

Extreme Heat and Wildfire Smoke FAQ

Public Health Resource | May 2025

What are the key public health messages for heat waves?

- **Take actions to cool** your space by closing the windows and blinds during the day, using an air conditioner if you have it, or a [cool kit](#). If your space gets too hot, visit cool indoor spaces with air conditioning (e.g. libraries or malls), or cool outdoor spaces (e.g. parks). Learn more tips to cool your space at www.vch.ca/heat.
- **The most dangerous part of heat waves are high indoor temperatures, particularly at home.** Risk of heat-related illness increases over 26°C (78°F), and temperatures over 31°C (88°F) are dangerous for people at higher risk.
- **Find a heat buddy.** Sometimes it can be difficult to notice when we are too hot or dehydrated, or to get to a cooler space when needed. Plan to check on each other and the temperature inside your homes regularly during a heat wave.
- **Everyone should have a plan for heat season.** PreparedBC has an [Extreme Heat Preparedness Guide](#) you can fill in and it is available in multiple languages.
- See www.vch.ca/heat for more information.

What are the key public health messages for wildfire smoke?

- **Wildfire smoke can have both short-term and longer-lasting health impacts.** Wildfire smoke contains tiny particles of pollution that travel deep into your lungs and blood stream when you breathe them in. This causes irritation and inflammation throughout the body.
- **The best way to protect your health from wildfire smoke is to spend time in filtered indoor air.** Close the windows and use a [portable air cleaner with HEPA filters](#) or a [do-it-yourself air cleaner](#) (minimum MERV 13 filter). If you don't have an air cleaner or your home is too hot, spend time in air-conditioned public spaces (most likely to have cleaner air).
- **Air quality can change quickly. Check the local air quality online throughout the day.** Use the [Air Quality Health Index \(AQHI\)](#) to help you decide about outdoor activities.
- See www.vch.ca/wildfiresmoke for more information



What populations are at higher risk from heat waves?

Anyone can experience heat-related illness but staying cool and hydrated is extra important for:

- Older adults, aged 60 years or older
- People who live alone or are socially isolated
- People with pre-existing health conditions such as diabetes, respiratory or heart disease
- People with mental illness such as schizophrenia, depression, or anxiety
- People with substance use disorders, including alcohol
- People with limited mobility or other disabilities
- People experiencing homelessness or marginal housing
- People who work or live in hot environments
- People who are pregnant
- Infants and young children

What populations are at higher risk from wildfire smoke?

People respond differently to wildfire smoke, and some people are at higher risk for health effects. Reducing exposure to wildfire smoke is especially important for:

- People with pre-existing health conditions such as such as respiratory or heart disease.
- Older adults, aged 60 years or older
- People with a current or recent respiratory infection
- Infants and young children
- People who are pregnant
- People experiencing homelessness or marginal housing

What are the health impacts from heat waves?

Heat waves are the leading cause of weather-related injuries and deaths in Canada. High indoor or outdoor temperatures can cause [acute heat-related illnesses](#), such as heat exhaustion or heat stroke, a medical emergency. High temperatures can also worsen pre-existing health conditions (e.g. heart or lung conditions).

What is wildfire smoke and what are the health impacts?

Wildfire smoke is made up of particles and gases. The greatest health concern from wildfire smoke is fine particulate matter (PM_{2.5}), which are particles tiny enough to enter the lungs and blood stream. Exposure to wildfire smoke can cause [short term health impacts](#), including more severe symptoms like shortness of breath, severe cough, dizziness, chest pain, and heart palpitations. There is also emerging evidence of [longer-term health effects](#) from wildfire smoke.

What air cleaners work well for wildfire smoke?

Not all portable air cleaners will protect from wildfire smoke. VCH [How to Choose and Use Portable Air Cleaners](#) checklist provides helpful tips for buying and maintaining an air cleaner for wildfire smoke.



Is it ok to use fans during heat waves?

Fans can feel nice but may not effectively reduce core body temperature or prevent heat-related illness. **Do not rely on fans as the main cooling method for people at higher risk from heat, including fans used with water or ice (i.e. swamp coolers).** Use fans to blow cool air inside overnight or to create a cross breeze, but monitor the indoor temperature and go somewhere cooler if it is too hot. See [VCH Fans in Extreme Heat FAQ](#) to learn more.

Is closing the windows and doors enough during a wildfire smoke event?

