

HEALTHY LIFESTYLE CAMPAIGN



CARDIOVASCULAR DISEASES GENERAL INFORMATION FOR PARAMEDIC

HEALTH DIVISION
MINISTRY OF HEALTH MALAYSIA
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INTRODUCTION

In the past, the Ministry of Health has implemented various preventive and curative programmes to improve the people's health. The strategies used in the prevention and control of infectious diseases like diphtheria and poliomyelitis have resulted in a decrease in the incidence of such diseases. Other programmes aimed at improving the health of mothers and children have also succeeded in reducing the mortality rate in the two groups.

However, as the country wins the battle over endemic infectious diseases and the people become more affluent, so our lifestyle changes. Where previously more people were engaged in the more physical- type of work, today's work activities combined with increasing automation require less physical exertion.

The affluent lifestyle has led to irregular meal times and habitual from fast food outlets. We are giving less thought to the need for proper nutritious meals and consume more processed, instant or convenience foods which are rich in calories, sugar, fats, cholesterol and salt. In addition, affluence has also resulted in an increase in smoking and alcohol consumption. For these reasons, the disease pattern in the country has also changed and we see a move from 'environmental' to 'lifestyle' diseases.

What do we mean by this?.

Let's take cancer as an example. The incidence rate of cancer has increased from 71 cases per 100,000 people in 1970 (6,254 cases) to 156 in 1989 (22,254 cases). Other lifestyle- related diseases like coronary heart diseases, diabetes, sexually-transmitted diseases including AIDS, and food poisoning are also on the rise.

As these diseases are related to both the individual's and society's, way of life, it is very important that the public are informed of what preventive measures can be taken so one does not fall victim to any of the lifestyle diseases.

At the same time, we must also intensify efforts to motivate everyone to practise a healthy lifestyle.

What is Healthy Lifestyle?

To enjoy a healthy lifestyle, one must be in good health. Unfortunately, many confuse good health with fitness. A healthy lifestyle is more than just physical fitness. It is choosing the correct type of food to eat; maintaining correct body weight; being able to cope with the stress and strains of modern living, avoidance of smoking and alcohol and doing regular moderate exercises.

All these contribute towards helping one achieve a lifestyle which makes one feel good and where the prospect of growing old in a good frame of mind and health is bright. The Ministry of Health's Healthy Lifestyle Campaign. On May 25, 1991, the Ministry launched a nationwide 'Healthy Lifestyle' Campaign. Using the health care approach, the campaign is aimed at promoting a healthy way of life among individuals, and society as a whole.

The three main objectives of the Campaign are:

- To create greater awareness of the dangers of 'lifestyle' diseases amongst Malaysians.
- To educate Malaysians on the preventive measures which can be taken.
- To promote a healthy lifestyle amongst Malaysians.

The priority diseases which have been selected for this campaign are:

1. Cardiovascular Diseases.
2. Sexually-Transmitted Diseases/AIDS.
3. Food Poisoning.

4. Cancer
5. Diabetes Mellitus.
6. Childhood Diseases.

To ensure a full-understanding of each priority diseases, the Healthy Lifestyle Campaign will be spread over six years with one disease being highlighted each year.

The proper dissemination of all healthy lifestyle messages will also be ensured as the Campaign will be carried out at both national and State levels.

At national level, the activities will include:

- Talks and spot announcements on radio and television.
- Dissemination of health messages via newspapers, magazines and other print media.
- Nationwide educational activities to be carried out by Health Ministry personnel through exhibitions, group discussions and demonstrations.

At State level, the State Medical and Health Director will, organized and implement various activities using the Primary Health Care approach, that is, inter-sectoral collaboration and community participation. In the former, other government agencies (eg. Ministry of Information, Ministry of Education, Rukun Tetangga groups, etc.) and non-governmental civic organisations (eg. Rotaract, Lions, Kiwanis, etc) will be encouraged to participate either directly in the Ministry's promotional activities or through their own efforts.

Your Role

As representatives of the Ministry of Health and responsible citizens, your role in the Healthy Lifestyle Campaign is vital. Very often, you are the vital link between the medical practitioner and the public. And in a campaign of this nature, you are the most likely person the public will approach for explanations.

This manual has been prepared to help you pass on the healthy lifestyle messages. As 1991 will focus on Cardiovascular Diseases, the following pages detail what the risk factors are, how they affect one's health and give some basic advice on how to overcome them. We hope you find this Manual a useful reference to queries about the Healthy Lifestyle Campaign and the first 'lifestyle' disease, Cardiovascular Disease.

HEALTHY LIFESTYLE CAMPAIGN 1991 - CARDIOVASCULAR DISEASES.

Cardiovascular diseases are the No. 1 'killer' in the country. In 1989, 5,294 (29.1%) of all medically certified deaths in Peninsular Malaysia were due to cardiovascular diseases. Between 1981 to 1989, the mortality rate rose from 15.3 per 100,000 persons to 37.0, an increase of 141.8%. Hospital admissions for cardiovascular diseases also show a similar trend, increasing by 534% between 1965 and 1989.

Cardiovascular disease includes coronary heart disease, stroke and other vascular diseases. Of these, coronary heart disease is the most preventable through adoption of healthy lifestyle: This campaign focus on coronary heart disease.

Main Risk Factors for Coronary Heart Diseases.

There are five main risk areas. They are:

1. Smoking
2. faulty Nutrition/Obesity
3. Lack of Exercise
4. Hypertension
5. Excessive stress.

It is vital that these risk areas are highlighted so the public is aware of them and are informed of the preventive measures which can be taken.

SMOKING

Why is Smoking Harmful?

There are over 4,000 chemicals in cigarette smoke. As the tobacco heats up, it changes form and creates chemicals not present in the original tobacco. These chemicals fall into four main categories:

i) Nicotine

Stimulates yet depresses the nervous system. Also increases heart rate and blood pressure.

Initial effects include:

- Constricts blood vessels
- Increases heart rate making the heart work harder
- Increases the amount of oxygen need by the heart

Later effects include:

- Addiction
- Raises blood pressure
- Allows blood to clot more readily.
- More prone to heart attack, stroke and stomach and intestinal ulcers.

ii) Tar

Cancer-causing substance which stick to the inner lining of the mouth, air passage and lungs.

