

HEALTH EFFECTS OF PARTICULATE MATTER

Health effects of PM can occur even at very low concentrations, including:



Increased heart problems



Increased lung problems



Increased hospital admissions



Increased medical visits



Lung cancer



Premature death

AIR POLLUTION: WHAT IS PARTICULATE MATTER (PM)?

PM is a mixture of small liquid and solid particles in the air we breathe. They vary in size and chemical make-up.



PM is a component of smog.

WHO IS MOST AT RISK TO AIR POLLUTION?

Even healthy young adults can experience health issues on days when the air is heavily polluted but some groups are more at risk:



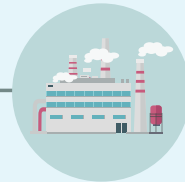
Children / Seniors

- Children
- Seniors
- People with asthma, chronic obstructive pulmonary disease (COPD), cardiovascular diseases, diabetes
- Active people of all ages who exercise or work hard outdoors

Vehicle emissions



Industry



Wood burning



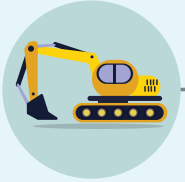
Forest fires



Road dust



Construction



Agriculture



WHERE DOES PM COME FROM?

PM can come directly from man-made and natural sources or be formed by reactions among other pollutants. Main sources of PM are (but not limited to):

HOW CAN I PROTECT MYSELF FROM AIR POLLUTION?

Know when the air is unhealthy:

- Check the **Air Quality Health Index** in your community to find out the best time to be active outside (airhealth.ca)
- If you have a heart or lung condition, talk to your health care professional about additional ways to protect your health when air pollution levels are high

Ways to reduce exposure:

- Avoid or reduce strenuous outdoor activities when air pollution levels are high
- Avoid or reduce exercising near areas of heavy traffic, especially during rush hour

WHAT ACTION IS THE GOVERNMENT OF CANADA TAKING ON PM?

- Federal regulations have reduced PM emissions in Canada from key sources.
- Canada has agreed to international treaties to reduce PM emissions.
- Canada has established the **Canadian Ambient Air Quality Standards (CAAQS)**. These are health- and environment-based numerical values of outdoor air concentrations of pollutants intended to drive continuous air quality improvement in Canada. The CAAQS, a key element of the Air Quality Management System, were developed through a process steered by the Canadian Council of Ministers of the Environment (CCME).

Pollutant	Averaging Time	CAAQS Numerical Values		Units	Metric
		Effective in 2015	Effective in 2020		
PM _{2.5}	24 hours (calendar day)	28	27	Micrograms per cubic metre (µg/m ³)	The 3-year average of the annual 98th percentile of the daily 24-hour average concentrations
	Annual (calendar year)	10.0	8.8		The 3-year average of the annual average concentrations

LEVELS OF PM IN OUTDOOR AIR



Levels of PM in outdoor air can vary by region and by season.

More information can be found on the **STATE OF THE AIR** website

<http://airquality-qualifiedelair.ccme.ca/en>

For more information on air pollution, please visit www.canada.ca/en/health-canada/services/air-quality.html or contact us at: HC.air.SC@canada.ca