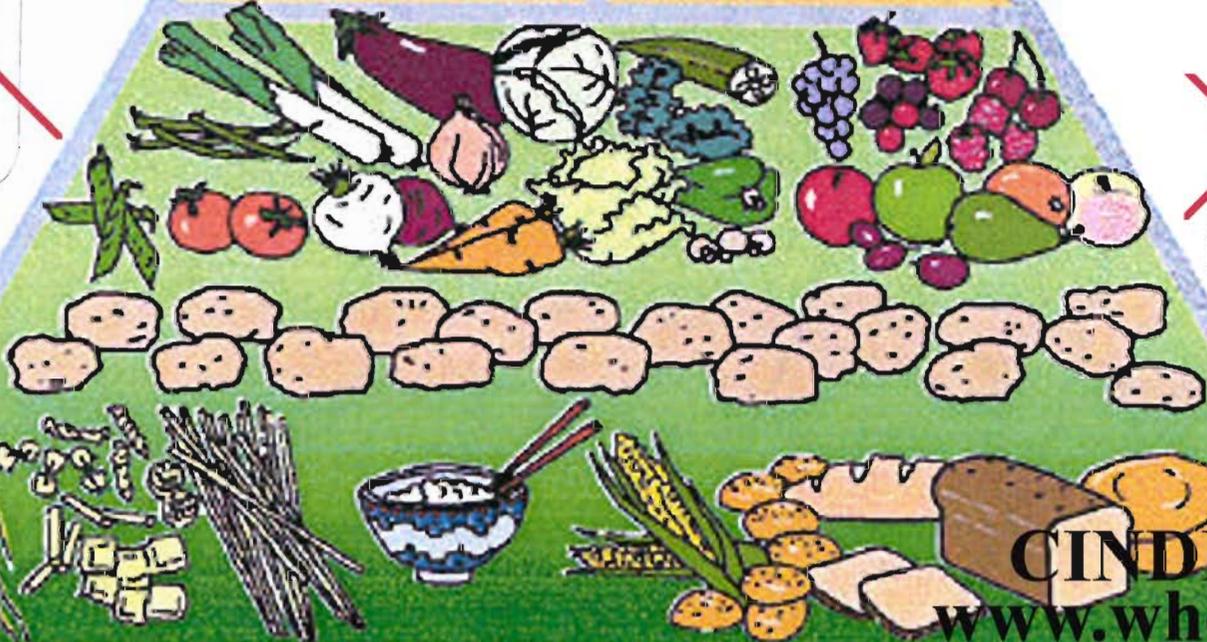


38A. NUTRITION



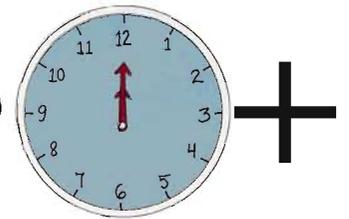
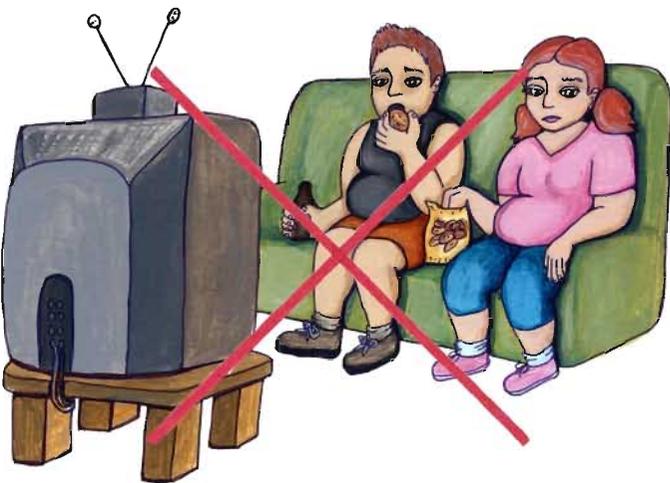
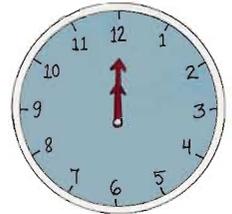
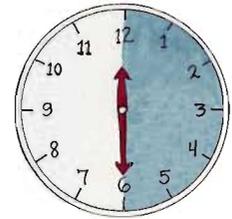
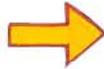
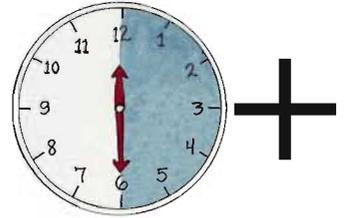
# WHO 5 KEYS TO A HEALTHY DIET

