

# If the Air is Thick, It's Time to Be Quick!

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# What is Wildfire Smoke?

**Definition:** Wildfire smoke is a mix of particles and gases, including CO, CO<sub>2</sub>, NO<sub>x</sub>, PAHs, and VOCs.

## Components:

- Particulate matter (PM<sub>2.5</sub> and PM<sub>10</sub>)
- Carbon monoxide
- Volatile organic compounds (VOCs)
- Nitrogen oxides



# Health Impacts of Wildfire Smoke

## Short-term Effects

- Eye irritation
- Throat irritation
- Cough
- Runny nose
- Headaches
- Dizziness
- Chest pains
- Difficulty breathing
- Wheezing
- Heart palpitations

## Long-term Effects

- Increased risk of cardiovascular diseases
- Chronic respiratory conditions



# Vulnerable Populations

- Children and infants
- Elderly individuals
- People with pre-existing respiratory or cardiovascular conditions
- Pregnant women
- Outdoor workers

## **Encourage Community Support**

- Check on family, friends, and neighbours



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# Monitoring Air Quality

- Air Quality Index (AQI): Measures air pollution levels.

## **AQHI Scale:**

- Low Risk (1-3): Ideal for outdoor activities.
- Moderate Risk (4-6): If experiencing symptoms, consider reducing or rescheduling intense outdoor activities.
- High Risk (7-10): Reduce or reschedule intense outdoor activities
- Very High Risk (10+): Avoid intense outdoor activities

## **Other Tools:**

- PurpleAir/Air Quality Egg Sensors: Provide real-time PM2.5 data.
- Fire Smoke Canada: Offers smoke forecasts up to 48 hours ahead during wildfire season.
- WeatherCAN App: Provides real-time weather and AQHI updates.

# Protective Measures

- **Stay Indoors:** Keep windows and doors closed; use air conditioning if possible.
- **Create Cleaner Air Spaces:** Use portable air cleaners or HEPA filters.
- **Limit Outdoor Activities:** Avoid intense activities, especially for at-risk populations.
- **Use N95 Respirators:** Wear a properly fitted N95 respirator if you must be outside.
- **Stay Hydrated:** Drink plenty of water.

## Special Considerations for At-Risk Populations:

- Keep a supply of necessary medications.
- Develop an action plan with your healthcare provider.
- Consider relocating temporarily to areas with better air quality if smoke persists.



# Consideration for Municipality

- **Public Communications:** Share health messages and alerts.
- **Cleaner Air Spaces:** Provide access to places with cleaner air like libraries and community centers.
- **Emergency Services Coordination:** Support emergency medical services and help vulnerable populations.
- **Air Quality Monitoring:** Install and maintain air quality sensors for real-time data.

## Collaboration Opportunities:

- Improve notification processes.
- Educate the public on health risks and protective measures.
- Address the needs of priority populations during air quality events.



# Surveillance and Assessment

- Effective surveillance and assessment are crucial for managing air quality and protecting public health.
- The Air Quality Health Index (AQHI) calculates health risk levels based on ozone (O<sub>3</sub>), particulate matter (PM<sub>2.5</sub>), and nitrogen dioxide (NO<sub>2</sub>), guiding public actions.

## Air Quality Monitoring Resources:

- MECP's 38 air monitoring stations
- [Guidance for Cleaner Air Spaces during Wildfire Smoke Events](#)
- [Cleaner Air Space Checklist](#)





# AQMap

Health Risk Category due to wildfire smoke	PM <sub>2.5</sub> µg/m <sup>3</sup> (1 hr)	AQHI+	Guidance	
			Health Message for People at Higher Risk	Health Message for the General Population
Low	<31	1-3	Enjoy your usual outdoor activities.	Ideal air quality for outdoor activities.
Moderate	31 – 60	4-6	Consider reducing or rescheduling strenuous activities outdoors if you experience symptoms.	No need to modify your usual outdoor activities unless you experience symptoms such as coughing and throat irritation.
High	61 – 100	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 through irritation.
Very High	101+	10+	Avoid strenuous activity 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



# Questions?



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