

# Smoking and the Heart

Most people know that smoking is bad for your lungs and can cause cancer. However, fewer may be aware of the effects of smoking on the heart and the **circulatory system**—the arteries and veins that carry the blood throughout the body. The May 7, 2008, issue of *JAMA* includes an article reporting that quitting greatly reduces the excess death rates due to smoking in women. This Patient Page is based on one published in the July 2, 2003, issue of *JAMA*.

## SMOKING, BLOOD VESSELS, AND DEATH

Cigarette smoking is the main preventable cause of premature death in the developed world. It accounts for nearly 440,000 deaths every year in the United States.

When you smoke, toxic chemicals from tobacco enter your bloodstream. Some of these chemicals send signals to your heart to beat harder and faster. Smoking also causes blood vessels to **constrict** (become more narrow), forcing blood to travel through a smaller space. Both of these effects cause high blood pressure. Smoking also lowers **high-density lipoprotein** (good cholesterol) in your body and increases the likelihood of **plaques** (fatty buildups) collecting on the inside of blood vessels, a condition called **atherosclerosis** (hardening of the arteries). Smoking also increases the risk of **thrombosis** (blood clots blocking a blood vessel). Over time, these effects increase the risk of having a **myocardial infarction** (heart attack).

Smoking can also increase the risk of having a **stroke** (sudden blockage of blood circulation in the brain). A stroke is usually caused by a blood clot getting lodged in the blood vessels supplying the brain with blood and oxygen. When this happens, brain cells begin to die. This can cause permanent brain damage or even death. Women who smoke and use **oral contraceptives** (birth control pills) are at a much higher risk of developing heart disease or having a stroke than women taking oral contraceptives who do not smoke.

## BENEFITS OF QUITTING SMOKING

- Reduces risk of heart disease by almost half and reduces chances of having heart-related problems if you already have heart disease
- Reduces risk of having a blood clot
- Reduces chances of developing several different kinds of cancer
- Reduces risk of developing **emphysema**, a serious lung disease that impairs breathing
- Improves stamina for exercising and participating in sports
- Improves senses of taste and smell

Quitting smoking can be a difficult process but is well worth the effort. A number of prescription and nonprescription aids are available to help you quit. If you are still smoking, talk with your doctor about it!

Sources: American Heart Association; American Lung Association; National Heart, Lung, and Blood Institute; National Cancer Institute

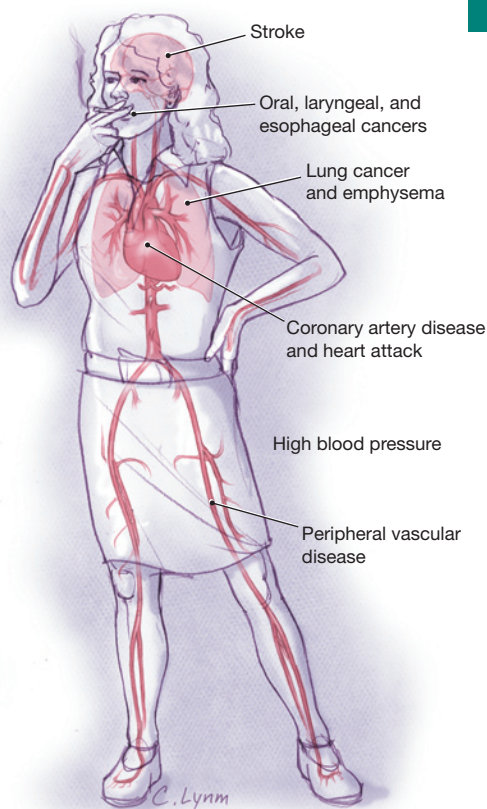
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Health problems caused by smoking



## FOR MORE INFORMATION

- American Heart Association  
[www.americanheart.org](http://www.americanheart.org)
- American Lung Association  
[www.lungusa.org](http://www.lungusa.org)

## INFORM YOURSELF

To find this and previous JAMA Patient Pages, go to the Patient Page link on JAMA's Web site at [www.jama.com](http://www.jama.com). A Patient Page on lung cancer was published in the March 7, 2007, issue, and one on quitting smoking was published in the December 12, 2007, issue.