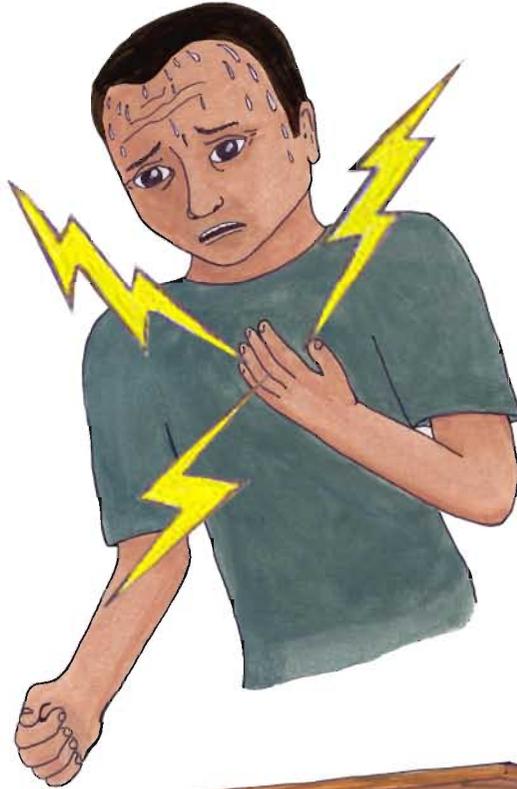
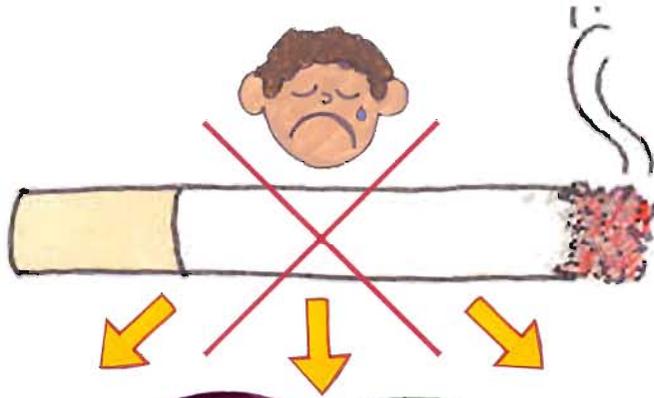


