

## A smoke-free environment for your children



### Learning more about second-hand and third-hand smoke

#### What is second-hand smoke?

Second-hand smoke is a mixture of exhaled smoke and smoke that comes from the tip of a burning cigarette, pipe, or cigar.

Scientists have found more than 4,000 chemicals in second-hand smoke. They include nicotine, carbon monoxide, ammonia, formaldehyde, dioxins, and furan. Most of them come from the burning of tobacco (combustion).

When we compare the smoke inhaled by the person who is smoking to second-hand smoke, we find

that second-hand smoke contains higher levels of certain harmful chemicals. This is because second-hand smoke occurs at a lower burning temperature.

Nicotine and solid particles make up about 10% of second-hand smoke. When cooled, these by-products are actually tar. As well, more than 50 cancer-causing agents occur in second-hand smoke. They include arsenic, asbestos, benzene, and vinyl chloride.

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## STRATEGIES

Here are some things you can do that may help reduce children's and pregnant women's exposure to second-hand smoke.

1	Smoke outside
2	Ask visitors to smoke outside
3	Politely ask people not to smoke around children and pregnant women
4	If necessary, leave
5	If you need to smoke outside, ask someone to cover childcare
6	Schedule visits when it is easier to smoke outdoors
7	Mothers who smoke should breastfeed before they smoke
8	Clearly identify your home as smoke-free
9	Meet in outdoor or non-smoking locations
10	Provide comfortable settings to smoke outdoors
11	Help people understand the impact of smoke on children's health
12	Smoke far away from the home
13	Recognize the efforts made by people who smoke
14	Be a role model and do not smoke
15	If necessary, build slowly towards a smoke-free home
16	Discuss smoking openly

## What are the risks of second-hand smoke?

- ✓ Exposure to second-hand smoke is the second-highest cause of lung cancer (smoking is the first).
- ✓ Living with a partner who smokes raises your risk of heart disease and chronic obstructive pulmonary disease (COPD).
- ✓ 30 minutes of exposure to smoke hardens the arteries (arteriosclerosis). Longer exposure raises the risk of heart disease.
- ✓ Research has shown a link between second-hand smoke and stroke, breast cancer, cervical cancer, worsening of cystic fibrosis, and miscarriage.
- ✓ Each year in Canada, more than 800 people die from second-hand smoke.

### Here are some short-term effects of being exposed to second-hand smoke:

- ✓ Irritation of the eyes, nose, and throat.
- ✓ Feeling dizzy.
- ✓ Headache.
- ✓ Nausea (feeling like you might throw up).
- ✓ Trouble with mental focus.
- ✓ Heart rate speeds up.
- ✓ Heart beat becomes irregular.

### Here are the risks for children who are exposed to second-hand smoke on a regular basis:

- ✓ A higher risk of sudden infant death syndrome (SIDS).
- ✓ More coughing and wheezing than children of non-smoking parents.
- ✓ More cases of asthma than children of non-smoking parents.
- ✓ More ear infections than children of non-smoking parents.
- ✓ Less room for the lungs to expand (reduced capacity).
- ✓ Twice the risk of bronchitis, croup, and pneumonia.
- ✓ Lower test scores in math, reading, and logic.
- ✓ A higher risk of heart disease.
- ✓ A higher risk of smoking as they grow older.



## Why is second-hand smoke so harmful to children?

Research has shown that children are more likely to have health problems if they are exposed to second-hand smoke. Here are the reasons:

- ✓ Children's lungs are still growing. Their lungs are more likely to be damaged by the dangerous chemicals in second-hand smoke.
- ✓ They breathe in more air for their body weight than adults do. This means they absorb more smoke.
- ✓ They tend to be more active than adults and therefore absorb more of the toxins contained in smoky air.
- ✓ Their immune systems are not as developed as adults.
- ✓ They have less power and are less able to complain about second-hand smoke.
- ✓ They are less able to leave places where there is second-hand smoke.

