

Wildfire smoke can be present in Yukon communities throughout the summer months. It impacts everyone, especially those who work outdoors. Wind can carry smoke thousands of kilometers affecting the air quality both close to and far from the wildfire zone.

### What's the hazard?

Wildfire smoke is a mix of gases, particles and water vapor. It is made up of:

- ozone;
- methane;
- sulphur dioxide;
- nitrogen dioxide;
- carbon monoxide;
- volatile organic compounds;
- fine particulate matter (pm<sub>2.5</sub>); and
- polycyclic aromatic hydrocarbons (pahs).

There's no known safe level of exposure for some of these pollutants, so even low levels of smoke can impact your health.

Fine particles (PM<sub>2.5</sub>) represent the main health risk from wildfire smoke and have been linked to a wide range of health effects.

### What are the possible effects?

Mild and more common symptoms of smoke include:

- headaches;
- a mild cough;
- cardiovascular problems with the worsening of chronic conditions like asthma and bronchitis;
- production of mucus, or
- 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, or
- heart palpitations (irregular heartbeat).

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

### What are some risk factors associated with exposure to wildfire smoke in the workplace?

During heavy smoke conditions, everyone is at risk regardless of age or health. Those who work outdoors are at an elevated risk because they are more exposed to wildfire smoke. Those who are at the most risk include:

- people involved in strenuous work outdoors;
- seniors;
- people who smoke;
- infants and young children;
- people living in rural and remote areas;
- pregnant people; and
- people with existing health issues like cancer, diabetes, or lung and heart conditions.

### What can be done to prevent exposure in the workplace?

The best way to protect your health is to reduce your exposure. When possible, stay indoors and keep windows and doors closed. Using an air filter can help reduce smoke particles in the air.

If you have to work outside, wear a well-fitted respirator-type mask such as a National Institute for Occupational Safety and Health (NIOSH) certified N95.

Limit your physical effort as much as possible since physical activity can increase air intake and smoke inhalation.

As smoke conditions can change quickly, it's important to be prepared to adjust your work and stop if conditions get worse.

### Required by law

Employers must:

- Conduct hazard assessments to identify any hazards in the workplace and consider the location and nature of the work.
- If wildfire smoke poses a risk, your employer must identify potential and actual hazards to workers and ensure the controls offer adequate protection.
- Develop and implement safe work procedures related to wildfire smoke exposure and provide education and training on these procedures.

Employers should monitor wildfire conditions for changes and adjust control measures as needed.

The employer must ensure workers understand and have access to the written procedures in place to protect workers and update them as necessary.

Where hazard assessment identifies respirators as an appropriate control then workers must receive a properly fitted respirator-type mask, such as a NIOSH certified N95. This mask filters out particles larger than 0.3 microns and helps prevent PM 2.5 microns from entering when the mask is fitted and worn correctly.

### Additional controls for outdoor workers

To ensure safety and minimize exposure for outdoor workers, use these additional controls:

- monitor the direction of the smoke and follow air quality advisories to adjust your work schedule;
- reduce physical activity by taking frequent breaks;
- look for ways to relocate to less smoky areas; and
- reschedule work until air quality improves.

### Additional controls for indoor workers

Indoor air in the workplace must be as clean as possible, especially if you must stay inside due to wildfire smoke.

To protect your indoor air from wildfire smoke:

- keep windows and doors closed as much as possible (when an extreme heat event occurs with poor air quality, prioritize keeping cool);
- use a clean, good-quality air filter in your ventilation system based on the manufacturer's recommendations;
- use a certified portable air cleaner that filters fine particles;
- change the filters of your ventilation system and portable air cleaner regularly as wildfire smoke clogged filters aren't effective at removing smoke; and
- limit the use of exhaust fans.

### Additional controls for workers in vehicles

Keep vents and windows closed and, if possible, operate the air-conditioning in “recirculate” mode.

Workers should also:

- open windows occasionally in good air quality to prevent carbon dioxide build up;
- plan for the potential exposure of heat stress or heat exhaustion; and
- drive with lights on and with caution in the low-visibility area.

While driving through wildfire smoke, monitor the air quality to stay informed about potential health risks.

The Air Quality Health Index (AQHI) uses a scale from 1 to 10+ to show the quality of the air. Higher numbers mean a greater risk to your health from the air quality.

Environment and Climate Change Canada (ECCC) provides ongoing updates and reports air quality conditions and the AQHI in many locations.

Additional resources for active wildfire smoke season:

- [Air Quality Health Index](#)
- [Road conditions 511 Yukon](#)
- [Wildfire updates](#)
- Air quality advisories
- Special air quality statements:
  - [CKRW](#)
  - [CBC](#)

This information can be found on:

- [Canadian weather](#)
- [Local Weather](#)

### Discussion questions

1. What processes do we have in place regarding working in wildfire smoke?
2. What is our workplace's emergency plan in case of a wildfire and has it been tested for gaps?

### More information

If you have more questions or concerns about exposure to wildfire smoke, please contact:

Workers' Safety and Compensation Board, 867-667-5450 or 1-800-661-0443 or [work.safe@wcb.yk.ca](mailto:work.safe@wcb.yk.ca)

Additional resources and information are available at:

- [Wildfire smoke, air quality and your health – Government of Canada](#)
- [Wildfire smoke and your health – Health Canada](#)