

Air Pollution and Seniors' Health

Clean air is something we all need.

It is vital to healthy living and a healthy environment.



Canadian Public Health Association

What is air pollution?

Air is a mixture of gases surrounding the Earth. These gases create the atmosphere that allows life to flourish. Clean air consists of 21% oxygen and 78% nitrogen by volume, and traces of other gases such as argon, carbon dioxide (CO₂) and water vapour.

Every day, the average adult breathes about 15,000 to 20,000 litres of air. Both indoor and outdoor air contain chemical and biological gases, droplets and particles, some of which are harmful to people and animals and damaging to plants. **Air pollution** is the term that describes any harmful gases or particles in the air.

Air pollution can affect both urban and rural areas. Although natural emissions from forest fires and wind-blown dust from soil and volcanoes contribute to air pollution, human activities release far more pollutants into the environment. Canada's largest sources of air pollution are power plants, industries and vehicle emissions. While emission controls have improved in Canada over the last 20 years, a growing demand for power and the use of cars have increased the consumption of fossil fuels (gasoline, oil, natural gas, coal). Some other causes of air pollution are burning of wood, pesticides and toxic household products.

Where smoking is still permitted indoors, tobacco smoke is the most important single source of indoor air pollution.

What are the health effects of air pollution?

Air pollution can affect health in many ways:

- irritation of eyes, nose and throat;
- wheezing, coughing and breathing difficulties;
- worsening of existing lung and heart problems;
- increased risk of heart attack; and
- in especially sensitive people, may even result in premature death.

Your reaction to air pollution depends on several factors, such as:

- level, type and combination of pollutants in the air;
- your degree of exposure (e.g., location, local sources of pollution, duration of exposure);
- amount of pollutant in the air; and
- your age, weight, activity level and health status.

Symptoms of exposure may persist for a number of days after you are exposed to high pollution levels, or they may appear several days later. There is no known, safe level of air pollution. Even low levels of air pollution can have a negative effect on the health of vulnerable people, such as the elderly, children, and people with cardio-respiratory problems.

How does air pollution affect seniors?

While most seniors lead healthy and productive lives, getting older can lead to certain conditions that can adversely affect your health and well-being.

- If you have a chronic lung, heart or circulatory condition, you may find your condition worsen when you inhale pollutants.
- If you are in general poor health, you are more vulnerable to the effects of pollutants.
- Reduced lung function occurs as a natural part of aging and may get worse because of air pollution.

Lung and heart diseases

The relationship between air pollution, and lung and heart diseases is the subject of considerable medical research. Findings confirm that air pollution can make these diseases worse. An early diagnosis, reduced exposure to air pollution and getting the right treatment at the right time will help you ensure a normal, or close to normal, quality of life.

If you are concerned about any of the symptoms of exposure to air pollution described above, contact your health care provider.

How can you reduce your exposure to air pollution?

Take notice!

- Refer to the local news and forecasts, your public health clinic, medical officer of health or ministry of health, for information about outdoor air quality and weather. Plan your day based on this information.
- High air pollution levels often happen on hot, humid summer days. This combination can be dangerous because it can lead to dehydration. Drink plenty of water on these days.
- Be aware of the quality of indoor air. Eliminate tobacco smoke, only use cleaning product chemicals in well-ventilated areas and clean up moulds in your home and workplace.

Time it right!

- Consider rescheduling outdoor activities on high pollution days. Stay away from heavy traffic areas, especially during rush hour.
- If you have a health condition or problem, consider asking someone else to do your errands on high pollution days.

- If a chronic condition gets worse due to air pollution or you find it hard to breathe, avoid strenuous physical activity, rest and consult your health care provider.

Take action!

- To reduce air pollution levels, change your lifestyle. Drive less, use energy more efficiently at home and make wise choices as a consumer.
- Consider using clean, low-impact renewable sources of energy in your home and cleaner fuels for your vehicles.
- Contact your local politicians at all levels of government to voice your concerns about air pollution.

Other actions for you to consider:

In transit

- Walk, cycle, car pool or use public transit instead of driving.
- If you do drive, keep your car properly tuned and reduce idling. Ten seconds of idling uses more fuel than restarting.
- Avoid rapid acceleration and maintain lower speed.
- If buying, renting or leasing a vehicle, choose one that is fuel-efficient.

At home

- Buy or make non-toxic alternatives for common household cleaners.
- Make sure no one smokes in your home.
- Look for alternatives to pesticides for lawns, gardens and indoor plants.
- Hang clothes to dry and lower thermostats on hot water heaters and furnaces.
- Reduce your use of air conditioning.
- Avoid using gas-powered equipment, such as lawn mowers, on high pollution days.
- Work with your landlord or condominium association to conserve energy in your building.

A Special Note to Caregivers:

Due to limited physical mobility or other causes, some seniors may not be able to protect themselves or act on health protection messages effectively. Caregivers should be aware of this, especially on days when pollution levels are high.



Celebrate Clean Air Day:

June 2, 2004; June 8, 2005; June 7, 2006!

Clean Air Day (CAD) occurs the first Wednesday every June and is a celebration of environmentally friendly activities that promote clean air and good health. The Government of Canada proclaimed CAD as part of Canadian Environment Week to increase public awareness about air quality and climate change. CAD is a grassroots event built on community activities. It is a great time to join other Canadians in making choices that will create a cleaner, safer world now and for the future. Visit www.cleanairday.com.

For more information on air pollution, its health effects and what you can do to reduce air pollution, contact the following agencies:

Canada Mortgage and Housing Corporation
800-668-2642 www.cmhc.ca

Canada's Association for the Fifty-Plus
800-363-9736 www.50plus.com

Canadian Health Network
www.canadian-health-network.ca

Canadian Lung Association
888-566-LUNG www.lung.ca/cando

Canadian Public Health Association
www.cpha.ca/cleanair

Clean Air Day
819-994-5404 www.cleanairday.com

Environment Canada
800-668-6767 www.ec.gc.ca/air

Health Canada
613-957-1876 www.healthcanada.ca/air

Heart and Stroke Foundation of Canada
888-HSF-INFO www.heartandstroke.ca

Office of Energy Efficiency, Natural Resources Canada
www.oeenrcan.gc.ca

Help make every day a Clean Air Day!
You can view / download this brochure and other resources at www.cpha.ca/cleanair

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