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## Health Risks of Secondhand Smoke

Secondhand smoke is known to cause cancer. It can also cause other diseases and death. Learn more about the health risks.

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### What is secondhand smoke?

Secondhand smoke is also called *environmental tobacco smoke*. It's a mixture of 2 forms of smoke that come from burning tobacco:

- Mainstream smoke: The smoke exhaled by a person who smokes tobacco.
- Sidestream smoke: Smoke from the lighted end of a cigarette, pipe, or cigar, or smoke from tobacco burning in a hookah.

Sidestream smoke has higher concentrations of nicotine and cancer-causing agents (carcinogens) than mainstream smoke.

You might also hear the term **involuntary or passive smoking**. This is when a person who doesn't smoke is exposed to secondhand smoke.

When you breathe secondhand smoke, you take in nicotine and toxic chemicals in the same way as a person who smokes. The more secondhand smoke you breathe in, the higher the levels of these harmful chemicals in your body. There's no safe level of

exposure for secondhand smoke.

## Why is secondhand smoke a problem?

When you inhale secondhand smoke, you breathe in the same harmful chemicals as the person who is smoking. This can lead to many health problems.

### Secondhand smoke causes cancer

Secondhand smoke is known to cause cancer. It has more than 7,000 chemicals, including about 70 that can cause cancer.

Secondhand smoke causes [lung cancer](#)<sup>1</sup>, even in people who have never smoked. There's also evidence suggesting secondhand smoke might increase the risk of other cancers in adults:

- [Larynx](#)<sup>2</sup> (voice box)
- [Nasopharynx](#)<sup>3</sup> (the part of the throat behind the nose)
- [Nasal sinuses](#)<sup>4</sup>
- [Breast](#)<sup>5</sup>

Babies of mothers who were exposed to secondhand smoke during pregnancy might have an increased risk of certain childhood cancers:

- [Lymphoma](#)<sup>6</sup>
- [Leukemia](#)<sup>7</sup>
- [Brain tumors](#)<sup>8</sup>

### Secondhand smoke causes other diseases and death

Secondhand smoke can also harm your health in other ways.

Breathing secondhand smoke affects your heart and blood vessels. This increases your risk of having a heart attack. Exposure to secondhand smoke increases your risk of developing and dying from heart disease. It also increases your risk of having (and dying from) a stroke.

### Secondhand smoke is harmful during pregnancy

Exposure to secondhand smoke during pregnancy can lead to problems for both the mother and the child. A woman may have a harder time getting pregnant and may develop problems during pregnancy. Also, the fetus may have poor birth outcomes, such as low birth weight, preterm birth, and lung problems.

### **Young children are most affected**

Young children are most affected by secondhand smoke and least able to avoid it. Most of their exposure to secondhand smoke comes from adults smoking at home. Studies show that children who are exposed to secondhand smoke:

- Get sick more often
- Have more lung infections (like bronchitis and pneumonia)
- Are more likely to cough, wheeze, and have shortness of breath
- Get more ear infections

Secondhand smoke can also trigger asthma attacks or make asthma symptoms worse.

Some of these problems might seem minor, but they can add up quickly. Think of the extra expenses, doctor visits, medicines, lost school time, and often lost work time for the parent or caregiver who must stay home with a sick child. And this doesn't include the discomforts the child goes through.

In very young children, secondhand smoke also increases the risk for more serious problems, including sudden infant death syndrome (SIDS).

### **Where is secondhand smoke a problem?**

The only way to fully protect people from indoor secondhand smoke is to prohibit all smoking in buildings and indoor spaces. Creating a separate indoor area for smoking does **not** protect people who don't smoke from being exposed. Purifying the air and ventilating buildings also doesn't keep people from being exposed to secondhand smoke.

You should be especially concerned about exposure to secondhand smoke in these places:

#### **At work**

The workplace can be a major source of secondhand smoke exposure for adults. Many

cities, states, and federal agencies have passed laws to make offices and public spaces smoke-free. But some places still allow employees and customers to smoke.

According to the Surgeon General, smoke-free workplace policies are the only way to prevent people from being exposed to secondhand smoke at work. These restrictions may also encourage people who smoke to smoke less, or even quit.

### **At home**

Making your home smoke-free is one of the most important things you can do for the health of your family. Any family member can develop health problems because of secondhand smoke. Children are very sensitive to the toxins. A smoke-free home protects your family, your guests, and even your pets.

Multi-unit housing where smoking is allowed is a special concern and a subject of research. Tobacco smoke can move through air ducts, wall and floor cracks, elevator shafts, and along crawl spaces to contaminate units on other floors. This is true even for units that are far from the smoke.

### **In public places**

Everyone can be exposed to secondhand smoke in public places where smoking is allowed. This includes some restaurants, shopping centers, public transportation, parks, and schools. The Surgeon General has suggested people choose smoke-free restaurants and businesses and let owners of businesses that are not smoke-free know that secondhand smoke is harmful to your family's health.

