

# Taking Charge OF YOUR HEALTH



## What is Good Health?

*Good health is more than just having a body free of disease or disability. Good Health is a state of complete physical, mental and social well being, says the World Health Organisation.*

Natural good health is when the body performs all its normal functions without difficulty or external assistance from chemical or medical devices. This means people with disabilities or a long-term illness can still enjoy a sense of *well being* and *quality of life* even though they may be limited in their activities.

The *Discovery Health Course* is designed to assist you in making more *informed choices* about your body and the care that you give it. The information is scientific and correct at the time of publication.

## Why learn about health?

*We influence our health by how we live, work, and interact with other people and with our environment. So our choice of behaviour will either enhance or risk our health. The choice is yours – take charge and positively influence your health.*

## Who Is Responsible For Your Health?

*In short, you are – with some help from health professionals. Good health largely depends on choices we all have. Of course we cannot choose our genes or control unfortunate life experiences, but our choices can reduce our risks and make the most of our circumstances. This in turn gives us control over our quality of life.*

Many people think that it's the doctor's job "fix you up" when you get sick. They don't bother to find out how to prevent that sickness in the first place with some simple strategies. When you take responsibility to give your body the basic things it needs to work properly - the right fuel, treatment and environment – it will naturally move towards good health. This will boost your feeling of well-being and enjoyment of life, and will more than repay your efforts in prevention. Seeing a medical practitioner when you are sick is increasingly important for early detection of serious illnesses and conditions. However there needs to be a greater emphasis of prevention of lifestyle diseases. These diseases often occur as a consequence of a lifestyle that is damaging to health.

*The risk of being affected by heart disease, stroke, high blood pressure, lung cancer, mature onset (Type 2) diabetes and respiratory (lung) diseases can be lessened by making healthy lifestyle choices.*

## Taking Charge of Your Health

### Information:

The first step in taking charge of your health is to be informed about how your body functions (physiology) and what it needs to keep functioning efficiently. Once informed, you can make the right choices.

### Motivation:

Changes won't occur if you are not motivated to change behaviour that may prevent good health. So how do you get motivated about giving up something that you enjoy but is not good for you?

### Inspiration:

We all need something to aim for to keep us motivated. Keeping the following goals in mind can help keep you motivated:

- more energy to do more things you enjoy such as travelling, sports etc.
- a sense of well-being and being in control of your life
- losing weight so you feel better about yourself
- living longer independently

### Commitment:

Often commitment is born of frustration with a situation. Feeling angry or passionate about the need for change, you decide to bring the full force of your resolve to change a particular situation. You are committed.

### Sense of Control:

*Most of us like to be in control of our lives, not controlled by others or by our circumstances. When you are successful in making changes in your life you are clearly demonstrating to yourself that you are in control.*



# How Can I Achieve Good Health?

*Good health is actually quite simple.*

The remainder of this topic introduces eight basic areas vital to maintaining good health. The rest of the course gives more specific information.

## 1. Nutrition

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*Nutrition is simply the study of what foods can help our bodies to function at their best. The food we eat is one of the most important aspects of health as it directly impacts on the way we feel and perform. It provides fuel for the body to run on. Energy from good food is the body's number one necessity.*

When you choose food lacking in essential nutrients your body becomes deficient. For example, an iron deficiency can make a person feel “washed out” and tired. The body needs iron to carry oxygen around the body, and a lack of iron means the oxygen isn’t carried around the body very well.

### *So what is a nutritious food?*

Nutritious foods contain lots of essential nutrients like vitamins, minerals (such as iron and calcium), carbohydrates, and some protein, fats and water. These are substances the body must get from food because it is unable to make its own supply. All food contains nutrients, but some foods contain more nutrients than others. It's important to choose the most nutritious food possible so that your body gets all the nutrients it needs to function properly. (Nutrition and healthy eating habits are covered in more detail in topics 2 and 3.)

## 2. Exercise

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*You need to be physically fit to be able to meet the demands and stresses of day to day life.*

Many people think of *fitness* as being an ability to run a marathon but it actually means *being able to do all the things you have to do each day and still have energy left over for family and relationships*. It also means having a *feeling of wellbeing*, rather than constant fatigue.

Exercise has many benefits:

- *controls your weight*
- *helps you manage stress*
- *boosts your immune system*
- *reduces your risk of heart disease*
- *reduces your risk of cancer*
- *perhaps even reduces your risk of premature death.*

Because the “Western lifestyle” of most Australian and New Zealanders does not involve a lot of physical activity, *it is important that we take regular exercise*. Older people generally do less activity than those who work or go to school, so it’s even more important for them to have a regular exercise program. How to begin an enjoyable exercise program that will benefit your health is covered in topic 4.

## 3. Water

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*Your body is about 60% water, and even though you can live up to 50 days without food, you can live only a few days without water. Water is vital to life itself - and yet we often ignore the importance of water for our body’s health.*

Many people use their thirst as a guide to how much water they should drink, but *thirst is the body's first sign of dehydration*. We all lose water each day through urine, faeces, sweat and via evaporation from our lungs. Adults need to *drink about 6 to 8 glasses of water every day*, and even more in hot weather or during exercise. Water is vital for kidney function, regulating body temperature and body fluids. So drink up - *water is kilojoule free!*

## 4. Sunlight

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Australians and New Zealanders can take for granted the abundance of sunlight that we enjoy. Some countries in the Northern Hemisphere have only a few months of sunlight each year. Research in those countries has revealed *how important sunlight is for people to feel happy and well*. Depression and low morale is common during the long winter months on the Northern Hemisphere.

*Sunlight boosts our supply of vitamin D*, an essential nutrient that our bodies can make in skin that is exposed to sunlight. Vitamin D helps you absorb and use the calcium you need for strong bones and teeth, for healthy immune and nervous systems, for control of body hormones and for cell growth.

*However, too much sunlight can be damaging especially in Australia and New Zealand where skin cancer rates are high. Being "sun safe" is very important - don't forget the 15+ or 30+ sunscreen, collared shirt and hat.*

## 5. Balance

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*When we talk about balance, we do not mean "everything in moderation". (Who wants cyanide in moderation?)*

Balance means a *proper combination* of the good things that promote health – and *no destructive* ones.

*Balance is about a lifestyle that increases quality of life and a sense of well-being.*

*All the issues you'll study in this Health series express the importance of a balanced lifestyle.*

## 6. Air

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*The air we breathe is also critical to our health.*

*Air pollution can cause illness and death* if pollutants become concentrated for a period of several days or weeks. Increased levels of carbon monoxide and air-borne acids, as well as decreased oxygen levels, can *put people under strain*. This is especially stressful for people who suffer from congestive heart failure and chronic obstructive pulmonary diseases, such as chronic bronchitis or emphysema, and also for the very young and the elderly. Hence the warnings on the news when the smog levels are very high.

Not all air pollution is caused by humans. Air is also polluted by forest fires, pollen bloom and dust storms. However *humans have polluted the air at an ever-increasing rate since the Industrial Revolution*. Now at least there is growing awareness of the importance of protecting our environment.

## 7. Rest

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*Relaxation, recreation and sleep are vital to health. With the rapid pace and pressures of life, it is essential to find some time each day for relaxation, so the tensions that build up in our muscles can be released.*

*Recreation is a vital part of rest.* Getting away for a day in the bush or a walk along a beach can make us feel re-created and able to cope.

Hugh McKay, a sociologist in Australia and author of 'Reinventing Australia', recommends that ideally an individual should devote some time each week to purposeful reflection and relaxation. This regular time period should provide opportunities for "reflective detachment", *time out from the hard reality of life*. This can be found in activities like walking, making music, religious worship, meditation, play and spending time with family, friends and pets.

The need to sleep has an awesome power over us. If we're deprived of sleep for long, we can't stay awake to even save our lives - as shown by car accidents when people fall asleep at the wheel. *Most people don't get enough sleep, and studies show the average person needs between 6-8 hours of sleep per night.*

*And researchers believe Grandma may have been right: an hour's sleep before midnight may well be worth two hours afterwards.*

*How often have you gone to bed feeling depressed and cranky, and woken up after a good sleep feeling a lot better about life?*

## 8. Trusted Relationships

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A *sense of purpose* and a *sense of belonging* are important in order to enjoy life and feel good. You may wonder what this has to do with health, but a life filled with depression, loneliness and anger is hardly high quality or healthy. Difficult circumstances such as grief or loss, betrayal by a partner, serious illness, or death of a loved one, can have major effects on our health.

A sense of purpose and belonging are crucial, and they can come from the spiritual dimension of health, which includes our values and philosophy of life. To enjoy spiritual health is to possess the capacity for love, compassion, forgiveness, peace and fulfilment. Trust in a power outside of oneself and trust in those around us are vital aspects of good health. *The “golden rule” of loving our neighbour as ourselves is basic to a sense of self esteem and self worth.*

We all need to find a balance between meeting our own needs and the needs and demands of others. Feelings of cynicism, anger, bitterness, fear, anxiety and pessimism are often felt by people who are overcommitted to the needs of others and their work with no energy left for themselves.

Time alone for yourself and your own needs is crucial if you want to feel refreshed and ready to give and meet the needs of other people.



## Eating Smart

### You Are What You Eat

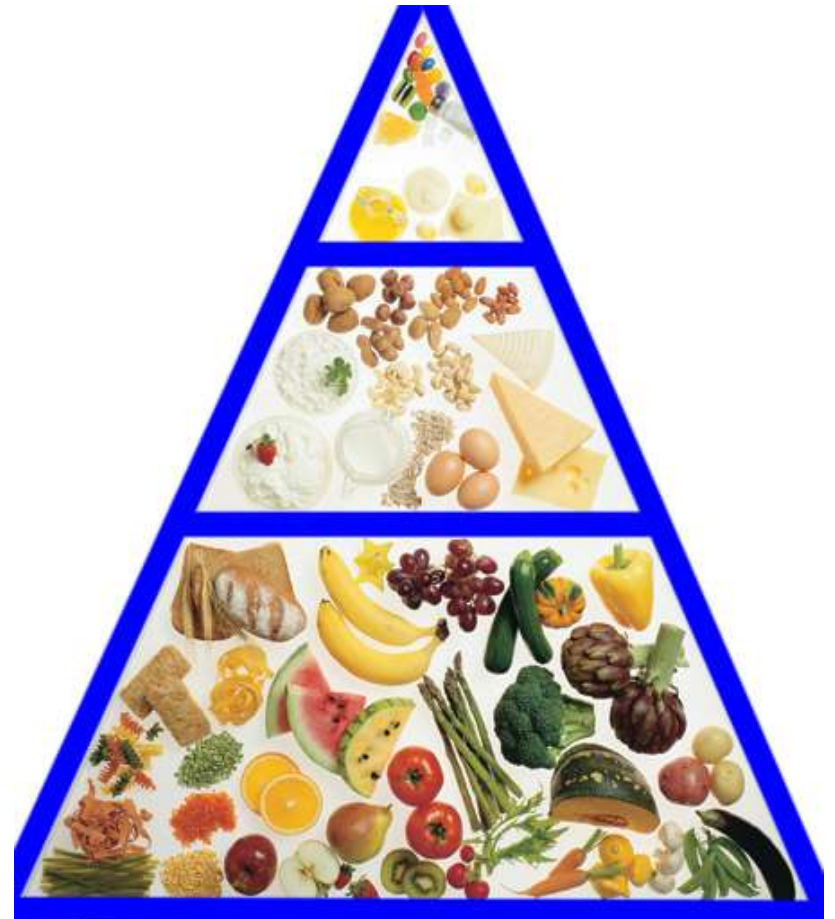
In this topic we'll discuss a healthy diet – what it is, and practical ways *it can benefit you*. We'll then look at a very common problem – iron deficiency.

You can get any number of opinions on eating, and magazines selling “great new diet” plans, but reliable scientific information is harder to find. *Your personal nutrition deserves advice from an accredited dietitian*. Accreditation means they are committed to ongoing study into nutrition and health, and are reviewed by other experts.

### Nutrition Made Easy

#### Healthy Eating Pyramid

To simplify choosing the right foods in the right proportions, the *Australian Nutrition Foundation* has developed the *Healthy Eating Pyramid*. It arranges foods into three groups - illustrating which foods we should eat most often, in moderate amounts, and least often. You'll notice they do not actually rule out any foods, but *they give some foods a lower priority than others*. Some should be everyday foods and others only occasional foods.



## Which Foods Should You Eat Most?

*At the base of the pyramid are breads, cereals, fruits, vegetables and legumes. These foods should make up the major part of our daily food intake.*

### **Breads, Cereals, Rice, Pasta & Grains**

Until recently most people purposely avoided foods such as *bread* with the *mistaken idea that they were fattening*. We now know that breads, cereals, corn, rice and pasta are excellent food choices. They provide energy in the form of *complex carbohydrates - which are the ideal and most sustaining source of energy*. They supply all important fibre, as well as protein, the B vitamins, iron and traces of other minerals. The best option is to *choose wholemeal and wholegrain* varieties; refined grains such as white bread lose much of their fibre, vitamins and minerals during processing.

### **Fruits & Vegetables**

Fruits and vegetables are an easy way to add variety, great taste and good nutrition to your menu. High in nutrients and usually low in kilojoules, *they provide us with many vitamins, minerals and fibre*.

*Yellow-orange fruits and vegetables - such as carrots, pumpkin, mangoes, rock melon and pawpaw - are especially good sources of vitamins A and C. So are dark green vegetables - like broccoli, capsicum, spinach and parsley - which supply calcium and iron as well. Citrus fruits, berries and tomatoes also contain high levels of vitamin C.*

### **Legumes**

Legumes are peas, beans and lentils – for example *soya beans, kidney beans, red lentils*. They are nutritional wonders! Combining legumes with grains - for example rice with lentils, corn tacos with beans, or baked beans on toast – increases their protein value. Legumes also provide fibre, B vitamins and many minerals - iron, calcium, potassium, phosphorous and magnesium, to name a few. *They are low in fat and saturated fat, and contain no cholesterol - what a bonus!*

## Which Foods Should You Eat Moderately?

*The middle section of the pyramid is made up of fish, poultry, meat and meat alternatives, seeds, nuts, eggs, dairy products and dairy alternatives. These foods should make up a moderate part of our daily food intake.*

### **Fish, Poultry, Meat & Meat Alternatives**

These foods, along with nuts and seeds, are a good source of protein. However, *it's important to realise that we often eat too much protein* – nutrition experts agree that we require it in only moderate amounts. The foods in this group also contain other important nutrients - *vitamins, iron, phosphorous and other minerals important for our health.*

### **Dairy Products & Dairy Alternatives**

Dairy products include milk, yoghurt and cheese; milk alternatives include fortified-soy drinks (such as So Good ®) and tofu. They are *high in protein and minerals*, especially calcium for strong bones and teeth. Other nutrients include B vitamins and vitamins A and D. *It's best to choose low-fat or reduced-fat varieties.*

## Which Foods Should You Eat the Least?

*At the top of the pyramid are fats and oils, sugar and sugary foods. These foods are high in energy but are lacking in other nutrients.*

Too much indulgence in these foods will *unbalance your nutrition* pyramid. Fatty, sugary and salty foods should form only a small part of our diet; *an excess of these foods is associated with poor health and diet-related disease.*

## Dietary Guidelines: Australia & New Zealand

The *top nutrition experts* in our region have developed *national guidelines for healthy eating*. Below is a summary based on Dietary Guidelines from both Australia and New Zealand.

