

Wildfire Smoke

Dry conditions can increase the potential for wildfires in or near wilderness areas. This results in smoke that pollutes the air that can affect your health.

Wildfire smoke is a complex mixture of particles and gases containing hundreds of chemicals. The smoke contains large amounts of fine particulate matter, as well as gases such as carbon monoxide, carbon dioxide, and nitrogen oxides. Depending on the type of materials burned, the smoke may also contain sulfur oxides, volatile organic compounds, and other compounds such as hydrocarbons and formaldehyde that are known carcinogens (cancer). These components can vary greatly over time, from fire to fire, and from area to area within a fire zone.

What is the Danger?

There are several potential health effects associated with wildfire smoke. Inhaling fine particles of smoke has been linked with the aggravation of pre-existing respiratory and cardiovascular disease. Potential health effects from wildfire smoke depends on the level and duration of exposure, age of the workers, individual sensitivity, or other factors. For these reasons, not everyone exposed to smoke will be affected in the same way.

Greater Risk from Wildfire Smoke

- People with pre-existing heart or lung disease
- Older adults (due to their increased risk of heart and lung disease)
- Children (airways are undeveloped and therefore breathe more)
- Pregnant women (increased breathing rates)

Wildfire smoke contains very small particles that travel deep into your lungs when you inhale. These particles can cause irritation and inflammation, which can last until the air quality improves. Most symptoms are relatively mild, and can be managed without medical attention. Symptoms include:

Mild Symptoms

- Sore throat
- Eye irritation
- Runny nose
- Mild cough
- Phlegm production
- Wheezing
- Headaches
- Worsening of allergies

Workers with lung diseases such as asthma or chronic obstructive pulmonary disease (COPD) or others that are at greater risk are likely to experience more serious or acute symptoms and should seek prompt medical attention if experiencing the following:

Severe Symptoms

- Shortness of breath
- Severe cough
- Dizziness
- Chest pain
- Heart palpitations

Workers exposed to wildfire smoke may raise concerns about long-term health effects, such as an increased risk of cancer or other chronic health problems. In general, however, the long-term health risks from short-term exposure to low or moderate levels of smoke during a wildfire event are considered to be quite low.

SAFETY TALKS Wildfire Smoke

Safety Tips

- ✓ Minimize health risks by reducing contact with the smoke as much as possible
- ✓ Check local air quality reports. Listen and watch for news or health warnings about smoke.
- ✓ Keep indoor air as clean as possible. Keeping doors and windows closed and inspecting the HVAC system to make sure the filters are clean and working properly.
- ✓ Consider the use of portable air cleaners for smaller rooms. These work best when doors and windows are kept closed.
- ✓ Cloth masks will not protect you from wildfire smoke. If needed, the most common type of respirator used to protect against wildfire smoke exposure is the N95 particulate-filtering facepiece respirator.
- ✓ Reduce workers' level of physical activity when possible, since physical exertion can increase air intake as much as 20 times.
- ✓ Relocate or reschedule outside work until air quality improves. Keep in mind some workers may be more susceptible to health effects from the smoke and may need additional measures to reduce their exposure.
- ✓ Workers who primarily work in vehicles are advised to keep vents and windows closed and operate their air conditioning in "recirculate" mode. Workers should open windows occasionally in areas with good air quality to prevent carbon dioxide from building up inside the vehicle.
- ✓ Consider the potential for heat stress or heat exhaustion and stay hydrated in extreme heat.
- ✓ Take precautions against the hazards of working or driving in low-visibility environments (high visibility vests, driving with lights on, etc.)

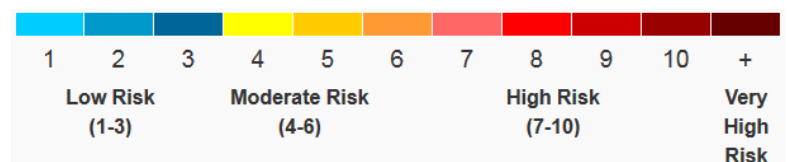
Demonstrate

Review S2SA's Heat Stress and/or Mask Use – Hot Temperatures Safety Talk with workers.

Review company Emergency Response Plan to include Wildfire Smoke

Show workers where to find updates on Manitoba's Air Quality Health Index and discuss the different levels.

(https://weather.gc.ca/airquality/pages/provincial_summary/mb_e.html)



Discussion

What should you do if you are experiencing symptoms of smoke exposure?

What are some job tasks that you perform that may expose you to wildfire smoke?



Manitoba Workplace Safety and Health Act and Regulation

Part 4 - General Workplace Requirements

Workers Involved in this Safety Talk

Date: _____

Name	Signature

Name	Signature

Notes
