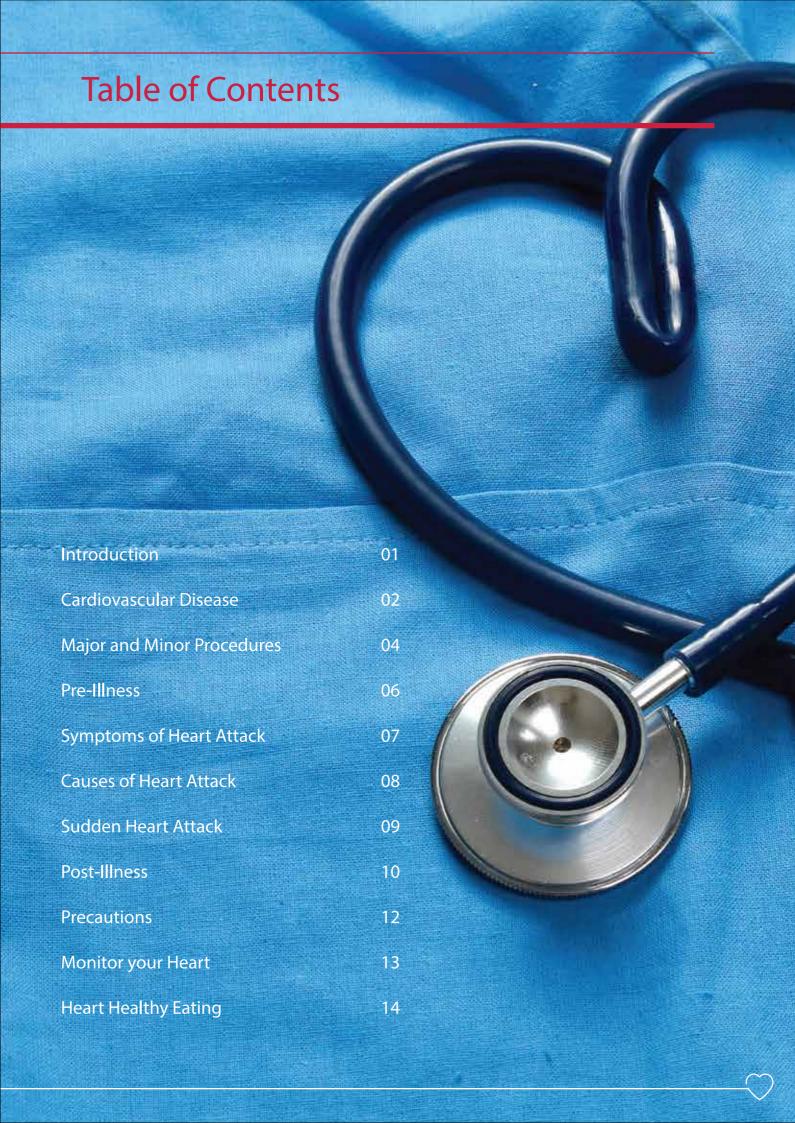




CARDIAC SAVINGS PLAN
Heart Health Check Booklet

## Disclaimer

This booklet has been created to educate Jubilee Life's customers about cardiac diseases and steps that should be taken before or after suffering from this disease. The information provided in this booklet has been taken from various sources. This booklet in no way should be perceived as medical advice and for all cardiac related information, please refer to your doctor or physician.



# Introduction

You probably know someone in your family or among your friends who has had a heart attack. Cardiovascular diseases (diseases of the heart and the blood vessels) are killing more and more people around the world, striking rich and poor alike.

Those who survive a heart attack often need to take long term medical treatment. If you have ever had a heart attack or stroke, or had to take care for someone who had it, you will know that these diseases can seriously affect life of both the patient and his or her family. The effects can even reach beyond the family to the community.

Yet so many heart attacks could be prevented. That is why you should read this booklet. This booklet explains why heart attacks occur and how can you avoid them. It tells you what you should do to avoid becoming a victim.

If you are at high risk, there is advice on the signs to look out for and what you can do to reduce your risk. If you have already had a heart attack or stroke, there is advice on how your condition can be treated and controlled, and how you can improve your quality of life.

Following the advice in this booklet may mean changing your habits and routines, and that is often not easy. It helps to get lots of encouragement and support from your friends and family, and from your health care team. This booklet is not meant to take the place of your doctor, but by reading it, you are taking a positive step towards better health.





# Cardiovascular Disease

# Cardiovascular disease (CVD)



is a general term that describes a disease of the heart or blood vessels. Blood flow to the heart, brain or body can be reduced as the result of a blood clot (thrombosis), or by a build up of fatty deposits inside an artery that cause the artery to harden and narrow (atherosclerosis).

## Types of Cardiovascular diseases

## | Coronary heart disease

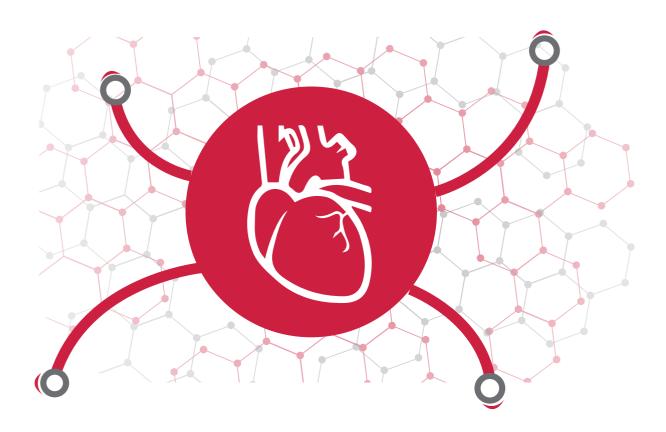
Coronary heart disease (CHD) occurs when the flow of oxygen rich blood to your heart is blocked or reduced by a build up of fatty material (atheroma) in the coronary arteries.