- *Enjoy a wide variety of nutritious foods from the four major food groups every day: vegetables and fruit; breads and cereal foods; milk and dairy products (especially low-fat); and lean meat, poultry, fish, eggs, nuts or legumes.*
- *Eat plenty of breads and cereals (preferably wholegrain), vegetables (including legumes) and fruits.*
- *Eat a diet low in fat and, in particular, low in saturated fat.*
- *Maintain a healthy body weight by balancing physical activity and food intake.*
- *If you drink alcohol, limit your intake.*
- *Eat only a moderate amount of sugars and foods containing added sugars.*
- *Choose low-salt foods and use salt sparingly.*
- *Drink plenty of liquids each day.*
- *Encourage and support breastfeeding.*
- *Eat foods containing calcium. This is particularly important for girls and women.*
- *Eat foods containing iron. This is particularly important for girls, women, vegetarians and athletes.*

Of course these guidelines alone cannot guarantee good health, since it depends on other factors such as genetics, lifestyle, environment and mental attitude. However, *good nutrition is one important factor we can control*.

## Water

Water is life. Without it we survive just a few days. *Every day we lose 2.5 litres of water* that must be replaced. This means that to get enough water we need to drink about 6 to 8 glasses of water per day. The rest can come from foods.

*Thirstiness is not a good guide to how much water you need.* Thirst is the first sign of dehydration, so by the time you feel thirsty you are already dehydrated.

If you are not already a water drinker, you might like to try these practical habits to make sure you get your 6 to 8 glasses of water per day.

- *drink a glass of water as soon as you get out of bed in the morning.*
- *keep a jug of water on your desk at work.*
- *carry a small water bottle with you when travelling that can be refilled.*
- *drink 1 to 2 glasses of water 30 minutes before eating.*

## Alcohol

*Alcohol isn't necessary, but if you do drink, limit your intake.*

*Alcohol supplies kilojoules with little or no nutrients* and it is a drug that affects your mind and your behaviour. Drinkers are also advised to limit their alcohol intake because it is *linked with health problems such as addiction, gastritis, cirrhosis of the liver, obesity, hypertension, memory loss, and alcohol interferes with the metabolism of B vitamins and minerals.*

## Iron Food

Iron deficiency has been called the *“most common nutrient deficiency in the developed and developing world”*. This is a serious issue because iron is an essential mineral, vital to keeping your body healthy and working at peak performance.

### What Happens If You Don't Get Enough Iron?

Symptoms of iron deficiency can include *weakness, tiredness, reduced ability to maintain body temperature and a decreased ability for physical activity*.

This occurs because iron forms an important part of red blood cells known as haemoglobin, which carries oxygen throughout the body. Iron is also an essential part of the muscle protein myoglobin, which provides oxygen to the muscles for strenuous physical activity. As well, iron is involved in the body's chemical reactions which produce energy.

*If an iron deficiency is prolonged, it can lead to anaemia* which is a reduction in blood haemoglobin and therefore the amount of oxygen that reaches the body's tissues.

## Who is at Risk of Iron Deficiency?

*People need extra iron during periods of rapid growth*. So, in infancy, adolescence and during pregnancy the body needs more iron than usual to help increase the number of red blood cells and provide blood for new body mass.

Red blood cells have a life cycle of 120 days. When they die, their iron is reused. This efficient mechanism means that *men lose only small amounts of iron* from the body each day. On the other hand, *women lose much more iron* due to menstrual blood loss. In fact, women who have heavy periods can lose substantial quantities of iron.

If you suspect that you lack iron, *ask your doctor* for a blood test to determine your iron levels and whether your symptoms may be caused by some other factors.

## How Much Iron Do You Need?

The *Recommended Daily Intake* of iron is:

### *Infants*

*0-6 months*                      *0.5mg*

*7-12 months*                    *9mg*

### *Children*

*1 - 11 years*                    *6-8mg*

*12 - 18 years*                 *10-13mg*

### *Women*

*19 - 54 years*                 *12-16mg*

*54+ years*                      *5-7mg*

*During pregnancy*         *22-36mg*

*During lactation*             *12-16mg*

### *Men*

*19+ years*                      *7mg*



## Food Sources of Iron

An adequate dietary iron intake is possible once you know which foods are good sources of iron, and understand how your body absorbs iron from foods.

There are *two major types of iron* in foods. *Haem iron* is found in foods such as liver, kidney, meat, seafood and poultry. Haem iron is well absorbed by the body. *Non-haem iron* is found in legumes, wholemeal breads and wholegrain cereals, green leafy vegetables, nuts and seeds. Non-haem iron is not as well absorbed as haem iron, however, with a little planning, vegetarians can maximise the amount of iron absorbed from their diet.

*The following food items are an example of how a vegetarian might get an adequate supply of iron in their diet.*

### NON-MEAT SOURCES OF IRON:

Food source	Iron (mg)
Lentils, dried peas or beans (1 cup cooked)	3.2
Breakfast cereal, with added iron (e.g Weet-Bix <sup>R</sup> average serve)	3.0
Tofu, 1 block (9x5x3cm)	2.8
Cashews, 25 nuts (50g)	2.5
Sanitarium <sup>TM</sup> Marmite <sup>R</sup> , 1tsp (5g)	1.8
Dried apricots, 10 halves (50g)	1.6
Peas, fresh or frozen, ½ cup (60g)	1.3
Rolled oats, dry, 1/3 cup (30g)	1.1
Raisins, 2 tspn (10g)	1.1
Wheatgerm, 1tspn (10g)	1.0
Almonds, 20-25 nuts (25g)	1.0
Egg, poached (50g)	1.0
Broccoli, cooked 2/3 cup (100g)	1.0
Mixed vegetables, 1 serve (100g)	0.8
Wholemeal bread, 1 slice (30g)	0.7
Grape juice, 1 glass (250mL)	0.5
Banana, 1 (100g)	0.5
White Bread, 1 slice (28g)	0.3



## How to Get the Most Iron Out of Your Foods

*Certain substances in food can reduce the amount of non-hem iron your body absorbs.* Tannin and phytic acid are two culprits. Tannin is found in tea, so if you do drink tea, *don't drink it with meals*. Phytic acid is found in wholegrain cereals – but don't stop eating your cereal, because you'd need to eat a *whole cupful of unprocessed bran* each day before it would become a concern. (That much bran is not tasty anyway!)

Foods rich in *Vitamin C increase absorption* of iron from foods containing non-hem iron when eaten at the same meal. For example, drinking a glass of orange juice with your wholegrain breakfast cereal increases your absorption of iron.

## Healthy Heart, Healthy Bones

This topic outlines *exciting research* into preventing two of the major Western lifestyle diseases.

### Risk Factors For Heart Disease

- *Increasing age*
- *Being male*
- *Family history of heart disease*
- *Raised blood cholesterol*
- *High blood pressure*
- *Smoking*
- *Being overweight*
- *Diabetes*
- *Physical inactivity*



You can't change risk factors like your gender, age, or family history, but *you can make diet and lifestyle changes to reduce your total risk.*

### Maintain A Healthy Weight

Extra weight is a risk. *Losing excess kilos indirectly affects other heart disease risk factors:* it can lower cholesterol levels, lower blood pressure and control blood sugar levels in people with non-insulin-dependent (Type 2) diabetes.

Healthy Weight is discussed further in topic 8 of this series.

## Watch Fat Intake

Watching the *amount* and *type* of fats in your diet can also help lower blood cholesterol levels. *Different types of fats have varying effects on cholesterol.*

### **Saturated fats.**

These tend to *increase* cholesterol, and specifically “bad” cholesterol or LDL, which can clog arteries. Saturated fats come mainly from fatty meats, animal products like full-cream milk, and many takeaway and processed foods like pastries and commercial biscuits.

### **Unsaturated fats (polyunsaturated and monounsaturated).**

*These can lower total and “bad” (LDL) cholesterol. Monounsaturated fats can also increase the level of ‘good’ cholesterol (HDL) in the blood.*

Good cholesterol mops up fats in the blood and stops them clogging up blood vessel walls. Polyunsaturated fats are present in many oils and margarines, nuts, seeds, soybeans and ‘oily’ fish like mackerel and sardines. Monounsaturated fats are found in some oils like olive or canola, nuts, seeds and avocados.

*To reduce your cholesterol, replace much of your saturated fat intake with poly- and mono- unsaturated. But remember that all fats contain the same kilojoules (calories), so you need to limit them if you’re watching your weight.*

## Beat High Blood Pressure

Factors that can contribute to high blood pressure (hypertension) include:

*being overweight*

*being inactive*

*excessive alcohol intake*

*high salt intake*

*excessive caffeine intake*

*Smoking* may not cause high blood pressure, but it *greatly aggravates its harm.*

*A high salt intake is linked to hypertension*, yet sodium can affect blood pressure differently for different people. *Most Western diets are much higher in salt than necessary*, so cutting back on salt and processed foods are advisable.

There is evidence that a diet can reduce *high blood pressure* if:

- *it’s low in total and saturated fats*

- *it's rich in fruits and vegetables*
- *it's dairy products are mainly low-fat*

## Keep Active

*Regular exercise helps reduce your overall risk of developing heart disease.* It can also help lower blood cholesterol and high blood pressure, control weight and control blood sugar levels in people with non-insulin-dependent diabetes.

## Heart Protective Foods

Other foods appear to protect against heart disease.

### SOY FOODS

Substantial research evidence suggests *soy protein* can:

- *lower 'bad' LDL cholesterol and triglycerides (another blood fat).*
- *raise 'good' cholesterol or HDL levels.*

Current evidence suggests 2 to 3 *servings of soy foods* per day may *provide protection against heart disease*. Soy foods are now easily available: tofu, textured vegetable protein (TVP), soy-based burgers, sausages and sandwich slices, soy beverages (eg Sanitarium™ So Good<sup>R</sup>), soy yoghurt, soy custard, soy beans, soy flour, tempeh, miso, and roasted soy 'nuts'.

### NUTS

Research shows that people who regularly eat nuts have:

- *lower cholesterol levels*
- *less chance of heart attacks.*

Why do nuts protect the heart? They:

- *are rich in polyunsaturated and monounsaturated fats.*
- *are high in fibre - which can lower cholesterol*
- *contain vitamin E, a potent anti-oxidant which prevents cholesterol being changed into a harmful form that clogs blood vessels.*
- *are rich in arginine, an amino acid which can be made into nitric oxide to help keep blood vessels relaxed.*
- *contain minerals like magnesium and copper which may protect against heart disease.*

Research so far suggests that *people should eat small amounts of nuts on most days of the week*. Nuts are quite high in fat, but a handful of nuts (*at least 30g*) can be a healthy substitute for some high fat foods such as chocolate and chips. Nuts can be added to a stir-fry, salad or muesli.

## FOLATE

Research shows that:

- *a high blood level of homocysteine (an amino acid) may be associated with increased heart disease risk. Studies have found that supplementing the diet with folate can help reduce high homocysteine levels.*
- *a high intake of folate (>400µg per day) has been linked to a lower risk of colon cancer.*

*Good folate sources* include green leafy vegetables, fresh fruits and juices, wholegrain breads and cereals (especially those with added folate such as Sanitarium™ Weet-Bix<sup>R</sup> and Weet-Bix<sup>R</sup> plus Oat Bran), legumes (beans, lentils etc.), yeast extract spreads (such as Sanitarium™ Marmite<sup>R</sup>) and other folate-fortified foods.

## Osteoporosis: What Can You Do To Prevent It?

*Osteoporosis means porous bones.* It is a disease where bones thin and weaken, becoming fragile enough to fracture under slight injuries.

*Osteoporosis is a growing problem.* Around 60% of Australian women and 30% of men over 60 suffer from a fracture associated with osteoporosis. Figures for New Zealand's Caucasian population are similar.

## How Does Osteoporosis Develop?

Osteoporosis is caused by *a loss of calcium from the bones.* Calcium is the most important nutrient for healthy bones, and 99% of your body's calcium is stored in the bones and teeth. Since your bones are constantly wearing away, *you need calcium in your diet to rebuild the bone structure.*

The other 1% of calcium is in body fluids. It is vital for healthy nerves and muscles, and for blood clotting. The levels of calcium in body fluids *must be kept constant.* If they drop too low, *calcium is withdrawn out of the bones* and even a small loss over many years can lead to osteoporosis.

*Remember that the more dense your bones are to begin with, the better chance you have of avoiding osteoporosis.*

## Why Are Women More At Risk?

*From about forty*, both men and women lose calcium from their bones. However, *women after menopause have a higher risk* for two main reasons:

- *Women have lighter bones than men*
- *Lower levels of the female hormone estrogen speed calcium loss*

*Underweight women and those whose periods are irregular or absent are at an even greater risk of developing osteoporosis.*

## How To Reduce Your Risk

### 1. Eat calcium-containing foods

Research shows *many people do not get enough calcium*. The Recommended Daily Intake (RDI) of calcium in Australia and New Zealand for women and men is 800mg. Women need 1,100mg when pregnant, 1,200mg when breast-feeding, and 1,000mg after menopause. The most recent Australian National Nutrition Survey found that *boys aged 12-15 years and females in most age groups did not meet the RDI for calcium*. A large survey in New Zealand revealed that calcium intake was *below the RDI in women of all age groups* and *below the RDI in men from aged 19-24 and over 56*.

#### Good sources of calcium include

- *dairy foods: milk, yoghurt, cheese*
- *calcium-fortified soy beverages (Sanitarium™ So Good<sup>R</sup>) and yoghurt.*
- *Tofu*
- *nuts (such as almonds and pistachios)*
- *dried figs, dried apricots*
- *Asian greens (such as bok choy).*

### 2. Absorb maximum calcium from your food.

**A number of factors can** *interfere with calcium absorption:*

- *high salt intake.*
- *too much caffeine from tea, coffee and cola drinks.*
- *high protein intake, particularly protein from animal sources.*
- *too little vitamin D. This vitamin helps regulate calcium absorption. It is made when sunlight hits skin, and is found in some foods: fatty fish such as mackerel and sardines, eggs, margarine and cheese. Elderly people are less able to absorb or make vitamin D.*

### 3. Eat more soy foods

Research suggests that *soy foods can promote healthy bones*. Soy contains *isoflavones*, which *may increase bone formation and strengthen bones*, particularly in post-menopausal women. And soy protein *may cause the loss of less calcium from the body* via the urine than animal protein does.

*So in summary, it is vital to consume a variety of calcium-containing foods each day. If you are consuming high amounts of salt, caffeine and protein each day, cut back. And try including more soy every day.*

### Sources of Calcium

Food Source	Calcium (mg)
Whole/skim milk, 250mL	300
Sanitarium™ So Good <sup>R</sup> soy drink, 250mL	300
Sanitarium™ Up & Go <sup>R</sup> , 250mL	440
Yoghurt, fruit, 200g	260
Cheese, cheddar, 30g	230
Cottage cheese, regular, 50g	35
Almonds, 30g	75
Sesame seeds, hulled, 1 Tbsp, 15g	100
Soya beans, cooked ½ cup, 150g	115
Tofu, silken (set with nigari), steamed, 100g	150
Most vegetables, 1/2 cup	10-50
Orange, medium, 130g	40

### 4. Get more exercise!

Physical activity is very important. Just as using muscles strengthens them, so our bones become denser and stronger in response to mechanical stress.

*Simply holding the body in an upright position against the pull of gravity stimulates bone maintenance*; any activity that achieves this is known as *'weight-bearing' activity*.