Going inside with closed windows and doors is better than being outside in the wildfire smoke. The amount of protection varies depending on the building, and even some new buildings may not effectively keep wildfire smoke out. The best protection from wildfire smoke is to filter the indoor air at home or spend as much time as possible in community spaces with air conditioning. If you want to monitor indoor air quality to learn how protective your building is, please email the [VCH Healthy Environments & Climate Change](#) for more information.

Are masks effective for wildfire smoke?

A well-fitted respirator (e.g. N95, KN95, KF94) can reduce PM_{2.5} concentrations by more than 90% ([BCCDC](#)). Masks with three layers or medical masks provide some protection but less than a respirator. Single-layer masks, bandanas, scarves, and t-shirts offer no protection from PM_{2.5}, even if they are wet.

Why is it important to check on people during heat waves?

Of the 619 people who died during the 2021 heat dome, **98% died indoors in a residence** and **56% lived alone** ([BC Coroners Service, 2022](#)). Older adults, people with medical conditions, or people using substances **may not recognize overheating or dehydration**. Encourage people to find a heat buddy and check in with each other at least once a day during a heat wave. It is important to check for signs of heat-related illness and the indoor temperature of their home. Share the [NCCEH Health Checks During Extreme Heat Events guide](#) with clients, caregivers, family, friends, neighbours, and anyone who may be checking on someone during a heat wave.

If there is a heat wave and wildfire smoke, what should be prioritized?

Ideally, protect from both heat waves and wildfire smoke by keeping the indoor air cool and filtered (e.g. use an air conditioner and air cleaner). If that is not possible, high heat is the more immediate danger for most people and should be prioritized. See [Wildfire Smoke During Extreme Heat Events for more information](#) (BCCDC). People at higher risk for health impacts from wildfire smoke, can fill out a [Wildfire Smoke and Extreme Heat Action Plan](#) (there is a health care provider guide on how to support someone filling out their plan).

What if air conditioning isn't affordable or available?

Use the [PreparedBC Extreme Heat Preparedness guide](#) (translated) to make a plan for heat season, including cool spaces to visit in community. Air conditions can be [claimed on tax returns](#) with a prescription from a health care provider. For 2025, the [BC Hydro free air conditioning program](#) has closed for the public but is still available to clients referred from home care or mental health and substance use teams (while supplies last).



What if a portable air cleaner isn't affordable or available?

Air cleaners can be [claimed on tax returns](#) with a prescription from a health care provider. Alternatively, consider building a [do-it-yourself air cleaner](#) (approximately \$100 of materials found at most hardware stores). Otherwise, close the windows and doors while at home, and try to spend as much time as possible visiting community spaces with air conditioning (more likely to have cleaner indoor air).

Where are the local cooling centres and cleaner air centres?

Check with the local government or First Nation to find out if there are cooling centres or cleaner air centres in your community. The location and hours of local cooling and cleaner air spaces are often posted on local government or First Nations websites or social media. Check back because additional information may be shared during an event.

Where else can I go during a heat wave or wildfire smoke event?

Look for local community spaces to visit for as long as possible to give your body a rest from the heat and smoke. For heat waves, look for cool indoor or outdoor spaces, especially spaces available in the afternoon and evening when indoor temperatures peak and your home may be too hot. For wildfire smoke events, look for buildings with air conditioning, which are the most likely to have cleaner indoor air. Plan transportation options to avoid time out in the heat and wildfire smoke.

How do I check local air quality?

1. **Check local air quality data:** Visit the [Environment and Climate Change Canada \(ECCC\) air quality map](#). Find your community on the map and locate the nearby air quality sensors, marked by colored shapes. Note the color and number of the sensor.
2. **Use the [Air Quality Health Index \(AQHI\)](#):** Match the sensor color/number to the AQHI risk category (low, moderate, high or very high) to decide if you need to adjust your plans. Refer to the AQHI table for steps to protect yourself and others from wildfire smoke.
3. **Check air quality often.** Air quality can change throughout the day, so keep checking.

How do I know when there is a heat wave or air quality warning?

In British Columbia we have two alert levels for heat waves: Heat Warning (level 1) and Extreme Heat Emergency (level 2). For wildfire smoke events an Air Quality Warning may be issued. Sign up for Environment and Climate Change Canada email notifications through [EC Alert Me](#) or smartphone notifications from [WeatherCAN App](#). People without internet/ smartphone can call [HelloWeather](#) for automated forecasts.

Where can I find the most up-to-date resources?

Check out the VCH [Extreme Heat webpage](#) and [Wildfire Smoke webpage](#), updated annually with provincial guidance and the latest research. Please contact healthy.environments@vch.ca with any questions. We welcome feedback or requests for new information.

