

Wildfire smoke and your health

As wildfires burn through forests and grasslands, they produce smoke. Smoke can be a major source of air pollution for people in Canada. Wildfire smoke may be carried thousands of kilometres from the fire zone. This means smoke can impact air quality in areas close to and far away from the wildfire.

Wildfire smoke is a mix of gases, particles and water vapour that contains:

- ozone
- methane
- sulphur dioxide
- nitrogen dioxide
- carbon monoxide
- volatile organic compounds
- fine particulate matter (PM_{2.5})
- polycyclic aromatic hydrocarbons (PAHs)

Fine particles (PM_{2.5}) represent the main health risk from wildfire smoke. These particles aren't visible to the human eye and have been linked to a wide range of health effects.

There's no known safe level of exposure for some of these pollutants. This means that smoke can impact your health even at very low levels. As smoke levels increase, your health risk increases. Air quality may be poor even if you can't see or smell smoke.



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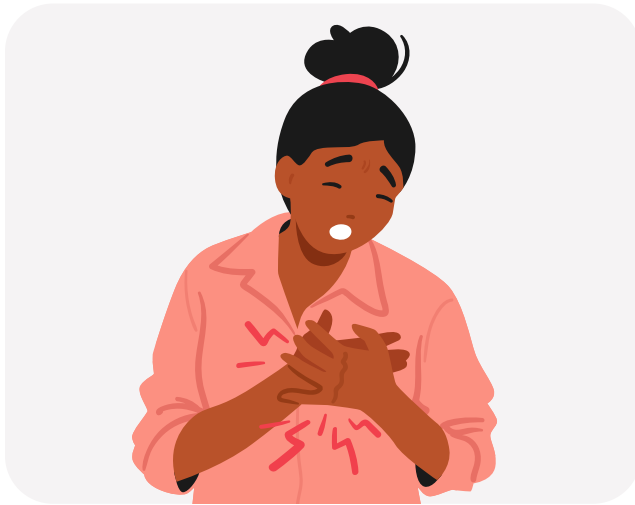
Symptoms and health effects of wildfire smoke exposure

Wildfire smoke can cause a variety of symptoms or health effects that can range in severity. Some symptoms or health effects are more common than others.

Milder and more common symptoms of smoke exposure include:

- headaches
- a mild cough
- production of mucus
- nose, throat, eye and sinus irritation

In many cases, you can manage these symptoms without medical intervention.



More serious but less common symptoms of smoke exposure include:

- dizziness
- wheezing
- chest pains
- severe cough
- asthma attacks
- shortness of breath
- heart palpitations (irregular heart beat)

If you experience any of these symptoms, talk to a health care provider or seek urgent medical attention.

Less commonly, exposure to wildfire smoke can lead to:

- stroke
- heart attack
- premature death
- reproductive and developmental effects, such as low birth weight

If you think you are having a medical emergency, dial 9-1-1 and seek immediate medical care.

Who is most at risk of the health effects of wildfire smoke

During heavy smoke conditions, everyone is at risk regardless of their age or health. Some people are more likely to be at risk because they are exposed more frequently to high levels of wildfire smoke. Others are more likely to experience symptoms or health effects when exposed to wildfire smoke.

Check in on neighbours, friends and family, especially those who are more likely to be impacted by wildfire smoke.

In general, those who are most at risk of health effects of wildfire smoke are:

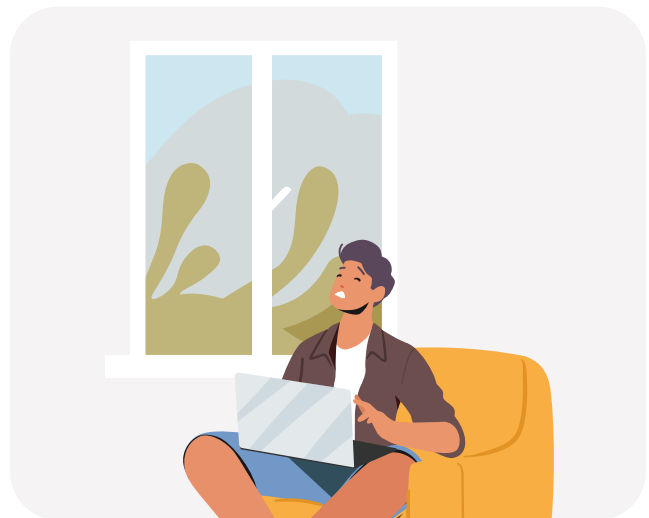
- seniors
- Indigenous Peoples
- people who smoke
- infants and young children
- people living in rural and remote areas
- pregnant women and pregnant people
- people involved in strenuous outdoor exercise
- people who work outdoors, including wildland firefighters
- people living in situations of lower socio economic status such as:
 - those with lower income
 - those with lower education
 - those experiencing housing insecurity
 - those experiencing uncertain employment
- people with an existing illness or chronic health conditions, such as:
 - cancer
 - diabetes
 - lung or heart conditions