Initial effects include:

- Bad breath
- Yellow teeth
- Smoky smelling clothes
- Smoky home and work environment

Later effects include:

- Lung cancer.
- emphysema (difficulty in breathing)
- Other cancers likely.

iii) Carbon Monoxide

Reduces oxygen in the blood going to all parts of the body.

Initial effects include:

- Less oxygen in the body hence breath shortness
- Less stamina for exercise
- Less oxygen for foetus

Later effects include:

- Increases chance of antherosclerosis (narrowing and blockage of blood vessels).
- Damages blood vessels leading to blood vessel disease, coronary heart diseases and lung disease.
- Decreased fitness

iv) Other Chemicals

Irritate lungs and air passages, paralyse cilia in air passages, destroy air sacs in lungs and cause cancer.

Initial effects include:

- Increased phlegm
- A dry and sore throat
- Watery eyes
- An incessant cough

Later effects include:

- Chest infections
- Emphysema and chronic bronchitis
- Damage to teeth
- Gum disease
- Lung cancer

Smoking is a major cause of ill health and premature deaths. It is responsible for 90% of lung cancer cases and a number of other cancers, 75% of chronic obstructive airway diseases, 25% of coronary heart diseases, complications during pregnancy and childhood respiratory diseases.

Those who smoke more than 20 cigarettes a day are 10 to 15 times more likely to suffer a fatal heart attack as smoking lowers blood levels of high density lipoproteins (good fats).

Non-Smokers Can Get Coronary Heart Disease Through Passive Smoking.

Passive smoking means breathing air which contains other people's tobacco smoke. Non-smokers breathe higher levels of nicotine, carbon monoxide and other toxic chemicals when exposed to tobacco smoke in the home and at work. This is because there are two kinds of cigarette smoke.

The smoker inhales 25% mainstream smoke while the remaining 75% sidestream smoke from the tip of the cigarette goes directly into the air. On top of that, the smoker puffs out half the mainstream smoke so 85% - 90% gets into the air which others breathe.

Pure sidestream smoke contains three times more tar, five times more carbon monoxide, twice as much nicotine and 50 times more cancer-causing substances than mainstream smoke. Though the harmful sidestream smoke is diluted in the air and non-smokers breathe in the less harmful concentrations, they are still breathing in the pollutants.

How To Stop Smoking

When one stop smoking, the risk of heart diseases is reduced although it would be several years before the chances are low enough to equal that of a non-smoker. The risk declines substantially within one year of stopping and gradually after 10 to 20 years it is the same as that of the non-smoker. The will to stop and to be healthy is imperative towards overcoming the habit. The best way to stop smoking is just stop and stop forever.

Some Initial Effects When You Stop

Craving

It takes 2 - 3 weeks for nicotine to leave the body. During this time, the urge for a cigarette smoke to replenish the nicotine can occur.

- Tingling Sensations

For some people, strange tingling sensations are felt in the arms and body. This is just the improved blood circulation getting back to normal.

Coughing

As the lung clear and the paralysed cilia functions again, coughing may occur to help clear the lungs of phlegm.

Non-Smoking Rewards

Stopping smoking completely will enhance the heart's health. Non-smokers enjoy:

- Improved health
- A much-reduced risk of lung cancer, heart attack, other cancers, chronic bronchitis and emphysema
- Breathing will be easier
- More stamina to exercise
- No smoker's cough and sore throat
- Feeling better all round

Freedom

- One is no longer a slave to cravings for cigarettes
- More money to spend on other things.

Social Image

- Absent of bad breath

NUTRITION AND OBESITY

With increasing affluence comes a faster pace of life. Today's busy lifestyles find people not eating proper food and always in a hurry. We often find ourselves eating food which is rich in salt, fats and sugar. The result? More and more people are falling victims to obesity, heart disease, high blood pressure, diabetes, etc. To stop this trend, we must educate the public of the need to change their eating habits.

EAT A HEALTHY DIET TO REDUCE DISEASE RISK.

Reduce excessive **FAT**, **CHOLESTEROL** and **CALORIE** intake, avoid deep fried foods, choose low fat and low cholesterol foods.

Reduce excessive **SUGAR**. — avoid soft drinks, cordials, biscuits, cakes, desserts, jams.
Increase **FIBER**. — eat more fruits, green or yellow vegetables, beans, pulses, cereals.

Reduce **SALT** intake. — eat more natural and freshly prepared foods and fewer processed foods with added salt, avoid sauces and sprinkling of extra salt in food.

Eat a wide **VARIETY** of foods including cereals, legumes, fish, meat, fruits and vegetables.

THE SECRETS OF PRACTICING GOOD NUTRITION FOR HEALTH AND LONGEVITY

Eat a wide **VARIETY** of foods. — No single food supplies all the nutrients you need.

Eat according to your **AGE** and level of **ACTIVITY**. — As you grow older you do not need as much food. If you are physically active in your work (e.g. padi farming, construction work) or in physical exercise (eg. sportsmen), you need more food.

Choose daily from a **COMBINATION** of foods which supplies — **ENERGY** (eg. rice, mee, potatoes, bread, flour), **PROTEIN** (eg. fish, meat, eggs, milk, beans, dhal), **VITAMINS** and **MINERALS** (fruits and vegetables eg. papaya, starfruit, pineapple, tomatoes, carrots, spinach, kangkong, sawi, pucuk paku).

Eat more **FRUITS**, Green or yellow **VEGETABLES**, beans, pulses and whole grain **CEREALS**.

Eat more **NATURAL** and **FRESHLY** prepared foods.

Eat a little of EVERY food but NOT too much of ONE TYPE of food.

Eat REGULARLY and do not take SNACKS in-between.

WHAT IS FAULTY NUTRITION?

Faulty nutrition increases the risk of heart diseases due to; * Excessive CALORIES, * Excessive SUGAR,

* Excessive FAT, * Excessive CHOLESTEROL-RICH FOODS, * Excessive SALT, * Insufficient FIBER,

in our daily diet.

WHAT IS CALORIE?

Calorie is a unit measurement for energy. Everyone needs energy for living. We get our energy from fat, protein and carbohydrate.

What's wrong with too many calories?

You become fat by • eating food that contains more calories than your body can use up. Fat people are generally less healthy and more prone to illnesses such as diabetes mellitus, high blood pressure and coronary heart disease.