*Take weight-bearing daily*. Try walking, running, cycling or activities like housework or mowing. *Swimming is not a weight-bearing exercise*, and is therefore not effective at building strong or dense bones, although, it does, of course, provide other benefits.

### 5. Avoid alcohol and nicotine

Smoking and heavy use of alcohol are *risk factors for developing osteoporosis*, possibly due to *toxic effects on bone cells*.

## Should I Take Calcium Supplements?

Taking a calcium supplement instead of eating a calcium-rich food can mean *missing out on other useful nutrients* - such as phosphorous, protein and riboflavin.

However, some people find it *difficult to meet their calcium requirements* through food alone. For example, some people do not include dairy products or suitable alternatives (such as a fortified soy drink) in their diet. They may be sensitive to cow's milk or dislike its taste, or they may choose a vegan lifestyle.

*A doctor or dietitian would recommend a calcium supplement for them.*

The best protection against osteoporosis is to *build strong, healthy bones before mid-life* and make lifestyle changes like *more exercise to maintain bone mass*. These choices pay off well.



## Active For Health

### Be Fit

So you can't slam-dunk a basketball or run 100m in 11 seconds? You can still be fit.

*The World Health Organisation (WHO) defines fitness as: "The ability to perform your normal daily tasks with vigour and alertness and without undue fatigue, with enough energy left in reserve to cope with any emergencies that may arise or to follow the leisure pursuits of your choice".*

This definition does not mention athletics or biceps measurements, or even the cardiovascular health that is such an important side benefit of fitness. Instead it focuses on *quality of life*. The main benefit of fitness is your ability to cope and still have energy left over to live a life. It's all about breaking the cycle of work, recover, work some more.

So while exercise may add years to your life, the *major benefit* of physical fitness is that it *adds life to your years*.

## Fitness: The Benefits

Apart from *improving your quality of life*, exercise has measurable health benefits for your body. Here are some:

- *It naturally de-stresses you, burning up many of the excess chemical products of stress, relaxing the muscles and releasing a natural anti-depressant to the brain.*
- *It stimulates production of HDL or 'good' cholesterol, which assists in the regulation of fatty deposits in the arteries, and thus in the prevention of vascular diseases.*
- *It contributes to weight loss by allowing us to expend greater amounts of energy.*
- *It builds stronger muscle tone and therefore establishes a healthier metabolism, making weight management easier.*
- *It strengthens the heart muscle and improves its output.*
- *It improves the efficiency of the vascular system and its ability to supply cells with oxygen and other nutrients.*
- *It improves lung function and our ability to uptake oxygen.*

## 2. How do I establish an exercise program?

*So you're convinced you should exercise. What is a good exercise program for you, and how should you begin?*

### 1. Enjoy, don't endure

'No pain, no gain' may look impressive on your sweatshirt, but it's not the best motto for fitness. *Pain can be a sign of damage.* And if exercise is a pain, you'll soon find an excuse why you can't fit it into your day.

Unless you want to be a power-lifting champ, pain is not necessary – *exercise at any intensity is beneficial to the body.* Of course you may benefit from pushing up your performance levels, but even then the *challenge should be fun,* not masochism.

Don't get into a rut of doing just one thing – variety keeps you motivated, and *a range of activities can develop different areas of your body.* For example, swimming is a great work-out for the heart and lungs and muscles. Yet it is not a "weight-bearing" exercise like walking, which also uses and strengthens your bones.

*A combination of swimming and walking would give a more complete weekly exercise plan.*

Active recreations like bush walking, tennis, golf (without a cart) or a stroll along the beach are also exercise.

Be sociable – *you're more likely to exercise in the company of friends.* Make a deal with friends that one Sunday each month you'll get together and do something physical - make it a bush barbecue or beach picnic, but don't forget to fit that walk, swim or bike ride in amongst it. *This may be a good way to kick-start your exercise program.*

## 2. How often?

Ideally you should *exercise every day,* but three to five times per week is still a good level. One workable routine is to exercise both days of the weekend, and then on Tuesday and Thursday. That way you only have to find two spots during the working week.

### 3. How long?

It used to be believed that anything less than 12 minutes of exercise was useless – but that is a myth. *The benefits of exercise are cumulative*, so every little bit helps. Even on a day when you're too busy for your full exercise regime, you can get some benefit from taking the stairs instead of the lift, from a 2-minute walk to the train station, or from five minutes of walking the aisles in the supermarket. *All of these add up for your overall physical wellbeing.*

*But 30 minutes of exercise is a daily minimum for optimal cardiovascular health.*

A lot of exercise programs suggest you start out with 5 minutes of exercise if that is all that you can sustain, and gradually build up over time. Unless you are suffering from some physical disability, it is better to start off with a target of something like 20 minutes. The idea is to *keep going for the full duration*, even if that means you may have to *start at a lower, more sustainable intensity level.*

*It may be helpful to think of exercise as the tap to a "fat tank". The more intense the exercise, the wider the tap is open. The more frequent the exercise, the longer the tap is open.*

### 4. How Intense?

*Some sportswear commercials suggest you should push yourself till it hurts, or go back to bed. This may be true for die-hard sportspeople, but most of us do not require such high levels to train our cardiovascular systems or improve physical well-being, and should not over-exercise.*

Low intensity exercise consumes a higher *proportion* of fat than high intensity exercise, but less *total* fat and total energy. So *low or medium intensity exercise is by no means a waste of time, and contributes significantly to weight loss.* High intensity exercise has the best total health benefits, including weight loss, but be careful – *beginners can be damaged by overdoing it*, and high levels may be associated with problems like osteoarthritis later in life.

*The optimal level to aim for in an exercise program is where you breathe more deeply and rapidly but you are not out of breath.* If you happen to be exercising with a friend, your breathing rate should still *allow you to have a 'light conversation'* – not just put together a few short words as you gasp for air. This is called the "talk test" and if you cannot talk during exercise then you are exercising above your current fitness status. This method is an easy measure of exercise intensity for people of all fitness levels, and can be *a good rough guide for safely pushing yourself to higher levels.*

*In summary, an exercise regime should consist of a variety of activities that you enjoy, that you participate in 3-5 times per week for 30 minutes or more, at a level of intensity where you are made to breathe deeper and more rapidly, but are not out of breath.*

## What are other factors of fitness?

*So far we have concentrated on cardiovascular or aerobic exercise.* Aerobic (meaning “with oxygen”) is a term given to exercise which burns oxygen to produce energy for large muscle groups. While aerobic exercise is the most important type of exercise for our well being, *other types of exercise are very important to our balanced health.*

### Flexibility

*It is important to maintain good flexibility around about our joints so that we are less inclined to suffer injury and back pain.*

*Regular stretching* is the best way to improve flexibility. It is important to *maintain control throughout each stretch* you perform. Ballistic or bouncing stretches are bad for the body, as gravity and motion can take control and cause you to over-stretch, contributing to muscle pain and injury. The modern trend for stretching is to hold the stretch for 20-30 seconds whilst relaxing and breathing, and then repeat it. *Establish a regular stretching routine* that incorporates all of your major muscle groups, and remember to go through it *at least three times per week.*

## Muscle tone

*Muscular strength is an important component of overall physical fitness, and not just for body builders – it helps us move and live with strength and balance.*

It also plays a vital role in our *metabolism and weight control.* You can think of muscle tissue as a fireplace that constantly burns fat. Muscles burn 25 times more kilojoules than fat tissues do. Your fireplace may be turned down but not off, even when you are asleep. *More exercise means a higher metabolism* or larger fireplace. But when you lose weight *by diet alone, without exercise, at least one quarter of what you lose is muscle* (or lean body mass). That's like shrinking your fireplace by one quarter. Then when you stop dieting and return to normal eating, your metabolism is not burning as much fat and you put weight on.

*As we age, our bodies start to experience muscle loss.* This fall in muscle mass results in a decreased metabolism, lack of energy and sadly an increased likelihood of osteoporosis, falls and hip fractures. Although this was once thought to be an inevitable part of growing older, research has found that you can not only halt the loss process, but even reverse it by *regular training with resistance equipment* (e.g. weights or isometric circuits). It is important for all of us to participate in some kind of resistance training routine. *People of all ages respond to regular exercise* and are able to increase their muscle mass.

## Precautions of exercise

**Have a medical check.**

*If you have not exercised for a period of time, make sure you are not likely to aggravate some physical condition.*

**Be patient.**

*It may take 5 weeks or more before you feel the benefits of physical activity.* You may sense some muscle stiffness in the first few weeks, but you should not feel *pain – it's a sign of damage* and your body's signal to stop. But don't give up just because it takes time. Persist. Discipline will have long-term benefits, and you will come to enjoy it.

## Physical Activity Guidelines for all People

*An excellent summary of this lesson is provided in the following draft guidelines on physical activity for all Australians.*

### Preamble

The guidelines below refer to the *minimum levels of activity required for good health and a healthy body weight*. They are not intended for high level fitness training or sporting achievement. They also *do not include stretching, warm-up and cool-down* requirements associated with a more advanced exercise program. For best results all guidelines should be followed, otherwise do them in order.

*1 Think of physical activity as an opportunity, not an inconvenience.*

*2 Be active every day in as many ways as you can ( for example, make a habit of walking or cycling instead of using the car, working in the garden, or doing things yourself instead of using machines. Some activity is better than none, and more is better than a little).*

*3 Combine a more active lifestyle with healthy eating to maintain a healthy body weight.*

*4 Put together at least 30 minutes of moderate intensity physical activity on most, preferably all days of the week ( for example, walk, cycle or play an active sport for 30 minutes or more, or combine short sessions of different activities of around 10 minutes each).*

*5 If you can, also enjoy some regular, vigorous exercise for a minimum of 20 minutes, 3-4 days a week, for extra health and fitness benefits.*

### FOR A HEALTHY PREGNANCY

Carry out regular physical activity of light to moderate intensity, which is comfortable and appropriate for the stage of pregnancy.

### FOR PEOPLE WHO ARE ELDERLY, VERY UNFIT OR OVER WEIGHT

Try to carry out guidelines 1-4 at least.

### FOR PEOPLE WITH DISABILITIES

Try to carry out guidelines 1-3 at least.

## Coping With Stress

### The Stress Test

*Ever had a day where nothing seemed to go right?* The toast burns, you can't find your car keys, your child has a fever, you miss deadlines, you sit fuming in traffic and worry about bills and your bank balance. Your sanity and patience are stretched to breaking point. *It doesn't have to be that way.*

### Less Stress Now

*If you have answered Yes to any of the previous questions, you may have too much stress in your life.*

The small graphs for each response indicate the percentages of how other students in your group have answered. You will see that you are not alone in many areas of your life.

*Have you been through a major life crisis? Experienced the pain of loss? Wished you understood and handled things better? You can.*

*There is no doubt we live in an age of anxiety, uncertainty and confusion. In our topsy-turvy world everything seems to be changing. Life is not simple. We are confronted by an information explosion, a shrinking globe and complex marketplace choices. Our time, space and minds are threatened by overload. It is easy to get caught up in the rat race of life. But we don't have to.*

*Daily we react to change, events, people and our environment. That is stress. There is good stress ("eustress") and harmful stress ("distress"). But much of our distress is self-inflicted - our mind and perceptions can create fear, anxiety and worries.*

*We can't eliminate stress, but it is possible to reduce it. In this topic you will discover the ABC's of stress management.*

*Living Smart is surviving and thriving on stress.*

## Stress Signals

**Recognise your own symptoms and signs of stress.**

The first step in the ABC's of stress control is **Awareness**. Your mind and body tell you when the pressure is on. Nervous and chemical changes take place. **Every person reacts differently**: some are challenged and thrive on stress, while for another the same event will cause distress.

For each individual, different situations may produce different physical, emotional and behavioural responses. Most symptoms are normal and pass after a short time. **Major problems occur when symptoms persist**.

**Monitor your own stress signals**. Be prepared to slow down and change behaviour. **Of course stress may not be the only cause of these symptoms**.

## Reactions

### **Physical Reactions**

- Muscle aches
- Headaches
- Rapid breathing
- Faster Heartbeat
- Trembling, shaking
- Tense jaw
- Dry mouth
- Stomach in knots
- Faintness

- Fatigue

### **Behavioural Reactions**

- Unable to sleep
- Loss of interest in food, sex and life
- Overeating
- Drug & alcohol abuse

### **Emotional Reactions**

- Nervousness
- Fear
- Anxiety
- Worry
- Anger
- Depression
- Panic
- Memory Lapse
- Feelings of Worthlessness

## What Stresses You Out?

Stress is *part of everyday life*. Stress is the combined affect of a long list of things that influence someone's life *either positively or negatively*.

*To be alive is to be under stress.*

The next step in awareness is to *identify the major causes of stress in your life* - either situations, events, places, people or your environment. *Your perception* of these stressors can be a major factor. *Remember there is the good side of stress as well as the unpleasant.*

### *Good Stress*

Good stress can be from things like buying a new home, getting married, work promotion, planning a holiday, attending a party, enjoying life's pleasures, playing sport, creativity and helping other people.

#### **Good stress**

- *Challenges and motivates*
- *Feels exciting*
- *Can improve performance*
- *Increases well being*
- *Is usually short term*

### *Bad Stress*

*Prolonged distress is unpleasant and harmful.* As tension builds, burnout and depression can result. Once you identify it, you can *plan coping strategies* to manage, reduce or eliminate these problems.



**Change:** career, starting school, new home, retirement

**Work:** job demands, lack of control, work conditions, boredom

**Relationships:** conflict, family concern, co-workers

**Life Crises:** death in family, accident, divorce, unemployment

**Personal:** health, financial, self-image

**Daily Hassles:** the constant irritations and niggling problems that build up pressure

**Environment:** weather, noise and living conditions

## 12 Stress Solutions

*Preventing stress from occurring is far better than trying to remove stress from your life.*

Here are some suggested strategies for reducing as well as preventing stress. Choose the strategies that work best for you.

### **Eat Smart**

- *Choose a balanced, nutritious diet.*
- *Include plenty of fresh fruit and vegetables.*
- *Avoid junk food and extremes.*

### **Exercise Regularly**

- *Choose exercises that you enjoy.*
- *Have a regular program, 5 to 7 times a week.*
- *Brisk walking is great - 45 minutes a day.*

### **Get Beauty Sleep**

- *Sleep restores the mind and body.*
- *Plan for 7 to 8 hours a night.*
- *If you wake up feeling refreshed you have had sufficient sleep.*

### **Take Control of Your Life**

- *As much as possible, take control of things that matter.*

- *Direct your part on the stage of life.*

### Anticipate Change

- *Prepare for future crises.*
- *Expand your mind. Look for better ways to do things.*
- *Don't get caught in the usual old rut.*

### Laugh it Off

- *Humour is a great stress reliever.*
- *Look for the funny side of life.*
- *Laugh every day - including at yourself.*

### Talk Things Through

- *Learn to communicate effectively.*
- *Share joys and problems with close friends.*
- *Don't bottle up frustration and fears.*

### Learn to Relax

- *Discover ways to relax body and mind.*
- *Try deep breathing, stretching.*
- *Enjoy the quietness of nature.*
- *Have a warm bath, get a massage.*
- *Play your favourite music.*
- *Meditate, pray.*

### Take Time to Play

- *Recreation gives sparkle to life.*
- *Find a hobby or leisure interest.*
- *Hike or explore the great outdoors.*
- *Try water sports, play team games.*
- *Avoid ultra-competitive sport.*

### Be Happy

- *Happiness is a choice, an attitude of mind.*
- *Use positive self-talk.*
- *Smile on the outside and on the inside.*

### Develop Friendships

- *Build strong family relationships.*
- *Keep old friends, make new ones.*
- *Help others in need.*

### Don't Be Afraid to Cry

- *We all have times of sadness and loss.*
- *Tears are an outlet for the emotions.*

## Coping With Crises

*No one is exempt from crises in life.*

Personal tragedies are nasty surprises that hit us all at times, and *individuals react differently*. Some sail through severe stress that can be life-shattering for others. Crises depress our immune system and make the body more susceptible to illness. Our response depends on our *perception of distress* and on the extent of our *personal coping resources*.

