



# SAFETY ALERT



Safety Alert Number: **0000007**

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## Risks of Smoke Exposure - Wildfires

### Summary

Wildfires are a risk when dry conditions and less precipitation contribute to an elevated risk across the province. Smoke emitted from wildfires can have health consequences, as it can travel over vast distances and significantly impact air quality in nearby regions. It is important that employers take precautions to protect their workers from exposure to wildfire smoke.

### The potential health effects of wildfire smoke

- Wildfire smoke may cause short-term and long-term health effects. Severity of impact depends on the level and duration of exposure and the health of those exposed.
- Employees with respiratory conditions, cardiovascular conditions, compromised lung function, or weakened immune systems are at greater risk.
- Fire smoke contains hazardous components such as carbon monoxide and fine particulate matter.
- Inhaled carbon monoxide reduces oxygen supply, leading to symptoms like nausea, dizziness, headaches, visual impairment, and loss of consciousness. In high quantities, it can be fatal.
- Particulate matter from smoke can affect the respiratory system and settle in the lungs, causing irritation, coughing, shortness of breath, and worsening of pre-existing conditions.
- Smoke exposure can also cause heat stress.



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## How to protect workers from smoke exposure

As a first step, it is important that you conduct a risk assessment to evaluate the potential hazards and risks associated with wildfire smoke. To protect your workers from exposure to wildfire smoke, it is recommended that you:

- Consider relocating work activities indoors or to an outdoor area with better air quality.
- If relocation is not feasible, reschedule work until the air quality improves. Stay informed about air quality advisories in your area ([Halifax, Nova Scotia - Air Quality Health Index \(AQHI\) - Environment Canada \(weather.gc.ca\)](#)).
- Adjust the pace of work to minimize physical exertion and reduce inhalation of polluted air. Physical exertion can increase air intake as much as 20 times.
- Provide cool drinking water at the worksite. Remind workers to stay hydrated by drinking a glass of water every 15 to 20 minutes, even if they don't feel thirsty, to prevent heat stress caused by the smoke. For more information on heat stress, visit Nova Scotia Heat Stress Guidelines ([Heat-Stress-Guidelines.pdf \(novascotia.ca\)](#)).
- Train your workers to recognize symptoms of smoke exposure and have a response plan in place if an employee experiences such symptoms.
- If necessary, provide appropriate respirators for the level of protection required, respirators must be selected and used in accordance with the latest edition of CSA Z94.4. A copy of this standard is available for view on CSA Communities ([Sign in | CSA Communities \(csagroup.org\)](#)). The N95 particulate-filtering facepiece is commonly used for wildfire smoke. Surgical masks are not suitable.
- It is important that workers, even those who are more susceptible to effects from wildfire smoke, have a respirator that seals to the face to provide optimal protection. That means ensuring nothing is obstructing the seal, like facial hair, and the wearer is fit tested to verify.
- Ensure proper training on the correct use of respirators for your workers.



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## Tips for indoor workplaces

Wildfire smoke can also impact indoor air quality. To reduce its impact on the air quality indoors, it is recommended that you:

- Keep windows and doors closed to prevent smoke from entering your building.
- Inspect the HVAC system to make sure it is working properly.
- Consider increasing the frequency of HVAC filter changes in the short-term. If the system is capable, consider replacing the filters with high efficiency filters (HEPA) for the duration of the wildfire event.
- You could also consider reducing the intake of outdoor air temporarily. Only do so after consulting a HVAC technician.
- If available, use individual portable air cleaners equipped with high efficiency filters (HEPA), this can help remove fine particles from indoor air.

## Contact us

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