How much calorie intake do we need to consume?

By eating food that contains more calorie than your body can use up, you will become fat. Refer to table below for calorie intake according to your age and level of activity.

Recommended daily calorie intake (Moderately active adult).

Age (Year)	Energy (kcal) — Male	Energy (kcal) — Female
20 — 39	2,530	2,000
40 — 49	2,400	1,900
50 — 59	2,280	1,800
> 60	2,020	1,600

How to Choose foods for low calories?

Avoid foods that contain high amounts of hydrogenated vegetable oils e.g. hard margarine, vegetable shortening, butter, ghee, lard and coconut oil.

Limit intake of hawker food prepared with excessive fats and oil e.g. kway teow/mee goreng, roti canal, yar char kwai, br mai fan, mee kari, nasi lemak, nasi goreng, nasi minyak, myor pak and ayam/ikan goreng.

Restrict deep fried foods to twice a week. Drain deep fried foods well before eating e.g. curry puff, ayam/ikan goreng, pisang goreng, cokodok pisang, yar chow kwai, keropok lekor.

Limit intake of nuts, crisps, cream cakes, cream and sweet biscuits, chocolate, toffees, local 'kueh' eg. kuih bakul, kuih dodol, rempeyak, kuih sago, kuih sen muka, kuih kochi.

Limit intake of fatty minced meat, burgers, sausages, luncheon meats, bacon and ham.

Eat less red meat (pork, beef, mutton, duck). Eat more chicken and fish. Choose lean meat and trim away any visible fat and skin.

Try more vegetable-based dishes. For example cook with peas, beans, dhal or soya-bean products.

Use minimal amount of sweetened condensed milk in coffee, tea, sweets and cakes.

WHAT IS SUGAR?

Sugar supplies calories only and does not contain any other important nutrient essential for good health. It can be concentrated into small amounts of food and drinks which makes it easy to consume excessive calorie unintentionally.

Table sugar is not needed in the diet. Your body can convert carbohydrates present in other foods to sugar in the body.

Adding sugar to the diet is habit forming. A sweet tooth acquired in childhood will perpetuate a fondness to sweet foods later throughout their lives.

What's wrong with too much sugar?

Eating too much sugar can lead to overweight and obesity, displace nutritious foods from the diet, thus you may not get enough vitamins, minerals and fiber and can increase the risk of tooth decay.

How to reduce excessive sugar?

Avoid soft drinks, syrups, sweetened drinks, glucose drinks, crystals and powders. Drink plain water instead.

Limit the use of sweetened condensed milk, jam, sri kaya and honey e.g. if 3 teaspoon are being used in a cup of coffee or tea, reduce it to one teaspoon.

Replace sweet snacks, desserts, puddings and confectioneries with fruit or savoury alternatives.

Make your own fruit juices without added sugar rather than drinking sweetened commercial juices.

Read the food labels carefully before buying.

WHAT IS FATS?

Fat in the diet are essential for good health. Most of the fat in our diet comes from five sources:

- meat and meat products
- spreading fats (butter, margarine)
- milk, cream and cheese
- cooking fats (butter, margarine, lard and ghee) and oils.
- nuts

There are 3 kinds of fat in food.

Saturated fat — Tends to raise blood cholesterol which is bad for your heart. They are found mainly in fatty meats, butter, cheese, ghee, lard, coconut oil, coconut cream.

Polyunsaturated fat — Tends to lower blood cholesterol which is good for your heart. Polyunsaturated fats are liquid fats from plants (corn oil and soya bean oil except coconut oil).

Monounsaturated fat — May help to lower blood cholesterol eg. palm oil, peanut oil, sesame oil and olive oil.

Note: Read the tables of the contents of your vegetable oil to determine the source of oil.

What's wrong with too much fat?

Fat has a very high calorie content. For the same weight, fat has twice the amount of calories compared to carbohydrate and protein.

- 1 gram of fat provides 9 kilocalorie
- 1 gram of protein provides 4 kilocalorie
- 1 gram of carbohydrate provides 3.75 kilocalorie

If you eat a lot of fatty foods, you are much more likely to become obese and also you are more prone to develop coronary heart disease.

Where are the hidden fats?

Be aware of fat from hidden sources especially from snacks and processed foods that may not look fatty or oily.

Fast food restaurants offers a variety of fatty choices. When you choose fried chicken, french fries and a milk shake you would be eating at one meal the amount of fat you should take per day. Deep fried foods are high in fat.

Bread spread is like peanut butter, sri kaya and cheese spread where extra fat is being added to the diet. Snacks like doughnuts, salted crispes, keropok and nuts, deep fried savouries eg. curry puff, vadai, sweets, chocolates, sweet meats, pastries, cakes and cookies have fats.

How much fat do we need to consume?

You can reduce risk of developing coronary heart disease by limiting total fat intake to not more than 30% of calorie intake.

How to limit fat intake (30% of calorie intake)?.

Choose the correct type of food

- Choose fish, poultry and other meat instead of red meat.
- daily replace at least one serving of meat or fish or poultry with peas, beans, dhal or soya bean products.
- choose low fat dairy products when possible eg. skim milk, low fat milk, low fat cheese, low fat yogurt.

Use not more than 2 tablespoon of added fat or oil per day.

- in cooking fats (like butter, margarine, lard and ghee) and oil OR as spread (butter or margarine).

Food Preparation to reduce fat intake

- trim off all visible fat from meat.
- remove skin and visible fat from poultry before cooking
- boiling or cooking without fat or oil eg. masak pindang.
- bake without added fat or oil by seasoning as usual then add a small amount of water to the baking dish and bake wrapped in banana leaf, turmeric leaf or aluminium foil.
- grill without added fat or oil by seasoning as usual then wrap in banana leaf, turmeric leaf or aluminium foil and grill on a rack and moisten food repeatedly with stock or soup. steam meat, fish or poultry with herbs, spices, lemon juice or other low calorie seasoning. braise meat or poultry and vegetables with a little cooking oil then add water to the pot and cover lightly with a lid. When almost ready add seasoning like tomato sauce, soy sauce or oyster sauce according to recipe. For example when cooking assam pedas use a little oil for frying.
- fry without adding oil or fat by using a non-stick fry pan.
- curries can be prepared using skim milk instead of coconut milk or may be thickened by adding finely sliced potato at the beginning of the cooking.
- remove excessive fat from soup before adding fresh vegetables. (This is easily done by preparing the soup ahead of time and chilling it in the refrigerator. The fat rises to

the top, solidifies and can be easily removed. Then prepare soup as usual using this stock).