### *Major Life Changing Events*

- *Death of a spouse*
- *Divorce*
- *Death of a close family member*
- *Marital separation*
- *Personal injury or illness*
- *Acts of violence, war*
- *Natural disasters - earthquake, flood*
- *Financial disaster*
- *Loss of job*

## Coping Strategies

- *Maintain good health*
- *Understand the loss-grief process*
- *Seek support of friends*

### *The Loss-Grief Process*

It is *normal and healthy* to express a range of painful emotions relating to loss. These reactions are often experienced.

- *Shock*
- *Denial*
- *Anger*
- *Emotional Release*
- *Guilt*
- *Depression*
- *Acceptance*

*Living smart is clinging to hope through tears and having courage to accept change.*

### *Ineffective Coping Methods*

*There are many quick fixes that don't work.* People often use cigarettes, alcohol, drugs and food as solutions for stress. Unfortunately these are not the answers, because they:

- *May give temporary feelings of relief*
- *Only address the symptoms*
- *Often aggravate the problem*
- *Create a vicious cycle*
- *Lead to addiction and a sense of helplessness*
- *Can damage health*

## Living Smart Skills

Indecision, poor communication and lack of planning can create extra stress.

*Give your life direction and reduce stress by learning simple personal and people skills.*

### *Making Decisions*

Develop self-confidence by using these steps for effective decision making.

- *Understand the question or situation*
- *Set specific and realistic goals for the major areas of life - personal, family, career*
- *Assess options, consider strengths and weaknesses*
- *Decide on a plan and take action*
- *Evaluate the outcome*

## Manage Your Time

*If you can manage yourself, you will manage your time.*

- *Assess your actual and preferred uses of time*
- *Set priorities*
- *Make 'to do' lists*
- *Learn to say no*
- *Take regular time to relax*

## Time Management

- *Set your priorities*
- *Schedule your tasks for peak efficiency*
- *Aim for realistic goals*
- *Write down your goals*
- *Allow yourself enough time*
- *Sweeten your long-term goals with short-term goals*
- *Visualise the achievement of your goals*
- *Sleep on it*
- *Delegate responsibility*
- *Say no when necessary*
- *Give yourself a break*

## Communicate Effectively

*Avoid misunderstanding and resolve conflicts with good communication skills.*

- *Communication involves work*, voice tones, body language, feelings and perceptions
- *Listen carefully*, and ask for responses and clarification
- *Express* feelings and opinions in an assertive manner
- *Allow time* for talking - turn off the TV

## Financial Planning

*Wise money management can take a lot of worry out of life.*

- *Set financial goals*
- *Make a realistic budget*
- *Plan to save money each month*



- *Set limits on credit cards*

## Promoting Mind Health

*“As you think, you are.” -Proverb*

There is a vital mind-body connection that influences our emotional responses, behaviour and health. Physical and sexual abuse, faulty self-perception and mental illness can cause emotional and physical dysfunction.

### *Enhance Your Emotional Wellbeing*

- *Develop a positive self-concept*
- *Believe in yourself*
- *Recognise your potential, accept your limitations*
- *Discard irrational fears and beliefs*
- *Defuse hostility and anger*
- *Accept and give positive responses*

*When you feel OK, life is an exciting challenge.*

## Understanding Mental Illness

*At some stage in their lives, one in five people will experience a mental illness.*

- *Varies from the mild and temporary to the severe*
- *Caused by a physical dysfunction of the brain*
- *Most of these illnesses can be treated*
- *Many people have a brief episode and recover*
- *People need support and acceptance*

### *Seek Professional Treatment for More Serious Problems*

- *Psychotic Illnesses - losing touch with reality*
- *Schizophrenia - affects mental functioning and personality*
- *Bipolar Disorder (manic depressive) - extreme mood swings*

### *Non-psychotic Illnesses*

- *Anxiety, phobias*
- *Depression - intense, prolonged sadness and despair*
- *Obsessive compulsive disorders, such as constantly washing hands*
- *Eating disorders - bulimia, anorexia nervosa*

## Winning with Stress

*The right amount of stress makes life exciting.*

*Some stress is necessary and good. A moderate amount of stress, properly directed, can help us to be successful.*

- *Stimulates creativity*
- *Motivates*
- *Allows us to achieve and enjoy life*

### *Practise the ABC's of Stress Control*

**Awareness:** Recognise and identify your symptoms and causes of stress.

**Balance:** Put your life into balance and discover ways to lower your stress.

**Control:** Take control of your life and destiny by the choices you make.

*“God grant me the serenity to accept the things I cannot change, courage to change the things I can, and wisdom to know the difference.”*

*When life is in balance, stress is under control.*

- *Keep every dimension in perspective - the physical, emotional, mental, social and spiritual.*
- *This requires goals, a plan and a winning attitude.*
- *Practice the golden rule - treat others as you want them to treat you.*
- *Cherish your values and create magic moments for yourself and others.*

## Your Choice: Why Do Drugs

### Drugs

*In the middle of the 20<sup>th</sup> century the range of drugs commonly available was very small - primarily limited to alcohol, nicotine, and caffeine. The alcohol was basically in the form of beer, wine or spirits.*

Now these are still favourites, but a whole *range of other drugs* take most of the attention:

- drugs which speed up brain and body functions such as the amphetamines, including MDMA (ecstasy). These are termed *stimulants*.
- drugs that distort reality such as marijuana and LSD and ecstasy again. These are *hallucinogens*.
- and still others which sedate the brain and bodily functions such as barbiturates and heroin. These are *depressants*.

All are readily available in our communities.

The new drugs are illegal. *The old ones are legal*, but imagine if they were unknown and someone tried to introduce them now - both alcohol and nicotine would probably be made illegal.

As it is, governments struggle to handle the health costs and social problems generated by the use of both legal and illegal substances. *Yet most people in Australia and New Zealand use at least one of these drugs daily.*

### Why People Use Drugs

Millions of dollars have been spent on research to determine why human beings take drugs. Here are some suggested answers:

#### **To belong.**

The first experimental use of drugs is usually the result of influence from friends (“peer pressure”). This is the desire to fit in with one part of society, and possibly to rebel against the rest. For example, ecstasy use began in underground raves and dance parties and spread to a large part of youth culture.

### Pleasant sensations

...associated with the drug are what motivates people to keep using. For example, the feeling of being more alert and less tired with the use of caffeine draws the user back to the tea cup, coffee mug or cola machine.

### Escaping reality

is another appeal. People want to get past *boredom*, *difficult life circumstances*, *alienation* from family and society. Some parts of society see alcohol, heroin, sedatives, or amphetamines as legitimate for this purpose. *Depression* and *anxiety* can also make people look for a way to dull their pain.

### Performance or image.

The so-called “performance enhancing” drugs such as anabolic steroids fall into a different category, as they are used to build muscle, enhance endurance and give a competitive edge in performance or image.

### Addiction.

Each of these drugs has its own way of creating and maintaining itself. This is seen most commonly with caffeine (33% of the population addicted), alcohol (25%) and nicotine from tobacco (25%). The power of the addiction cannot be ignored as it drives the user to continued and repeated use. Some drugs are highly addictive (alcohol, nicotine, heroin, marijuana and amphetamines). Even caffeine withdrawal causes headaches, restlessness, lethargy, and irritability in chronic users who stop suddenly.

## The Downside of Drugs

### Addiction

*Addiction to any drug creates a problem* – the user feels they cannot face living without the chemical. Addictions to caffeine may not be dangerous, but the dependence on the drug is real. *Nicotine and alcohol addictions* are the most obvious in our community, and they can spiral into heavier and heavier use.

### Behaviour changes

...are *major for some drugs*, and may be noted even with caffeine.

### Irrational choices.

Using heroin, amphetamines, ecstasy or marijuana is itself a criminal activity in some places, as are drink-driving and under-age smoking and drinking.

*Using can lead to other criminal activity after the user runs out of personal resources to maintain their supply, and considers stealing, dealing or prostitution.*

### ***Multiple addictions.***

Often drug users are addicted to ***more than one drug at a time***, because emotional modification with one drug often leads to experimentation with others. Unfortunately the addiction to the second or third drug comes more quickly than the first, and has an additive effect.

### ***The Follow-on Effect***

It is widely known from research that ***users of “soft” drugs*** like marijuana are more likely to ***move on to using “hard” drugs*** like amphetamines, heroin and ecstasy.

***Less widely known is the research finding that people who start young with smoking or alcohol are more likely to use hard drugs.***

This follow-on or “gateway effect” should be of concern to educators, parents, and legislators. Delaying the age at which the “soft” drugs are used decreases the risk of using the “hard” drugs later in life. And if it is socially acceptable to alter your emotions using chemicals rather than natural means, we must ask what messages of unspoken permission this is sending to children, and what that belief might lead them to.

### ***Personality changes.***

***Acute personality changes*** are associated with the use of a drug – e.g. alcohol can bring hilarity or aggression.

***Chronic changes*** are those that are present even when a person is not using – e.g. the deceptiveness, surliness and selfishness of intravenous and some marijuana users.

### ***Changes in values.***

The life of the user seems to revolve more and more about drugs, and nothing else seems relevant or valuable to them. Friends, lovers, sport, art, sex, even food can be overtaken by an addiction.

### ***Finance.***

***Drugs cost our country hundreds of millions of dollars each year*** – much more than the excises and taxes imposed on the legal drugs by governments. These costs include medical care for people suffering the consequences of the drug use, injuries, the social dislocation costs, welfare payments, legal and prison incarceration costs, increased costs of security and insurance, compensation to victims of drug-related crimes, and the cost of rehabilitation and prevention programs.

***Individuals find drug use makes a huge hole in their own resources, and often those of their family and friends.***

### ***Illness.***

***Drugs are associated with a long list of health problems.*** Recovery is sometimes possible, but even then it is a slow, painful process for the patient and those who care for him or her.

The liver, brain and artery diseases caused by alcohol are usually diagnosed after years of use, but the acute results are more obvious. Fortunately ***alcoholism is an illness*** that is ***totally preventable by a decision never to start using.***

The long term effects of tobacco use are seen in ***cancers of various organs, heart disease, and lung diseases*** such as emphysema.

Intravenous drug users have a ***real risk of infection with Hepatitis B and C, HIV-AIDS***, and other life threatening illnesses.

Any mind-altering substance dramatically ***increases a person's risk of a sexually transmitted disease*** (STD), due to the lack of cerebral control in decision making. Marijuana is particularly associated with STDs. It is also associated with faster development of mental illnesses, as is alcohol.

***Marijuana is four times more damaging to the lungs than cigarette smoke.***

### ***Family***

The family or network of the addicted person suffers from the loss of personal wealth, shame and embarrassment, neglect, violence and intimidation that comes from the variable and controlling behaviour of the addict.

***Family abuse frequently results from addiction to mind altering substances.***

Rather than being part of a family group, the addicted person becomes ***self centred*** enough to betray the family and the individuals in the family ***in preference to seeking help.***

But that ***help is available*** through many agencies: [Alcoholics Anonymous \(AA\)](#), [Narcotics Anonymous](#), and [Teen Challenge](#) help users, while family members can benefit from AL-ANON.

### ***Co-dependency***

***Anyone who lives with, works with, or is related to a drug addict has the potential to become co-dependent.***



*Co-dependency means you become part of the other person's addiction.* This does not mean you use their addictive substances, but *your behaviour reinforces their use of the substance*, or *makes you dependent on the addict's approval for your own self-worth*. Thus a co-dependent person becomes trapped in a personal cycle of behaviour which makes becoming a victim seem like “normal” life – but unfortunately it leads to an abnormal life.

## Alternative Solutions to Drugs For Coping

The basic strategy is to **find positive alternatives** that **meet your needs** without any damaging consequences.

There are **healthier ways** to escape stressful reality – a good movie or book or game doesn't leave a hangover. Healthy outdoor activity can be a boredom-beater. Drug-free recreation venues encourage alternative ways to have fun.

**There are healthy ways to feel acceptance and belong to a group** – supportive friendships and relationships, and putting time into family to make it work. And community groups can offer participation, belonging, and a wide group of friends.

**Employment** can bring satisfaction and motivate the discipline necessary to stay off drugs. Another alternative is to be active in community groups that offer you the chance to serve other people, and to feel the resulting affirmation and pride of achievement.

Children are less likely to start using drugs if they each have an **adult they can trust and relate to well**. A strong family or other network gives them this chance, and a caring neighbour, teacher or friend can be a support.

## Drug Free Living

**Living free from drugs happens because of choices in the light of knowledge about the harmful effects of drugs.**

Therefore every child needs **education** about the possible **options**, and encouragement to make positive lifestyle choices. Drug-free living is the healthy option – **it's healthy physically, socially, mentally and spiritually**. The choice is up to you.

## No Butts About It

*If twenty 747 jets crashed every day, would you still fly?*

Over twenty Jumbo jets full of people die from smoking every day – *and people still smoke. Why?*

## Why Do People Smoke?

Talk to a smoker about *why they started* and they'll probably say:

- *peer pressure*
- *to look cool*
- *to feel grown up*
- *to be macho*
- *to be sexy*
- *rebellion*
- *to reduce stress, or*
- *to keep my weight down.*

Many of these images are portrayed in *tobacco advertising*.

*But ask why they continue to smoke and you'll probably get different responses:*

- *I'm addicted*
- *It's a habit*
- *To reduce stress (Topic 05 - Coping With Stress)*
- *To keep my weight down (Topic 08 - Healthy Body, Healthy Weight)*

All of these are *very real issues*. This series of topics will address them.

Surveys show that *80-90% of smokers would like to quit* – but it can be extremely hard, and most are looking for the magic pill. But smoking is a very complex behaviour influenced by physical, mental, emotional and social factors with the major control exerted by nicotine.

*Most smokers know the horror statistics* we are about to quote but, while knowledge can start a desire to quit, it is not enough motivation on its own.

Later we will look at how to get past knowing better and *actually doing something about it*, based on a method that has *helped millions of people around the world* to be free of smoking.

## The Cost Of Smoking

*One out of every four young people who take up smoking will die from it.*

Smoking accounts for more deaths than from *drug, alcohol, accidents, and AIDS combined*. Of every two smokers who continue to smoke throughout life, one will die from a tobacco caused disease at an early age - 20 years earlier than they should!

Tobacco smoking killed about 3.3 million people globally in 1998 - more than 9,000 people per day. *Each year, tobacco kills more than 18,000 Australians and 4,000 New Zealanders.*

*And it will get worse. If present smoking rates continue till 2020, an estimated 10 million people annually will die from smoking-related causes. Seven million of them will be in developing countries; most will be Asian men, particularly in China where up to 70% of men currently smoke.*

In Australia and New Zealand 50 years ago 70% of men were smokers. Now only 25% of men and women smoke. But that rate varies between groups. Unskilled workers and unemployed people generally have higher rates. And up to *40% of young women smoke - more than young men*. New Zealand's Maori women have the highest rate of female smoking in the world – 55%.