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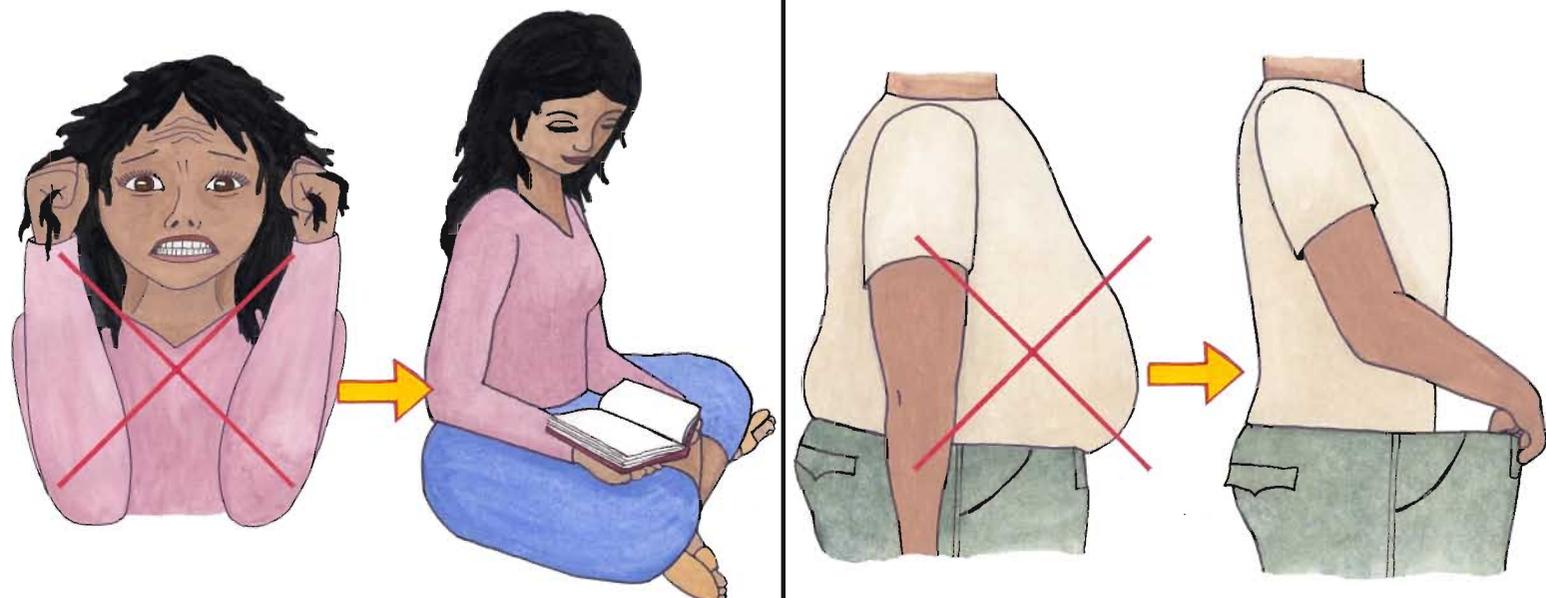
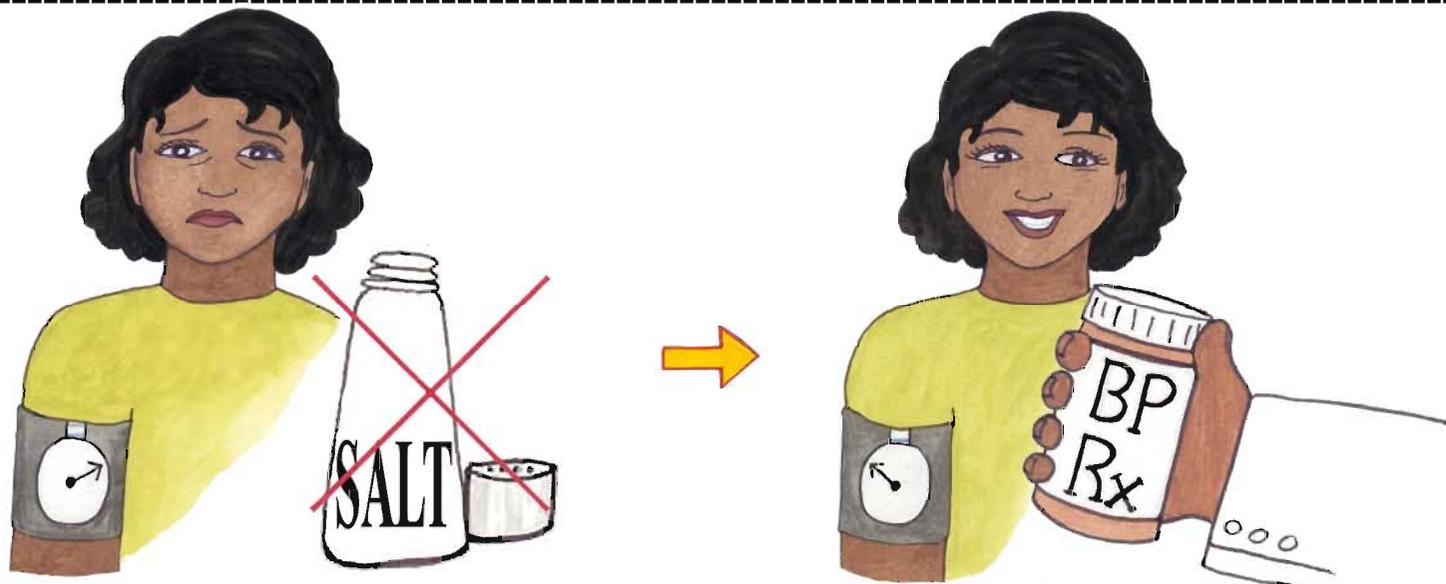
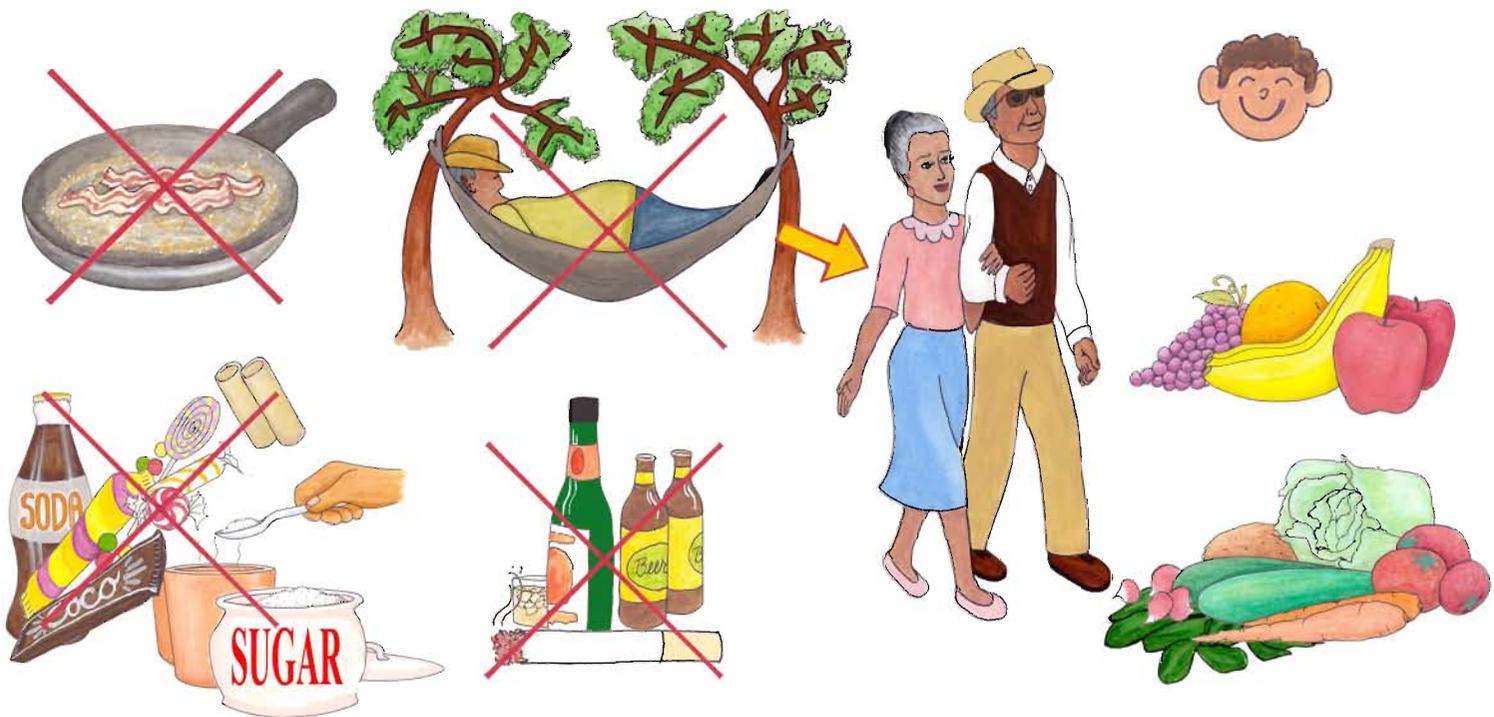
# WHO 5 KEYS TO APPROPRIATE PHYSICAL ACTIVITY