- cooking without fat using a microwave oven.
- use low calorie dressing for salad — These are made without oil or fat eg.

Salad dressing — 1/2 cup tomato juice

(Substitute 2 tablespoon lemon juice or vinegar

for cream 1 tablespoon finely chopped onion

dressing) salt and pepper to taste.

Note: Other herbs and spices may be added eg. chilli, mustard

Vinegar dressing — 4 tablespoon vinegar or lime

2 tablespoon water

1 clove garlic crushed

fresh chillies

1/4 teacup chives / spring onion chopped

salt and pepper to taste

Air assam 4 red chillies

1/4 inch belacan (prawn paste)

40 g tamarind

1/2 tsp. sugar

3 small onions cut coarsely

1 cup water

1 tomato cut coarsely

Pinch of salt.

Avoid foods high in fat content

- all fatty meat, tinned meat, sausages
- all food containing coconut or coconut milk.
- all fried or rich food eg pisang goreng, curry puff, kokodok pisang, roti canal, ikan/ayam goreng, kueh teow/mee goreng, keropok lekor, pastries and cakes
- all salad dressings made with oil or fat.
- all full cream dairy products eg. cheese, chocolates and ice cream.
- all food canned in oil eg. sardines.

WHAT IS CHOLESTEROL?

Cholesterol is a waxy substance produced by body tissues. It is essential to life. The body makes sufficient cholesterol for its needs and does not rely on cholesterol in the diet.

What's wrong with too much cholesterol?

Eating excess food high in cholesterol may raise the blood cholesterol and increase the risk of developing coronary heart disease.

Dietary factors that influence blood cholesterol level

Type of fat

Saturated fats tend to raise blood cholesterol levels even if a meal contain no cholesterol. Unsaturated fats lower blood cholesterol levels. Monosaturated fat may also help to lower blood cholesterol. To stay healthy, we need to keep our intake of all fats low.

Cholesterol in food

Cholesterol in the diet comes from animal foods — organ meats such as brain and liver, meat, poultry, egg yolks, butter, prawns, ikan bilis, sotong, pork and mutton. Plant foods have no significant amount of cholesterol. High intake of cholesterol —rich foods raise blood cholesterol level.

Amount of food

Excessive calorie intake leading to obesity may influence the blood cholesterol level.

Fiber

Foods high in fiber favour the lowering of blood cholesterol level.

How much cholesterol do we need to consume?

Limit cholesterol in the diet to not more than 300 mg daily;

- eat organ meats not more than once per week.
- eat egg yolk not more than 3 times per week.
- remove head of anchovies and prawns before cooking.

WHAT IS SALT?

Salt is sodium chloride which is added during cooking, processing, manufacturing and preservation of food. Salt is essential for the healthy functioning of the body. Most of us eat far too much salt for our own good. We only need 1 teaspoon a day which is already present in most of the processed and preserved food.

The health concern in salt intake is the sodium component of sodium chloride. Sodium intake is not through salt alone but are also found in other foods.

What's wrong with too much salt?

Too much salt in the diet is associated with increased risk of high blood pressure which in turn increases the risk of heart disease, stroke and kidney problems.

Where is the hidden salt?

Food such as salted fish, vegetables, eggs, nuts, crisps, biscuits, soya sauce, oyster sauce and tomato sauce have salt. But more often salt is hidden or masked by other flavours. Generally preserved or processed foods contain hidden salt. These foods include preserved barbecued meat, luncheon meat, sausages, burger.

How to reduce salt intake?

Limit salt intake to not more than 6 g of salt per day (about 1 teaspoon). Most restaurants, fast food centres and hawkers use too much salt and monosodium glutamate.

Do not add soya sauce or salt at the table. Go slow on all savoury sauces eg. chilli sauce, tomato sauce, oyster sauce, barbecue sauce.

Use less salt, monosodium glutamate, soya sauce and all savoury sauces in cooking e.g. oyster sauce,

soya sauce instead use more spices, herbs, garlic and onions to bring out the flavour of foods. Taste before adding salt.

Do not add salt to your children's food according to your taste.

Sources of sodium?

Poor	Moderate		Rich
Fruits	Meat	Flavouring	
Vegetables	Fish	Agents	— Soy sauce, Lee & Perrins
Pure oil	Egg		Tomato, barbecue sauce,
Natural Fats	Milk		Soy paste.
Sugar			
Plain Flour		Extract	— Vegetable (marmite)
Rice			Meat (brovрил)
Most Cereals			
Legumes		Enhancers	— Monosodium Glutamate
Nuts			Flavouring cubes
		Raising agent	— bicarbonate of soda, baking powder
		Dressing	-- Salad cream, Mayonnaise
		Processed Food	Tinned or canned food

	prepared breakfast cereal (ready to-eat) cheese packet soup
	raising agents
Preserved Food	— salted fish/eggs cured meat, sausages preserved
	vegetables/fruits, prawn paste
Medication	- Effervescent salts Bicarbonate powder

WHAT IS FIBER IN FOOD?

Fiber is found only in plant foods like fruits, vegetables, tubers, nuts beans, dhal, brown rice, gram. Fiber or 'roughage' is generally regarded as those parts of plant food that cannot be completely digested. Fibers play a vital part in our diet. Its main function is to create a bulk in the intestine to help carry away waste materials. It does this by absorbing many times its own weight of water. The soft bulk moves faster through the gut, thus preventing constipation and other problems. High fiber diet has been associated with the lowering of blood cholesterol.

What's wrong with insufficient fiber?

Lack of fiber in the diet is associated with disorders of the bowels including cancers of colon and rectum, piles, constipation and coronary heart disease.

How to increase fiber in food?

Eat more fruits green or yellow vegetables, beans, pulses, cereals

- Eat 2 or 3 servings of cereals and legumes per meal.
- Eat 2 or 3 more servings of green leafy and the yellow or orange vegetables like spinach and carrots and fruits particularly the yellow or orange variety like papaya, pineapple, mango.
- Eat more wholemeal bread instead of white bread.

