

He found that 70-80% of these people who had suffered from heart attacks, cancer, stomach ulcers, ulcerative colitis, multiple sclerosis, and other conditions had all experienced extended periods of helplessness and times when they felt like giving up.

The vulnerability of the human being is found even at the earliest age. Tiffany Field, and her colleagues at the University of Milan Research Institute showed that premature infants who were massaged several times a day for ten minutes demonstrated a 47% weight gain and were able to leave the hospital six days earlier than other prems who received only the customary hospital care. This saved the hospital costs of \$10,000 per baby per day.

### ***The Control and Moderation of Stress***

In quality of life assessment therefore we have to understand that control and moderation of stress is a prerequisite for people who wish to live long fulfilling lives.

On top of this, what quality of life surveys have not addressed is happiness and health. Happiness is not even touched in quality of life assessments. A reference can be made to the poverty outline discussed in the World Banks dissertation and research on poverty. It is interesting to see that in the context of physiological change, humanity has barely moved out of bodily integrity.

### ***Self Actualisation***

The primitive physiological drives for survival for flight and fight and hunger are the basic modus vivendi for most of humanity. What we need to emphasise and encourage in the creation of culture are the dynamic needs that Maslow so aptly describes in his dynamic hierarchy which are safety needs, belongingness and love, esteem and self

actualisation. Our current culture is a rapacious assault on peoples senses of a belief system of success at all costs, competition, exploitation of people and environment.

Healing above all else in terms of mind/body medicine is the key to creating a culture that is more sustainable and vital. A nation that is actively involved in its own healing and thereby creating a unique culture is more able to satisfy and enhance its creative needs.

Such a nation would be able to set an example to the rest of the world in terms of its creative performance and economic success. The ingredient is the development of a culture which is based on physiological happiness which then becomes the determinant for actual self actualisation both in terms of the individual and also in terms of society. This reduction of stress will also save billions of dollars in terms of the prevention of cardiovascular disease, cancer and other degenerative diseases of western society.

### ***The Healed and Creative Nation***

From this point of view, the healer comes into focus as being a significant player in the building of a knowledge and creative nation. In this aspect everyone who comes to see a physician could be helped to understand the emotional, environmental, work and social stresses that contribute to their illness.

They could be advised about proper nutrition, exercise and taught relaxation techniques, self hypnosis and other appropriate strategies for self awareness, self regulation and self actualisation. Kofi Annan has recently talked about the ecological print of unsustainability that humankind currently has on this planet. The population is currently at 6,169,232,000, and increases at about 438 every ten minutes. "Humanity must solve a complex equation". Annan said. "We must stabilise our numbers, but equally importantly we must stabilise over use of resources and ensure sustainable development for all."

The dominance of the market system has meant that the GNP does not include environmental costs and benefits, or social indicators. A new economics of sustainability should include such social indicators as literacy, education, women's rights, crime, suicide health and illness. The GNP does not reflect the way people feel about themselves, or society. In this respect, we need a new index which encompasses quality of life and wellbeing for a nation in rapid transition and renaissance.

### ***Psycho Social Influences on Aging and Health***

Within the context of mind influencing matter, there are several papers which are of interest. Firstly, it has been shown that the intellectual and emotional development of children from the age five to the completion of high school is adversely affected by lack of social capital where social capital refers to unfavourable environments which basically do not give care or support.

The affect was specifically noted in socio economically deprived families. (Quote: Paediatrics Vol. No. 101 1998, Children Who Prosper in Unfavourable Environments, The Relationship to Social Capital).

Another study has found that dementia occurs at a much higher rate amongst elderly people with learning disabilities than it does amongst the general population This is independent of the association between Dementia and Downs Syndrome. (Quote: High Prevalence of Dementia amongst People with Learning Disabilities not Attributable to Downs Syndrome, Sally Ann Cooper, Psychological Medicine 1997, No. 27.) A further study examines the perception of parental caring obtained from under-graduates, relating to subsequent health over an ensuing 35 years. This was done on Harvard under-graduate men who participated in the Harvard Mastery of Stress Study, and the results showed that subjects identified in mid-life as suffering from the common degenerative diseases of western society gave their parents significantly lower ratings as perceived in terms of parental care, loving and just, and fair and hardworking and clever whilst in college.

It is obvious that intellectual stimulation and loving, caring, support from parents, family, community, and society at large, is extremely important for the general wellbeing of the individual as well as for the prevention of intellectual deficit in later life. It also shows that there is more to the development of intellectual retardation in aging, than purely biological processes.