Reduce your exposure to wildfire smoke outdoors

During heavy smoke conditions, it's extremely important that you take actions to protect your health.

Check local air conditions using the Air Quality Health Index (AQHI), InfoSmog (Quebec), special air quality statements or air quality advisories to determine whether smoke is impacting your area.

Limit time outdoors. Listen to your body. If you experience symptoms of wildfire smoke exposure, consider reducing or stopping strenuous outdoor activities.



If you're among the groups who are more likely to be impacted by wildfire smoke, you should:

- reduce or reschedule strenuous activities outdoors
- seek medical attention if experiencing symptoms of wildfire smoke exposure

If you need to work outdoors, check with your provincial or territorial occupational health and safety organization or your local health authority. They can provide guidance on how to reduce your exposure while working outdoors during wildfire smoke events.

Participating in outdoor events and activities

It's important to weigh the risks and benefits of being outdoors and participating in physical activity outside. Check the Air Quality Health Index (AQHI), and special air quality statements or air quality advisories for the area. Consider the level and type of activity involved, as well as the needs of participants and spectators when deciding whether to re-schedule or reduce activities.

As smoke conditions can vary considerably from hour to hour, it's important to be prepared for changing conditions and stop activities if necessary.

Protect your indoor air from wildfire smoke

It's important that the air indoors is as clean as possible, especially if you have to stay inside due to wildfire smoke events.

Protect your indoor air from wildfire smoke by:

- keeping windows and doors closed as much as possible. When there's an extreme heat event occurring with poor air quality, prioritize keeping cool.
- using a clean, good quality air filter in your ventilation system based on the manufacturer's recommendations
- using a certified portable air cleaner that can filter fine particles
- changing the filters of your ventilation system and portable air cleaner regularly during wildfire smoke events. Clogged filters aren't effective at removing smoke.
- limiting the use of exhaust fans, such as bathroom fans



If you need more support during a wildfire smoke event, contact your local authorities for information on local cleaner air spaces. Seek out local cleaner air spaces to take a break from the smoke, especially if you:

- can't maintain cleaner air indoors during a wildfire smoke event
- don't have air conditioning and it's too warm to stay inside with the windows closed

If smoke is present for more than a few days, stay active when you can. Try finding a place with cleaner air to exercise indoors, like a gym, community centre or at home. Levels of air pollutants in smoke may be lower indoors, but can still be elevated. Listen to your body and stay aware of any symptoms even when you're exercising indoors.

Take care of your mental health

Taking care of your mental health can help you to cope with challenges experienced during a wildfire smoke event. By being mentally healthy and improving emotional strength you can increase your coping skills and resiliency, including how you handle stressful experiences.

It's not unusual to feel worried, stressed out, sad or isolated during a smoke event. Eating well, getting enough sleep, exercising indoors in a place with cleaner air and staying in contact with friends can help. If you're having trouble coping, you may want to consider seeking help from a:

- friend
- family member
- community leader
- health care provider

Remember, a wildfire smoke event may last a long time, but it will eventually end. You may find it helpful to share positive outlooks and attitudes in challenging times.

If you're in immediate danger or need urgent medical support, call 9-1-1.

If you or someone you know is thinking about suicide, call or text 9-8-8. Support is available 24 hours a day, 7 days a week through **9-8-8: Suicide Crisis Helpline**.

You can access free mental health supports here:

- **Mental health support**
- **About mental health - Canada.ca**
- **Hope for Wellness Helpline for Indigenous Peoples**
- **Kids Help Phone**

For more information on wildfire smoke and health, visit canada.ca/wildfiresmoke or contact us at air@hc-sc.gc.ca