- Have brown rice instead of white rice.
- Use more wholemeal or atta flour instead of white flour.

MAINTAIN DESIRABLE BODY WEIGHT.

Overweight leads to increased risk of coronary heart disease, diabetes mellitus and hypertension — Body weight is a major influence on health throughout life. Fat people are generally less healthy and are more prone to illnesses such as heart disease, diabetes mellitus and hypertension.

If you are overweight, increased activity and exercise in combination with food restriction can be an effective means of reducing your weight.

HOW TO MAINTAIN DESIRABLE BODY WEIGHT?

Weigh yourself regularly and know your desirable body weight

- Weigh yourself at least once a week at the same time of the day wearing similar clothing.
- Check your weight against a desired weight;.

Medium frame 5 feet tall WOMEN should weigh 100 lbs. for every inch less or more, minus or

add 5 lbs. respectively.

Medium frame 5 feet tall MEN should weigh 106 lbs. for every inch less or more, minus or add

6 lbs. respectively.

If you are small frame, minus 10% of the medium frame body weight. If you are big frame, add 10% of the medium frame body weight.

What to do if overweight?

- Make a firm decision to lose body weight (½ — 1 Kg per week)
- Reduce calories intake by modifying your present diet.
- Avoid food and drinks high in calorie e.g. pisang goreng, curry puff, cokodok pisang, burger, rendang,

- roti canai, ikan/ayam goreng, nasi minyak, kueh teow/mee goreng, rojak mamak, br mai fan, mysor pak, mee kari, sweetened fizzy drinks, sweetened packet drinks, air tebu, keropok lekor.
- Limit alcohol intake;
- Spirits — Brandy (45 ml) = 16 g alcohol, 100 calories
- Wines — Sherry, medium (150 ml) = 22 g alcohol, 180 cal.
- Beers — Stout, extra (250 ml) = 12 g alcohol, 100 calories
- Exercise regularly (at least 3 times per week).

What to do if underweight?

- Eat a healthy diet daily.
- Try to achieve the desired body weight.
- Exercise regularly (at least 3 times per week).

EXERCISE

Why Exercise?

Exercise develops the muscles, heart and lungs to give speed, strength, agility and endurance to easily do daily tasks.

It also helps you to relax, to keep your mind alert and free from undue worry and tension.

Benefits

Exercising regularly can help to reduce the risk of coronary heart diseases by:

- Strengthening the heart muscles and reducing the workload on the heart as well as improving the lungs' efficiency.
- Assisting in weight control by burning up calories.
- Increasing the levels of high density lipoproteins (HDL) which are the protective cholesterol carriers.
- Reducing blood fat levels.
- Increasing blood vessel penetration and oxygenation of the heart muscles.
- In addition, exercising also:
 - Decreases fatigue by increasing physical endurance.
 - Improves posture, appearance and self-image.
 - Improves muscle tone and joint flexibility by increasing muscle size.
 - Relieves muscle tension caused by stress.
 - Improves alertness and mental concentration.

Types of Exercises

Many perceive exercise as participating in competitive sports. This is wrong. We exercise to become physically fit and this is within everyone's capability. There are two types of exercises:

Aerobic Exercise

- Physical activities which build the capacity of energy output and physical endurance by increasing the oxygen supply to the skin and muscles.
- Improves and maintains heart-lung fitness and helps reduce weight.

- Some examples are brisk walking, jogging, aerobic, climbing stairs, stationary running and cycling, badminton, progressive treadmill exercise, tennis, swimming, football, skipping and basketball.

Calisthenics

- Activities which improve joint flexibility and muscle tone
- Good for warming up and cooling down.
- Improves muscle strength, endurance and flexibility.
- Help to loosen the muscles and prepare the body for aerobic activity in warm-up sessions. When cooling-down, calisthenics help prevent dizziness or fainting as well as muscle aches which may result from stopping suddenly during a vigorous exercise activity.
- Some examples are stretching, tai chi, arm swinging, chin-ups and push-ups.

Know your fitness level before choosing exercise programme.

If you have 2 or more of these risk factors which is Male above 40 years, smoker, high blood pressure, and having family history of heart disease, you should seek medical advice before embarking into exercise programme.

Choosing an Exercise Programme

Different people have different body builds and enjoy different activities. It is therefore important to choose an activity which you like and will be able to incorporate into your daily life.

How to Exercise?

When exercising, remember the following:

Duration

- A continuous 15—20 minutes of aerobic at a steady pace is recommended.
- For the less fit, start with a few minutes at a time on several occasions each day before embarking on a full programme.

Intensity

- The activity should be vigorous enough to cause heavy breathing and sweating but not gasping.
- Raise the pulse rate to 120—150 beats per minute. This is equivalent to 60% — 85% of your maximum heart rate. To measure your maximum possible heart rate, subtract your age from 220, eg. $220 - 29 = 190$ beats per minutes.
- During exercise, the pulse rate should reach 60% of the maximum heart rate for beginners. This can go up to 85% for very fit individuals.

Frequency

The benefit of any exercise begins to decrease after 48 hours. So exercising irregularly has no lasting benefit. Regular exercise means at least three times a week and evenly spaced out. You should also build up your fitness level gradually, based on your initial level of fitness.

Exercise Session

Begin each session with five minutes of calisthenics for to warm up. This will help to prevent muscle injury and prepare the heart-lung for increase effort. Then do the aerobic exercise for about 15—20 minutes. When completed, cool down with another five minutes of calisthenics to give the body time to re-adjust the distribution of blood flow.

Personalize Fitness Programme

A fitness programme should b developed to suit the individual's targets. It should be personalized and not competitive.

A Simple Test To Assess Your Fitness Level:

TEST 1 : **Body Composition.**

AIM : To determine body fat percentage.

PROCEDURE : For male, measure largest abdominal circumference (at navel) take his weight and relate abdominal circumference against weight in body fat calculation table for men.

For female, measure waist (smallest circumference) hips, and height.

To calculate body fat percentage refer to table and use the following

formula; Constant A (hip measurement) + Constant B (Abdominal measurement)

- Constant C (height) = Body fat percentage.

TEST 2 : One Minute Sit Up

AIM : To test strength/endurance of abdominal muscles.

