

Risk Factors for Cardiovascular Disease

- Age
- Family history
- Gender
- Tobacco use
- High blood pressure
- High cholesterol
- Sedentary lifestyle
- Diabetes
- Stress
- Being overweight
- Excessive use of alcohol

The American Heart Association defines risk factors as inherited tendencies or daily habits that may lead to the development of cardiovascular disease (CVD), which is the buildup of plaque in the arteries called atherosclerosis. Research has shown that certain factors and lifestyles are associated with an increased risk of heart disease. Some of these things we can change. Some, however, we cannot.

You can prevent or slow down the progression of heart disease by changing your lifestyle and managing certain risk factors. If you have questions about your particular risks, please discuss them with your healthcare team.

Risk Factors You Cannot Change

Age

In general, as you get older, your chances of having coronary artery disease increase. The older one gets, the greater the role age plays as a risk factor.

Family History

Research has shown that your risk of developing CVD is higher if you have a close relative (grandparents, parents or siblings) with a history of heart disease or stroke at an early age. Your family's lifestyle such as lack of exercise, being overweight, smoking and eating large amounts of saturated fats and cholesterol also may contribute to heart disease. Most people who have a strong family history of heart disease also have one or more risk factors.

Gender

Women in general have a lower risk of developing heart disease than men, at least until menopause. After menopause, apparently because of hormonal changes, the rate for women also increases. Note, too, that women who smoke have just as great a chance as men for developing heart disease.

Risk Factors You Can Change

Tobacco Use

Tobacco use is the single most preventable risk factor for heart disease. People who use tobacco have twice the risk of developing heart disease than non-smokers. Tobacco use damages the inner lining of blood vessel walls and thickens blood, which can cause clots. This speeds up the development of atherosclerosis and peripheral vascular disease; it also increases your risk of having a fatal heart attack or stroke. Nicotine raises your heart rate and blood pressure. Blood vessels constrict and that forces your heart to work harder to deliver oxygen to the rest of your body. If you start smoking again after having a heart attack, your chances of having another one are doubled. No matter how much or how long you have smoked, your risk of heart disease decreases when you quit.

The American Cancer Society provides these statistics:

- Within 20 minutes of smoking your last cigarette, your blood pressure drops to normal and the temperature of your hands and feet return to normal.
- Within eight hours, the oxygen level in your blood increases to normal.
- Within 24 hours, your risk of heart attack starts dropping.
- Within 48 hours, nerve endings start to regrow and your senses of smell and taste are enhanced.
- Within three months, circulation and lung function will improve, making walking easier.
- Within nine months, coughing, sinus congestion, fatigue and shortness of breath decrease and cilia regrow in the lungs.
- After five years, the lung cancer death rate decreases by almost half.
- After 15 years of being tobacco free, the risk of heart disease is that of a non-tobacco user.

It is important to note that the extent to which the risks above decrease after quitting, is dependent on the amount you have smoked, the age you started smoking and how much you actually smoked. It is never too late to give up tobacco. Blood is less likely to clot, and the heart can pump more blood with less effort. If you are a tobacco-user, **stop now!**

For assistance with quitting, call **MeritCare's Tobacco Dependence Program** at (701) 234-2524 for an appointment or (701) 234-6452, (701) 234-6460 for answers to questions about tobacco.

Chewing Tobacco:

It may sound like we are only talking about cigarettes here, but chewing tobacco products contain lots of nicotine, not to mention many other toxic chemicals. Just because you don't inhale this product into your lungs only lessens the danger a tiny bit. The amount of nicotine in chewing tobacco is astounding. Quitting its use can be harder than cigarettes some times. Help is a phone call away.

Tips to Become Tobacco-Free:

While learning to live without tobacco will seem difficult at first, it **is** achievable. There are a variety of ways to quit, but studies show that tobacco users are two to three times more likely to quit successfully if they receive help, especially counseling and medication. Remember that successful methods are as different as the people who use them. If you try one method and you

are not successful, don't hesitate to try something else. The average smoker may have six to seven quit attempts before achieving success. This doesn't mean that there's something wrong with you. It just means that nicotine addiction is tough! **Don't give up!!**

