

Is the Air Quality Affecting Your Health?



our challenge Maintaining and ensuring good air quality for all Albertans remains a priority as the province continues to grow. Yet, there are times when the quality of the air is impacted and that, in turn, can impact health.

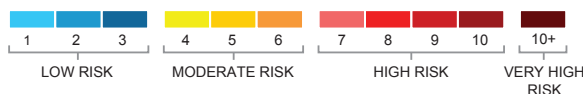
our actions To help Albertans better understand how air quality affects human health and actions people can take to protect their health, the province uses the national Air Quality Health Index (AQHI) as part of its air quality reporting system.

What is the Air Quality Health Index?

The Air Quality Health Index is a public health tool reported on a scale from 1 to 10+, the lower the number, the lower the health risk. The Index has corresponding health risk categories and provides advice to the general population and at-risk audiences on how to lessen risk based on those categories. The Index is updated throughout the day in more than 20 communities across Alberta at airquality.alberta.ca

The Index also provides a forecast in many Alberta communities, which calculates an AQHI for later in the day, and the following day. The AQHI does not measure the effects of pollen, heat or humidity on your health. To learn more about the AQHI scale and risk categories, visit airquality.alberta.ca

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What does the Air Quality Health Index Measure?

The AQHI measures the relative health risk against three common air pollutants known to harm human health. These are ground-level ozone, fine particulate matter, and nitrogen dioxide. All three can affect health, even with short-term exposure. Additionally, these pollutants can pose health risks at low levels of exposure, especially among those with pre-existing health conditions.

In Alberta, unlike other parts of the country, the Index also considers pollutant concentrations that may, from time to time, go above the province's set thresholds for individual pollutants. Thresholds are applicable to ozone, fine particulate matter, nitrogen dioxide, sulphur dioxide and carbon monoxide. In these cases, the AQHI value could be replaced with an appropriate "High" or "Very High" risk value depending on the level of the single pollutant. In addition, special community-based messaging for odour and visibility is used when hydrogen sulphide, sulphur dioxide and total reduced sulphur (for odour) concentrations or fine particulate matter (for visibility) concentrations exceed specified thresholds.

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Who is most at risk?

The most common categories of people at increased risk include:

People with existing respiratory or cardiovascular conditions: Those with existing respiratory conditions as well as those with existing cardiovascular conditions such as angina, previous heart attack, congestive heart failure or heart rhythm problems (arrhythmia or irregular heartbeat). People with Diabetes also appear to be at greater risk. Air pollution can make it even harder for people to breathe and can make existing lung or heart-related symptoms worse.

Young children: Included in the sensitive groups because on a per-body weight basis, children tend to inhale relatively more air than adults. Their elevated metabolic rate and young defense systems make them more susceptible to air pollution.

The elderly: A group more likely to be affected by air pollution, due to generally weaker defense systems, or undiagnosed respiratory or cardiovascular health conditions.

Those active outdoors: Athletes or individuals who undertake strenuous work outside tend to breathe deeper and more rapidly allowing more air pollution to enter the lungs.

How can you tell if you may be sensitive to air pollution?

Exposure to air pollutants can cause a range of symptoms. People with lung or heart disease may experience increased frequency and/or severity of symptoms, and increased medication requirements.

People who are otherwise healthy may have the following symptoms:

- irritated eyes,
- nose or throat increased mucus production
- cough
- difficulty breathing especially during exercise

By understanding how air pollution can affect health, people can better protect themselves and those they care for. The Air Quality Health Index is updated often and can be checked any time at airquality.alberta.ca

When the Air Quality Health Index reading rises, individuals can decide whether they need to:

- Reduce or reschedule outdoor physical activities;
- Monitor possible symptoms, such as difficulty breathing, coughing or irritated eyes;
- Activate a personal health plan or consult a physician or health care provider.

Health Risk	Air Quality Health Index	Health Messages	
		At Risk Population	General Population
Low Risk	1 – 3	Enjoy your usual outdoor activities.	Ideal air quality for outdoor activities.
Moderate Risk	4 – 6	Consider reducing or rescheduling strenuous activities outdoors if you are experiencing symptoms.	No need to modify your usual outdoor activities unless you experience symptoms such as coughing and throat irritation.
High Risk	7 – 10	Reduce or reschedule strenuous activities outdoors. Children and the elderly should also take it easy.	Consider reducing or rescheduling strenuous activities outdoors if you experience symptoms such as coughing and throat irritation.
Very High Risk	Above 10	Avoid strenuous activities outdoors. Children and the elderly should also avoid outdoor physical exertion.	Reduce or reschedule strenuous activities outdoors, especially if you experience symptoms such as coughing and throat irritation.

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