

HEART DISEASE

Circulation refers to blood circulating throughout the body. Many things can cause a problem with circulation, e.g. bleeding, shock, breathing problem, allergies, etc. For this section we will focus on blood vessel disease, which can lead to heart disease, which can lead to a heart attack.

Blood vessel disease:

- This is sometimes referred to as coronary artery disease, cardiovascular disease, heart disease, atherosclerosis, arteriosclerosis. But, the bottom line is that it all means the same thing.

Definition:

- It simply refers to the narrowing of the blood vessels by plaque buildup. This will cause poor blood flow to any part of the body, including the heart which can cause a heart attack, or the brain which can cause a stroke. In the case of a heart attack the blood vessels (coronary arteries) have become blocked and no longer allow blood to flow through to the heart muscle. As a result the heart muscles cannot function properly and will soon die.

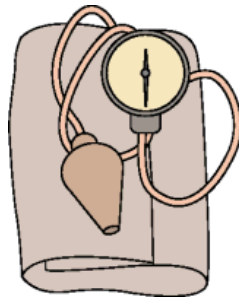
Although heart disease will kill more adults than any other disease, it is considered a preventable disease. Heart disease is not something that happens over night. It takes years to develop, and can therefore be prevented through a few simple lifestyle changes in habits. The earlier on someone adopts healthy habits the less chance they will have of developing heart disease. These controllable habits are referred to as modifiable risk factors.

Modifiable Risk factors (factors we can control):

- **Smoking:** there is no doubt that smoking is harmful. What some people don't realize is that it is not just a risk for lung cancer. The poisonous chemicals in smoking are absorbed by the blood and carried throughout the body. These poisonous chemicals cause high blood pressure, cause your arteries to become very stiff, and cause plaque to build up in the arteries.
- **Obesity:** having excess fat puts a lot of stress on your body. It also causes high blood pressure, high triglycerides, and is associated with high sugar levels in the blood. Losing excess fat is not easy but following a healthy eating style and being physically active is the best approach.
- **Sedentary lifestyle:** Exercise is one of the best things you can do for your body. It strengthens the heart muscle, lowers blood pressure, controls excess calories from being stored as fat, strengthens bones and muscles, etc. To stay healthy exercise should be done almost daily. So, go for a walk, jog, swim, play tennis, squash, do an aerobic class, etc. Whatever you need to do to get your body moving.



- **High blood pressure (HBP):** blood pressure is defined as the force the blood is exerting on your arteries as it flows through them. So high blood pressure is when the pressure is more than it should be. It is also called hypertension. If the pressure is too great the blood vessels stretch beyond their capacity which will lead to small cracks. These small cracks are wounds which must heal. This means that as they heal there may be scar tissue that develops in the area which may impede blood flow. Or, if pressure is too high, the blood vessel may simply burst causing an aneurysm. Despite contrary belief there are no warning signs for HBP except to have it checked by your physician at least once a year.



- **Poor diet:** most people in industrialized countries have poor eating habits. Way too much processed, refined, and high saturated-fat foods, too much sugar, etc. And, not nearly enough fresh fruits and vegetables. Poor diets can easily lead to high cholesterol, obesity, HBP, type 2 diabetes, etc.
- **Salt:** in about 25% of the population excess salt (sodium) intake will increase blood pressure. Most people eat about 4 times as much salt as what is needed. And this excess can be harmful.
- **Stress:** when it is excessive and continuous stress has also been shown to contribute to heart disease. It seems that the chemicals the body releases when under stress can cause damage to the circulatory system.

The more risk factors you have the higher your chances of developing blood vessel disease. There is no cure for blood vessel disease. That is why it is so important to start healthy life style habits early on.



Non-Modifiable Risk factor (factors we cannot control):

- **Age:** as we get older there is a bigger risk of heart disease simply because we've had more time to damage our bodies. There is nothing we can do for this, so don't worry about it too much.
- **Gender:** men have a higher chance for two main reasons:
 - Men carry excess fat higher up in the bodies which affects internal organs. The belief is that this causes higher blood sugar and higher cholesterol.
 - Estrogen (which men don't have) has been shown to reduce the chance of heart disease in women.
- **Diabetes:** this disease will cause damage to small blood vessels which affects circulation. This can lead to heart disease, kidney failure, blindness, and amputations. There is more on diabetes later on.
- **Genetics:** as unfair as this may seem there are some people genetically predisposed to developing heart disease. If heart disease has been a problem with older family members then this may also be a problem for you. Therefore you should discuss this with your family doctor and monitor your health, so if there is a problem it is caught early. In addition, focusing on the modifiable risk factors is vital.

