

## Smoking and Your Heart

### Heart and blood vessel disease

Smoking causes more than 230,000 deaths from heart and blood vessel disease each year in the United States. Another name for heart and blood vessel disease is cardiovascular (KAR-dee-oh-VAS-kyu-ler) disease. Smoking is a major risk factor for getting heart and blood vessel disease. The more you smoke, the greater your risk.

### Angina

Smoking affects your heart's arteries. These arteries are called coronary (KOR-un-AIR-ee) arteries. When a coronary artery is blocked, you can get chest pain, or angina (anj-EYE-nuh).

### Heart attack

When a blocked artery deprives part of the heart muscle of blood flow, you have a heart attack. Your heart muscle becomes damaged. Most cardiovascular illness and death is due to diseased arteries of the heart.

### Stroke

Smoking can lead to stroke. A stroke occurs when blood flow to the brain is blocked. The brain then cannot get enough oxygen. Brain cells begin to die, making parts of your body unable to function. A stroke is sometimes called a brain attack.

### Aneurysm

Another problem involves your body's main artery. This artery is called the aorta (ay-OR-ta). Smoking can make the aorta widen and leak, damaging your body and causing death. This is called an aortic (ay-OR-tik) aneurysm (AN-your-izm).

### Sudden death

Sudden death happens unexpectedly, with few or no symptoms. Evidence shows that sudden death is related to smoking.

### Artery disease of the legs

Smoking can lead to artery disease in the legs. The arteries in the legs are called peripheral (per-IF-er-al) arteries. When the arteries in your legs become narrowed or blocked, walking becomes painful and difficult. Non-healing sores may develop over time from peripheral artery disease.

### Major risk factors

Below is a list of major risk factors for cardiovascular disease. Some risks you can change, and some you cannot change. Risk factors you can change are:

- Cigarette smoking
- High blood pressure
- High cholesterol
- Lack of physical activity
- Risk factors you cannot change are:
  - Age
  - Diabetes
  - Family history

Cigarette smoking added to other major risk factors gives you much greater risk for cardiovascular disease. When you quit smoking, you lower your risk.

### **What smoking does to your heart**

Cigarette smoke contains many chemicals that enter your body. Two of these substances are nicotine (NIK-uh-TEEN) and carbon monoxide (muh-NOK-side). They have a big effect on your heart and blood vessels.

- Nicotine makes the heart work harder and need more oxygen:
- Heart rate increases.
- Blood pressure increases.
- Arteries narrow.
- Blood flow decreases.
- Carbon monoxide reduces the amount of oxygen carried in the blood.
- Carbon monoxide and nicotine damage the walls of the arteries. Fatty deposits build up on the inner walls of arteries. The fatty deposits, called plaque (PLACK), make arteries narrow. The heart has to work harder to pump blood through narrow blood vessels. This process is called hardening of the arteries. Another name is arteriosclerosis (are-TEER-ee-oh-skler-OH-sis).
- Smoking changes blood cholesterol levels. This adds to hardening of the arteries:
- Total cholesterol increases.
- Bad cholesterol increase — both VLDL (very low-density lipoprotein) and LDL (low-density lipoprotein).
- Good cholesterol decreases — HDL (high-density lipoprotein). The anti clogging effect of HDL decreases, too.
- Fats called triglycerides (try-GLIH-sehrides) increase — these fats clog arteries.
- Smoking increases blood clotting. Blood clots can block arteries, especially when already narrowed. Blood clots can lead to heart attacks and strokes.
- Smoking increases the risk of abnormal heart rhythms, which may cause sudden death.

### **Low-tar and low-nicotine cigarettes**

What about cigarettes that have low tar and low nicotine? There is no safe cigarette. If you switch to low tar and low nicotine, you will probably smoke more. You will also inhale more deeply. Or you will hold the smoke in your lungs longer to get more nicotine from the smoke. You may actually get a higher intake of tar, carbon monoxide, and other substances.

### **Benefits when you quit smoking**

When you quit smoking, you get real benefits. After you stop smoking, your risk of cardiovascular disease starts to decrease almost at once. This is true no matter what your age.

- Within 20 minutes after your last cigarette, your heart rate and blood pressure drop to your normal level.
- Within 8 hours, your carbon monoxide level drops. Your oxygen level rises to your normal level.
- Within 24 hours, your chance of heart attack starts to decrease.
- Within 1 month, your cholesterol levels can start to change. Former smokers and non-smokers have cholesterol levels that are similar.
- After you stop smoking, your risk of getting blood clots decreases.
- Within 1 year, your risk of heart attack is reduced more than 50 percent.
- Within several years, your risk of heart disease may be the same as that of a person who has never smoked. Even if you've had a heart attack or have heart disease, you will benefit. When you quit smoking:
- After a heart attack, you reduce your chance of another heart attack by 50 percent.
- After coronary angioplasty (AN-jee-oh- PLAS-tee), you greatly reduce your risk of death and future heart attacks. Angioplasty uses balloons to open clogged heart arteries.
- After heart bypass surgery, you reduce your risk of angina, heart attack, and a second bypass.

**It's never too late to quit smoking.**

**How second-hand smoke affects your heart**

When people are smoking, the air around them is polluted with tobacco smoke. This is called second-hand smoke. Second-hand smoke comes from two sources. The burning end of the cigarette produces smoke, and the smoker exhales smoke.

When you are near a person smoking, you breathe second-hand smoke. Evidence shows that second-hand smoke can increase risk of heart and blood vessel disease. An estimated 39,000 people die each year from cardiovascular disease caused by second-hand smoke.

**Stay away from second-hand smoke.**