The war against tobacco is slowly being won in Australia and New Zealand. *Overall smoking rates are dropping*. Thousands quit each year to enjoy better health and a longer life. *But many keep smoking and die prematurely*. And unfortunately many teenagers take up the habit and take their places on the down escalator of addiction, disease and death.

*Smoking is the single largest cause of premature and preventable death in Australia and New Zealand.*

*Tobacco robs families of mothers and fathers in the prime of life*, and costs taxpayers billions of dollars a year in illness, disability, hospitalisation, medical treatment and years of lost productivity.

## Smoking and the Environment

It's not just smoking that harms the environment, but cigarette manufacture. The ovens which dry tobacco leaves are fuelled by trees, and *drying one hectare of tobacco requires the burning of one hectare of trees*. This causes the destruction of five million hectares of trees each year.

### What's in a Cigarette?

*Cigarette smoke contains more than 4000 chemicals – many of which are toxins, poisons and irritants to the human body. Many chemicals are added during growing and processing.*

#### *Poisons in Tobacco and their Common Uses*

##### *POISON*

*Nicotine*  
*Ammonia*  
*Arsenic*  
*Carbon monoxide*  
*Butane*  
*Hydrogen cyanide*  
*Toluene*  
*DDT*  
*Acetone*  
*Cadmium*  
*Methanol*  
*Naphthalene*  
*Formaldehyde*

##### *COMMON USE*

*Pesticide*  
*Kitchen cleaner*  
*Termite poison*  
*Poison in car exhaust*  
*Lighter fuel*  
*Gas chamber*  
*Industrial solvent*  
*Previous pesticide*  
*Paint stripper*  
*Car batteries*  
*Rocket fuel*  
*Mothballs*  
*Preserving dead bodies*

*When a person smokes a cigarette they breathe in all of these poisons. Tar, nicotine and carbon monoxide are the main substances that cause harm.*

- **Tar** is a sticky black substance that contains many different poisons, including **43 cancer-causing substances**.

*It produces the yellow stains on smoker's fingers and teeth and on the ceilings of rooms where people smoke heavily.*

- **Nicotine causes addiction**. It **increases** the heart rate and **constricts** small blood vessels.
- **Carbon monoxide reduces the amount of oxygen** in a person's red blood cells. Combined with nicotine it **increases the heart rate and blood pressure by up to 30%**.

## No Butts: Every Cigarette Does Damage

When a smoker drags on a lighted cigarette a lethal cocktail of chemicals is inhaled. Even the damage from **just one cigarette** reduces a smoker's life by **seven to twelve minutes**.

### *What happens when you smoke?*

*The smoke affects each part of the body it touches*. Hot smoke **irritates** the eyes, nose, mouth and throat and then is sucked down into the lungs. Tar is **deposited** inside the mouth, throat and in the lungs. The hairlike cilia, which act as sweepers to keep out junk and clear the lungs, are **paralysed for 10-20 minutes** after smoking a cigarette.

Nicotine and carbon monoxide are **absorbed** into the blood stream. **Within 7 seconds** of inhaling, nicotine is **reacting** with the neuro-transmitters **in the brain** to produce the drug effects. The small blood vessels particularly in hands and feet are constricted. As the nicotine and other chemicals circulate and are broken down and eliminated, **they affect other organs** such as the kidneys and bladder.

*During the last 40 years scientific evidence has continued to document the harmful effects of smoking. Since the 1964 US Surgeon General's Report linked smoking with lung cancer, another twenty volumes and thousands of research articles leave no doubt that smoking is one of the major causes of illness, death and disability in the twentieth century.*

**Smoking is not pretty or sexy**. It does not enhance beauty or increase strength. **It causes harm**. Cigarette smoking causes 90% of lung and mouth cancer, almost all cases of emphysema and is one of the major risks for coronary heart disease, stroke and chronic bronchitis. It causes impotence in men. Smoking also harms the unborn child, infants and non-smokers.

## Some Short Term Effects Of Smoking

- *Increases pulse rate and blood pressure*
- *Restricts circulation in fingers and toes causing a decrease in skin temperature*
- *Increases acid in the stomach*
- *Dulls sensation of appetite, taste and smell*
- *Paralyses and reduces the function of cilia*
- *Stimulates then reduces brain and nervous system activity*
- *Increases coughs and cold*

## Some Long Term Effects Of Smoking

- *Increased risk of heart attacks and stroke*
- *Shortness of breath*
- *Respiratory infections*
- *Chronic bronchitis*
- *Emphysema*
- *Impotence*
- *Cancer of the lung, mouth, throat, oesophagus, bladder, kidney, pancreas, cervix*
- *Stomach ulcers*
- *Small blood vessel disease, possibly resulting in amputation of feet and legs*
- *Wrinkling and premature aging of the skin*

## The Effects Of Passive Smoking

For many years non-smokers have reported the *discomfort and irritant effects* of second-hand smoke on eyes and the upper respiratory system. Now there is *substantial evidence* that passive smoking has long-term adverse effects on the health of non-smokers.

*Long term exposure to passive smoking throughout life either in the home or workplace has been shown to increase all smoking related cancers and a 30% increase in heart disease in the non-smoker.*

Public health authorities and governments and many workplaces have responded to this evidence by making public places smoke-free, *reducing the risk* and providing a *safer, cleaner environment*.

## Smoking And Children

*When a pregnant woman smokes, her unborn child feels discomfort from chemical irritation, and suffers reduced oxygen flow.*

This results in growth retardation -decreased length and a smaller chest and head. This may persist through life and result in lower intelligence. *There is also a greater risk of miscarriage and infant mortality.* Babies of smoking mothers weigh an average of 200 grams less than babies of non-smoking mothers and face other complications.

During childhood if children are exposed to tobacco smoke from their parents they have a greater risk of developing a reduced lung function, increased asthma and colds, and glue ear.

## Nicotine Is Addictive

*Nicotine* is a powerful drug that acts both as a *depressant and a stimulant*. That is why smokers can get the effect of relaxation as well as a boost to alertness. *Nicotine reacts with neuro-transmitters in the brain* to create pathways that make continued smoking easier and more pleasurable. So nicotine provides its own reward and reinforces the habit.

*So what's the problem?*



*Nicotine is a deadly poison.* Smokers avoid fatal overdoses only because the liver works to break nicotine down into other chemicals. The body develops *a tolerance for a certain level of nicotine*, which means smokers only last a few hours before the blood level of nicotine falls below what now feels “normal”, and they feel cravings and withdrawal symptoms. That is why physically dependent smokers rush to smoke a cigarette as soon as they wake up.

Cigarettes become associated with every waking activity of life and the emotional dependence and physical habit are continually reinforced. *Often for a smoker giving up smoking is like losing a best friend. It is painful.*

*But it is possible to stop. Thousands do so each year.*

## So How Do I Quit?

There are many ways to stop smoking:

- *group therapy*
- *“cold turkey” (an abrupt and complete stop)*
- *nicotine patches or gum*
- *counselling*
- *hypnotherapy*
- *acupuncture*

*Some methods are more successful than others.* Often smokers make several attempts with help from others before they finally succeed on their own.

*But everyone is different.* Nicotine replacement therapy – using patches or gum is helpful for many addicted smokers if used in conjunction with changing smoking attitudes, habits and behaviour. *Contact your doctor, chemist or Quitline for further advice.*

If you wish to stop or help a close friend quit, try these following suggestions from the well-known community program *Quit Now!* These *“7 Steps to Freedom”* have helped millions of people worldwide be *free from smoking*.

## 7 Steps To Freedom

### Step 1. Getting Ready to Quit

*Preparation is important.* During this step the smoker needs to really make up his or her mind that quitting smoking is the *most important thing to do* at this time in life. They should understand *why, when and how* they smoke.

- *Discover all the benefits of stopping – better health, saving money, being a good role model, taking control of your life.*
- *Decide when to quit – mark it on the calendar, tell others, get help.*
- *Set a goal, make a contract with yourself.*

### Step 2. It's Time to Quit

- *Stop smoking completely on the quit day.*
- *Develop strategies to handle craving*
- *Declare – “I choose to be a non-smoker” Positive self-talk is important*
- *Delay – wait a few minutes and the craving will become weaker*
- *Deep Breathing - this is a replacement for the smoking drag; it helps to make your mind more relaxed and alert*
- *Drink Water – slowly sip a glass or two*
- *Do Something Else – acknowledge the craving but become busy with something else – exercise, hobby etc*
- *Depend on God – many people find that meditation and prayer helps them cope*
- *Eat a nutritious, low-fat diet*
- *Ask family and friends for their support*

### Step 3. Conquering Nicotine

Nicotine is a big hook but *it is possible to break free*. Most smokers experience some withdrawal effects for several days, including body aches, irritability, inability to concentrate, drowsiness or inability to sleep. *The body is adjusting to life without the drug*. It will soon recover. Urges or cravings may last longer but will become less intense and less frequent as time passes. Most of these cravings are associated with an *emotional or psychological dependence* on smoking.

- *Nicotine patches/gum which provide low doses of nicotine may help reduce withdrawal while habits are changing.*
- *Break the normal smoking habits and routines by choosing alternative behaviours.*
- *Change your thinking – use positive self-talk.*
- *Exercise can give you a healthy high.*
- *Reward yourself for being smoke-free.*

### Step 4. Choose New Habits

- *Continue to change habits that have been associated with smoking at home, work, parties or while travelling.*
- *Develop a regular exercise program.*
- *Use all the resources available including spiritual power.*

### Step 5. Living Smoke Free

- *Review the benefits: lower risk of disease, more energy, less puffing, enjoyment of tastes and smells.*
- *Eat smart and exercise to control your weight.*
- *Practice and enjoy living as a non-smoker.*

### Step 6. Staying Stopped

The *danger period* for many new non-smokers is during *the first three months*. Most relapses occur at a party when alcohol is consumed, during high stress periods or when people are depressed. *Learn to manage stress and relax. Make plans and practice strategies* for difficult situations.

## Step 7. Winning at Life

*It is possible to be a non-smoker for life*

- *Maintain the commitment and motivation.*
- *Keep using the skills and strategies that work.*
- *Help others to stop smoking and you will be helping yourself.*
- *Plan ways to celebrate your smoke-free life and spend the money you have saved.*
- *Never give in to the idea that “I’ll just try one cigarette”.*

## A smoke-free life is the greatest.

If you have never smoked – *don’t start*. It is too easy to become *addicted*. The saddest thing is watching young people, who love freedom, being hooked in powerful addiction.

*If you smoke – think about stopping, get some help, it will be one of the best decisions you make.*

If you have stopped or don’t smoke – *Congratulations*. Encourage your friends and family to live a smoke-free life.

## Healthy Weight

*People are all different shapes and sizes.* Many people wish for the body of a model, but your *healthy weight* may be a lot larger, depending on your frame size and height. *Not everyone should fit into small clothing sizes.*

Putting current fashions aside, there are *very good reasons* for achieving and maintaining a healthy body weight.

*Those who maintain a healthy body weight are more likely to enjoy a better quality of life and to live longer.*

## What is Obesity?

*Obesity occurs when excess fat builds up in the body to the extent that it can interfere with good health and promote disease.*

Adults can test in a general way whether they have too much body fat by working out their *Body Mass Index* (BMI). You may like to do this on the [BMI calculator](#).

Interim Report of a World Health Organisation (WHO) Consultation on Obesity, 1998.

*For children, growth charts are currently used to assess obesity, but a new BMI chart is being developed for use in all countries.*

## Distribution of Fat

Obese people differ not only in *how much* fat they carry but *where* they carry their fat. Recent research has shown that the *distribution of fat in the body* is a better predictor of health risks than BMI (which only tells you how overweight or obese you are).

*Excess fat around the tummy area, in particular, increases your risk of certain health problems.*

A simple way to measure this is Waist to Hip Ratio (WHR) which is calculated by dividing the waist measurement in centimetres by the hip measurement in centimetres. *A WHR greater than 0.9 in men and 0.8 in women means a greater risk of health problems.*

*For example, a woman has a waist measurement of 90 cm and her hips are 95 cm the WHR would be 0.95. This would mean that this woman had a higher risk of health problems.*

#### Risk of Health Complications Due to Obesity According to Waist Circumference

	Increased	Substantially Increased
<i>Men</i>	<i>more than 94cm</i>	<i>more than 102cm</i>
<i>Women</i>	<i>more than 80cm</i>	<i>more than 88cm</i>

Interim Report of a WHO Consultation on Obesity, 1998.

*Figures quoted in these WHO Interim Reports may only apply to people of Caucasian background.*

## Benefits of a Healthy Weight

- *lower risk of heart disease*
- *lower blood pressure*
- *lower risk of diabetes type 2 or mature onset diabetes*
- *lower risk of gallstones*
- *lower risk of some types of cancer*
- *lower risk of arthritis & gout*

## How Many People Are Too Fat?

- *Around one third of women and half of men in Australia and New Zealand are overweight*, while between 10-20% are obese. Overall, about *half of the population is too fat* and this trend is growing.
- In Australia, *men are more likely to be overweight or obese than women* are - even though more women think they are fat and are dieting! This trend is similar in New Zealand.
- The proportion of people who are too fat *increases with age*, and shoots up particularly in the *middle years*.
- Rates of *overweight and obesity are even higher* in Aboriginals and Torres Strait Islanders, sedentary workers (eg office workers, drivers), unemployed and low income groups.



## Why Do People Gain Weight?

People generally gain weight due to an *imbalance* between the *energy gained from the food they eat* and the *amount of energy their bodies actually use up during the day*.

*The energy that is not used by the body can be stored as body fat.*

If this *imbalance* continues over time, a person may become overweight. Several factors can contribute to this imbalance.

### *1. Over-eating:*

We may be tempted by a full refrigerator, or by ads showing high energy snack foods that are high in fat and/or sugar. *Sometimes over-eating becomes a way to alleviate boredom, frustration or depression, or we may also just eat out of habit.*

### *2. Eating Too Much Fat:*

Most people in Australia eat too much fat. *Fat contains twice as many kilojoules (of energy) as the same weight of carbohydrate or protein.* And the kilojoules from *dietary fats* are more readily stored as *body fat* than those from carbohydrates and proteins.

### *3. Little Exercise:*

Modern labour-saving devices have reduced our day-to-day physical activities. Time is often spent doing leisure activities that don't require us to expend much energy. *Australian studies show 67% of Australians do little or no exercise each day.* Our *sedentary lifestyles* may be *a far bigger contributor* to why we gain weight than most of us would ever imagine.

### *4. Genes?*

The genes you inherit do play a role in determining whether or not you will have the tendency to gain weight. New research indicates that *genetics contribute to 25-40% of the variation in the BMI of the population*, according to the International Obesity Taskforce set up by the World Health Organisation. Our genes are like a blueprint, setting out how we are likely to respond to fat in the diet or burn up energy. However, we can still control the type of food we eat and the amount of exercise we do so even if we are genetically destined to be obese, *a healthy lifestyle can impact on our weight in a significant way.*

## How Can I Lose Weight Naturally?

*There are no instant or magic cures for obesity.*

The most successful strategies include a *reduction in food kilojoules*, particularly from fat, and an *increase in energy output via physical activity*.

This usually means *permanent lifestyle changes* in order to maintain the new weight.



# 11 Lifestyle Hints for Weight Loss

## ***1. Lose Weight Gradually***

A weight loss of up to one kilogram per week is considered safe and appropriate by health authorities.

## ***2. Choose Healthy Foods***

Eat mostly fruits, vegetables, wholegrain breads, cereals, pastas and legumes. Making these foods the basis of each meal can help to reduce excess fat and energy intake. Cut down on sugars if you are consuming many high sugar foods.