**5,000,000**

**41A. HEART DISEASE AND STROKE**



**41B. HEART DISEASE AND STROKE**

**HEALTH EDUCATION PROGRAM  
FOR  
DEVELOPING COUNTRIES**  
*(THE MOST IMPORTANT KNOWLEDGE)*



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**INTERNATIONAL & NATIONAL STANDARDS & PRACTICE GUIDELINES**

WHO=World Health Organization & its divisions & collaborating partners.

HHS=Dept of Health & Human Services & its divisions & collaborating partners.

**HEALTH SCREENING  
PATIENT EDUCATION & COUNSELING**

**Section 38: Nutrition & Physical Activity and  
Section 41: Heart Disease & Stroke**

**38A. NUTRITION-EATING THE RIGHT FOODS**

Nutrition has become one of the most critical factors in determining the health and wellbeing of people throughout the world. Both **under-nutrition** and **over-nutrition** cause millions of unnecessary deaths each year.

Millions of the world's poor, especially children, continue to suffer and die from diseases related to under-nutrition. Under-nutrition affects the immune system and many of these children die from infections. More than one third of child deaths worldwide are due to under-nutrition

However, there is now also a world-wide epidemic of obesity due to over-consumption of the wrong kinds of foods. Obesity and the related diseases of diabetes, high blood pressure, heart attacks, strokes and cancer are now among the greatest killers of adults throughout the world. Obesity often begins in childhood, and has become a serious problem in developing as well as developed countries. This often leads to serious health problems and early death as an adult.