PROCEDURE : Lie flat on back, knees bent (about 90 degree) hands clasped behind head. Curl up and twist trunk, the elbow touching the opposite knee before returning to starting position. Alternate with both elbows and knees. Record the number of repetitions in one minute.

TEST 3 : Flexed Arm Hang.

AIM : To test strength/endurance of the arm and shoulder muscles.

PROCEDURE : For male, stand on stool or chair, grasp bar (overhand) hands shoulder width apart, hand from bar chin above level of the bar. Timing is started when feet leave the chair or stool and stopped when chin falls below the level of the bar or the head tilts backward in an effort to keep the chin at bar level.

For female, slide under and grasp (overhand) bar which is 75cm high with hands about shoulder width apart. Pull up, feet shoulder width apart, heels resting on the floor, body straight, till elbows are bent 90 degree or less. Maintain this position. Test and timing ends once elbows are bent more than 90 degree.

TEST : 4 4 x 10 meter shuttle run.

AIM : To test the speed, agility, coordination and balance.

PROCEDURE : Two parallel lines are marked on the floor 10 meters apart, and the two blocks of wood are placed behind one line. Start from the other end, run to pick up one block of wood. Place it behind starting line,

run back to pick up the second block of wood and run across the starting line. Record the time of the better of two attempts.

TEST 5 : Standing broad jump.

AIM : To test strength/power of the leg muscles.

PROCEDURE : Standing behind take off line, feet about shoulder width apart. Swing arms backwards, bend knees, jump, extending knees and swinging arms forwards. Measure from take off line to the heel or any other part of the body that touches the floor, nearest to the take off line. Record the best of three attempts.

TEST 6 : Sit and Reach.

AIM : To test the flexibility of the hip and hamstring muscles.

PROCEDURE : Sit barefoot, with meter stick or tape between the legs, which are extended, heels 25 to 30 cm apart, at the 50 cm mark at the tape. Slowly reach forwards. Measure from take off line to the heel or any other part of the bending knees, holding this position momentarily. Record the best of three attempts.

TEST 7 : Cardiovascular Fitness.

AIM : To test the efficiency of the circulatory and respiratory systems. Cardiovascular system produce energy using oxygen. This system comprises heart, lung, and whole circulatory system. Cardiovascular endurance is the capability of human body to do work in long duration without feeling tired.

PROCEDURE : 1. 2.4 km run.

Cover 2.4 km in the fastest time possible. Record time taken.

2. 4.8 km walk.

Cover 4.8 km in the fastest time possible without running. Record time taken.

3. 12 minute swim.

Swim for 12 minute, using whatever stroke and resting when necessary, but trying of maximum effort, and record the distance.

4. 12 minute cycling.

Cycle for 12 minutes and record the distance.

PRECAUTIONS

1. Ensure sufficient and proper warm up before the test and cool down after.
2. Do not take test if sick or injured.
3. For those with medical problems get medical clearance before undergoing test.
4. For those above 35 years old and who have been inactive for some time, or are not sure of their state of health or fitness, get a medical checkup and clearance from doctor before undergoing test.
5. It is advisable to be on a fitness programme for at least 2 to 6 weeks before undergoing test.

NORM (MALE)

TESTS		TEST 7 Cardiovascular Fitness Test				TEST 1 % Fats	TEST 2 cyc / min	TEST 3 sec	TEST 4 sec	TEST 5 cm	TEST 6 cm
AGE	GRADE	RUN (min.)	WALK (min.)	SWIM (meter)	CYCLE (Km)						
13-19	SUP.	< 10:00	< 35:00	750 >	9.0 >	< 15.9	46 >	71 >	< 10.3	251 >	66 >
	EXCE.	10:01 - 11:30	35:01 - 38:00	650 - 749	7.5 - 8.9	16.0 - 20.9	42 - 45	51 - 70	10.4 - 10.5	241 - 250	61 - 65
	GOOD	11:31 - 13:15	38:01 - 41:30	550 - 649	6.0 - 7.4	21.0 - 25.9	38 - 41	31 - 50	10.6 - 10.7	231 - 240	56 - 60
	FAIR	13:16 - 15:00	41:31 - 45:00	450 - 549	4.5 - 5.9	26.0 - 30.9	34 - 37	11 - 30	10.8 - 10.9	221 - 230	51 - 55
	WEAK	15:01 >	45:01 >	< 449	< 4.4	31.00 >	< 33	< 10	11.0 >	< 220	< 50
20-29	SUP.	< 10:30	< 36:00	650 >	8.5 >	< 16.9	43 >	71 >	< 10.5	241 >	61 >
	EXCE.	10:31 - 12:00	36:01 - 39:00	550 - 649	7.0 - 8.4	17.0 - 21.9	39 - 42	51 - 70	10.6 - 10.7	231 - 240	56 - 60
	GOOD	12:01 - 13:45	39:01 - 42:30	450 - 549	5.5 - 6.9	22.0 - 26.9	35 - 38	31 - 50	10.8 - 10.9	221 - 230	51 - 55
	FAIR	13:46 - 15:30	42:31 - 46:00	350 - 449	4.0 - 5.4	27.0 - 31.9	31 - 34	11 - 30	11.0 - 11.1	211 - 220	46 - 50
	WEAK	15:31 >	46:01 >	< 349	< 3.9	32.0 >	< 30	< 10	11.2 >	< 210	< 45
30-39	SUP.	< 11:00	< 37:00	600 >	8.0 >	< 17.9	40 >	66 >	< 10.7	231 >	56 >
	EXCE.	11:01 - 12:30	37:01 - 40:00	500 - 599	6.5 - 7.9	18.0 - 22.9	36 - 39	46 - 65	10.8 - 10.9	221 - 230	51 - 55
	GOOD	12:31 - 14:15	40:01 - 43:30	400 - 499	5.0 - 6.4	23.0 - 27.9	32 - 35	26 - 45	11.0 - 11.1	211 - 220	46 - 50
	FAIR	14:16 - 16:00	43:31 - 47:00	300 - 399	3.5 - 4.9	28.0 - 32.9	28 - 31	6 - 25	11.2 - 11.3	201 - 210	41 - 45
	WEAK	16:01 >	47:01 >	< 299	< 3.4	33.0 >	< 27	< 5	11.4 >	< 200	< 40
40-49	SUP.	< 11:30	< 38:00	550 >	7.5 >	< 18.9	37 >	51 >	< 10.9	221 >	51 >
	EXCE.	11:31 - 13:00	38:01 - 41:00	450 - 549	6.0 - 7.4	19.0 - 23.9	33 - 36	31 - 50	11.0 - 11.1	211 - 220	46 - 50
	GOOD	13:01 - 14:45	41:01 - 44:30	350 - 449	4.5 - 5.9	24.0 - 28.9	29 - 32	16 - 30	11.2 - 11.3	201 - 210	41 - 45
	FAIR	14:46 - 16:30	44:31 - 48:00	250 - 349	3.0 - 4.4	29.0 - 33.9	25 - 28	6 - 15	11.4 - 11.5	191 - 200	36 - 40
	WEAK	16:31 >	48:01 >	< 249	< 2.9	34.0 >	< 24	< 5	11.6 >	< 190	< 35
50 >	SUP.	< 12:00	< 39:00	500 >	7.0 >	< 19.9	34 >	41 >	< 11.1	211 >	46 >
	EXCE.	12:01 - 13:30	39:01 - 42:00	400 - 499	5.5 - 6.9	20.0 - 24.9	30 - 33	26 - 40	11.2 - 11.3	201 - 210	41 - 45
	GOOD	13:31 - 15:15	42:01 - 45:30	300 - 399	4.0 - 5.4	25.0 - 29.9	26 - 29	11 - 25	11.4 - 11.5	191 - 200	36 - 40
	FAIR	15:16 - 17:00	45:31 - 49:00	200 - 299	2.5 - 3.9	30.0 - 34.9	22 - 25	6 - 10	11.6 - 11.7	181 - 190	31 - 35
	WEAK	17:01 >	49:01 >	< 199	< 2.4	35.0 >	< 21	< 5	11.8 >	< 180	< 30