- Two common ways to stop tobacco use are gradual reduction and abrupt cessation.
- Tobacco users may be more successful if they abruptly stop all tobacco use, but with help from products like nicotine patches, gum or lozenges the probability of a successful quit doubles. These products are available over-the-counter, but they can only help if you learn how much you need and how to use them. Few people can truly quit Cold Turkey.
- If you are planning for a quit date, gradual reduction and changing your brand to one that you don't like as much may help. Teach yourself how to handle not smoking in some circumstances--which will help you make the leap to complete abstinence. Placing barriers (physical and time) between you and your cigarettes or chewing tobacco helps.
- Other things you can do ahead of time that will make it easier to quit and increase your chances of staying tobacco free include getting rid of all your tobacco, ashtrays, and other objects that trigger your urges to smoke. Common triggers are driving, stress, after meals, with coffee or socializing with friends. What are *your* triggers? What are some ways *you* can overcome each trigger? You may be able to avoid or change the trigger situations, but in situations you can't change, use substitutes such as a pencil and paper, a straw, gum, pretzels, or sunflower seeds to control the cravings. Think about your previous quit attempts. What worked for you before? What didn't? Use those things that worked but also think about why you started again and how you are going to overcome those situations next time.
- Once you quit, it is extremely important that you don't try a single puff/dip. More times than not, this leads to starting over. If this does happen, remember that one slip does not make you a tobacco user again. Slips are learning opportunities, not excuses to start again. Get rid of it and continue to remain tobacco-free. It's not worth all of the hard work you have put into quitting thus far.

If you are motivated to make this attempt a serious one, it is very likely that you will be successful.

The desired health effects are not really obtained until you actually quit completely.

Withdrawal:

Withdrawal symptoms are the side effects that occur when your body no longer has the drug nicotine in it. Having withdrawal symptoms means your body is changing from a dependence on nicotine to operating the way it did before nicotine and tar was introduced. Coping with withdrawal is hard, but understand that withdrawal symptoms are temporary and with help, will be easier to handle.

Know that most relapses happen in the first week after quitting, when withdrawal symptoms are strongest and your body is still dependent on nicotine. Be aware that this will be your hardest time and use all your personal resources--willpower, family and friends--to get you through this critical time successfully.

Medications:

Using nicotine replacement products along with counseling approximately doubles your chance of quitting. The nicotine gum, inhaler, lozenge, nasal spray and patch are different types of nicotine replacement therapy. These products work by lessening your craving for nicotine and reducing withdrawal symptoms. There is a lot of misinformation about these products. Make sure you understand how to use the products you are using. Ask questions!

Other medicines that are available by prescription only include **Wellbutrin** or **Zyban** and a new drug called **Chantix**. These are medications you take as a pill. They do not contain nicotine, but help you resist your urge to smoke. Of the ones listed, **Chantix** is showing very high quit rates and seems to be the medication of choice in many patients.

If you are interested in using any of these medications, ask your health care provider for advice. Taking a step toward eliminating tobacco from your life is a positive move. You will look back on this as a very difficult time but you will also be able to say that because you are now tobacco-free you will lead a longer and healthier life.

The Serenity Prayer for Smokers:

*God grant me serenity,
to accept that I'm addicted to nicotine,
the courage to withstand the cravings,
and the wisdom to get some help and to know
that smoking and chewing can kill me.*

High Blood Pressure (Hypertension)

Known as the silent killer, high blood pressure often has no specific symptoms or warning signs. Hypertension is a blood pressure which stays above 140/90. Prehypertension is a blood pressure of 120-139/80-89. A normal blood pressure is less than 120/80. Uncontrolled high blood pressure adds to the workload of the heart, causing it to enlarge and become weaker. Without treatment, the risks for heart failure, heart attack, stroke, kidney failure and reduced eyesight are increased. When high blood pressure is combined with other risk factors such as being overweight, smoking, high cholesterol or diabetes, your risk of developing heart disease increases several times. High blood pressure can be controlled with healthy eating, regular exercise, medication and reducing salt intake. By following these guidelines, your risk of developing high blood pressure can be reduced.

Increased Lipid or Cholesterol Levels

A high level of cholesterol in the blood has been shown to speed up the development of atherosclerosis and heart disease. Cholesterol is a soft, fatty substance produced by your liver. It is also found in foods such as meat, poultry, seafood, eggs and dairy products.