We will review **under-nutrition** first.

In developing countries, being **underweight** is one of the most common killers of children, especially those under the age of five.--The younger the child the greater the risk. In addition to breast feeding your children until three years of age, you must be certain your children under five get their share of the family's nutritious food. (Help toddlers to eat instead of leaving them to serve themselves from the family dish.)

For children who are no longer breast feeding and adults, cow's **milk** is a very good source of **protein and calcium** (prevents osteoporosis-weak bones). However you must be certain that the milk has been **pasteurized** (For example, heated to 60 degrees C for 30 minutes--The heating is important to prevent diseases such as Brucellosis and TB) or use powdered milk with safe (boiled) water. Also, for adolescents and adults who are overweight, low or non fat milk should be used.

**Iron, Vitamin A, and Zinc deficiencies** are especially common and contribute to many deaths.

Foods high in **Iron** include: liver, clams, iron fortified cereals, oysters, brewers yeast, spinach, baked potato with skin, beans, peas and raisins.

Foods high in **Vitamin A** include: milk (including breast milk), egg, liver and fish liver oils, green vegetables, yellow fruits and vegetables.

Foods high in **Zinc** include: Oysters (very high), crab, liver, beef, pork, poultry, bran flakes, dried beans and lentils, milk and cheese.

**Eat a variety of foods** to get the energy, protein, vitamins, minerals, and fiber you need for good health. It may sometimes be difficult to eat from each food group each day. But by doing such things as buying your children milk instead of soda, you will help them to be as healthy as possible. Also, children should not eat a lot of sweets or drink coffee as this will decrease their appetite for healthier foods. Sweets are also the most common cause tooth decay with its pain and suffering.

**If you drink alcoholic beverages, do so in moderation.** Alcohol is a very dangerous and addictive drug. You may have heard that drinking in moderation may lower risk for coronary heart disease, mainly among men over age 45 and women over age 55. However, there are other factors that reduce the risk of heart disease that are much more important, including a healthy diet, physical activity, avoidance of smoking, and maintenance of a healthy weight. Also, moderate consumption provides little, if any, health benefit for younger people. Risk of alcohol abuse increases when drinking starts at an early age. Alcoholic beverages supply calories but few nutrients. Alcoholic beverages are harmful when consumed in excess, and **many people should not drink at all**. Excess alcohol alters judgment and can lead to dependency and a great many other serious health problems.

**If you choose to drink alcoholic beverages:**

-limit intake to no more than one drink per day for women or two per day for men, and take with meals to slow alcohol absorption. (One Drink=12 ounces of regular beer or 5 ounces of wine or 1.5 ounces of 80-proof distilled spirits)

Avoid drinking before or when driving, or whenever it puts you or others at risk. **Alcohol increases the risk for motor vehicle crashes, other injuries, high blood pressure, stroke, violence, suicide, and various types of cancer, including breast cancer. Alcohol consumption during pregnancy increases risk of birth defects. Alcohol often causes social and psychological problems, cirrhosis of the liver, inflammation of the pancreas, and damage to the brain and heart.**

### **38B. NUTRITION-EATING THE RIGHT FOODS (CONTINUED)**

Various “**Food Pyramids**” have been developed to show the relative amounts and types of foods that are recommended. These vary depending on the culture and the availability of specific foods, however, the basic principles are the same. In general, a **healthy diet** is one that:

- emphasizes vegetables, fruits and whole grains
- includes milk and milk products (fat-free or low-fat are recommended for people over 2 years of age who are not malnourished or underweight)
- includes beans, nuts, eggs, fish, poultry or lean meats and
- is low in saturated fats, trans fats, cholesterol, salt (sodium) and sugars.

The food pyramid in the illustration is from the WHO Countrywide Integrated Non-communicable Disease Intervention (CINDI) program.

**Choose a diet with plenty of vegetables, whole grain products and fruits** which provide needed vitamins, minerals, fiber, and complex carbohydrates, and can help you lower your intake of fat.

If you and your family are not malnourished or underweight, **choose a diet low in saturated fat and cholesterol** to reduce your risk of heart attack and certain types of cancer. This is especially important if you are overweight. To reduce your intake of saturated fat and cholesterol:

1) Limit use of solid (meat and dairy) fats such as butter, hard margarines, lard, and partially hydrogenated shortenings. Coconut and palm kernel oil are also high in saturated fats. Instead, use vegetable oils such as canola, olive, soybean, corn or sunflower oil.

