

Smoking tends to increase blood cholesterol levels.

# Tobacco **FACT** Sheet

[www.tobaccoprevention.org](http://www.tobaccoprevention.org)

## Smoking and cardiovascular disease

Cardiovascular disease refers to disorders of the heart and circulatory system. The latter includes the arteries that supply blood to all organs of the body and veins which return the de-oxygenated blood to the heart.

### **What is coronary heart disease (CHD)?**

The heart needs a steady supply of blood to function effectively. Coronary heart disease known as is a general term that describes conditions caused by an interrupted or diminished blood flow through the coronary arteries to the heart muscle. The most common way that this flow of oxygen-rich blood becomes reduced is by the build up of fatty deposits (atherosclerosis) or the formation of a blood clot (thrombosis) in the arteries. When the blood supply to the heart is interrupted, it sometimes causes the chest pain known as angina. When the blood supply is cut off completely, a myocardial infarction or heart attack occurs. The heart muscle may become permanently damaged by this complete and prolonged interruption of the blood supply to it.

### **Risk factors for coronary heart disease**

Cigarette smoking, raised blood cholesterol and high blood pressure are the most firmly established, non hereditary risk factors leading to CHD, with cigarette smoking being the “most important of the known modifiable risk factors for CHD”, according to the US Surgeon General. A cigarette smoker has an increased risk of both having a heart attack and dying from CHD, with the risk increased most in younger smokers. A review of heart disease incidence in 21 countries found that people under the age of 40 had a five times greater risk of heart attack if they smoked. Overall, a smoker has two to three times the risk of having a heart attack than a non-smoker. If both of the other main risk factors are present then the chances of having a heart attack can be increased eight times.

### **The role of smoking in cardiovascular disease**

Inhaling tobacco smoke causes several immediate responses within the heart and its blood vessels. Within one minute of starting to smoke, the heart rate begins to rise: it may increase by as much as 30 percent during the first 10 minutes of smoking. Carbon monoxide in tobacco smoke exerts a negative effect on the heart by reducing the blood’s ability to carry oxygen.

Smoking tends to increase blood cholesterol levels. Furthermore, the ratio of high-density lipoprotein cholesterol (the “good” cholesterol) to low-density lipoprotein cholesterol (the “bad” cholesterol) tends to be lower in smokers compared to non-smokers. Smoking also raises the levels of fibrinogen (a protein which causes blood to clot) and increases platelet production (also involved in the formation of blood clots) which makes the blood more sticky. Carbon monoxide attaches itself to hemoglobin (the oxygen-carrying pigment in red blood cells) much more easily than oxygen does. This reduces the amount of oxygen available to the tissues. All these factors make smokers more at risk of developing various forms of heart disease.

### **Aneurysm**

An aneurysm is a ballooning of the wall of an artery which leads to risk of bursting or clotting, which may have catastrophic consequences. Smokers are very much more likely to die from a ruptured aneurysm of the abdominal aorta than non-smokers.

Whatever a person's age, it is never too late to give up smoking.

# Tobacco **FACT** Sheet

[www.tobaccoprevention.org](http://www.tobaccoprevention.org)

## Smoking and cardiovascular disease

### Peripheral vascular disease (PVD)

Smokers have a 16 times greater risk of developing peripheral vascular disease (blocked blood vessels in the legs or feet) than people who have never smoked. Smokers who ignore the warning of early symptoms and continue to smoke are more likely to develop gangrene.

### Stroke

Smokers are more likely to develop stroke than non-smokers. About 11% of all stroke deaths are estimated to be smoking related, with the overall relative risk of stroke in smokers being about 1.5 times that of non-smokers. Heavy smokers (consuming 20 or more cigarettes a day) have 2-4 times greater risk of stroke than non-smokers. Passive smoking (secondhand smoke) as well as active smoking significantly increased the risk of stroke in men and women.

### The benefits of stopping smoking

Whatever a person's age, it is never too late to give up smoking. Blood is less likely to clot, and the heart can pump more blood (and therefore oxygen) around the body with less effort. Giving up smoking reduces the risk of a heart attack and is particularly important for those who have other risk factors such as high blood pressure, raised blood cholesterol levels, are overweight or diabetic. Some studies have shown that, within five years of giving up, the risk is reduced almost to that of a non-smoker.

### Passive smoking

There is now strong evidence to show that exposure to secondhand tobacco smoke can cause heart disease in non-smokers. A recent review of the evidence suggests that previous studies have under-estimated the risk and that exposure to secondhand smoke can increase the risk of CHD by 50% to 60%, i.e. twice previous estimates.

One recent study has shown that just 30 minutes of exposure to secondhand tobacco smoke by healthy non-smokers can have a substantial impact on a coronary blood flow. There is now also evidence that passive smoking is associated with increased risk of stroke in men and women.

### Five tips for quitting

*Studies have shown that these five steps will help you quit and quit for good. You have the best chances of quitting if you use these five steps to develop and maintain your own quit plan.*

1. Get ready.
2. Get support.
3. Learn new skills and behaviors.
4. Get medication and use it correctly.
5. Be prepared for difficult situations.

*Talk to your health care provider, they can help. If you do not have insurance or just need to talk call the Washington Tobacco Quitline.*

**Tobacco Quit Line**

**1-800-QUIT-NOW**

toll-free 1-800-784-8669

**QUITLINE.COM**

We also recommend:  
[www.secondhandsmokesyou.com](http://www.secondhandsmokesyou.com)  
[www.cdc.gov/tobacco](http://www.cdc.gov/tobacco)