## Second-hand smoke during pregnancy

- ✓ Second-hand smoke can even harm unborn babies. The chemicals in tobacco smoke can move from the mother's blood into the bloodstream of the growing baby.
- ✓ Nicotine raises the fetal heart rate and slows development of the lungs and respiratory tract. Carbon monoxide (the same toxic gas that comes from cars) is part of second-hand smoke. This gas can reduce the baby's oxygen supply, causing a lower birth weight.
- ✓ In the last third of pregnancy, the fetus starts to get ready to breathe after birth. It's normal for the chest muscles to move in and out (as if the baby were breathing) while still in the womb. This can stop for long periods of time just a few seconds after the fetus is exposed to second-hand smoke.
- ✓ Second-hand smoke is also linked to early birth (premature babies) and miscarriage.



**"Tobacco smoke is the most harmful and widespread known indoor air pollutant."**

– Health Canada

## What is third-hand smoke and how does it affect health?

Third-hand smoke is made up of the toxins in smoke that linger even after the smoker puts out the cigarette, cigar, or pipe.

Third-hand smoke gets trapped in hair, skin, walls, fabric, carpet, furniture, and toys. It builds up over time. We don't know how long these chemicals can last indoors. It depends on how much they are absorbed by soft items, like those made of fabric and foam. It also depends on how well they stick to surfaces.

The strength of third-hand smoke is reduced after smoking has stopped, but some of the chemicals can still be measured for months or even years, especially if heavy smoking happened in the room or house. The chemicals can be measured long after the smell has gone away.

Third-hand smoke also gets into household dust. Babies can swallow this dust when they crawl on floors or put their hands into their mouths. Babies take in more third-hand smoke chemicals because they breathe more quickly and because they spend more time on the floor. They can take in 20 times more third-hand smoke than adults.

Sources: Canadian Lung Association, Program Training and Consultation Centre, and Health Canada.

To learn more...

### Canadian Lung Association

This website gives general information about smoking, second-hand smoke, and how to quit smoking. Visit: [www.lung.ca](http://www.lung.ca)

### Program Training and Consultation Centre

#### Second-hand Smoke in Home Environments Info Pack

This package can help you learn more about the effects of second-hand smoke in the home. Visit: [www.ptcc-cfc.on.ca/upload/RDS\\_0005.pdf](http://www.ptcc-cfc.on.ca/upload/RDS_0005.pdf).

#### Info Pack on Smoking Cessation in Pregnancy

This package contains guidelines for groups, agencies, and coalitions that want to reduce tobacco use in their communities. Visit: [www.ptcc-cfc.on.ca/upload/RDS\\_0007.pdf](http://www.ptcc-cfc.on.ca/upload/RDS_0007.pdf)

### Health Canada

This website gives general information about second-hand smoke.

Visit: [www.hc-sc.gc.ca/ewh-semt/air/in/poll/second/index-eng.php](http://www.hc-sc.gc.ca/ewh-semt/air/in/poll/second/index-eng.php)

### On the Road to Quitting – Guide to becoming a non-smoker

This self-help guide is for people who smoke. It helps them create a personal profile so they can understand what drives them to smoke. It also outlines the steps for quitting, based on their profile Visit: [www.hc-sc.gc.ca/hc-ps/pubs/tobac-tabac/orq-svr/index-eng.php](http://www.hc-sc.gc.ca/hc-ps/pubs/tobac-tabac/orq-svr/index-eng.php)

### Canadian Cancer Society

#### One step at a time: For smokers who don't want to quit

This guide provides no-pressure information about quitting smoking. Helps to explain why people smoke and the effects of smoking on those around them.

#### One step at a time: For smokers who want to quit

Provides information to increase the motivation and confidence of people who want to quit.

#### One step at a time: If you want to help a smoker quit

For family members and friends of people who smoke and who want to help them quit.

Visit: [www.cancer.ca/Canada-wide/Publications/Publications on reducing your risk of cancer.aspx](http://www.cancer.ca/Canada-wide/Publications/Publications%20on%20reducing%20your%20risk%20of%20cancer.aspx)

### Smokers' Helpline

This service is free across Canada. Your call is private.

Call: 1-877-513-5333

Visit: [www.smokershelpline.ca](http://www.smokershelpline.ca)

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