The coronary arteries are the two major blood vessels that supply your heart with blood. As they narrow because of a build up of atheroma, the blood supply to your heart will be restricted. This can cause angina (chest pain). If a coronary artery becomes completely blocked, it can cause a heart attack.

## Stroke

A stroke is a serious medical condition that occurs when the blood supply to part of the brain is cut off.

Like all organs, the brain needs a constant supply of oxygen and nutrients to function properly. This is provided by the blood, so if your blood flow is restricted or stopped, brain cells will begin to die. This can cause brain damage and possibly death.



## | Peripheral arterial disease

Peripheral arterial disease, also known as peripheral vascular disease, occurs when there's a blockage in the arteries to your limbs (usually your legs).

## Aortic disease

The aorta is the largest blood vessel in the body which carries blood from your heart to the rest of your body. An aneurysm is a bulge or "ballooning" in the wall of an artery. Arteries are blood vessels that carry oxygen rich blood from the heart to other parts of the body. If an aneurysm grows large, it can burst and cause dangerous bleeding or even death .Most aneurysms are in the aorta, the main artery that runs from the heart through the chest and abdomen.

Source: National Library of Medicine http://www.nlm.nih.gov/medlineplus/aorticaneurysm.html

## **Major Heart Procedures**

## Coronary Artery Bypass Surgery

A coronary artery bypass graft (CABG) is a surgical procedure used to treat coronary heart disease. It diverts blood around narrowed or clogged parts of the major arteries to improve blood flow and oxygen supply to the heart.

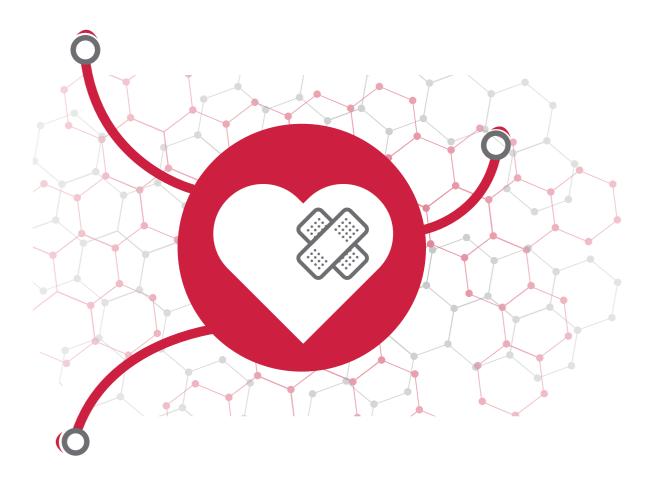
A CABG involves taking a blood vessel from another part of the body usually the chest, leg or arm and attaching it to the coronary artery above and below the narrowed area or blockage. This new blood vessel is known as a graft.

Source: National Health Services http://www.nhs.uk/conditions/coronary-artery-bypass/pages/introduction.aspx

## | Mitral or Aortic Valve Replacement or Repair Surgery

Mitral valve replacement is usually only considered if you're unable to have the valve repaired. You will need it if your valve is furred up with calcium deposits or if the leaflets of your valve do not move. Aortic valve replacement is a type of open heart surgery and is used to treat problems with the heart's aortic valve. The aortic valve is removed and replaced with an artificial valve (prosthesis).

Sources: National Health Services http://www.nhs.uk/conditions/mitral-valve-problems/pages/introduction.aspx http://www.nhs.uk/conditions/aorticvalvereplacement/pages/whatisitpage.aspx



## | Abdominal aortic aneurysm treatment

Abdominal aortic aneurysm (AAA) repair is a procedure used to treat an aneurysm (abnormal enlargement) of the abdominal aorta. Repair of an abdominal aortic aneurysm may be performed surgically through an open incision or in a minimally invasive procedure called endovascular aneurysm repair (EVAR).

## **Minor Heart Procedures**

## | Balloon Angioplasty



Interventional cardiologists perform angioplasty, which opens narrowed arteries. They use a long, thin tube called a catheter that has a small balloon on its tip. They inflate the balloon at the blockage site in the artery to flatten or compress the plaque against the artery wall. Angioplasty is also called percutaneous transluminal coronary angioplasty (PTCA).

Source: Texas Heart Institute (http://www.texasheart.org/HIC/Topics/Proced/angioplasty.cfm)



## Atherectomy

An atherectomy is a procedure that utilizes a catheter with a sharp blade on the end to remove plaque from a blood vessel. The catheter is inserted into the artery through a small puncture in the artery, and it is performed under local anesthesia. The catheter is designed to collect the removed plaque in a chamber in the tip, which allows removal of the plaque as the device is removed from the artery. The process can be repeated at the time the treatment is performed to remove a significant amount of disease from the artery, thus eliminating a blockage from atherosclerotic disease.

#### | Stent Implantation

A stent is a small, mesh-like device made of metal. When a stent is placed inside of a coronary artery, it acts as a support or scaffold, keeping the vessel open. By keeping the vessel open, the stent helps to improve blood flow to the heart muscle and reduce the pain of angina. Stent procedures are usually used along with balloon angioplasty. In fact, about 80% of patients who have balloon angioplasty will have a stent placed as well.

