

A smoker is anyone who has smoked 100 cigarettes in her lifetime and currently smokes some days or every day. You may already know that smoking raises your risk of heart disease, but the damage caused by smoking is not limited to your heart. The harmful chemicals in cigarette smoke affect all the blood vessels in your body, putting you at risk for [Peripheral Artery Disease](#) (PAD) as well.<sup>1</sup>

More than 21 million American women smoke, and these women die on average 15 years earlier than nonsmokers.<sup>2,3</sup> Smoking kills 174,000 American women each year.<sup>1</sup>

See also:

[Smoking & Your Heart](#)  
[Smoking & Vein Disease Risk](#)

### How does smoking affect my PAD risk?

Smokers have a higher risk of PAD. Smoking has an especially large impact on [PAD in the legs](#), increasing your risk up to 6-fold.<sup>4,5</sup>

Smoking also increases the risk of leg pain during exercise (*intermittent claudication*) by 3 to 10 times. Nearly half of women who develop PAD are smokers or former smokers.<sup>6</sup>

Smoking is also one of the strongest risk factors for an [aortic aneurysm](#) —a bulging out of the wall of the large artery that carries blood from the heart and distributes it to the rest of the body. Smoking increases a woman's aortic aneurysm risk approximately 5-fold (even former smokers have twice the aneurysm risk of never-smokers). Three in every four women with large aortic aneurysms have been a smoker at some point in their lives.<sup>7</sup>

Smokers are also more likely to develop a buildup of fatty plaque (*atherosclerosis*) in the [carotid arteries](#) in the neck, with more severe disease the longer they have smoked and the more cigarettes they smoke.

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This leads to twice the [stroke](#) risk in women who smoke compared with nonsmokers.

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### Why is smoking so harmful?

The chemicals in cigarette smoke trigger changes in your blood and vessels that increase your risk of PAD, including:

- Causing damage and creating inflammation in the artery walls, encouraging the buildup of fatty plaque (*atherosclerosis*) that narrows the arteries and blocks blood flow. Smoking can also trigger these fatty plaques to burst, blocking an artery and causing a heart attack or stroke.
- Stiffening the artery walls and making them less able to expand and relax. This affects all the arteries but is especially important in the aorta, which needs to stretch and contract as blood is pumped from the heart. A stiffened aorta is more likely to balloon out and form an aortic aneurysm.
- Making the blood thicker and more likely to form clots.
- Nicotine signals your body to release chemicals that raise your blood pressure.

In addition to these direct effects, smokers are less likely to have heart-healthy diets and tend to drink more alcohol. Smokers also have higher levels of LDL (bad) cholesterol and triglycerides, and lower levels of HDL (good) cholesterol.<sup>10</sup> All these characteristics make women who smoke more likely to develop heart disease and PAD.

### Does secondhand smoke put me at risk for PAD?

Nonsmokers who are exposed to cigarette smoke at home or at work are more likely to develop

coronary artery disease and have a 30% higher risk of heart attack.<sup>11</sup> It has not been proven that secondhand smoke has the same effect on your PAD risk.

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Studies so far have had mixed results concerning the link between secondhand smoke and PAD. A study that used survey data from 7,550 people (52% were women) in the National Health and Nutrition Examination Survey found that secondhand smoke exposure was not linked to an increased risk of developing PAD.<sup>13</sup> The researchers suggested that it might take higher doses of chemicals in cigarette smoke to affect the arteries of the legs compared with the arteries in the heart and brain.

However, some other studies have detected a link. A study of 1,209 Chinese women who had never smoked, women who were exposed to secondhand smoke at home or at work were 67% more likely to develop PAD than those who had no regular exposure. The more time a woman spent in a smoky environment, the greater her risk of developing PAD, heart disease, and stroke.<sup>14</sup>

### **Can quitting smoking help prevent PAD?**

Quitting smoking can lower your risk of developing PAD. If you have already been diagnosed with PAD, quitting smoking can help prevent serious complications.

Although former smokers have a higher PAD risk than women who have never smoked, their risk is lower than women who continue to smoke. In the Edinburgh Artery Study of 1,592 patients (half were women), even smokers who had quit less than 5 years ago had a significantly lower risk of developing PAD in the legs than women who continued to smoke.<sup>15</sup> Quitting also cuts a woman's risk of developing an aortic aneurysm in half,

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and slows the buildup of fatty plaque in the carotid arteries in the neck.

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The longer it has been since you quit smoking, the greater the benefits.

If you have already been diagnosed with PAD, it is not too late to benefit from quitting smoking. Women with PAD who quit have a lower heart attack risk, live longer, and are less likely to have

a limb amputated compared with women who continue smoking.<sup>18</sup>

Quitting smoking can be difficult, but getting the help you need to quit can drastically improve your chances of success. See [How do I quit smoking?](#) for common concerns about quitting and links to free resources that can help you quit.

### **What can I do to minimize the risk of secondhand smoke?**

Although the link between secondhand smoke and PAD has not been conclusively proven, there is no doubt that secondhand smoke damages your arteries and puts you at risk for heart attack and other artery problems.

Much of the burden of secondhand smoke falls on women, who are less likely than men to smoke and more likely to be exposed to secondhand smoke from their husband or partner. Children are also at risk because they breathe more quickly and take in more air than adults do, meaning they absorb higher doses of toxic chemicals from smoky air. Avoiding secondhand smoke is especially important if you or your children have lung conditions, or if you have heart disease or are pregnant.

The only way to avoid the dangers of secondhand smoke is a 100% smoke-free environment. Opening a window, sitting in a separate area, or using ventilation cannot prevent exposure to cigarette smoke. A few steps you can take to protect yourself and your family:

- If you smoke, get the help you need to quit. There are medications, support groups, and programs to help you stop smoking. Your doctor can also help. See our section on [quitting smoking](#) or call 1-800-QUIT-NOW for more information.
- Make your home and car smoke-free
- Ask people not to smoke around you or your children
- Teach your children to avoid secondhand smoke
- Choose restaurants and other businesses that are smoke-free
- Support more and stronger public area and workplace smoking restriction laws

### References

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