

# SMOKING AND VASCULAR DISEASE

YOUR VASCULAR HEALTH

**Don't SMOKE.** You hear that from every medical professional you meet. You hear it causes cancer, heart attacks and stroke. Can one product really cause that much damage? Yes!

The reality of cigarettes is that it is not one product. Every time you smoke, you not only ingest nicotine, but hundreds of other deadly chemicals in the tobacco leaf, paper, contaminants and fertilizers used to grow tobacco. Over time the accumulation of these products causes serious harm to multiple organs. And unlike many things in life, moderation in smoking is not a cure.

Benzene, for example, is a substance on the Environmental Protection Agency's list of national hazards. It is abundant in tobacco smoke and takes more than 32 hours to completely clear the human body. That means that even ONE cigarette a day continues to keep this poison in your system.



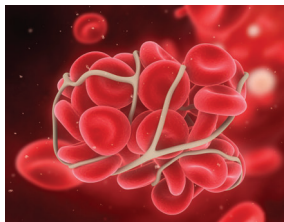
## What Does SMOKING Do to Your Arteries?

Smoking is the number one preventable cause of death in the United States. Its effect on heart attacks, peripheral vascular disease and strokes is due to the damage that smoking does to the arteries.

The two chemicals in cigarettes that cause the most trouble are nicotine and carbon monoxide. Nicotine, besides being addictive, has very powerful effects on arteries throughout the body. Nicotine is a stimulant, speeding up the heart by about 20 beats per minute with every cigarette. It raises blood pressure and is a vasoconstrictor, which means it makes arteries all over the body become smaller. That makes it harder for the heart to pump blood through the constricted arteries and it causes the body to release its stores of fat and cholesterol into the blood.

Smoking accelerates the hardening and narrowing process in your arteries; it starts earlier and blood clots are two to four times more likely. Smoking lowers your levels of high-density lipoprotein cholesterol ("good" cholesterol) and raises your levels of low-density lipoprotein cholesterol ("bad" cholesterol). It decreases the movement of cholesterol through the body, and contributes to its accumulation in your arteries. This puts you at a higher risk for heart attack, stroke, and limb loss.

Cigarette smoking increases risks of blood clots significantly. If the blood clots in an artery and blood can no longer get through, the tissue that is supposed to be supplied with blood has lost the source of its oxygen and nutrients and dies in minutes. This can result in heart attacks, strokes, and gangrene of the leg.



## SMOKING Effects on the Brain

Smoking increases the risk of stroke by narrowing the arteries in the brain and the carotid arteries in the neck that lead to the brain. In addition, the vessels to the brain can become blocked by a clog or blood clot, which can lead to collapse, stroke and paralysis. If the blood vessels are completely blocked to part of the brain, that part will die. Patients may lose the ability to speak, walk or move normally, or, depending on the part of the brain affected, the stroke may be fatal.



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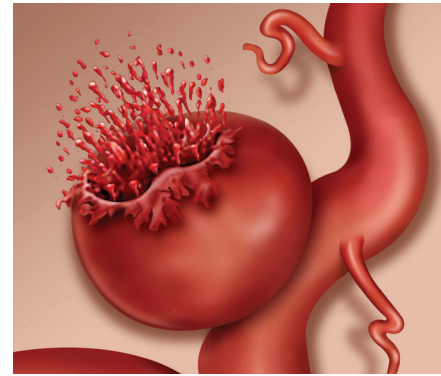
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## SMOKING and Peripheral Artery Disease (PAD)

All arteries are highly susceptible to the vasoconstrictor effects of nicotine as well as the increase of clots and clogging risks posed by smoking. Smoking is a primary cause of much of the PAD cases doctors see, and is a powerful aggravating factor for people who have other pre-existing conditions causing circulation problems in the extremities.

Smoking may cause peripheral vascular disease (PAD), which is the narrowing of the arteries that carry blood to the leg and arm muscles.

When smokers get PAD, they are significantly more likely than non-smokers to have leg pain when walking, to face gangrene and amputations, and to be unsuccessful at treating the disease.



## SMOKING and Aneurysms

Prior studies have found that smoking can have a dangerous effect on aneurysms. Smokers were more likely to develop aneurysms than non-smokers, and these aneurysms were more likely to rupture. When these enlarged blood vessels rupture, internal bleeding can occur. This bleeding can be fatal.

**If your primary care physician suggests you be referred to a specialist for vascular disease, see a vascular surgeon.**

## SMOKING Effects on Sexual Function

For men in their 30s and 40s, smoking increases the risk of erectile dysfunction by about 50 percent. Erection can't occur unless blood can flow freely into the penis, so these blood vessels have to be in good condition. Smoking can damage the blood vessels and cause them to degenerate; nicotine narrows the arteries that lead to the penis, reducing blood flow and the pressure of blood in the penis. This narrowing effect increases over time, so even if you have no problems now, things could change later. Erection problems in smokers may be an early warning signal that cigarettes are already damaging other areas of the body — such as the blood vessels that supply the heart.

## VAPING

Studies on the effects of vaping are not as abundant as those for smoking. However, vaping -- and dipping, snuff, or chewing tobacco -- all have known health risks and are NOT a healthy alternative to smoking.

**Need help to quit smoking?  
Start at [www.smokefree.gov](http://www.smokefree.gov)**



## What Happens When You Stop SMOKING?

Within 48 hours after quitting smoking, blood pressure decreases, pulse rate drops, body temperature of hands and feet increases, the carbon monoxide level in the blood returns to normal, the oxygen level in the blood increases to normal, the chance of a heart attack decreases, nerve endings start regrowing, and the ability to taste and smell is increased. Within the first year after quitting smoking, circulation and lung functions increase, and there is a decrease in coughing, sinus congestion and shortness of breath.

**Looking for a vascular specialist?  
Start here: [vascular.org/find-specialist](http://vascular.org/find-specialist)**