Source:
Texas Heart Institute:
http://www.texasheart.org/HIC/Topics/Proced/angioplasty.cfm

## Cardiac ablation procedures

Cardiac ablation is a procedure that is used to scar small areas in your heart that may be causing your heart rhythm problems. This can prevent the abnormal electrical signals or rhythms from moving through the heart.

During the procedure, small wires called electrodes are placed inside your heart to measure your heart's electrical activity. These electrodes may also be used to destroy the bad areas of your heart. Cardiac ablation is used to treat certain heart rhythm problems that medicines are not controlling.

Source: National Library of Medicine http://www.nlm.nih.gov/medlineplus/ency/article/007368.htm

## Arrhythmia implantable (or internal) cardioverter defibrillator

Any irregularity in your heart's natural rhythm is called an arrhythmia. An ICD is usually about the size of a pager. It consists of a pulse generator, which includes the battery and several electronic circuits & wires, called leads.

The ICD is implanted beneath the skin, near the collarbone or somewhere at or above the waistline. The leads are placed inside the heart or on its surface and are attached to the ICD. Once the ICD is implanted, the leads monitor your heart rate. If the ICD detects ventricular tachycardia or fibrillation, it sends out a controlled burst of impulses (called "overdrive" pacing). If that does not work, the ICD "shocks" the heart to restore a normal rhythm. Newer ICD devices can also work like a pacemaker if a slow heart rate (bradycardia) occurs.

An ICD is used in patients at risk for

- Ventricular tachycardia, when the lower chambers of the heart independently beat faster than 100 beats per minute.
- Ventricular fibrillation, when the muscle fibers of the lower chambers of the heart contract in a fast, uncoordinated manner.
- Sudden cardiac arrest caused by arrhythmias

Source: Texas Heart Institute http://www.texasheart.org/HIC/Topics/Proced/icdtopic.cfm

## | Cardiac Pacemaker

A pacemaker is a small electrical device that produces tiny electrical signals that replace the function of your natural pacemaker. Pacemakers are run by a small dry cell battery. They vary in size but most are around two thirds the size of a credit card and about 5mm thick.

The pacemaker is connected to up to four wires that are fed into your heart through one of your veins. It's placed in the appropriate area of the heart using X-ray guidance.

Source: National Health Services http://www.nhs.uk/conditions/heart-block/pages/treatment.aspx

# **Pre-Illness**

Certain factors contribute to the unwanted build up of fatty deposits (atherosclerosis) that narrows arteries throughout your body, including arteries to your heart. You can improve or eliminate many of these risk factors to reduce your chances of having a first or subsequent heart attack. These risk factors include:



Men who are 45 or older and women who are 55 or older are more likely to have a heart attack than are younger men and women.



Smoking and long-term exposure to second hand smoke (smoke inhaled involuntarily from tobacco being smoked by others) damage the interior walls of arteries including arteries to your heart allowing deposits of cholesterol and other substances to collect and slow down blood flow. Smoking also increases the risk of deadly blood clots forming and causing a heart attack.



Over time, high blood pressure can damage arteries that feed your heart by accelerating atherosclerosis. High blood pressure that occurs with obesity, smoking, high cholesterol or diabetes increases your risk even more.



## | High blood cholesterol or triglyceride levels

Cholesterol is a major part of the deposits that can narrow arteries throughout your body, including those that supply your heart. A high level of the wrong kind of cholesterol in your blood increases your risk of a heart attack. Low density lipoprotein (LDL) cholesterol (the "bad" cholesterol) is most likely to narrow arteries. A high level of triglycerides, another type of blood fat related to your diet, also ups your risk of heart attack. However, a high level of high-density lipoprotein (HDL) cholesterol (the "good" cholesterol), which helps the body clean up excess cholesterol, is desirable and lowers your risk of heart



Diabetes is the inability of your body to adequately produce insulin or response to insulin need properly. Insulin, a hormone secreted by your pancreas, allows your body to use glucose, which is a form of sugar from foods. Diabetes, especially uncontrolled diabetes, increases your risk of a heart attack.



## | Family history of heart attack

If your siblings, parents or grandparents have had early heart attacks (by age 55 for male relatives and by age 65 for female relatives), you may be at increased risk of heart attack.



## Lack of physical activity

An inactive lifestyle contributes to high blood cholesterol levels and obesity. People who get regular aerobic exercise have better cardiovascular fitness, which decreases their overall risk of heart attack. Exercise is also beneficial in lowering high blood pressure.



## Obesity

Obesity raises the risk of heart disease because it's associated with high blood cholesterol levels, high blood pressure and diabetes. Losing just 10 percent of your body weight can lower this risk, however.



#### Stress

You may respond to stress in ways that can increase your risk of a heart attack.



## | Illegal drug use

Using stimulant drugs, such as cocaine or amphetamines, can trigger a spasm of your coronary arteries that can cause a heart attack.



## A history of preeclampsia

Pre-eclampsia is a condition that affects some pregnant women, usually during the second half of pregnancy (from around 20 weeks) or soon after their baby is delivered. Early signs of pre-eclampsia include having high blood pressure (hypertension) and protein in your urine (proteinuria).