## ***3. Medication and Surgery***

A number of medications are used in the treatment of established obesity. These include appetite suppressants. Several types of surgery are also being used in the treatment of obesity.

## ***4. Decrease Fat Intake***

People aiming to lose weight should keep their intake of fat to around 40-50 grams per day for men and 30-40 grams per day for women. *Identify the sources of fat in your diet and substitute reduced-fat alternatives where possible.*

- Use reduced-fat varieties of milk, yoghurt, cheese or soy alternatives.
- Eat less fat from butter, margarine, cooking oils, fat on meats, fats in dairy products and hidden fats in processed foods like cakes and biscuits.
- Limit greasy take-away foods and cook quick, simple fast food at home.
- Choose low-fat cooking methods such as grilling, baking, boiling or microwaving instead of frying.
- Include snacks such as rice cakes, crispbreads and fresh or dried fruit.
- Keep in mind that excess amounts of energy from any source (eg. fat or sugar) can contribute to weight gain. So it's also recommended that we consume only a moderate amount of sugar and foods containing added sugars.
- A small amount of beneficial fats such as from nuts, vegetable oils such as canola oil and extra virgin olive oil, and avocado can be included in the diet. As mentioned earlier - lowering fat intake to 30-40 grams per day is recommended for those who need to lose weight.

### The Fat Content of Some Fast Foods

<i>McDonalds</i> -1 Big Mac	27g
<i>Pizza Hut</i> -1/4 pan supreme	24.5g
<i>KFC</i> -1 piece chicken & small chips	31g
<i>Meat pie</i> 1	24g

### 5. Increase Dietary Fibre

*Fibre is filling*, decreases feelings of hunger and is an important nutrient for maintaining a healthy bowel and digestive system. *Try these tips* to include more fibre in your meals:

- *Use wholegrain breakfast cereals and breads*
- *Include fresh fruit and some raw vegetables*
- *Use brown rice and pasta instead of white varieties*

## ***6. Eat Breakfast***

Eating breakfast not only helps to increase metabolic rate (the rate at which our body uses energy) but it also improves concentration and energy levels during the morning.

## ***7. Increase Exercise***

Exercise burns up the energy provided by food and increases the rate at which energy is used for the rest of the day, thereby helping to reduce body fat. Exercise can also relieve boredom, stress and frustration - factors which can lead to over-eating. ***Health authorities recommend that we should do 30 minutes of moderate-intensity activity every day*** – but we can still reap the benefits if we break this up into ***three or four 10-15 minute sessions per day***. Remember – any exercise is better than none. So, choose exercise that you will enjoy and that is easy to fit into your daily routine and, try to make the most of time over the weekend by including plenty of physical activity such as swimming, golf, cycling or walking.

***It is important to see your doctor before commencing an exercise program. Then, begin with short, easy-paced walks. See topic 4 for more information.***

## ***8. Drink More Water***

***Water is an excellent kilojoule-free, caffeine-free alternative*** to many of the beverages we commonly consume (such as fruit juices, soft drinks, coffee, tea and alcohol).

## ***9. Decrease Alcohol Intake***

***Most alcoholic drinks are high in kilojoules***, as are the mixers frequently consumed with alcohol (soft drinks). In addition, alcohol is thought to decrease the body's ability to burn fat, ***therefore making it easier to gain weight***.

## ***10. Eat Out Safely***

***Make healthy choices at takeaway food outlets***. Substitute a small vegetarian pizza with less cheese for your usual pizza with the lot. Stir-fried vegetables and steamed rice are a better choice than dim sims, spring rolls and fried rice.

## ***11. Enjoy Your Food***

***Good health is not just about avoiding disease- it's also about the quality of life.***

Healthy eating doesn't mean you need to miss out on flavour. Pasta with tomato, basil and garlic sauce or a fresh tropical fruit salad are flavour-packed, healthy foods. And healthy eating doesn't mean you can't enjoy your favourite treat foods - just include them every now and then.

## Reduce The Risk Of Cancer

*Cancer can be a frightening word.* This booklet will help you understand what cancer is, but will also give you the *good news* - some exciting research shows that lifestyle choices can *reduce your cancer risk*.

## What is Cancer?

*Cancer (also called a malignancy or neoplasia) is a disease of uncontrolled cell growth.*

Most cancers take the form of *tumours*. A tumour is new growth of body tissue that has no purpose or contributes nothing useful to the body. Some tumours are benign, which means they do not metastasise (or spread out of control).

To *test* whether a tumour is malignant or benign, doctors often use a *biopsy*, which is the removal and examination of a small piece of body tissue. A needle biopsy, usually done in a doctor's office, uses a needle to remove a small sample. Other biopsies require surgery.

*Cancer has four characteristics:*

- *Cloning. One cell undergoes genetic changes or mutation, then clones itself or reproduces itself over and over.*
- *Unregulated growth. Cell growth is excessive because it is not regulated as normal by the body, but is under its own control (or autonomous).*
- *Abnormal cells. Cells do not develop and differentiate normally (called anaplasia).*
- *Spread or Metastasis. Metastasis means the spread of cancer cells by the blood or lymphatic system, so that they grow at other sites in the body.*

## • What do we know about the Prevention of Cancer?

*There is strong medical evidence that the following factors will help you to reduce your overall risk of cancers:*

- *Not smoking, and avoiding smoke*
- *Protecting skin from the sun*
- *Drinking alcohol in moderation, if at all*

- *Avoiding smokeless tobacco*
- *Avoiding excessive exposure to radiation*
- *Following Dietary Recommendations (outlined later in this topic)*
- *Exercise*

*The World Cancer Research Fund and the American Institute for Cancer Research, both highly respected independent bodies, have released a major international report into the link between diet and cancer, which gives dietary advice for the prevention of cancer. This report is as large as most city telephone directories, and summarises 4,000 of the latest scientific papers with input from over 100 of the world's top scientists.*

*This booklet's recommendations are based on that report, "Food, Nutrition and the Prevention of Cancer: a Global Perspective".*

## Preventing Common Cancers

### *Lung Cancer*

*Lung cancer remains the leading cause of cancer death in the world and smoking is mostly responsible.*

You can reduce your lung cancer risk by *choosing not to smoke*. There is convincing evidence that a *diet rich in vegetables and fruits* is very protective. *Carotenoids*, which are natural plant chemicals found in these foods, are probably responsible for at least some of this effect. However for smokers, even a diet with plenty of fruits and vegetables is *unlikely to counteract all the detrimental effects of smoking*.

### *Breast Cancer*

Breast cancer is the most common type of cancer in women *worldwide* although apart from *skin cancer, which is more common in Australia*. The risk seems to be increased by weight gain in adulthood, and factors related to a woman's reproductive system and history.

Diets high in *vegetables and fruits* probably *reduce the risk* of breast cancer. Studies found that using *alcohol*, even in small amounts, probably *increases the risk of breast cancer* and should be avoided. *Exercise* may possibly be a benefit.

### *Prostate Cancer*

*Prostate is the third most common cause of death from cancer in Australian and New Zealand men.*

At present, there is no convincing or probable evidence for a link with dietary factors. However it is thought that *vegetables may possibly decrease risk*. *Fat* (particularly *animal* or *saturated fat*) and a *high intake* of *red meat* and *dairy products* possibly increase the risk.

### *Bowel Cancer*

*Cancer of the colon (large bowel or intestine) and rectum (the lower part of the large bowel) is the fourth most common cancer in the world – and is even more common in Australia and New Zealand.*

*The good news is that up to 70% of bowel cancer can be prevented by a healthy lifestyle!* There is now convincing evidence that *physical activity* or exercise and a high intake of *vegetables* are protective, while *alcohol and a high intake of red meat probably increase the risk.*

### *Skin Cancer*

*Skin cancer is caused predominantly by over-exposure to the ultraviolet rays of the sun.*

A small number of cases are caused by exposure to coal tar, pitch, arsenic, and radioactive materials. *There is a strong link between severe sunburns in childhood and skin cancer later in life*, so it is particularly important that children be protected against sunburn.

The most protective thing you can do is to *avoid over-exposure to the sun*. If you are outside for 20 minutes or more even on cloudy days remember to “slip-slop-slap”:

*“slip” on a long-sleeved shirt,*

*“slop” on a high protection sunscreen (15+ or 30+)*

*“slap” on a hat to protect your face.*

*Any tanning, at the beach or a tanning salon, increases your risk of skin cancer.*

## Eating to Reduce Cancer Risk

*These are the dietary recommendations most relevant to Australians and New Zealanders aged 2 and older, based on the World Cancer Research Fund report.*

### *Focus on Plant Foods*

Eat a *mainly plant-based diet* rich in *fruits, vegetables, legumes* and *minimally-processed starchy foods* like wholegrain breakfast cereals, pasta and rice. Plant foods are extremely important in the diet as they provide *dietary fibre, vitamins, minerals* and biologically-active compounds called *phytochemicals*, which are thought to provide *protection against cancer.*

### ***Maintain a Healthy Body Weight***

***Avoid being too skinny or too fat.*** Avoid gaining more than 5kg in adulthood. The Australian National Nutrition Survey (1995) reports that just under ***half of the men***, and about ***a third of the women in Australia***, carry too much body fat. ***The figures for New Zealand are even higher.***

Overseas studies on ***vegetarians*** have found that they tend to be ***leaner than the general population***, tend to ***exercise more***, and have ***lower levels of several cancers***.

### ***Keep Physically Active***

If you have a sedentary job, include ***one hour of brisk walking each day*** and a total of ***one hour of vigorous exercise for the week***.

***Regular exercise seems to work hand in hand with a good diet to provide health benefits. There is convincing evidence that it can help prevent bowel cancer - and it may assist in keeping breast and lung cancer at bay.***

### ***Eat More Vegetables and Fruits***

***Eat 5 or more serves (One serve means about half a cup of vegetables, or one piece of fruit) of a variety of vegetables and fruits each day.***

Currently the evidence favours ***raw vegetables*** (or salads), ***green vegetables***, vegetables from the ***onion family***, ***carrots***, ***tomatoes*** and ***citrus fruits*** - ***but all these should not be eaten to the exclusion of other vegetables and fruits***. Eating a variety of vegetables and fruits each day will provide the greatest number of protective factors, some of which are yet to be discovered.

***Fruit juice should count for no more than one serve per day as it does not contain everything you would get from eating the whole***

### ***Balance Other Plant Foods***

Eat 7 or more serves of a ***variety of grains, grain products, legumes, roots and tubers***. Prefer ***minimally processed*** foods. ***Limit sugar*** consumption.

***One serve of a grain product or legumes is approximately equal to 2 thick slices bread, 2 cups of breakfast cereal, half a cup of cooked rice or pasta, or half a cup of cooked legumes.***

### ***Avoid Alcohol***

The report says ***alcohol consumption is not recommended at all***. But if people do choose to drink, it advises ***less than two drinks per day for men*** and ***less than one drink per day for women***.

***There is now convincing evidence that alcohol increases the risk of cancers of the mouth, pharynx, larynx, oesophagus and liver, and probably the risks of colon, breast and rectal cancer. Interestingly, this risk is further increased in people who also smoke!***



### *If Eating Meat, Use it as a Condiment*

*If red meat is eaten at all, it should be limited to less than 80g per day.*

It is preferable to choose *fish, poultry or game* (meat from non-domesticated animals) in place of *red meat*. The World Cancer Research Fund report concludes that diets high in red meat (beef, pork, lamb) probably increase the risk of bowel cancer and possibly increase the risk of cancers of the breast, pancreas, prostate and kidney. *So it would be wise to reduce our use of meat, and ideally to avoid it altogether if possible.*

### *Fats and Oils in the Diet*

*Limit fatty foods, particularly those of animal origin. Use vegetable oils in moderation and choose mono-unsaturated types such as olive oil or canola.*

There is growing evidence now that “oils ain’t oils”, and not all fats are created equal. *Plant fats or oils are preferable*, particularly if they are in their *natural liquid form* and not chemically processed (“hydrogenated”) so as to harden them.

The report preferred mono-unsaturated fat largely because of the benefits for heart disease. The balance of information available at the time of publication suggests that this possibly does not influence cancer risk.

### *Slow Down on Salt*

*Limit salty foods and the use of cooking and table salt. Use herbs and spices instead to flavour foods.*

*Most of the salt* in the diets of Australians and New Zealanders comes from *processed foods*, so look for “*no added salt*”, “*low salt*” and “*salt reduced*” options in the supermarket.

### *Storage of Food*

*Store perishable food in ways that minimise fungal contamination.* Refrigerate or freeze cooked foods (such as casseroles) and fresh foods (such as milk). If they stand at room temperature (above 4 to 6°C), they are more likely to be contaminated with bacteria.

### *Additives and Residues in Food*

When levels of additives, contaminants and other residues are *properly regulated*, their presence in food and drink is not known to be harmful. However *unregulated or improper use* can be a health hazard, especially in less developed countries.

### *Use Healthy Cooking Methods*

*Do not eat charred food. If you eat fish or meat, avoid burning their juices.*

Fish or meats which have been *grilled in direct flame, cured or smoked* should be used only occasionally, if at all. *Grilling* of foods, especially meat and fish, causes the formation of compounds which have been shown to induce cancer in animals. *Cured or smoked meats* have other compounds incorporated into them during their processing, which have also been shown to cause cancer in animals.

*Use relatively low temperature cooking methods. Try to steam, boil, poach, stew, braise, bake, microwave or roast your food whenever possible. Limit your use of the grill, frypan and barbecue, especially for the preparation of meats.*

### *Don't Bother With Dietary Supplements*

*Unless administered under medical advice, dietary supplements are probably unnecessary and even unhelpful for people who follow the above recommendations to prevent cancer.*

## Early Detection of Cancers

*Early detection of cancer may save your life.* Here are some simple guidelines:

*Self-monitoring is essential for early cancer detection. If you see any of the signs listed in the CAUTION list that follows, see your doctor.*

The most important *cancer screening tests* include

- *self-examination of breasts and testicles*
- *pap smears every 2 years*
- *rectal exams every year (after age 40)*
- *stool blood tests every year (after age 50).*

Treatment methods consist of surgery, chemotherapy, and radiation therapy. Immunotherapy, vaccines and genetic engineering also hold promise as effective treatments in future.

## CAUTION

- C** *Change in bowel or bladder habits*
- A** *A sore that does not heal*
- U** *Unusual bleeding or discharge*
- T** *Thickening or lump in the breasts or elsewhere*
- I** *Indigestion or difficulty in swallowing*
- O** *Obvious change in a wart or mole*
- N** *Nagging cough or hoarseness*

# Plant Foods

*The health benefits of a plant-based diet can be amazing, as this booklet will show from the latest research.*

If you're cringing at the thought of dry lentil burgers, bean sprouts and raw carrot chunks, *don't worry*. We're talking pizza with sun-dried vegetables, tacos with guacamole, North Indian vegetable curry, Irish stew or lasagne with pistachio nuts.

*Warning:* this topic will have you drooling over dishes you may not realise were *plant-based and good for you*.