Family feelings, social economic forces, work status, ethnic identity and individual biological differences all come together in each of us. The whole is more than the sum of these vital parts. The new medicine takes into account these differences and realises that the biomedical model is authoritarian and takes responsibility out of the patients hands. It also presupposes that we can all be made into statistics for the benefit of double blind medical trials or evidence based medicine. This does not acknowledge the individuality of the patient and the fact that there is idiosyncrasy and difference in every person.

As Professor Roger Williams has pointed out, there are significant differences in normal peoples sensitivity to a rate of metabolism of pharmaceutical agents. Not only that, we fail to acknowledge the effect of social and economic forces on health and illness and even on peoples ability to think and cognite correctly depending upon their level of stress and their life state at a particular time. As Dr. Candace Pert has shown, the whole body is a brain and the neuropeptides existing in the cell walls of the immune system also found in the cell walls of the brain. The glial tissue of the brain has enormous immune properties. Similarly, the lymphoid tissue around the intestines contains the same neuropeptides, 60% of the immune system of the body is found around the intestines. The gut could be said to be a second brain.

Stress is ubiquitous in Western society, and particularly in Australian society. Stress is a reflection of the individual being overwhelmed by stimuli which he or she cannot cope with. Most people in our society have, allostatic load, an enormous degree of stress which they cannot cope with. This is contributing towards the high incidence of degenerative disease and depression.

### *The Gradient of Proneness to Disease and Stress*

It is now known that stress stems from early childhood experiences. In fact, recent studies (details of which are enclosed) suggest that it is lack of proper child care during the very early years that inadvertently produces the ever increasing levels of stress in our society.

Carol Bellamy, Executive Director of the **United Nations Children's Fund on the State of the World's Children**, in 1999, said, "The greater the care and stimulation a child receives, the greater the benefit, for the national economy as well as the child. The world is finally recognising that children's rights to education, growth and development, physical, cognitive, social, emotional and moral, cannot be met without a comprehensive approach to serving their needs from birth."

It has been found that there is a gradient of proneness to disease, criminal activity and drug and alcohol addiction, which stems from the quality of child rearing in the first twelve months of life. This research emphasises the fact that in the first twelve months of life, the newly born baby undergoes tremendous rewiring of the cortex. What actually happens is that up to 50% of the neuronal mass is actually lost, the newly born baby being born with more than the necessary compliment of neuronal mass to last until adult life.

What is significant is the number of connections that the baby has then to form. The number of connections that are formed depend mainly on the infant's social stimulation.

David Hubbal, who did pioneering work on vision and the brain, concluded that, "Early deprivation of social interaction such as contacts with the mother may lead to mental disturbances that have their counterparts in **actual structural abnormalities** in the brain."

Things such as whether or not the baby is breast fed, the way the baby is handled, the way the child is taught, and whether or not the child is read to and cuddled, all have a tremendous influence on "wiring" of all perceptual facilities as the child integrates the five senses and creates a pattern of perception and cognition for the future.

Studies have shown that if this kind of nurturing is not available, the child is likely to end up illiterate or delinquent and may end up suffering from depression by the age of thirty.

It has been said that the health and wealth of the nation is not dependent on socio-economic factors alone, but it is paramountly dependent on the way the new generation is being raised. Pre-natal training for parents is equally as important, as is natal care, for the future well being of the children.

### *Child Centres for Brain Stimulation*

It has been found that educational facilities tend to be somewhat didactic in their approach. In a recent study conducted in Canada, headed by Dr Fraser Mustard, special

child development and parental care centres were created. In these centres, it was found that the greatest successes were found when the children's parents were involved in the process. It was looked upon, not as being a didactic teaching process, but a process which cultivated play, and therefore, maximum stimulation of the young child's growing brain.

Dr Mustard has said, "One of the best markers as to how well a society is handling rapid change and globalisation, is what is happening to its young children. Because if you don't handle that properly, you are not going to have the quality of population that will be able to compete in the new economy." Dr Mustard recommended quality parenting and Early Child Development Centres that are both parent oriented and child oriented.

It has been said that this century will be the century of the brain, and that this millennium will be the millennium of the mind, and indeed, the growing brains of the newly born babies are the key to a nation's wealth and economic success.

**The Carolina Abecedarian Project** was designed to examine the effect of early child education and parental support on child development in socio-economically disadvantaged families. It began just weeks after the child's birth, with a full year centre based intervention, home visits and a teacher ratio of one to three.

At the end of the pre-school, the intervention group significantly outperformed the non-intervention group in terms of IQ.