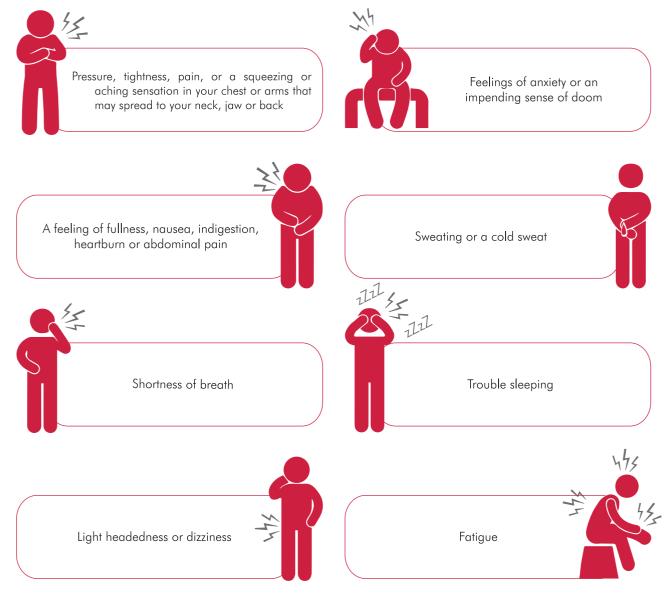
In some cases, further symptoms can develop, including:

- swelling of the feet, ankles, face and hands caused by fluid retention (oedema)
- severe headache
- vision problems
- pain just below the ribs

Source: National Health Services http://www.nhs.uk/conditions/pre-eclampsia/pages/introduction.aspx



# Symptoms of Heart Attack



Although symptoms can vary, the discomfort or pain of a heart attack is usually similar to that of angina, but it's often more severe. The symptoms of a heart attack can also be similar to indigestion. For example, they may include a feeling of heaviness in your chest, a stomach ache or heartburn.

A heart attack can occur at any time, including while you're resting. If heart pains last longer than 15 minutes, it may be the start of a heart attack.

Source: National Health Services http://www.nhs.uk/conditions/coronary-heart-disease/pages/symptoms.aspx

# **Causes of Heart Attack**

Most heart attacks are usually caused by a build-up of fatty deposits on the walls of the arteries around the heart (coronary arteries). The fatty deposits, called atheroma, are made up of cholesterol and other waste substances.

The build up of atheroma on the walls of the coronary arteries makes the arteries narrower, restricting the flow of blood to the heart muscle. This process is called atherosclerosis. Your risk of developing atherosclerosis is significantly increased if you:

- smoke
- have high blood pressure (hypertension)
- have a high blood cholesterol level
- don't take regular exercise
- have diabetes

Other risk factors for developing atherosclerosis include being obese or overweight and having a family history of CHD (the risk is increased if you have a male relative under the age of 55, or a female relative under 65, with CHD).

Source: National Health Services http://www.nhs.uk/conditions/coronary-heart-disease/pages/causes.aspx





# Sudden Heart Attack

## What To Do

If you think someone is having a heart attack, do the following:



Have the person sit down, rest, and try to keep calm.



Loosen any tight clothing.



Ask if the person takes any chest pain medication for a known heart condition, such as nitroglycerin, and help them take it.



If the pain does not go away promptly with rest or within 3 minutes of taking nitroglycerin, call for emergency medical help.



If the person is unconscious and unresponsive, call local hospital and then begin CPR (cardiopulmonary resuscitation). This helps deliver oxygen to the body and brain.

Regardless of whether you've been trained, you should begin CPR with chest compressions. Press down about 2 inches (5 centimetres) on the person's chest for each compression at a rate of about 100 a minute. If you've been trained in CPR, check the person's airway and deliver rescue breaths after every 30 compressions. If you haven't been trained, continue doing only compressions until help arrives

Sudden cardiac arrest during a heart attack is commonly caused by a deadly heart rhythm in which the heart quivers uselessly (ventricular fibrillation). Without immediate treatment, ventricular fibrillation leads to death. The timely use of an automated external defibrillator (AED), which shocks the heart back into a normal rhythm, can provide emergency treatment before a person having a heart attack reaches the hospital. But, if you're alone, it's important to continue chest compressions. If there's a second person present, that person can look for a nearby AED.

## What Not To Do









Do not give the person anything by mouth unless a heart medication (such as nitroglycerin) has been prescribed.

Sources: MediLine Plus - National Library of Medicines, National Institutes of Health US (http://www.nlm.nih.gov/medlineplus /ency/article/000063.htm)

# Post-Illness

## Life after Heart Disease

Having a heart attack or a heart procedure can be a frightening and upsetting experience. It is difficult to discover often suddenly that your body isn't working the way it should, and to be plunged into an unfamiliar world of hospitals and high tech procedures. But it's important to know that millions of people have survived a heart attack, recovered fully, and gone on to resume active, normal lives.

Likewise, most people who undergo heart surgery recover well and return to their usual activities. Many surgery patients eventually feel healthier than they did before their procedure. The time it takes to get back to normal will depend on many factors, including your age and general health. If you have had a heart attack, the pace of recovery will also depend on the severity of the attack. If you have undergone surgery, recovery time will depend partly on the type of procedure you had. But whatever your situation, there is much you can do to improve your health and prevent complications following a heart attack or major heart procedure.

- Give yourself permission to recover. You and your body have been through a lot, and it will take some time to feel like yourself again. Expect to feel quite tired at first, and to gradually regain your strength and energy.
- When you first arrive home from the hospital, you'll need to get a lot of rest so that your heart can begin to heal. It is very important to eat healthy and to get enough sleep.
- Take the medications your doctor has prescribed for you.
- Avoid heavy yard work, house cleaning, or other projects that require a lot of energy. Also refrain from physical activity in very hot or cold weather. Ask family and friends to help out with chores, childcare, and other activities that may be difficult to take care of during your first weeks at home. At the same time, it is important to get up and move around as you begin to recover.
- Your heart is a muscle that needs be exercised though very gently at first. Pace yourself. Allow plenty of time for each thing you do during the day, from getting out of bed to taking a shower to preparing a simple breakfast. Rest between activities, and whenever you feel tired. Ask your doctor for a list of guidelines for activity during your first few weeks at home.