2) Limit your intake of hydrogenated and partially hydrogenated foods. These contain trans fats and are found in commercially prepared baked goods, snack foods, “fast” foods and other processed foods. There is no safe level of trans fats and it is best try to eliminate them completely from your diet.

3) Limit your intake of high-fat processed meats such as bacon, sausages, salami and bologna.

4) Limit your intake of liver and other organ meats. Use egg yolks and whole eggs in moderation (Egg whites and egg substitutes can be used freely when cooking since they contain no cholesterol and little or no fat).

5) Choose fat-free or low-fat dairy products (for people over 2 years of age). Choose dry beans (cooked), peas, and lentils often. Choose nuts, fish and shellfish. Choose lean poultry or other lean meats, not fried.--Trim fat from meat and take skin off poultry.

6) Get most of your calories from plant foods (whole grains, fruits, vegetables).

**Choose a diet low or moderate in sugars.** A diet with lots of sugars has too many calories and too few nutrients and also contributes to tooth decay. Between meals, eat few foods or beverages containing sugars or starches. If you do eat them, brush your teeth afterward to reduce risk of tooth decay.

-Get most of your calories from grains (especially whole grains), vegetables and whole fruits (Whole fruits have more fiber and less sugar than fruit juices).

-Take care not to let soft drinks or other sweets crowd out other foods you and your children need to maintain health, such as milk or other good sources of calcium.

-Drink water often.

**Choose a diet low or moderate in salt (sodium).** This is especially important if you have high blood pressure. Choose fruits and vegetables often. Instead of table salt use herbs, spices, and fruits to flavor food.

**Additional health benefits.** There are numerous additional health benefits to following the above diet recommendations. For example, they are also the very best treatment we have for **Constipation**. Constipation is firm stools that are difficult to pass (It is normal not to have a bowel movement every day.--Many people think they have constipation when in fact they are normal). Eat a high-fiber diet that includes beans, bran, whole grains, fresh fruits, and vegetables. Drink at least 8, eight ounce glasses of water or fruit juices per day (Caffeine and alcohol can have a dehydrating effect and can make constipation worse). Exercise regularly. Set aside time after breakfast or dinner for undisturbed visits to the toilet. Do not ignore the urge to have a bowel movement. Understand that normal bowel habits vary.

The WHO has summarized the above guidelines in **“Five Keys to a Healthy Diet”**:

**1. Give your baby only breast milk for the first 6 months of life**

-From birth to 6 months of age your baby should receive only breast milk, day and night

-Breast feed your baby whenever the baby feels hungry

**2. Eat a variety of foods**

-Eat a combination of different foods: staple foods, legumes, vegetables, fruits and foods from animals

**3. Eat plenty of vegetables and fruits**

-Consume a wide variety of vegetables and fruits (more than 400 g per day)

-Eat raw vegetables and fruits as snacks instead of snacks that are high in sugars or fat

-When cooking vegetables and fruits, avoid overcooking as this can lead to loss of important vitamins

-Canned or dried vegetables and fruits may be used, but choose varieties without added salt or sugars

#### **4. Eat moderate amounts of fats and oils**

-Choose unsaturated vegetable oils (e.g. olive, soy, sunflower, corn) rather than animal fats or oils high in saturated fats (e.g. coconut and palm oil)

-Choose white meat (e.g. poultry) and fish that are generally low in fats rather than red meat

-Limit consumption of processed meats and luncheon meats that are high in fat and salts

-Use low- or reduced-fat milk and dairy products, where possible

-Avoid processed, baked, and fried foods that contain industrial trans fatty acids

#### **5. Eat less salt and sugars**

-Cook and prepare foods with as little salt as possible

-Avoid foods with high salt contents

-Limit the intake of soft drinks and fruit drinks sweetened with sugars

### **38C. PHYSICAL ACTIVITY**

**Balance the food you eat with physical activity**--This is especially important if you are overweight. Adequate exercise will reduce your chances of having high blood pressure, heart disease, a stroke, certain cancers, and the most common kind of diabetes.

**Sedentary (Little Exercise) Life Style (See also Section 41B):** Most people in rural areas of developing countries get plenty of exercise. However some have jobs where they only exercise a certain part of their body and others don't get much exercise at all. Exercise helps your heart and your body stay stronger and work better. It lowers blood pressure, improves your cholesterol levels, and can help you lose weight if that is a problem. It also strengthens your bones and improves your energy level and spirits.

