

Risk Factors for Heart Disease



Marshfield Clinic



MINISTRY HEALTH CARE



Two Leaders, One Leading Heart Care Team





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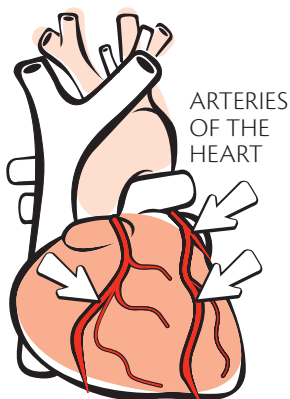
Lifestyle greatly influences your risk of developing heart disease. Therefore, the more healthy choices you make, the greater your chances of preventing it. Are you putting your heart health at risk?

The cardiovascular system is made up of the heart and blood vessels. Cardiovascular diseases (CVD), as defined by the American Heart Association, include:

- Coronary heart disease (CHD), leading form of heart disease
- Stroke
- High blood pressure (hypertension)
- Rheumatic heart disease

More than 81 million Americans have one or more forms of cardiovascular disease, with CHD and stroke being the #1 and #3 killers of American adults.

The heart is a powerful muscle, slightly larger than your clenched fist. It works as a pump to send blood containing oxygen and nutrients throughout the arteries and vessels, nourishing the body so it can function properly. The coronary arteries supply the heart with blood and, if a blockage occurs, a heart attack can result. Keeping your heart and arteries healthy reduces your risk of developing heart disease.





Risk Factors

Risk factors are behaviors or conditions that can increase your chances of developing a disease. There are many risk factors for heart disease. Most can be modified or controlled, though some cannot. The more risk factors you have, the greater your chances of developing disease. It is important to take steps to prevent or control them.



Risk factors contributing to heart disease that can be modified or controlled:

- High blood pressure
- High cholesterol
- Smoking
- Diabetes
- Overweight and obesity
- Physical inactivity
- Stress

Risk factors that you cannot control:

- Age (45 years and older for men and 55 years or older for women)
- Family history of early heart disease (father or brother before age 55; mother or sister before age 65)
- Race (American Indians, African Americans and Hispanics tend to have a higher incidence than Caucasians)

A Closer Look at the Risk Factors We Can Control

High Blood Pressure (Hypertension)

Blood pressure is the force of blood against the walls of the arteries. It is recorded in millimeters of mercury by two measurements. The pressure in the arteries when the heart beats is called systolic pressure.

The pressure in the arteries between heartbeats (resting period) is called diastolic pressure. The measurement is given as two numbers, systolic being first, diastolic second. An example would be 120/76, verbally expressed as "120 over 76." Our blood pressure is always changing in response to the needs of our body.

Optimal blood pressure is less than 120/80 mm/Hg.





High blood pressure makes the heart work harder and can cause hardening of the arteries, otherwise known as arteriosclerosis.

Over time, the increased work on the heart causes it to become enlarged, resulting in problems such as ischemic (lack of oxygen)



heart disease and congestive heart failure (CHF). The persistent stress on the vessels causes them to harden, narrow and weaken, which in addition to heart disease, contributes to stroke, kidney disease and blindness.

A person has high blood pressure when his or her pressure is consistently 140/90 or greater. According to recent estimates, nearly 1 in 3 adults in the U.S. have high blood pressure, with almost one-third of them being totally unaware of it. Because high blood pressure rarely causes symptoms, it is called the “Silent

Killer.” Being a significant risk factor in the development of cardiovascular diseases, it should not be underestimated.

Find out what your blood pressure is by having regular check-ups with your health care provider. Maintain a healthy diet and weight, exercise regularly and take medication if recommended by your health care provider.

High Cholesterol

Cholesterol is a soft, fat-like, waxy substance found in the bloodstream and in all your body’s cells. Produced in the liver, it’s an important part of a healthy body. It’s used for producing cell membranes and some hormones and serves other necessary functions. However, too much in the blood is a major risk for coronary heart disease, which leads to heart attack.

Besides our body’s production, we can get cholesterol from the animal products we eat. These include meats, poultry, fish, eggs, butter, cheese and whole milk. Other food that contains trans-fats and saturated fats causes the body to make more cholesterol.

Because cholesterol and other fats cannot dissolve in the blood, they have to be transported to and from cells by carriers called

lipoproteins, which are produced in the liver. Two lipoproteins to be aware of are: low-density lipoprotein, known as LDL or bad cholesterol, and high-density lipoprotein, known as HDL or good cholesterol. Too much LDL can clog your arteries, while HDL carries cholesterol away from your arteries.