NORM (FEMALE)

TESTS		TEST 7 Cardiovascular Fitness Test				TEST 1 % Fats	TEST 2 cyc / min	TEST 3 sec	TEST 4 sec	TEST 5 cm	TEST 6 cm
AGE	GRADE	RUN (min.)	WALK (min.)	SWIM (meter)	CYCLE (Km)						
13-19	SUP.	< 12:00	< 37:00	650 >	7.5 >	< 19.9	36 >	42 >	< 11.5	191 >	71 >
	EXCE.	12:01 - 13:30	37:01 - 40:00	550 - 649	6.0 - 7.4	20 - 23.9	32 - 35	38 - 41	11.6 - 11.8	181 - 190	66 - 70
	GOOD	13:31 - 15:15	40:01 - 43:30	450 - 549	4.5 - 5.9	24 - 27.9	28 - 31	34 - 37	11.9 - 12.1	171 - 180	61 - 65
	FAIR	15:16 - 17:00	43:31 - 47:00	350 - 449	3.0 - 4.4	28 - 31.9	24 - 27	30 - 33	12.2 - 12.4	161 - 170	56 - 60
	WEAK	17:01 >	47:01 >	< 349	< 2.9	32 >	< 23	< 29	12.5 >	< 160	< 55
20-29	SUP.	< 13:00	< 38:00	550 >	7.0 >	< 20.9	33 >	38 >	< 11.8	181 >	60 >
	EXCE.	13:01 - 14:30	38:01 - 41:00	450 - 549	5.5 - 6.9	21 - 24.9	29 - 32	34 - 37	11.9 - 12.1	171 - 180	64 - 65
	GOOD	14:29 - 16:15	41:01 - 44:30	350 - 449	4.0 - 5.4	25 - 28.9	25 - 28	30 - 33	12.2 - 12.4	161 - 170	56 - 60
	FAIR	16:16 - 18:00	44:31 - 48:00	250 - 349	2.5 - 3.9	29 - 32.9	21 - 24	26 - 29	12.5 - 12.7	151 - 160	51 - 55
	WEAK	18:01 >	48:01 >	< 249	< 2.4	33 >	< 20	< 25	12.8 >	< 150	< 50
30-39	SUP.	< 14:00	< 39:00	500 >	6.5 >	< 21.9	30 >	34 >	< 12.1	171 >	61 >
	EXCE.	14:01 - 15:30	39:01 - 42:00	400 - 499	5.0 - 6.4	22 - 25.9	26 - 29	30 - 33	12.2 - 12.4	161 - 170	56 - 60
	GOOD	15:31 - 17:15	42:01 - 45:30	300 - 399	3.5 - 4.9	26 - 29.9	22 - 25	26 - 29	12.5 - 12.7	151 - 160	51 - 55
	FAIR	17:16 - 19:00	45:31 - 49:00	200 - 299	2.0 - 3.4	30 - 33.9	18 - 21	22 - 25	12.8 - 13.0	141 - 150	46 - 50
	WEAK	19:01 >	49:01 >	< 199	< 1.9	34 >	< 17	< 21	13.1 >	< 140	< 45
40-49	SUP.	< 15:00	< 41:00	450 >	6.0 >	< 22.9	21 >	30 >	< 12.7	161 >	56 >
	EXCE.	15:01 - 16:30	41:01 - 44:00	350 - 449	4.5 - 5.9	23 - 26.9	23 - 26	26 - 29	12.8 - 13.0	151 - 160	51 - 55
	GOOD	16:31 - 18:15	44:01 - 47:30	250 - 349	3.0 - 4.4	27 - 30.9	19 - 22	22 - 25	13.1 - 13.3	141 - 150	46 - 50
	FAIR	18:16 - 20:00	47:31 - 51:00	150 - 249	1.5 - 2.9	31 - 34.9	15 - 18	18 - 21	13.4 - 18.6	131 - 140	41 - 45
	WEAK	20:01 >	51:01 >	< 149	< 1.4	35 >	< 14	< 17	13.7 >	< 130	< 40
50 >	SUP.	< 16:00	< 43:00	400 >	5.5 >	< 23.9	24 >	26 >	< 13.0	151 >	46 >
	EXCE.	16:01 - 17:30	43:01 - 46:00	300 - 399	4.0 - 5.4	24 - 27.9	20 - 23	22 - 25	13.1 - 13.3	141 - 150	41 - 45
	GOOD	17:31 - 19:15	46:01 - 49:30	200 - 299	2.5 - 3.9	28 - 31.9	16 - 19	18 - 21	13.4 - 13.6	131 - 140	36 - 40
	FAIR	19:16 - 21:00	49:31 - 53:00	100 - 199	1.0 - 2.4	32 - 35.9	12 - 15	14 - 17	13.7 - 13.9	121 - 130	31 - 35
	WEAK	21:01 >	53:01 >	< 99	< 0.9	36 >	< 11	< 13	14.0 >	< 120	< 30

HYPERTENSION

What is Hypertension

Hypertension or high blood pressure as it is generally known, is simply a measure of the force required to move blood around the body through the arteries and veins. The pumping action of the heart creates this force.