There is now a world-wide epidemic of obesity that involves all age groups in developing as well as developed countries. Appropriate physical activity is therefore important for men, women and children and ALL age groups. The WHO recommends the following **Five Keys to Appropriate Physical Activity**:

“1. If you are not physically active, it's not too late to start regular physical activity and reduce sedentary activities. (For example, Reduce sedentary habits such as watching TV and playing computer games.)

2. Be physically active every day in as many ways as you can.

3. Do at least 30 minutes of moderate-intensity physical activity on 5 or more days each week.

4. If you can, enjoy some regular vigorous-intensity physical activity for extra health and fitness benefits. (For example, Ride a bike to work instead of taking the car.)

5. School-aged young people should engage in at least 60 minutes of moderate-to vigorous-intensity physical activity each day.”

At least 60% of the world's population fails to complete the recommended amount of physical activity required to induce health benefits.

As noted in section 41, heart disease and stroke and the related conditions of obesity, diabetes and high blood pressure kill far more adults than anything else in the world. There are scores of medications for these conditions, and though some are very helpful, all have adverse effects.

Appropriate Diet and Exercise are two very simple things. Yet the WHO and our best evidence-based sources report that (even in the most advanced countries) what we do for ourselves and for our families can save many more lives and prevent much more suffering than all of our medicines and all of our surgeries combined.

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#### **41A. HEART DISEASE AND STROKE**

The WHO reports there is now an epidemic of deaths due to heart disease in developing countries. This can be prevented as the **causes are all under YOUR control**.

Stroke and Heart Disease risk factors **You** can control include: **Smoking, Overweight, High blood cholesterol, Sedentary (little exercise) lifestyle, Diabetes, High blood pressure, and Stress.**

**-Smoking:** We have already discussed some of the harmful effects of smoking such as gum and dental disease, stomach problems, and so on. Tobacco related diseases are the world's leading preventable cause of death.--Responsible for about 5 million deaths a year. Total tobacco consumption is on the rise. We now know that nicotine is a very highly addictive drug, so once you start smoking it is very difficult to quit. Yet nicotine remains legal, uncontrolled and unregulated, so the number of smokers, estimated at 1.3 billion today, is expected to rise to 1.7 billion by 2025. Some people are lucky and don't die from smoking. However, every second smoker will die of a tobacco-caused disease. (Quitting smoking can immediately begin to reduce those risks.--The sooner you quit, the less your risk of early death) Smoking causes heart attack, stroke, and blood vessel disease that leads to amputation--all of these terrible diseases shown here.

It also causes lung cancer, emphysema, bronchitis and many other diseases, including erectile dysfunction in men (Tobacco advertisements try to show us that smoking is "sexy" but its effects are exactly the opposite). **STOPPING SMOKING IS BY FAR THE MOST IMPORTANT THING THAT CAN BE DONE TO PREVENT THESE DISEASES AND IS MUCH MORE EFFECTIVE THAN ANY MEDICINE.** If you smoke in your home, the secondary inhalation of the smoke also causes diseases such as asthma, cancer and sudden infant death in your loved ones. The scientific evidence is so overwhelming that there is no longer any excuse for anyone, anywhere, to smoke at any time.

#### **41B. HEART DISEASE AND STROKE (CONTINUED)**

Other Stroke and Heart Disease Risk Factors **You** Can Control Include:

**-Overweight:** (See also SECTION 38. NUTRITION & PHYSICAL ACTIVITY) Weighing too much can increase your risk for developing many health problems including Heart disease, Stroke, Type 2 (adult onset) diabetes, Cancer and other serious diseases. You can lower your health risks by losing as little as 10 to 20 pounds. Limit the amount you eat, and exercise for one half to one hour every day. You should especially avoid foods high in saturated (animal) fats, trans fats and calories. Greasy, fatty foods such as meats, as well as many desserts and sweets are loaded with unhealthy fats and calories (fat has over twice as many calories as carbohydrate or protein). Instead, eat a variety of fruits, vegetables, low-fat dairy products, beans and whole grain foods each day. These foods provide lots of vitamins, minerals, and fiber, yet they provide the least concentrated sources of calories, so can also help you control your blood sugar, as well as lose weight.

**-High Blood Cholesterol:** *(See also SECTION 38. NUTRITION & PHYSICAL ACTIVITY)*

This also can be controlled by reducing the amount of animal fats in your diet. There are also medicines that can help. Cholesterol levels can also be improved by exercise.