## **Getting Your Life Back**

As you begin to recover from a heart attack or heart procedure, you may naturally wonder when you can return to your usual activities, including work, sexual activity, driving, and travel. Most people can safely return to most of their normal activities within a few weeks, as long as they do not have chest pain or other complications. While you should ask your doctor when you can return to each of your usual activities, here are some general guidelines:

#### Work

Most people are able to return to their usual work within several weeks. Your doctor may ask you to take tests to find out if you can do the kind of job you did before. While most individuals can continue their customary work with no problems, some people choose to change jobs or reduce their hours to lighten the load on their heart.

## Driving

It can usually begin within a week for most patients. People with complications or chest pain should not drive until their symptoms have been stable for a few weeks.

#### Travel

Once your doctor tells you it's safe for you to travel, keep these tips in mind:

- Keep your medications in your purse or carry on luggage so they will be easily available when you need them.
- Pack light so that you can lift your luggage without strain. At the airport, train, or bus station, use a pull-cart to cut down on lifting. If possible, get help from a porter.
- Allow more time than usual to catch your flight, train, or bus

## Walk

Walk around at least every 2 hours during trips. While sitting, flex your feet frequently and do other simple exercises to increase blood flow in your legs and prevent blood clots. Check with your doctor before traveling to locations at high altitudes (greater than 6,000 feet) or places where the temperature will be either very hot or very cold. When you first arrive, give yourself a chance to rest.

Remember, each person's recovery process is different. Don't try to guess when you can return to normal activities. Always ask your doctor first.

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## Coping With Your Feelings

Anyone who has had a heart attack or has undergone heart surgery knows that it can be an upsetting experience. You've just come through a major health crisis, and your usual life has been disrupted. Afterward, it's normal to experience a wide range of feelings. You may feel some relief. But you may also feel worried, angry, or depressed. It may be reassuring to know that these reactions are very common, and that most difficult feelings pass within a few weeks. Here are some things to remember:

## Take 1 day at a time

Try not to think too much about next week or next month. Do what you can do today.

## Enjoy small pleasures

A walk in your neighbourhood, a conversation with a loved one, a snuggle with a pet, or a good meal.

#### Share your concerns

Talk with family members and friends about your feelings and concerns, and ask for support. Be sure to ask for the kind of support you need. (For example, if you want a sympathetic ear rather than advice, gently let your loved ones know.) Be sure to give family members time to say what they feel and need, too. Supportive relationships may actually help to lengthen life after a heart attack.

#### Regular physical activity

It not only helps to reduce the risk of future heart problems, but also helps to relieve anxiety, depression, and other difficult feelings. Any regular physical activity even gentle walking can help to lift your mood.

## Seek help for depression

Up to 20 percent of heart disease patients battle serious depression, and many more suffer milder cases. If you find yourself feeling very sad or discouraged for more than a week or so, be sure to let your doctor know. Counselling and/or medication can often be very helpful. Seeking help is very important, not only because you deserve to enjoy life as fully as possible, but also because heart patients who are successfully treated for depression are less likely to have future serious heart problems.

## There's no getting around it

Heart disease changes your life. For many people, living with a heart condition requires changes both big and small, from undergoing major surgery to adding more fruits and vegetables to their diets. Change can be difficult, and sometimes even scary. But with support, resources, and a good supply of determination, most people are able to meet these new challenges well.

## Be patient with yourself

You're on a new life path, one that requires plenty of courage, awareness, and persistence. If you try your best to stay on that path, making a daily commitment to take good care of yourself and your heart, you're likely to discover what millions of others have learned: You can live a full, rewarding life with heart disease.

Source: NIH Publication No. 06–5270 November 200, U.S. Dept. of Health and Human Services, National Institute of Health.



## **Precautions**

There are several ways you can help reduce your risk of developing coronary heart disease (CHD), such as,

## Eat a healthy, balanced diet



A low fat, high fibre diet is recommended, which should include plenty of fresh fruit and vegetables (five portions a day) and whole grains.

You should limit the amount of salt you eat to no more than 6g (0.2oz) a day as too much salt will increase your blood pressure. Six grams of salt is about one teaspoonful.

There are two types of fat: saturated and unsaturated. You should avoid food containing saturated fats because these will increase the levels of bad cholesterol in your blood.

## Be more physically active



Combining a healthy diet with regular exercise is the best way of maintaining a healthy weight. Having a healthy weight reduces your chances of developing high blood pressure.

Regular exercise will make your heart and blood circulatory system more efficient, lower your cholesterol level, and also keep your blood pressure at a healthy level.

## Keep to a healthy weight



Being overweight or obese can put extra strain on your heart, making it more likely to develop cardiovascular disease.