So, if blood volume increases, for example by excess salt in the diet, blood pressure increases. It also increases if the arteries are constricted (eg. by fatty deposits) or if the heart has to pump more blood to the body as in an overweight person.

How is Hypertension Measures?

When the health professional measures blood pressure with an instrument called the sphygmomanometer, two numbers are noted. The Systolic Pressure (bigger number) for when the heart is pumping blood out and the Diastolic pressure (smaller number) for when the heart is resting between pumps.

Blood pressure is therefore given as:

Systolic pressure/Diastolic pressure e.g. 120/80 mm Hg and read as 120 over 80 millimetres of mercury.

Normal Blood Pressure, Vs. High Blood Pressure

Everyone has a different blood pressure which changes all the time. It increases when one is under stress, is angry or smoking, and decreases when one is relaxed or asleep. Normal blood pressure at rest is less than 140/90 mm Hg. High blood pressure is when blood pressure goes up and stays up, even at rest. In 10% of cases, high blood pressure is due to an underlying disease such as kidney disease while the cause of the remaining 90% is unknown.

Why Hypertension is Dangerous

Hypertension does not happen overnight, it builds up gradually. There are also no obvious symptoms. However, if not treated, the consequences can be serious and can lead to heart attack, blindness, stroke and kidney failure.

Risk Factors

Developing the condition is higher if the following apply:

Heredity

If a parent, brother or sister has hypertension, reduce other risk factor in your lifestyle.

Diet

Too much saturated fat in the diet raises blood cholesterol level and can lead to atherosclerosis. Too much salt in foods also increase blood volume. Some mild hypertension can be controlled by salt restriction and weight control alone.

Overweight

The heart has to pump harder in order to supply the excess fat tissues with blood. Some mild hypertension can be controlled by salt restriction and weight control alone.

Stress

Stress increases your heart rate and can constrict the arteries. Too much stress on a continual basis may increase your risk of hypertension.

How to manage Hypertension?

Avoid things which make blood pressure rise like high fat diet, too much salt, obese, stress and lack of exercise. There Is no cure for hypertension. However, as long as blood pressure is kept under control one can lead a normal life.

Some advice to follow include: Do the following:

- Have regular medical check-ups.
- Exercise regularly
- Relax and learn to control stress.
- Watch your diet. Do not eat too much foods which are high in fat and salt. Cut down your calorie and salt intake.
- Maintain a desirable body weight as extra kilos add pressure to your heart.
- Take medication as prescribed.

STRESS

What is Stress?

Stress is unavoidable and can be both good and bad. A little stress is good as it can stimulate us, make us work and think harder. Stress becomes bad when there is too much of it and harms our health.

Excessive stress is the feeling of anxiety, fear and tension. It affects everyone in varying degree and is in fact, a self-protective reaction for when we are confronted by threats to our well-being, happiness and self-esteem.

It is important to remember that everyone experiences stress, everyday. It is also importance for us to recognise the signs so that we can handle them better.

What Causes Stress

Stress comes from two sources, “external” and “internal” forces. The “external” forces include relationships (conflicts at home, office or school), financial problems (bad debts and poor budgeting), work (deadlines, job dissatisfaction), health (illness, a handicap), life events (births, deaths) and the environment (overcrowding, noise).

“Internal” forces are perceptions of oneself and others like personality, social ability, decision-making skills and expectations.

Effect of stress to health.

Mentally, stress can lead to loss of concentration, nervousness, withdrawal and depression. It can make us defensive and aggressive. Physically, stress can lead to a loss of appetite, fatigue, frequent headaches, change in sleep pattern, skin rashes, hypertension and coronary heart disease.

Managing Stress

To protect yourself against stress, the following positive actions are important:

Be Realistic, Accept Yourself As You Are

Looks : Make the best of what you have and accept what you cannot change.

Abilities : Know what you can and cannot do. Set achievable goals and learn to say No.

Finances : Do not spend more than what you earn. Accept and enjoy a standard of living you can afford.

Avoid Negative Emotions

Beliefs : Know yourself. Re-evaluate your thinking if necessary. Be realistic, you cannot please everyone all the time.

Attitudes : Balance competition with cooperation. Be able to accept criticisms. Look for the good points in another's behaviour. Able to accept even when things don't go right. Be able to accept and admit mistake and acknowledge it.

Limit Changes

Sudden change may lead to stress. Spread out major changes in life like marriage and change of job over period of time.

Plan Your Work

Prioritize your task. Do the most urgent task first and those that can wait, later. Manage your time properly and draw up a schedule.

Decide Carefully

Problem solving: List problems and tackle them one by one. Weigh the pros and cons. Learn from experience.

Problem sharing: Ask advice from those with more experience. Discuss decisions with those affected by them.

Learn To Relax

Take time off work or go on holidays to relax your mind and body. Hobbies and sports are both fun and relaxing as well.

Keep Healthy

Follow a nutritious diet, exercise regularly, don't smoke or abuse drugs and get enough sleep. Illness cause stress.

Build Healthy Social Environment.

Your family : Be kind to and respect your family. A happy marriage and loving children make life more meaningful.

Your friends : Cultivate good relationship with friends because they provide companionship. Help other when necessary and talk out your problems to someone you have confident.

Note: If an emotional disturbance becomes too distressing, seek professional help. It should be dealt with like any other illness. Go and see a doctor who may recommend visiting a psychiatrist or treatment at a clinic.

The quest for peace of mind and good mental health is universal. To achieve this means, striving for a better understanding of oneself and others and working out one's problems. Do not be afraid to seek assistance if it is needed.