Your LDL goal depends on how many risk factors you have. Generally, it should be 130 mg/dL or less. If you have heart disease or diabetes you should strive for less than 100 mg/dL. In the case of HDL, more is better. Less than 40 mg/dL for men and 50 mg/dL for women is a major risk factor. Studies suggest that high levels (greater than 60 mg/dL) greatly reduce your risk of heart disease.

Total cholesterol is the sum of all the cholesterol in your body and should be 200 mg/dL or less.

Triglycerides are another form of fat in the bloodstream derived from fats eaten or made in the body from other energy sources such as carbohydrates. People with high triglycerides often have high total cholesterol, high LDL and a low HDL level. Several clinical studies have shown that people with above-normal triglyceride levels (greater than or equal to 150 mg/dL) have an increased risk of heart disease.

All adults 20 years and older, should have fasting blood cholesterol levels checked every 5 years and, if abnormal, more often as determined by their health care provider.

Smoking

Cigarette smoking is the most important preventable risk factor for heart disease. If you smoke one pack a day, you are more than twice as likely to have a heart attack and five times as likely to suddenly die from one. Smoking contributes to heart disease in numerous ways:

- Damages the inner walls of the arteries
- Increases blood pressure
- Increases heart rate
- Decreases the amount of oxygen in your blood
- Reduces HDL 10 to 20%
- Increases blood clotting
- Causes coronary artery spasm and constriction
- Increases the risk of recurring coronary heart disease after bypass surgery



The good news is if you stop smoking your body begins to heal. In fact, over time, your risk of having a heart attack declines to similar levels of those who have never smoked.

Make a commitment to yourself and decide to quit smoking. Think about the benefits for you and your family. Options include going “cold turkey,” joining a support group, attending smoking cessation classes and, if necessary, the assistance of medication.

Diabetes

Diabetes is a disease that affects the body’s ability to produce or respond to insulin. Insulin is a hormone that allows blood glucose (sugar) to enter the cells of the body to be used for energy. Diabetes falls into two main categories: type 1 and type 2. In type 1, the body does not produce insulin. This usually occurs during childhood or adolescence. In type 2,



either the body does not produce enough insulin, or the cells ignore it. Type 2 is the most common form of the disease, usually occurring after age 45, but is increasingly being diagnosed in children and adolescents.

Diabetes can change the chemical makeup of some of the substances found in the blood which can cause blood vessels to become blocked. This is called atherosclerosis, a form of arteriosclerosis or hardening of

the arteries. Diabetes seems to speed this process up.

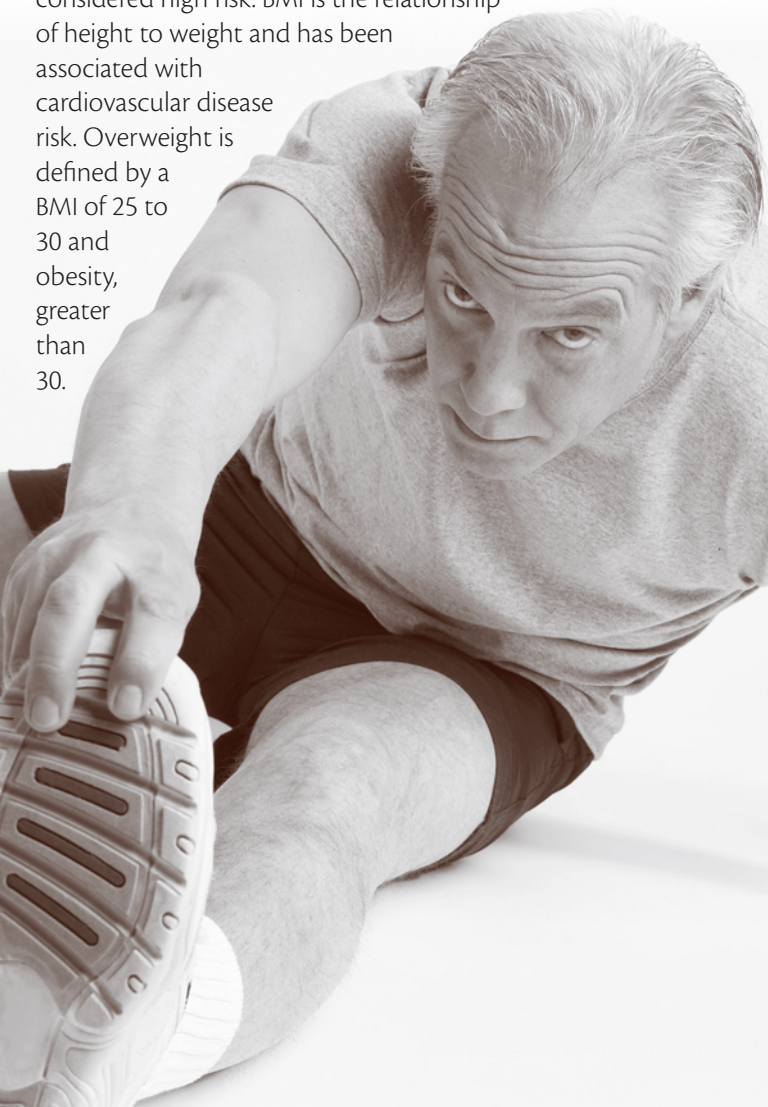
People with diabetes are two times more likely to develop heart disease than those without the disease. Cardiovascular problems occur at an earlier age, making it a risk factor worth a lot of attention. These problems can be lessened with careful monitoring of blood sugar levels through proper diet management, maintaining a healthy weight, regular exercise, stress management and medications.