- **Total Cholesterol**—A good range for total cholesterol is **less than 200 mg/dL**.
- **Low Density Lipoproteins (LDL)** cholesterol is often referred to as the lousy or bad cholesterol. LDL carries cholesterol from the liver to the other parts of the body where it is needed for cell repair and other activities. LDL can build up in the walls of the arteries. A good range for LDL is **less than 70 mg/dL** or as advised by your doctor.

- **High Density Lipoproteins (HDL)** cholesterol is often referred to as the healthy or good cholesterol. HDL helps remove excess LDL cholesterol from the body by picking up leftover cholesterol from the bloodstream and carrying it back to the liver for disposal. A good range for HDL is **greater than 40 mg/dL, however 45-50 mg/dL is preferable.**
- **Triglycerides** are another form of fat found in the blood. High triglyceride levels also contribute to fat buildup in the heart arteries. A good range for triglycerides is **less than 150 mg/dL. Note: some doctors are recommending less than 100 mg/dL.**

By lowering your cholesterol you can decrease or stop the buildup of cholesterol and decrease your risk of heart attack and stroke.

Note that your doctor may negotiate different levels for your health, based on your risk factors.

Inactive Lifestyle

Lack of exercise is a risk factor for heart disease. Research has shown that those who do aerobic exercise (such as walking, biking, etc.) on a regular basis (at least 30 – 60 minutes five times a week) can decrease their risk of developing heart disease. Inactivity also leads to high blood pressure, high cholesterol and being overweight.

Diabetes

Diabetes mellitus is a disease where there are high levels of glucose (sugar) in the blood. There are two forms of the disease, Type 1 (formerly known as juvenile diabetes) and Type 2 (formerly known as adult onset). Type 2 diabetes is often associated with being overweight and may be delayed or controlled with diet and exercise. Diabetes, or a hereditary tendency toward it, can significantly increase your risk of heart disease, so controlling other risk factors becomes an even more important factor. With healthy eating, weight control, regular exercise and medications, your healthcare team can work with you to plan the appropriate treatment program.

Stress

Stress is defined as any change that you must adapt to. It can be positive which motivates us, or negative which can overwhelm us. Whether the stress you experience is the result of minor everyday worries or major life changes, it is the way you respond to these experiences that determines the impact stress will have on your life. Too much stress can place added work on the heart and body. Although there is no way to measure stress, research has proven that there is a strong relationship between heart disease and your stress levels, behavior and socioeconomic status.

Overweight

Being extremely overweight causes your heart to work harder to pump blood throughout your body. It is a risk factor in the development of heart disease. Being overweight raises blood pressure, raises blood cholesterol and triglyceride levels, lowers HDL and may contribute to diabetes.

Excessive Use of Alcohol

Alcohol has been shown to have a number of effects on the circulatory system, including the heart. Alcohol in moderation may not be harmful, although the positive effects have not been absolutely proven. In addition to causing diseases of the liver, pancreas and nervous system, too much alcohol has been known to raise blood pressure, promote weight gain, raise triglyceride levels, thin blood, produce irregular heart rhythms and lead to heart failure.

If you have further questions about your individual risk factors for heart disease or need additional information, please ask a member of your healthcare team.

Warning Signs of a Stroke

Stroke is also considered a cardiovascular disease. The warning signs of stroke are not as well known as for heart attack. Please read and know these warning signs and share them with those around you.

- Sudden numbness or weakness of the face, arm or leg, especially on one side of the body
- Sudden confusion, trouble speaking or understanding
- Sudden trouble seeing in one or both eyes
- Sudden trouble walking, dizziness, loss of balance or coordination
- Sudden, severe headache with no known cause
- Not all these warning signs occur in every stroke. If some start to occur, don't wait. Get help immediately! Stroke is a medical emergency—call 911.



Risk Factor Tracker

Date/ Information	GOAL	Check it	Your Info	Your Info	Your Info	Your Info	Your Info
Cholesterol	<200	1 – 2x/ year					
LDL	<70* - 100	1 – 2x/ year					
HDL	Male >40 Female >50	1 – 2x/ year					
Triglycerides	<100* - 150	1 – 2x/ year					
Blood Pressure	↓ 130/80	As needed					
Exercise	30 - 60 minutes	5-7x/ week					
Smoking/ Tobacco	STOP						
Diet	Healthy Eating	Daily					
Managing Stress	Relax Daily	Daily					
Weight	Goal ___#	1x/ month					
Diabetes	A1C<7	2-4x/ year					

- These numbers are the goals for people with heart disease or diabetes



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