## Keep your blood pressure under control



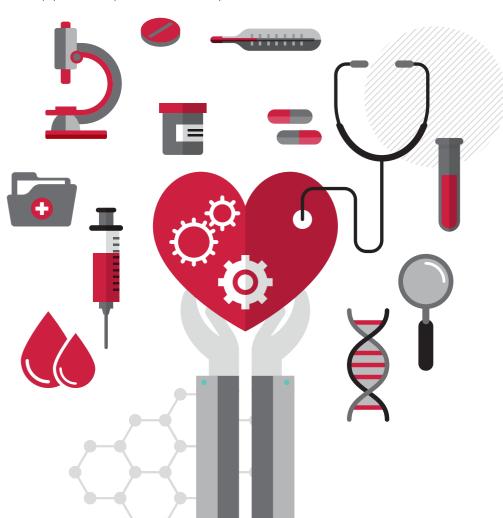
You can keep your blood pressure under control by eating a healthy diet low in saturated fat, exercising regularly and, if required, taking the appropriate medication to lower your blood pressure. Your target blood pressure should be below 140/85mmHg.

## Give up smoking



If you smoke, giving up will reduce your risk of developing CHD. Smoking is a major risk factor for developing atherosclerosis (furring of the arteries). It also causes the majority of cases of coronary thrombosis in people under the age of 50.

 $Source: National \ Health \ Services \\ http://www.nhs.uk/conditions/coronary-heart-disease/pages/prevention.aspx$ 



## **Monitor Your Heart**

You should get the few medical tests done which will help check if you have signs and symptoms, such as chest pain, signal a heart attack or another condition. These tests include:



This is the first test done to diagnose a heart attack. It's often done while you are being asked questions about your symptoms and often by the first responders from emergency medical services. This test records the electrical activity of your heart via electrodes attached to your skin. Impulses are recorded as waves displayed on a monitor or printed on paper. Because injured heart muscle doesn't conduct electrical impulses normally, the ECG may show that a heart attack has occurred or is in progress.



#### **Blood tests**

Certain heart enzymes slowly leak out into your blood if your heart has been damaged by a heart attack. Emergency room doctors will take samples of your blood to test for the presence of these enzymes.



## Additional tests

If you've had a heart attack or one is occurring, doctors will take immediate steps to treat your condition. You may also undergo these additional tests:



## Chest X-ray

An X-ray image of your chest allows your doctor to check the size of your heart and its blood vessels and to look for any fluid in your lungs.



## Echocardiogram

This test uses sound waves to produce an image of your heart. During an echocardiogram, sound waves are directed at your heart from a transducer, a wand like device, held on your chest. The sound waves bounce off your heart and are reflected back through your chest wall and processed electronically to provide video images of your heart. An echocardiogram can help identify whether an area of your heart has been damaged by a heart attack and isn't pumping normally or at peak capacity.



## Coronary catheterization (angiogram)

This test can show if your coronary arteries are narrowed or blocked. A liquid dye is injected into the arteries of your heart through a long, thin tube (catheter) that's fed through an artery, usually in your leg or groin, to the arteries in your heart. As the dye fills your arteries, the arteries become visible on X-ray, revealing areas of blockage. Additionally, while the catheter is in position, your doctor may treat the blockage by performing an angioplasty, also known as coronary artery balloon dilation, balloon angioplasty and percutaneous coronary intervention. Angioplasty uses tiny balloons threaded through a blood vessel and into a coronary artery to widen the blocked area. In most cases, a mesh tube (stent) is also placed inside the artery to hold it open more widely and prevent re-narrowing in the future.



#### Exercise stress test

In the days or weeks after your heart attack, you may also undergo a stress test. Stress tests measure how your heart and blood vessels respond to exertion. You may walk on a treadmill or pedal a stationary bike while attached to an ECG machine. Or you may receive a drug intravenously that stimulates your heart similar to exercise. Stress tests help doctors decide the best long-term treatment for you. Your doctor also may order a nuclear stress test, which is similar to an exercise stress test, but uses an injected dye and special imaging techniques to produce detailed images of your heart while you're exercising.



## Cardiac computerized tomography (CT) or magnetic resonance imaging (MRI)

These tests can be used to diagnose heart problems, including the extent of damage from heart attacks.

A computed tomography (CT) scan of the heart is an imaging method that uses x-rays to create detailed pictures of the heart and its blood vessels.

- This test is called a coronary calcum scan when it is done to see if you have a buildup of calcium in your arteries.
- It is called CT angiography if it is done to look at the arteries that bring blood to your heart.

In a cardiac CT scan, you will be asked to lie on a narrow table that slides into the center of the CT scanner. A computer creates separate images of the body area, called slices.

Heart magnetic resonance imaging (MRI) is an imaging method that uses powerful magnets and radio waves to create pictures of the heart. It does not use radiation (x-rays). You will lie on a narrow table, which slides into a large tunnel like tube. MRI provides detailed pictures of the heart and blood vessels from many views. Often, it is used when more information is needed after you have had an echocardiogram or heart CT scan. MRI is more accurate than CT scan or other tests for certain conditions, but less accurate for others.

Source: National Library of Medicine http://www.nlm.nih.gov/medlineplus/ency/article/003795.htm

# **Heart Healthy Eating**

Improving your diet is an important step toward preventing heart disease, but you may feel unsure where to begin. Take a look at the big picture: your overall eating patterns are more important than obsessing over individual foods. No single food can make you magically healthy, so your goal can be to incorporate a variety of healthy foods cooked in healthy ways into your diet, and make these habits your new lifestyle.