## Plant-based foods: an amazing variety

### Mediterranean

- *Pizza topped with onion, capsicum, mushroom, olives, pineapple, roasted vegetables, fresh herbs, red kidney beans and low fat cheese like cheddar, mozzarella, bocconcini, fetta or ricotta.*
- *Mushroom fettuccine - garlic, onion, mushrooms and low-fat sour cream.*
- *Focaccia with avocado, sundried tomatoes, rocket salad and roasted eggplant.*
- *Chunky minestrone soup with crusty bread rolls.*
- *Vegetarian lasagne with spinach, tomatoes, pistachio nuts and low-fat ricotta or fetta cheese.*
- *Fresh gnocchi with basil and tomato sauce.*
- *Felafel - chickpea rissoles rolled in Lebanese bread with tabouli, hommos and salad.*
- *Spinach and low-fat cheese tortellini, with sweet potato sauce.*
- *Cooked lentils in tomato and basil sauce with spaghetti.*
- *Spinach and ricotta cheese cannelloni with fresh tomato sauce topped with low-fat cheese.*
- *Eggplant moussaka.*
- *Capsicums stuffed with vegetable cous cous with fresh chives and roasted in olive oil.*
- *Tomato and Rocket Risotto made with Arborio rice.*
- *Lentil and Asparagus Risotto on a bed of wild rice and brown rice.*
- *Pesto Pizzettas with cherry tomatoes, pine kernels, asparagus, basil and mozzarella on pita bread.*
- *Potato and Corn Frittata, including eggs, low-fat cheese, coriander and garlic.*
- *Chickpea Salad with garlic, onions and balsamic vinegar added to boiled chick-peas.*
- *Split pea and potato soup flavoured with fresh herbs.*
- *Tomato and brown lentil soup with milk or So Good® for a creamy taste with low fat.*
- *Bean Casserole and fresh tomato sauce with vegetables.*

### Asian

- *Hokkien noodles with cashews, capsicums, bok choy and a mixture of sweet chilli and soy sauce.*
- *Vegetable curry, served with rice flavoured with cinnamon.*
- *Sweet and Sour with onions, capsicums, pineapple, broccoli on rice (can use bottled Sweet and Sour sauce).*
- *Crunchy stir-fry vegetables - broccoli, onions, cauliflower, carrots, and snow peas - with satay sauce.*
- *Indonesian Gado Gado with vegetables, boiled egg and satay sauce.*
- *Vegetable Kebabs - ideal for the BBQ, with cherry tomatoes, marinated tofu, onion, capsicum served with a peanut sauce on brown rice.*

## Mexican

- *Corn tacos filled with mexe-beans, tomato, lettuce and guacamole.*
- *Mexe Burritos with tortillas, salsa, cheese, capsicums, and tomato*

## What's so healthy about Plant-Based Diets?

*Plant-based diets*, which are increasingly popular, include *mainly or only* foods grown on plants. They *exclude meat, poultry and seafood* – or “anything with a face” as ex-Beatle Paul McCartney puts it. Some exclude eggs and dairy foods, which are derived from animals.

Medical researchers have long known that plant foods provide lots of fibre, carbohydrates, vitamins and minerals as well as protein (see topic 2). Recently *phytochemicals*, the natural chemicals in plants, have attracted research attention because they are linked to a *reduced risk* of:

- *coronary heart disease*
- *cancer (colorectal and lung)*
- *high blood pressure*
- *high cholesterol*
- *obesity*
- *non insulin dependent diabetes*

*But what other ways do plants offer protective benefits?*

## 1. Protection from Cancer

Some of the world's leading nutrition researchers have studied *vegetarians in Western countries* and confirmed that their rate of *cancer is lower* than that of meat eaters.

Professor Willett found that *avoiding red meat appeared to lower the risk of colon cancer*. Another study from *Loma Linda University* reported that people who frequently *eat red meat* have *increased rates of bladder cancer*.

*Foods that protect against cancer include fruits and vegetables, legumes (such as soya beans) and wholegrain breads and cereals. (See topic 9 for more information).*

## 2. Protection from Heart Disease

*Vegetarians have a 25% lower risk of heart disease compared to the general population*

... according to Dr Timothy Key from *Oxford University*, who reviewed *5 major studies on vegetarians* from around the world.

The Oxford Vegetarian Study found that people who eat *high amounts of animal fat* have *more than twice the risk of death from heart disease*.

*Protective foods for the heart include legumes, wholegrains and cereal fibre, nuts and a variety of fruits and vegetables.*

## 3. Managing Menopause

*Asian women rarely experience troublesome symptoms during menopause.* They are free from the hot flushes and mood swings well known to Western women. Research credits the large amount of *soy products* they eat, compared to the Western diet.

Menopause lowers a woman's natural levels of the *hormone estrogen*, and the *isoflavones in soy* seem to act like estrogen - to which they are *chemically similar*. This helps to compensate for lower estrogen levels, and may help alleviate certain menopausal symptoms in women - a natural version of hormone replacement therapy.

*Preliminary clinical studies have shown that hot flushes are less frequent and less severe when postmenopausal women supplement their diets with soy, which contains phytoestrogens (including isoflavones).*

These results need to be confirmed with longer studies on larger numbers of women, but they look promising.

## Should I Be Vegetarian?

*It's up to you.* The important point is to *eat lots of fruits, vegetables, nuts and wholegrains*. Getting these protective foods is even more important than avoiding harmful factors such as meat in the diet. Some extreme vegetarian *fads can be harmful if they are not balanced*, but generally...

*"Populations of vegetarians living in affluent countries appear to enjoy unusually good health with low rates of cancer, heart disease and death from any cause".*

All these organisations encourage people to eat more plant foods:

- *Diabetes Australia*
- *The Australian Nutrition Foundation*
- *The New Zealand Nutrition Foundation*
- *The National Heart Foundation*
- *The American Institute for Cancer Research*

The national *Dietary Guidelines* and the *Healthy Eating Pyramid* support the need to include lots of plant foods in the diet, and to eat mostly foods such as breads and cereals, fruits, vegetables and legumes.

## VEGETARIANS AND VEGETARIANS

There are two main types of vegetarians.

### 1. Total Vegetarian or Vegan

Their diet consists of only plant foods and *excludes* meat, fish, poultry, dairy products and eggs. Plant foods include *breads, cereals, fruits, vegetables* and *legumes*.

### 2. Lacto-Ovo Vegetarians

Their diet *excludes* meat, fish and poultry but *includes* dairy products and eggs.

*The American Dietetic Association says that appropriately planned vegetarian diets are healthy and nutritionally adequate and provide health benefits in the prevention and treatment of certain diseases.*

*A well-planned vegetarian diet, emphasising a variety of plant products and including some milk and eggs, satisfies all our nutritional needs. Even a vegan diet that contains no milk, eggs or meat can be nutritionally adequate if carefully planned and if vitamin B12 is supplemented.*

*Take special care when planning vegan meals for people with high nutritional needs:*

- *infants and children*

- *pregnant and lactating women*
- *people recovering from illness.*

In these situations it can help to *check with an Accredited Practising Dietitian*. They are a source of reliable information about your personal dietary needs.

## Nutrients

If you are considering becoming a vegetarian make sure you *plan a diet that includes the following nutrients* (all of which are available from a plant-based diet supplemented with eggs and dairy products).

### PROTEIN

Contrary to the myth, *protein is rarely a problem for vegetarians* because it is found in many plant foods, and in eggs and milk. Even the vegan, who includes no animal foods, can get adequate protein from a variety of plant foods. It is no longer considered necessary to eat combinations of plant protein foods at each meal.

And most Australians eat *twice as much protein* as they require, which can be detrimental to health. *Too much animal protein may decrease the amount of calcium our bodies absorb*. Animal proteins from meat and dairy products are a *source of fat and cholesterol and they lack fibre*, whereas vegetable proteins like legumes have little fat and plenty of fibre.

*A vegetarian diet contains an adequate amount of protein.*

## Vitamin B12

### VITAMIN B<sup>12</sup>

*Vitamin B<sup>12</sup> is important in making DNA and red blood cells and in the formation of nerve cells.*

It is possible to eat sufficient B<sup>12</sup> and yet *still have a deficiency* because the body has trouble *absorbing* the vitamin. This can lead to a condition called pernicious anaemia, which requires regular injections of vitamin B<sup>12</sup>. *If you are wondering if you have a deficiency, consult your doctor.*



B<sup>12</sup> deficiencies may also occur because of a lack of the vitamin in the diet. *B<sup>12</sup> is found naturally only in animal products*, so a diet that includes milk and eggs (lacto-ovo vegetarian) should supply enough. However vegans, particularly vegan children or mothers, need a reliable source of Vitamin B<sup>12</sup>. This can come from foods fortified with Vitamin B<sup>12</sup>, or Vitamin B<sup>12</sup> tablets such as Blackmore's<sup>R</sup> Naturetime B Complex<sup>TM</sup> which is free of animal products.

*Warning: Plant products such as tempeh, spirulina, mushroom and brewer's yeast contain only inactive analogues of B<sup>12</sup> which means in fact they block the absorption of true Vitamin B<sup>12</sup>.*

*How much Vitamin B<sup>12</sup> do we need each day?* Three serves or 2.0 micrograms (µg) per day for men and women, 1.0 - 1.5 µg for children, 3.0 µg for pregnant women, and 2.5 µg for lactating mothers.

#### **Natural Sources of Vitamin B<sup>12</sup>**

250mL dairy milk 0.7µg

1 large egg 1.0 µg

1 slice cheese (30g) 0.6 µg

2 tablespoons skim milk powder 0.8 µg

#### **Food Fortified with Vitamin B<sup>12</sup>**

250mL Sanitarium ® So Good ® soy drink 0.7µg

250mL Sanitarium ® Up & Go Liquid ® Breakfast 0.5µg

5g (1 tsp) Sanitarium ® Marmite ® 0.5µg

83g serve Sanitarium ® Soy Healthy TM Soy Fillets 0.8µg

## Iron

### **IRON**

*Iron is needed in the red blood cells to form haemoglobin, which carries oxygen throughout the body.*

It is also involved in the production of energy. Therefore *a deficiency of iron leaves us feeling tired and washed-out*. Iron deficiency anaemia is the most commonly occurring nutritional deficiency in the world, for *vegetarians and non-vegetarians alike*.

Iron is present in foods in *two main forms*, haem iron and non-haem iron.

- *Haem iron is found in meat and is readily absorbed by the body.*
- *Non-haem iron is found in cereals, fruits, vegetables and eggs, and requires Vitamin C to aid in absorption.*

It is important that *every meal includes a food rich in Vitamin C* (such as tomato, citrus or capsicum). Since a vegetarian diet is typically high in Vitamin C rich foods, adequate amounts of iron are absorbed.

How much iron you absorb depends on how much you need. *If you are lacking iron, you will absorb more.* Pregnant women need much more, and so they may require a supplement.

#### *Who needs the most iron?*

- *women of child-bearing age*
- *infants and children, especially when growing rapidly*
- *adolescent girls.*

Women who are *constantly dieting* and restricting their food intake can be *in danger of not getting enough iron.*

The *Recommended Daily Intake* is 5-7 mg for men, 12-16 mg for women and lactating mothers, 6-13 mg for infants and children and 22-28 mg for pregnant women. See topic 2 for information on foods containing iron.

## Zinc

### ZINC

*Zinc is a mineral, important for healing wounds, for the storage of insulin in the pancreas, and for growth and reproduction.*

As with iron, *the more zinc we need, the more we will absorb.*

The *phytic acid* in wholegrain husks, such as unprocessed bran, may *interfere with the body's absorption* of zinc, and of calcium and iron. This is only a problem when *excessive amounts* of unprocessed bran *are eaten each day* – hardly a temptation for most of us! Zinc is absorbed more easily from wholegrain breads baked with a leavening agent than from unleavened breads.

*All in all, it has been shown that the iron and zinc status of long-term vegetarians is adequate.*

The **Recommended Daily Intake** for Zinc is 12-16 mg for men and women, 16-21 mg for pregnant women, 22 mg for lactating women and 12-18 mg for boys and girls.

### GOOD SOURCES OF ZINC

250 mL milk	1.0 mg
250 mL Sanitarium © So Good © soy drink	0.5 mg
1 egg (55g)	0.6 mg
1 slice cheese (30g)	1.1 mg
1 carton plain yoghurt (200g)	1.2 mg
1 carton fruit yoghurt (200g)	1.0 mg
1/ 2 cup legumes (average)	0.7 mg
2 slices wholemeal bread	0.8 mg
1 cup brown rice	1.4 mg
1 cup cooked rolled oats	0.7 mg
60g muesli	1.6 mg
8 brazil nuts (30g)	1.2 mg
20 almonds (20g)	0.8 mg
1 tbsp sunflower seeds (15g)	1.0 mg

## Calcium

### CALCIUM

**Calcium is a mineral important in building strong teeth and bones. Calcium in the blood maintains the proper functioning of the nervous system and muscles.**

The amount of calcium in the blood is **kept fairly constant** because, if it drops, the body soon **withdraws calcium from the bones** to make up for the change. Thus the bones act like a bank account, and can become depleted if our dietary intake of calcium is poor.

We all lose some calcium from our bones as we age, but **women tend to lose twice as much as men**, especially around menopause. **Osteoporosis can result** if insufficient calcium was built up in the bones during early adult life. A balanced vegetarian diet provides enough calcium. (See topic 2 for more information).

## Healthy Families

*You may wonder why family relationships are covered in a course about physical health.*

*What does “soft and fluffy” psychology have to do with the science of health?*

Research shows that *physical health is clearly linked with mental and emotional health*, and *psychosomatic* (mind-body) illnesses are very common.

## One Example

A British study found that *divorced men* have a *76% extra risk of premature death* compared with married men. For *divorced women it was 39% extra risk*. The researcher, Fiona McAllister, says the reasons include these:

- *Good relationships are “a buffer against stress and anxiety.”*
- *Relationship malfunction triggers risky behaviour like smoking, drinking and unsafe sex.*

You would expect that suicide and fatal accidents are *more common outside of happy relationships*, but so are diseases like *heart disease and cancer!*

And *relationships profoundly affect mental health*, as shown in figures from mental hospitals. From an average community of 100,000 people, mental hospitals expect to see:

- *257 married men*
- *663 single men*
- *752 widowed men*
- *1,959 divorced men*

*Figures for women are very similar.*

## Family: The Vital Factor

In the first *Health* topic, *Taking Charge of Your Health*, we defined health as total well being - physically, mentally, socially, emotionally and spiritually. Like it or not, your *family influences you* in all those areas. Moira Eastman in her book *Family: The Vital Factor* quotes research studies that show:

- *The way family members interact with each other has a profound effect on a member's total health.*
- *Stress, anxiety, depression and confusion can be caused by the way family members usually interact with each other - and making positive changes in those habits of interaction can alleviate these mental health problems.*
- *Families who meet their child's intellectual, psychological and emotional needs also tend to look after their physical health.*
- *A supportive family (or other intimate support group) can reduce the effect of the stress that its members face from the outside world, and thus protect their health. For example, someone suffering stress at school can talk about it at home and gain sympathy and support, and maybe even some help.*
- *The way a family interacts with each other greatly influences the development of social skills of each family member, especially children.*

*This topic will outline the principles that make families functional and fun.* It is relevant to all types of family: a traditional Dad, Mum and 2.3 children; a single parent and child; step parents; children living with grandparents; or even non-related people living like family. In fact, *these principles work in an office, sports team or any other group.*

## What makes a healthy family?

*The world's leading family researchers agree that successful families share specific characteristics or strengths. These are worth aiming for.*

### **Adaptability**

Healthy families are able to *adapt to lifecycle changes*, both everyday changes and stressful events. They *focus on positive solutions*, and work as a team to master the difficulties that arise.