Overweight/Obesity

Overweight and obese simply means too much body fat. Excess fat, particularly around the middle, can cause many health

problems. In addition to making the heart work harder, it is associated with other risk factors contributing to heart disease such as lower HDL, high blood pressure, high cholesterol and/or triglycerides and diabetes. It is estimated that in this country over 65% of adults and 17% of children 2 to 19 years old are either overweight or obese and the numbers are increasing alarmingly.

Waist circumference measurement and body mass index (BMI) are two ways used to estimate body fat. A waist measurement greater than 35 inches in women and 40 inches in men is considered high risk. BMI is the relationship of height to weight and has been associated with cardiovascular disease risk. Overweight is defined by a BMI of 25 to 30 and obesity, greater than 30.





Losing as little as 10 pounds can reduce your risk of developing cardiovascular disease. It is important to identify the issues contributing to your eating habits before tackling the challenges of losing weight. If necessary, seek the help of a counselor.

Physical Inactivity

Physical inactivity is a major risk factor for developing heart disease. It also contributes to other risk factors, including obesity, high blood pressure, high triglycerides, a low level of HDL and diabetes.

Routine aerobic exercise improves cardiovascular fitness, providing many health benefits including:

- Weight loss and/or maintenance
- Improved muscle tone
- Decreased blood pressure
- Strengthens heart muscle
- Decreases blood sugar
- Reduces stress
- Produces a general feeling of well-being
- Raises HDL “good” cholesterol

The survival rate of heart attack victims is higher for those who exercise regularly. Walking is a good activity that most people tolerate and can do safely. Aim for at least 30 minutes of moderate to vigorous exercise most days of the week. It’s important to have regular physical exams and speak with your health care provider before starting an exercise program, especially if you’ve been a “couch potato.”

Stress

The “stress response” is a person’s reaction to physical, chemical, emotional or environmental factors. Though stress is not yet scientifically proven as a risk factor for heart disease, managing it makes sense for your overall health. Uncontrolled, this may affect other risk factors and behaviors such as high blood pressure and cholesterol levels, smoking, physical inactivity and overeating. More and more studies are showing evidence suggesting a link between cardiovascular disease and stress.

Our lives continue to get busier with demands coming from many directions. Finding time for ourselves is getting lower on the list of “things to do.” It’s good for our health to take time to



wind down, regroup and relax. There are a variety of stress management choices like yoga, meditation, exercise and deep-breathing techniques. Choose one that will work best for you.

What Can I Do?

Be proactive in your health and don't wait until it has deteriorated before doing something. Learn what you can about your health management and make good choices. Eat a diet low in

saturated fats and high in fiber, and include lots of fruits and vegetables. If you haven't already, start a regular exercise program. Maintain contact with your primary health care provider by having regular check-ups.

For more information on the Marshfield Clinic and Ministry Health Care heart care team, and for help in areas such as diet, exercise, smoking cessation and stress management, ask your health care provider or visit www.oneheartcareteam.org.

References:

- American Heart Association (AHA)
- American Diabetic Association (ADA)
- National Heart, Lung and Blood Institute (NHLBI)
- National Cholesterol Education Program (NCEP)

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