



HEALTH EFFECTS OF EXPOSURE TO SECOND-HAND SMOKE



What is Second-Hand Smoke?

Second-hand smoke (also known as environmental tobacco smoke or ETS) comes from the burning end of a lit cigarette, cigar or pipe. Two-thirds of the smoke from a burning cigarette is not inhaled by the smoker, but enters the area surrounding the smoker.¹

Smoke from the burning end of a cigarette has more harmful chemicals in it than the smoke inhaled directly by a smoker through a filtered cigarette. It is poisonous and contains over 4000 chemicals, including 50 chemicals known to cause cancer.²

Is Second-Hand Smoke Dangerous to Non-Smokers?

Second-hand smoke is more than an irritant or nuisance. The truth is that second-hand smoke poses a significant health threat to non-smokers, especially children, and is the third leading cause of preventable death, after alcohol and smoking.³ More than 1,000 non-smokers will die this year in Canada due to tobacco use — over 300 lung cancer deaths⁴ and at least 700 deaths from coronary heart disease⁵ will be caused by second-hand smoke. In BC, it is estimated that approximately 110 non-smokers die every year from diseases brought on by second-hand smoke, and thousands more become sick.⁶

The U.S. Environmental Protection Agency (EPA) has officially labelled second-hand smoke as a class 'A' cancer-causing substance.⁷ Class 'A' is considered the most dangerous of cancer agents and this ranking places second-hand smoke in the same EPA classification for the most deadly cancer-causing substances, including arsenic, asbestos, benzene and vinyl chloride. There is no known safe level of exposure for these substances.

What Are the Health Effects of Exposure to Second-Hand Smoke?

Medical science has shown that non-smokers suffer many of the diseases of active smoking when they breathe second-hand smoke. Here are some quick facts on second-hand smoke from Health Canada's website Go SmokeFree⁸

- Second-hand smoke causes disease and death in healthy non-smokers
- If you are a non-smoker, exposure to second-hand smoke increases your risk of getting either lung cancer or heart disease by 20%
- Exposure for as little as 8 to 20 minutes causes physical reactions linked to heart and stroke disease
- Second-hand smoke fosters the formation of blood clots that can lead to heart attacks and strokes, raises the heart rate and damages the heart muscle
- Infants exposed to second-hand smoke are more likely to die from Sudden Infant Death Syndrome (SIDS)
- Children regularly exposed to second-hand smoke are at least 50% more likely to suffer damage to their lungs and breathing problems such as asthma.

Over the past two decades, numerous major scientific reviews have been conducted on the health effects of exposure to second-hand smoke. Most recently, the California Environmental Protection Agency identified the following diseases and conditions that are known or suspected to be caused by exposure to second-hand smoke⁹:

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Exposure to second-hand smoke **causes** the following diseases and conditions:

Illnesses in Children:

- Sudden Infant Death Syndrome (SIDS)
- Low birth weight or small for gestational age
- Bronchitis, pneumonia and other lower respiratory tract infections
- Asthma induction and exacerbation
- Chronic respiratory symptoms
- Middle ear infections

Illnesses in Adults:

- Heart disease
- Lung cancer
- Nasal sinus cancer
- Asthma induction and exacerbation

Exposure to second-hand smoke is **associated** with the following diseases and conditions:

In Children:

- Adverse impact on learning and behavioral development
- Decreased lung function
- Exacerbation of cystic fibrosis
- Brain cancer and lymphomas

In Adults:

- Stroke
- Breast cancer
- Cervical cancer
- Miscarriages
- Chronic respiratory symptoms



Second-hand Smoke – Even Pets are at Risk

Did you know that cats living in homes where people smoke cigarettes are more than twice as likely as other cats to develop a deadly form of cancer known as feline lymphoma, according to researchers at Tufts University School of Veterinary Medicine and the University of Massachusetts (published in the August 1st, 2002 issue of the *American Journal of Epidemiology*). The results clearly indicate that exposure to second-hand tobacco smoke has devastating consequences for cats because it significantly increases their likelihood of contracting lymphoma.

WEB RESOURCES

Health Canada
www.gosmokefree.ca

BC Tobaccofacts
www.tobaccofacts.org/index.html

Canadian Lung Association
www.lung.ca

Non-Smokers' Rights Association
www.nsra-adnf.ca

Physicians for a Smoke-Free Canada
www.smoke-free.ca

US Environmental Protection Agency
www.epa.gov/smokefree

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¹ U.S. Department of Health, Education and Welfare. *Smoking and Health: A Report of the Surgeon General*. Rockville, Maryland: U.S. Department of Health, Education and Welfare, Public Health Service, Office of the Assistant Secretary for Health, Office on Smoking and Health, 1979.

² <http://www.hc-sc.gc.ca/hecs-sesc/tobacco/facts/index.html#ETS>

³ Physicians for a Smoke-Free Canada. *Tobacco and the Health of Canadians*.

⁴ Makomaski-Illing, E.M. and M.J. Kaiserman. Mortality Attributable to Tobacco Use in Canada and its Regions. *Chronic Diseases in Canada*. 1999;20(3):111-117

⁵ Margaret de Groh and Howard I Morrison. Environmental tobacco smoke and deaths from coronary heart disease in Canada. *Chronic Diseases in Canada*, Volume 23, Number 1, pp 13-16 (2002)

⁶ <http://www.tobaccofacts.org/secondhand/index.html>

⁷ U.S. Department of Health, Education and Welfare. *Smoking and Health: A Report of the Surgeon General*. Rockville, Maryland: U.S. Department of Health, Education and Welfare, Public Health Service, Office of the Assistant Secretary for Health, Office on Smoking and Health, 1979.

⁸ <http://www.hc-sc.gc.ca/hecs-sesc/tobacco/>

⁹ California Environmental Protection Agency. *Proposed Identification of Environmental Tobacco Smoke as a Toxic Air Contaminant*. Office of Environmental Health Hazard Assessment. 2003