**The Ypsilanti/High Scope Study** demonstrated that a high quality intervention programme with parent participation dramatically changed outcomes when the programme started at age 3. The intervention had tremendous positive effects when children reached young adulthood with respect to participation in labour force, decreased criminality and improved mental health.

It was found that with a combination of one facilitator to three to six children, frequent home visits and parental involvement, the results were extremely successful, particularly in lower social economic groups.

There is a marked association, from childhood, between socio-economic groups and the propensity to illness, illiteracy and delinquency (ref 4). Michael Rutter, the famous child psychologist, in his review of youth and anti-social behaviour, stated that, "signals indicating the more serious and persistent forms of anti-social behaviour can be detected as early as age three in the form of oppositional and hyperactive behaviour."

It has been found that even within the middle classes, a high degree of dysfunctionality in the children still occurs. They may be dysfunctional in terms of their intelligence or in their ability to form connections with other children.

This is put down to the fact that in our economic-rationalist society, where mothers are forced to go out and work to help make ends meet, staying at home to care for their

children is simply not an option, and this lack of personal parental care and lack of attention contributes to the dysfunctionality.

It has been found that as well as parenting and brain stimulation, nutrition in the early years of life, up to adolescence, also plays a powerful determinant role in delinquent behaviour due to its effect on the brain, particularly with respect to polyunsaturated fatty acids. At a recent workshop of the US National Institute of Health, evidence of LS-Polyunsaturated fatty acids on infant brain development continues to accumulate with respect to improvement in visual acuity and perceptual and motor skills.

Globalisation puts tremendous stresses on the younger generation as well as the parents, who are often changing jobs and adapting to new technologies.

The world is finally recognising that children's rights to education, growth and development, physical, cognitive, social, emotional and moral, cannot be met without a comprehensive approach to serving their needs from birth.

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Dr Michael Ellis is Founder of The Centre For Change [www.peace-era.com](http://www.peace-era.com) and The Medical renaissance Group [www.medicalrenaissance.org](http://www.medicalrenaissance.org) and facilitator for The Nichiren Shoshu Buddhist Society Australia [www.buddhistcentre.org](http://www.buddhistcentre.org) Dr Ellis is an English trained doctor with over 20 years of general practice both in the UK and in Australia. He has higher qualifications in general medicine and paediatrics. He has a special interest in mind/body medicine and in optimizing the physical, mental and emotional health of the. As well as his medical qualifications, Dr Ellis also has an Honours Degree in Literature, Arts, Philosophy and Social Psychology. Michael has been practicing Nichiren Shoshu Buddhism for 25 years and is a teacher of this Buddhism in Melbourne [www.buddhistcentre.org](http://www.buddhistcentre.org) He is the editor of the Australian Nichiren Shoshu Buddhist Newsletter which is distributed worldwide.

Dr Ellis is a writer and author.

Dr Ellis founded and convened an international conference – Conference Earth: Humanity and Planet Earth – 2001 and Beyond. This conference was held at and supported by Melbourne University on 17-19 November 1995 with 400 delegates, 50 workshop leaders and 10 international speakers attracting national media coverage. This series of Mindquest Conferences is now supported by the Research Institute "The Centre For Change" [www.peace-era.com](http://www.peace-era.com) founded by Dr Ellis.

Dr Ellis founded The Centre For Change in 2000 and has since conducted regular seminars at Swinburne University, Melbourne on a wide range of topics related to the achievement of World Peace. His invited speakers are all Leaders in their chosen fields. With Dr Pavel Kasyanov in 2002 he presented the paper entitled Transition to a Sustainable Civilisation at the World Summit on Sustainable Development( See [www.peace-era.com](http://www.peace-era.com))

Dr Ellis has a keen interest in the plight of the ordinary GP and is concerned about creating a more sustainable future for both doctors and the community. Because of this, he established The Medical Renaissance Group [www.medicalrenaissance.org](http://www.medicalrenaissance.org) in Australia in 2001, which is sponsored by Dr Ian Dettman, Director of Biological Therapies. The Medical Renaissance Group aims to bring together the global community of doctors and community to lobby their respective governments for the creation of a healing culture which places priority on the health of the individual rather than on the illness of the

individual. In this respect, it supports preventative, nutritional ,mind / body medicine and Wellness Medicine and sees healing as being a unique partnership between the doctor and the patient.Doctors may join the Medical Renaissance Discussion Group by contacting Dr Ellis at [mindquest@ozemail.com.au](mailto:mindquest@ozemail.com.au)

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