**-Sedentary (Little Exercise) Life Style:** *(See also SECTION 38C PHYSICAL ACTIVITY)*

Most people in rural areas of developing countries get plenty of exercise. However some have jobs where they only exercise a certain part of their body and others don't get much exercise at all. Exercise helps your heart and your body stay stronger and work better. It lowers blood pressure, improves your cholesterol levels, and can help you lose weight if that is a problem. It also strengthens your bones and improves your energy level and spirits. The Institute of Medicine now recommends that all people engage in some type of exercise for at least one hour every day of the week. However, even a half hour a day will help decrease your risks and help you to lose weight.

**-Diabetes (Type 2 or Adult Onset):** *(See also SECTION 38. NUTRITION & PHYSICAL ACTIVITY)* Poorly controlled diabetes also places you at serious increased risk of heart attack and stroke as well as blindness and amputation. Although medications are often necessary; diet, weight reduction and exercise have been shown to be more effective than medications in preventing and controlling adult onset diabetes. It is also essential that you never smoke (often results in amputations). Alcohol is especially toxic to diabetic patients and can worsen diabetic nerve damage, decreased vision and high blood pressure. If you have diabetes, you should be seen by a dietitian to help you regulate your diet and blood sugar levels. To help keep your blood sugar at a healthy level you should:

- 1) Eat about the same amount of food each day,
- 2) Eat at about the same times each day,
- 3) Take your medicines at the same times each day, and
- 4) Exercise about the same amount at about the same times each day.

It is also important to keep the amount of carbohydrate you eat consistent throughout the day. Although it is the total amount of carbohydrates (not only sugar) that is most important, you should not eat cookies, cakes, sodas and other fatty and sugary foods until you have seen a dietitian and are familiar with carbohydrate counting and exchanges.

If you are diabetic and overweight, what is most important is losing weight by limiting the size of the portions (amount of calories) you eat and exercising at least ½ to 1 hour every day. You should especially avoid saturated and trans fats, sweets and sugary foods. Eat a variety of fruits, vegetables, low-fat dairy products, beans and whole grain foods each day. These are the foods you should primarily eat. They provide lots of vitamins, minerals, and fiber, yet they provide the least concentrated sources of calories, so can also help you control your blood sugar, as well as lose weight. Most vegetables are relatively low in carbohydrate so are an especially good choice.

**-High Blood Pressure:** *(See also SECTION 38. NUTRITION & PHYSICAL ACTIVITY)*

Most people with high blood pressure don't feel sick. That is why high blood pressure is called the "Silent Killer". The reason it is important to treat high blood pressure is because it causes heart attacks and stroke. Fortunately, there is much you can do to decrease your blood pressure. Diet changes are our most effective treatments and include reducing the salt in your diet (to less than 1500 mg Sodium per day), increasing potassium intake (bananas and other fresh fruits and vegetables), and other recommendations as described in Section 38. Decreasing alcohol intake, increasing physical exercise, decreasing weight, and reducing stress are also very important for controlling your blood pressure.

Blood pressure requires close follow up by your regular health care provider. If your provider puts you on a blood pressure medicine it is very important that you always continue it, every day, even if you don't feel sick. Always see your provider before stopping your blood pressure medicine (Even before skipping one dose). Stopping the medicine abruptly can cause a rebound blood pressure that is very high and very dangerous and can cause heart attack and stroke. So it is very important that you continue to be seen regularly by your provider so he or she can monitor your blood pressure and adjust your medicines.

**-Stress:** Stress can also lead to heart attack and stroke and other health problems. Some people respond to stress by overeating. Studies have shown that patients who pray and have a spiritual life emphasizing love and forgiveness seem to manage stress better and respond better to treatment.

**Healthy diet, regular exercise and avoiding tobacco products** are just 3 simple things. Yet the WHO reports that **over 80%** of all the unnecessary deaths due to:

Premature Heart Disease (#1 Cause of Death),

Stroke (#3 Cause of Death),

Type 2 Diabetes (#6 Cause of Death),

and **40%** of Cancer (#2 Cause of Death)

could be prevented by a healthy diet, regular exercise and avoiding tobacco products. Though our drugs and surgeries for these conditions may help, they save very few lives compared to diet, exercise and avoiding tobacco.--Just 3 simple things. And each is under your control.

HEPFDC Health Screening: Download free at [www.hepfdc.info](http://www.hepfdc.info)