Public places where children go are a special area of concern. Make sure that your children's daycare centers and schools are smoke-free.

Some businesses might be afraid to ban smoking, but there's no strong evidence that going smoke-free is bad for business.

### **In the car**

Americans spend a great deal of time in cars. If someone smokes there, the toxins can build up quickly, even when the windows are open or the air-conditioner is on. Again, this can be especially harmful to children.

Many expert medical groups have been working to encourage people to make their cars, as well as their homes, smoke-free.

Some states and cities even have laws that ban smoking in the car if you have passengers under a certain age or weight. Many facilities like city buildings, malls, schools, colleges, and hospitals ban smoking on their grounds, including their parking lots.

There is no safe level of exposure to secondhand smoke. Any exposure is harmful.

## What can be done about secondhand smoke?

Many U.S. local and state governments have passed clean indoor air laws to protect people. So have the governments in some other countries. Although the laws vary from place to place, they are becoming more common. Detailed information on smoking restrictions in each state is available from the [American Lung Association](#)<sup>9</sup>.

You don't have to wait for the government to act. Even if you smoke, you can decide to make your home and car smoke-free. This is the safest thing to do for your children, other family members, pets, and guests.

## Should I worry about lingering smoke particles?

Particles from secondhand smoke can settle onto surfaces and be absorbed. These particles can stay in household surfaces and dust for a long time after the smoke is gone. This is called **thirdhand smoke**.

Thirdhand smoke particles are known to include nicotine and cancer-causing chemicals. For example, some of the carcinogens that we know cause lung cancer have been found in dust samples taken from the homes of people who smoke.

Research has also shown that thirdhand smoke can damage human DNA in cell cultures and might increase lung cancer risk in lab animals. Studies continue to look at risks of thirdhand smoke to people's health.

Thirdhand smoke particles may be stirred up and inhaled with other house dust. They may also be accidentally taken in through the mouth.

Babies and children are at higher risk of being exposed to thirdhand smoke when they play on the floor and put things in their mouths. Touching surfaces before eating can also increase exposure to thirdhand smoke.

Regular cleaning can reduce the amount of thirdhand smoke on surfaces, carpets, and furniture -- but only for a short amount of time. Thirdhand smoke levels quickly build

back up because particles continue to be released from surfaces.

## Is exposure to secondhand e-cigarette aerosol harmful?

As the use of e-cigarettes, vapes, and similar devices has increased, there is a growing concern about secondhand vapor. Secondhand vapor is the aerosol of tiny particles exhaled by people who use e-cigarettes. It might be harmful to other people who breathe it in.

Scientists are still learning about the health effects of being exposed to [secondhand e-cigarette aerosol](#)<sup>10</sup>. However, the US Surgeon General has concluded that e-cigarette aerosol is not harmless. Secondhand aerosol can expose others to nicotine, and possibly other harmful chemicals.

Smoke-free and tobacco-free policies already in place should also cover e-cigarettes. This will help non-users avoid being exposed to potentially harmful e-cigarette vapor.

## Hyperlinks

1. [www.cancer.org/cancer/types/lung-cancer.html](http://www.cancer.org/cancer/types/lung-cancer.html)
2. [www.cancer.org/cancer/types/laryngeal-and-hypopharyngeal-cancer.html](http://www.cancer.org/cancer/types/laryngeal-and-hypopharyngeal-cancer.html)
3. [www.cancer.org/cancer/types/nasopharyngeal-cancer.html](http://www.cancer.org/cancer/types/nasopharyngeal-cancer.html)
4. [www.cancer.org/cancer/types/nasal-cavity-and-paranasal-sinus-cancer.html](http://www.cancer.org/cancer/types/nasal-cavity-and-paranasal-sinus-cancer.html)
5. [www.cancer.org/cancer/types/breast-cancer.html](http://www.cancer.org/cancer/types/breast-cancer.html)
6. [www.cancer.org/cancer/types/lymphoma.html](http://www.cancer.org/cancer/types/lymphoma.html)
7. [www.cancer.org/cancer/types/leukemia-in-children.html](http://www.cancer.org/cancer/types/leukemia-in-children.html)
8. [www.cancer.org/cancer/types/brain-spinal-cord-tumors-children.html](http://www.cancer.org/cancer/types/brain-spinal-cord-tumors-children.html)
9. [www.lung.org/policy-advocacy/tobacco/slati](http://www.lung.org/policy-advocacy/tobacco/slati)
10. [www.cancer.org/cancer/risk-prevention/tobacco/e-cigarettes-vaping.html](http://www.cancer.org/cancer/risk-prevention/tobacco/e-cigarettes-vaping.html)

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## Written by

American Cancer Society medical and editorial content team  
(<https://www.cancer.org/cancer/acs-medical-content-and-news-staff.html>)

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