### **Commitment to each other**

Successful families are *highly committed to each other*, and work for each other's happiness and welfare. They *invest time and energy in one another*, and make their family their number one priority. They develop similar interests and common goals that give the family something to *work towards* and to *achieve together*.

### **Communication**

Healthy families *make time for talking together, listening and sharing*. They are clear, open and honest in their communication, and try to clear up any misunderstandings as *quickly as possible*.

### **Individuality**

Healthy families encourage every member to *belong and to feel connected*, but at the same time a confidence in themselves as individuals: their *power to make choices* and to grow in their area of interest.

### **Appreciation**

Successful families often *express appreciation for each other*, in clear and unmistakable ways. They enjoy making each other feel affirmed and valued.

### **Spiritual Health**

Statistically, healthy families are more likely than average to have *a spiritual focus* and be involved in religious practices. They *promote love, forgiveness, caring and compassion* within the family. While not all belong to a church or religious organisation, *most healthy families share religious faith and have similar moral values and standards*.

### **Social Connectedness**

Healthy families are *involved in a wider world* of friends, neighbours and extended family (grandparents, uncles and aunts, cousins). They do not live in isolation, but *participate in community activities*. This gives them networks of contacts and resources to help them cope with stresses and change.

### **Clear Roles**

Family members from successful families know their roles and *are secure in them*, but are *flexible enough to share responsibilities* to meet each other's needs. Gender issues are not a problem in healthy families.

### **Shared time together**

Healthy families *make time to be together*, even when they are busy. They work, play, learn and worship together. They share a sense of humour and experience fun together. *They enjoy both quality and quantity time spent with each*

## Developing personal qualities

Healthy families develop the following qualities of spirit in their members:

- *unconditional love*
- *forgiveness*
- *genuine respect*
- *tolerance and gracious acceptance of differences*
- *being honest and truthful*
- *speaking the truth lovingly*
- *empathy, thinking of the other person's needs*
- *conflict resolution skills*
- *anger management and expressing it appropriately*

Family researchers identify these same characteristics as the *healthy building blocks for any healthy relationship*, whether it is marriage and family or a friendship with people at school, or work, or in the neighbourhood.

## Trouble-shooting

When families operate without these strengths, dysfunction can damage the family as a group and as individuals in ways that *severely affect their mental and emotional health*. Here is a list of warning signs in families.

- *If you think you see your family in this list, it does not mean that you are stuck there or permanently classified as dysfunctional. Read on for some possible solutions.*
- *Inability to express feelings*
- *Dysfunctional families tend to avoid and deny their feelings as a way to handle hurt and pain. They may be highly defensive and easily threatened, and tend to blame other people for how they feel.*
- *Poor communication*
- *Unhealthy families have very little open communication with each other. If there is conflict, they avoid each other and withdraw emotionally. In highly dysfunctional families, one individual may create a crisis to force the others to resolve family problems. They may try to promote change within the family through “acting out” behaviours, rather than using direct, open communication.*





## What makes a dysfunctional family?

### **Extreme anger and conflict**

When problems arise, unhealthy families tend to *cover up rather than face up* to the issues that are impacting their family. They *argue about who is in charge* of the family, a power struggle that causes chaos and makes people say things that destroy or disrespect the feelings of others. People try to *ignore feelings of anger and hurt*, or they over-react and *express themselves in extreme ways*.

### **No clear boundaries**

In dysfunctional families, *relationships become entangled*. One family member becomes involved in another's life *without respect for their individuality* or differences, barging into their private space. These "boundary violations" can include *abuse and violence*.

### **Manipulation and control**

When unhealthy families are angry or disappointed with each other, they use *blaming and shaming*. They try to *manipulate people* into doing what they want, often try to make the other person *feel guilty or lower their self-esteem*.

### **Negative attitudes**

Dysfunctional families tend to be *overly serious and suspicious* of each other, and they *lack a sense of optimism and fun*. When they do play, *someone usually gets hurt*. These families have *few common interests* and little to talk about, and are *unable to share or celebrate* important events or values together.

## What makes a dysfunctional family?

### Rigid, intolerant attitudes

Unhealthy families are *afraid to try new ways* of doing things, *for fear* that someone will criticise them. They find it *hard to be free or spontaneous or creative*, and *tend to live in the past* rather than cope with change.

### Social isolation

Most unhealthy families are “*loners*”, cut off each other and *from the wider community*. They may be afraid to reach out for support because *they think no-one will bother with them*. They can also have such *anti-social attitudes and behaviour that they lose friends*.

### Stress and psychosomatic illnesses

Feelings that are not expressed are stored in our memories and *internalised*. This can affect the health of family members, and *develop a range of psychosomatic (mind-body) illnesses*. These in turn mean the person has less energy for the family.

## Looking for solutions

At times of crisis or distress, you need to talk over your problems and to feel you are not on your own.

Advice is cheap, but very few people really care enough to *listen and understand before they advise*. Even fewer people have the *wisdom and the professional training and experience* to offer you real help for your life. Here is where *a professional counsellor can really help*. Many people have found a few sessions have eased their worries and helped them to understand themselves and their problems.

To some people, especially men, seeing a counsellor seems like an admission of failure or weakness. Yet everyone asks for help from a skilled dentist or mechanic when they need it – *why not from a professional in human relationships?*

*Reaching out is a sign of strength, not of weakness, and can result in major personal growth and a healthier life.*

## Healthy Self Esteem

So you've never strutted the catwalk or won Wimbledon? They haven't called you about the Nobel Peace Prize yet? You haven't cured cancer or dated a movie star or won Olympic Gold? Maybe - but of the billions of us on Earth, *there is no one else quite like you.*

*You deserve love and respect just because you are you.*

And *you will be healthier if you think so.* Not just mentally, but physically.

## What is Self Esteem?

Self esteem (or self worth) is *feeling satisfied and confident with yourself, and valuing yourself as a person.* As a little boy put it, "I'm somebody, coz God don't make no junk."

*People with appropriately high self esteem have positive but realistic opinions about:*

*Who they are*

*What roles they are capable of doing*

*The roles they play*

Self esteem also helps you *feel good about other people.* If you can like yourself even with your imperfections, then you will realise that other people also deserve to be liked with their faults. *This attitude builds healthy relationships.*

One *major influence* on a person's self-esteem is their *family of origin.* Poor self-esteem can be caused by:

**Unrealistic expectations.**

- If children have goals set too high by well-meaning parents, they will never achieve them and may constantly feel like failures, even though they are performing well. Goals set too low can make children feel their parents never believed in their ability.

**Not feeling unconditional love.**

- For a number of reasons, children can receive unstated messages that they are loved *if* they do certain things, rather than just for who they are. The best reason to love and to be loved is “just because.”

### Divorce, infidelity, and betrayal.

- Children often blame themselves for their parents’ break-up, or feel that the parent who leaves is leaving *them*, a personal rejection.

*Families with problems like these have left many people feeling undeserving of love and even unworthy of life itself.*

*Their family has told them who they are.* It can be hard for them to step back from these situations and work out what is causing their problems, and what to do about it. But “Ugly Ducklings” can learn to fly – and not just in fairytales. *Your family background need not control the rest of your life*, as we will discuss later in this topic.

## What makes (and breaks) self esteem

### 2. Achievement and Failure

The *opinions we hold* about our abilities and achievements *affect our self-esteem* – and vice-versa. One study divided people into groups according to their *feelings and beliefs about their success or failure*, and what caused it. This research was done in a school, but can apply in the workplace and many other areas of life. The study found:

#### 2.1. Mastery-oriented people...

...value achievement in life, and feel confident that their abilities can be improved on. They *focus on goals* in order to *increase their skills and abilities*. They are *not fearful of failure*, because even when they fail they still know who they are, and *failing does not threaten their sense of competence and self-worth*. This allows them to *set moderately difficult goals, take risks, and cope with failure constructively*. They have the general feeling that success is usually because they worked hard, and so they assume responsibility for learning and their behaviours.

If you are a *mastery-oriented person*, you will

- *perform well in competitive situations*
- *learn fast*
- *have self-confidence and energy*

- *welcome constructive feedback (it does not threaten you)*
- *be eager to learn “the rules of the game” so you can succeed.*
- *be highly strung and tense, because you are constantly analysing and noticing your surroundings.*
- *2.2. Failure-avoiding people...*

... cannot separate *who they are from what they do*. They feel only as good as their last accomplishment, and do not have a strong sense of self-worth or competence unless they are achieving something. *This drives them to set performance goals.*

They are *very sensitive to failure* because of what they think it says about them. *Failure wrecks their self-esteem* and so they avoid it at all costs. If they feel they are generally successful, they avoid failure by taking very few risks and sticking with what they know. If they feel they have experienced more failure than success, they *may use failure avoidance strategies like:*

- *procrastination – “If you don’t even start, you can’t fail.”*
- *feeble efforts - “I didn’t really try anyway.”*
- *setting ridiculously high goals - “Oh well, I never could have hit the stars...”*
- *setting ridiculously low goals - “At least I succeeded at something...”*
- *claiming not to care– “This is not important to me. I have so many other things I’m good at.”*

Unfortunately *these failure-avoiding strategies fail*; they usually lead to the very failure the person was trying to avoid. If failures continue and excuses wear thin, *people may finally decide that they are incompetent*, and become failure-accepting.

### *2.3. Failure-accepting people...*

*...expect failure* in almost everything they do. They have pretty well *given up on themselves* and have almost *zero self-esteem*. They are convinced that their problems are due to their low ability, and that there is little hope for change. This *attitude causes more failure*, and so they feel this is even more proof that they have no ability. They are *likely to become depressed, apathetic and helpless*.

*The good news is that these people can learn to change their thinking! Martin Seligman’s book Learned Optimism has sold millions of copies because people want to change their attitudes.*

*It is important to recognise what type of person you are so you can take action accordingly. Identifying how you feel about failure is a good first step to dealing with failure in a more positive way in the future.*

## Our own choice

You may be listing off a whole heap of reasons why you are not worth something as suggested in this online material. But *every person is valuable* no matter what they do, what role they play in life, what car they drive and what house they live in.

*Being worthwhile is all about attitude.*

## Be An Optimist

*Healthy, optimistic thinking* can help you:

- *Improve your mood, self-esteem, and overall happiness.*
- *Decrease depression, anxiety and hostility.*
- *Lessen pain and other bodily symptoms.*
- *Speed recovery from surgery.*
- *Enhance your immune function.*
- *Possibly extend your life.*

*“Healthy thinking is not necessarily more realistic; it’s just healthier”.*

## How To Be An Optimist?

- *Be selective, remember mainly the positive events in the past.*
- *Focus on the present.*
- *See the future in terms of what can be done instead of what can’t happen.*
- *See threats as challenges - problems to be solved.*
- *Believe the world is coherent, and their actions make a significant difference.*

## Coping with Failure

Most of us probably see failure as only a negative thing. But *failure can be viewed positively* as feedback on how we are going. *People who are winners make far more mistakes than people who are losers.* We can learn far more from our failures than we can from our successes.

*Thomas Edison, the inventor of the first electric light bulb, failed so many times in his attempts that he became a mockery. When asked about his high failure rate, Edison replied that he had not failed at all, but rather had successfully found thousands of ways how not to make a light bulb. This is an example of a healthy attitude towards mistakes.*

## Helping Others To Cope With Failure

No matter who you are or what role you play in your family or community *you influence other people and their self-esteem.* If you are a parent or teacher, your role is especially important. You may be able to prevent some *failure-avoiding* people from becoming *failure-accepting* by helping them to *find new and more realistic goals.* Also, some people may need support in aspiring to higher levels in the face of sexual or ethnic stereotypes about what they “*should*” want or what they “*should not*” be able to do well. *This kind of support could make all the difference.*

## How Can I Feel Good About Myself?

- *Concentrate on things you do well.*
- *Be encouraged by your success no matter how small it may seem.*
- *If you have failed, think about where you went wrong and find a better solution, but do not dwell on your mistakes and failures for you are only likely to repeat them.*
- *Try to be flexible. There is often more than one solution to challenges that face us.*
- *Make things happen rather than wait for them to happen for you. Show initiative. Don't be frightened of making a mistake, provided you learn from it.*
- *Try and avoid asking others for advice as it often prevents you from trusting your own decision making ability and others may lie to you about what the reality of the situation may be to try and protect you. If you want advice ask for constructive feedback, that means you are giving people permission to say what they really think will be most helpful to you.*

# Life's Spiritual Values

*Life is what happens to us while we're looking for reasons to live.*

*What effect can my spiritual values have on my life?*

- *Give a sense of self-worth - you are loved and valued.*
- *Provide understanding and meaning to life.*
- *Give confidence and hope for the future.*
- *Demonstrate ways to love and accept others.*
- *Change viewpoints of life and humanity.*

*The Value of a Faith in God*

A *belief in God* provides:

- *A sense of meaning and purpose.*
- *A framework for setting priorities.*
- *A way to place stress in perspective.*
- *Comfort during illness or crisis.*
- *Support for a healthy lifestyle.*
- *Opportunities for social contact.*
- *A means of developing supportive relationships.*
- *Reasons to help others.*
- *A sense of being part of something larger than oneself.*

Research has found that *people who have religious beliefs have:*

- *Less stress.*
- *Less risk of self-destructive behaviour (suicide, smoking, and drug abuse).*



- *Greater overall satisfaction with life.*

*How can you make your own spiritual Rediscovery?*

- *Pray - the simplest form of renewal*
- *Develop your faith - connect yourself to a higher power*
- *Read good books - study the lives of successful people*
- *Practice the art of loving - its the secret of living*
- *Read the Bible - its the best manual on life ever written.*

## How To Think in a Healthier Way

### 1. Track Your Thoughts

Being *aware of negative thoughts* that you have about yourself is the first step to *becoming more positive* about yourself.

### 2. Question Pessimistic Self-Talk

Here are 10 questions to ask yourself next time you find yourself caught up in negative thinking.

- *Have I really identified what's bothering me?*
- *Am I exaggerating the situation?*
- *Am I over-generalising?*
- *Am I over-worrying?*
- *Am I assuming the worst?*
- *Am I making an unrealistic or unfair comparison?*
- *Do I have the evidence for my conclusion?*
- *Am I taking it too personally?*
- *Am I discounting the positive?*
- *Am I expecting perfection?*

### 3. Uncover Your Core Beliefs

It is important to understand *why you think the way you do* about yourself as it may be the result of a deep belief that you are unintelligent or that you are unable to communicate with the opposite sex.

#### 4. Challenge Your Shoulds

Deep beliefs about yourself *often involve the word 'should'*. For example you may feel that you should be thin, or that you should be the top of your class or that you should be the manager within your department.

#### 5. Use An Affirmation

*Encourage yourself with positive thinking* about yourself and your behaviour even if that may be a goal and not what 'is' at the moment.

#### 6. Get a Sense of Control

A sense of control *does not mean power or authority*, but rather an understanding that you and *you alone have the ultimate control over your personal situation* and over the choices that you make.

#### 7. Focus on What You've Got

Put together a list of your *personal talents and abilities that make you unique*. They can be things such as a complex skill, achievements, personality traits that set you apart such as a calm personality, ability to focus on a task, and an ability to make other people around feel comfortable because of your friendliness and relaxed manner.

#### 8. Act As If...

By acting as if something good were true, you can *generate positive feelings and thoughts*. This is important so you can *act in a way that is positive* with the confidence that you would feel if that *success had been personally yours*.

#### 9. Be Mindful

*Be aware of your thoughts and behaviours that reflect how you feel about yourself.*

We're glad you've enjoyed this course! *(See, we have healthy self-esteem!)*