Eat More	Eat Less
Healthy fats: raw nuts, olive oil, fish oils, flax seeds, or avocados	Trans fats from partially hydrogenated or deep-fried foods; saturated fats from whole fat dairy or red meat
Nutrients: colourful fruits and vegetables fresh or frozen, prepared without butter	Packaged foods of any kind, especially those high in sodium
Fiber: cereals, breads, and pasta made from whole grains or legumes	White or egg breads, granola type cereals, refined pastas or rice
Omega 3 and protein: fish and shellfish, poultry	Red meat, sausage, fried chicken
Calcium and protein: Egg whites, egg substitutes, skim or 1% milk, low fat or non fat cheese or yogurt	Egg yolks, whole or 2 percent milk, whole milk products like cheese or yogurt



## Fats

Of all the possible improvements you can make to your diet, limiting saturated fats and cutting out trans fats (Trans fats raise LDL "bad" cholesterol and make you more likely to get heart disease. They also lower HDL "good" cholesterol) entirely is perhaps the most important. Both types of fat raise your LDL, or "bad" cholesterol level, which can increase your risk for heart attack and stroke. Luckily, there are many ways to control how much saturated and trans fats you take in. Keep these culprits in mind as you cook and make food choices and learn how to avoid them.

The best way to avoid saturated or trans fats is to change your lifestyle practices. Instead of chips, snack on fruit or vegetables. Challenge yourself to cook with a limited amount of butter. At restaurants, ask that sauces or dressings be put on the side or left off altogether.

Reduce the amount of solid fats like butter, margarine, or shortening you add to food when cooking or serving. Instead of cooking with butter, for example, flavor your dishes with herbs or lemon juice. You can also limit solid fat by trimming fat off your meat or choosing leaner proteins.

Foods containing high levels of saturated fats or trans fats such as potato chips and packaged cookies can increase your cholesterol levels much more significantly than cholesterol containing foods such as eggs. Saturated fat and trans fat both increase LDL ("bad") cholesterol. Trans fat lowers your levels of HDL ("good") cholesterol, which can put you at increased cardiovascular risk.



## **Good Fats**

While saturated and trans fats are roadblocks to a healthy heart, unsaturated fats are essential for good health. You just have to know the difference. "Good" fats include:

- Omega 3 Fatty Acids: Fatty fish like salmon, trout, or herring and flaxseed, canola oil, and walnuts all contain polyunsaturated fats that are vital for the body.
- Omega 6 Fatty Acids: Vegetable oils, soy nuts, and many types of seeds all contain healthy fats.
- Monounsaturated fats: Almonds, cashews, peanuts, pecans, and butters made from these nuts, as well as avocadoes, are all great sources of "good" fat.

Swap out high-fat foods for their lower fat counterparts. Top your baked potato, for example, with salsa or low fat yogurt rather than butter, or use low sugar fruit spread on your toast instead of margarine. When cooking, use liquid oils like canola, olive, safflower, or sunflower, and substitute two egg whites for one whole egg in a recipe.



Check food labels on any prepared foods. Many snacks, even those labeled "reduced fat," may be made with oils containing trans fats. One clue that a food has some trans fat is the phrase "partially hydrogenated." And look for hidden fat; refried beans may contain lard, or breakfast cereals may have significant amounts of fat.

Choose your condiments and packaged foods carefully, looking for foods labeled sodium free, low sodium, or unsalted. Better yet, use fresh ingredients and cook without salt.





Unhealthy cholesterol levels increase your risk for heart disease, so keeping yours low is key to a healthier heart. Your diet is central to controlling your cholesterol. Some foods can actually lower your cholesterol, while others only make matters worse.

Choose foods rich in unsaturated fats, fiber, and protein. Fruits, vegetables, fish, beans, nuts, and seeds are all great cholesterol regulators. The best foods for lowering cholesterol are oatmeal, fish, walnuts (and other nuts), olive oil, and foods fortified with sterols or stanols substances found in plants that help block the absorption of cholesterol.

By adding fish like salmon or herring to your diet twice a week, you can significantly lower your cholesterol, and thus your risk for heart attack. Fish contain omega-3 fatty acids, which work like superheroes, doing good deeds for your heart and your whole body.



## Fruits and Vegetables

Most fruits and vegetables are low in calories and high in fiber, making them heart healthy. You can use some of the following strategies to make eating fruits and vegetables part of your diet every day. Wash and cut fruit and vegetables and put them in your refrigerator for quick and healthy snacks. Choose recipes that feature these high-fiber ingredients, like veggie stir-fries or fruit salad.

Add pre-cut fresh or frozen vegetables to soups and sauces. For example, mix chopped frozen broccoli into prepared spaghetti sauce or toss fresh baby carrots into stews. Add kidney beans, peas, or lentils to soups or black beans to a green salad. Fresh and dried fruit, raw vegetables, and whole grain crackers are all good ways to add fiber at snack time. An occasional handful of nuts is also a healthy, high fiber snack. Eating a lot of salt can contribute to high blood pressure, which is a major risk factor for cardiovascular disease. Reducing the salt in your food is a big part of a heart healthy diet. The American Heart Association recommends no more than about a teaspoon of salt a day for an adult. That may sound alarmingly small, but there are actually many painless even delicious ways to reduce your sodium intake.

Much of the salt you eat comes from canned or processed foods like soups or frozen dinners even poultry or other meats often have salt added during processing. Eating fresh foods, looking for unsalted meats, and making your own soups or stews can dramatically reduce your sodium intake. Cooking for yourself enables you to have more control over your salt intake. Make use of the many delicious alternatives to salt. Try fresh herbs like basil, thyme, or chives. In the dried spices aisle, you can find alternatives such as allspice, bay leaves, or cumin to flavor your meal without sodium.



## Control portion size - and your weight

Gaining or carrying excess weight means that your heart must work harder, and this often leads to high blood pressure a major cause of heart disease. Achieving a healthy body weight is key to reducing your risk of heart disease. Reducing portion sizes is a crucial step toward losing or maintaining a healthy weight. Try the following tactics to control your portion sizes:

A serving size is a specific amount of food, defined by common measurements such as cups, ounces, or pieces and a healthy serving size may be a lot smaller than you're used to.

Once you have a better idea of what a serving should be, you can estimate your portion. You can use common objects for reference; for example, a serving of pasta should be about the size of a baseball (slightly smaller than a cricket ball), while a serving of meat, fish, or chicken is about the size and thickness of a deck of cards. Portions served in restaurants are often more than anyone needs. Split an entrée with your dining companion, or take half your meal home for tomorrow's lunch.



## Focus on high-fiber

A diet high in fiber can lower "bad" cholesterol and provide nutrients that can help protect against heart disease. By filling up on whole grains, vegetables, and fruits, you can get most of the fiber you'll need, which means you'll also be lowering your risk of heart disease. Refined or processed foods are lower in fiber content, so make whole grains an integral part of your diet. There are many simple ways to add whole grains to your meals. Experiment with brown rice, wild rice, barley, whole-wheat pasta, and bulgur. These alternatives are higher in fiber than their more mainstream counterparts and you may find you love their tastes.

Fiber is a carbohydrate that your body can't break down, so it passes through the body undigested. It comes in two varieties: insoluble and soluble. Insoluble fiber is found in whole grains, wheat cereals, and vegetables such as carrots, celery, and tomatoes. Soluble fiber sources include barley, oatmeal, beans, nuts, and fruits such as apples, berries, citrus fruits, and pears. Both types have been linked to heart health. Fiber's role in preventing heart disease is thought to stem from its ability to lower both blood pressure and cholesterol. It also fills you up, which helps you eat less and perhaps lose weight.



## Cook your own Food

It's very difficult to eat right for your heart when you're eating out a lot, ordering in, or eating microwave dinners and other processed foods. The good news is that you can learn to make quick, heart healthy meals at home. It's easier and less time consuming than you may think. When you prepare and cook meals at home, you have better control over the nutritional content and the overall healthfulness of the foods you eat. An added bonus: you can also save money.

When you make healthy food easy to grab during your busy week, you're more likely to stay heart healthy. When you come home from grocery shopping, cut up vegetables and fruits and store them in the fridge, ready for the next meal or when you are looking for a ready to eat snack. Make healthy eating easier by freezing heart healthy foods in individual portions. Freeze fruits such as bananas, grapes, and orange slices to make them more fun to eat for children. Be careful with portion sizes: the recommended serving of cooked meat is about the size of a deck of cards, while a serving of pasta should be about the size of a baseball.

Choose substitutions like 1% or skimmed milk instead of whole milk, soft margarine for butter, and lean meats like chicken and fish in place of ribs or ground meat. These substitutions can save you an entire day's worth of saturated fat.

When baking at home, substitute whole grain flour for half or all of the white flour, since whole grain flour is heavier than white flour. In yeast breads, use a bit more yeast or let the dough rise longer. Try adding crushed bran cereal or unprocessed wheat bran to muffins, cakes, and cookies.

Flaxseeds are small brown seeds that are high in fiber and omega-3 fatty acids, which can lower your total blood cholesterol. You can grind the seeds in a coffee grinder or food processor and stir a teaspoon of them into yogurt, applesauce, or hot cereal.



Stock up on heart healthy cookbooks and recipes for cooking ideas. The internet is full of food blogs and websites devoted to healthy cooking methods and recipes, and a local library can be a great source for cookbooks as well.

Creating a heart friendly diet starts with stocking your fridge with healthy and accessible foods. Prepare a list before you head to the store or farmer's market, and leave a little time after your trip to set yourself up for success during the week.

Just as important as picking healthy foods at the grocery store is how you cook those foods into healthy meals. Use low fat methods: you can bake, broil, microwave, roast, steam, poach, lightly stir fry, or sauté using a small amount of vegetable or olive oil, reduced sodium broth, and spices.

For breakfast choose a high fiber breakfast cereal one with five or more grams of fiber per serving. Or add a few tablespoons of unprocessed wheat bran to your favourite cereal.

When you're cooking healthful meals, make extra helpings. Store as meals in reusable containers or directly on plates for easy reheating and ready to eat food the rest of the week. Cooking healthy food ahead this way is perhaps the most time saving, money saving, and heart saving strategy available.

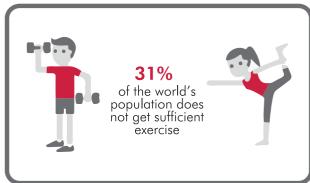
Source: Heart and Stroke Foundation (http://www.heartandstroke.com/site/c.iklQLcMWJtE/b.4199773/k.C5C2/Healthy\_Living\_\_Hearthealthy\_eating\_guide\_for\_your\_family.htm)

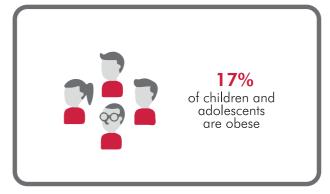




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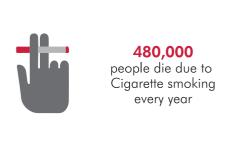


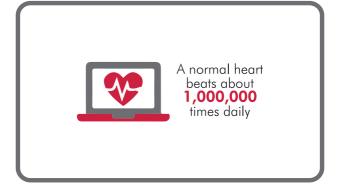












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