

# 2018 Wildfire Smoke Health Information

Smoke and wildfires can be a serious health hazard for communities across the province. The FNHA would like to provide some health information tips for those who may find themselves in close proximity to wildfires.

If you are in an emergency dial 9-1-1 or a local emergency contact number immediately.

For non-emergency health information and services visit <a href="https://www.HealthLinkBC.ca">www.HealthLinkBC.ca</a> or call 8-1-1 toll-free, 24 hours a day, 7 days a week. You can also contact your community health nurse or environmental health officer.

Find your local EHO here: <a href="https://www.fnha.ca/what-we-do/environmental-health">www.fnha.ca/what-we-do/environmental-health</a>
For the Air Quality Index for your area, visit <a href="https://www.bcairquality.ca/readings/">www.bcairquality.ca/readings/</a>

Smoke conditions and local air pollution levels can change due to the unpredictable nature of wildfires. Health effects from smoke, such as irritated eyes, nose and throat irritation, and/or coughing or difficulty breathing, is common in healthy people. These effects may be more serious to people who are considered sensitive populations.

## **SENSITIVE POPULATIONS**

Some people are considered to be more sensitive to smoke. These include people with existing heart or lung conditions, infants and young children, the Elderly, pregnant women, or those requiring special care and supportive care.

#### THIS POPULATION SHOULD:

- Take actions to reduce exposure at an early stage refer to the recommendations below.
- Watch for any change in symptoms that may be due to smoke exposure such as: persistent cough or wheezing, shortness of breath or other symptoms that indicate worsening of the underlying chronic health condition.
- Residents with asthma or other chronic illness should activate their asthma or personal care plan.
- If you have severe symptoms from smoke exposure, go to the health centre or nursing station.

Individuals whose health is being affected by prolonged smoke in their community and who don't have local access to a community clean air shelter, may want to consider temporarily relocating to friends or family in a larger community that does have daily access to clean air shelters such as gyms, shopping malls or extended family members homes with HEPA filters.

If you are otherwise healthy but experiencing symptoms due to heavy smoke follow the steps below to reduce your exposure.

#### REDUCING EXPOSURE TO SMOKE

### ACTIONS YOU CAN TAKE TO REDUCE HEALTH EFFECTS OF SMOKE IN THE AIR:

- Use common sense regarding outdoor physical activity if your breathing becomes difficult or uncomfortable, stop or reduce the activity, or go inside. If outdoor trips in smoky areas are necessary, breathe through a damp cloth to help filter out particles.
- Staying indoors may help you stay cool and provide some relief from the smoke. Close windows and blinds and move to the coolest room in the house. Also, keep the body cool and hydrated: take cool showers or baths and drink plenty of fluids avoid drinks with sugar or alcohol.
- Keep particle levels inside lower by not using anything that burns, such as wood stoves or even candles. Don't smoke this puts even more stress on your lungs.
- Use a portable HEPA (high efficiency particulate air) filtration unit or electrostatic precipitator if available. Buildings with central air systems may also provide relief.
- When driving your car, keep your windows and vents closed. Air conditioning should only be operated in the "recirculate" setting."

More information can be found at:

http://www.bccdc.ca/health-info/health-your-environment/air-quality

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# Wildfire Smoke - Clean Air Shelters

Wildfire smoke can have additional health risks for vulnerable populations or create irritating symptoms in healthy individuals. Staying indoors is recommended during smoke events to reduce exposure to smoke. Creating a clean air shelter is effective to reduce exposure. If your area is regularly impacted by smoke, plan your clean air shelters before the smoke season so that you are prepared.

Clean air shelters are areas, rooms or buildings that have a filtration system that reduces the amount of particulates generated by wildfire smoke. The objective, as in the image below, is to limit outdoor air entering the home, avoid creating indoor air pollutants, and filtering indoor air.

There are no specific standards or air quality measurements for clean air shelters. A review of science-based literature has shown that central air units are effective at reducing particulate materials/matter.

**Home clean air shelter (home-CAS)** is your home, or room of your home, with filtration that is suitable for reducing smoke exposure.

- ✓ Close all windows and doors.
- Seal cracks around doors and windows.
- ✓ Turn off exhaust fans, window air conditioners or other external vents.
- ✓ A central air system or air conditioning system can be used.
- ✓ Turn the fresh-air intake off and set to recirculate.
- ✓ A high efficiency particulate air (HEPA) filter is best; however

Clean Air Shelters Limit infiltration Outdoor particles Fresh air from outdoors 0 0 Limit indoor air pollution Outdoor particles Outdoor Outdoor particles entry particles Clean indoor air 0 **Outdoor particles entry** (existing central by Natural Ventilation air, HEPA, **Outdoor particles** electrostatic 0 entry by Infiltration 0 precipitator) Indoor particles

Chen 2011. Atmospheric Environment http://dx.doi.org 10.1016/vincial Health

conventional filters will lower PM levels to a lesser degree.

✓ Portable air cleaners (HEPA or electrostatic air filters) can be very effective at reducing smoke particles. Be sure that the unit is appropriately sized for the room.

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✓ Avoid creating other air pollution (e.g. smoking, burning candles, gas and wood stoves, and certain cleaning products). Avoid vacuuming which can stir up dust.



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- ✓ During heat events, air conditioning may be needed to keep the home cool and reduce heat stress.
- ✓ During periods when smoke clears open windows and doors to provide fresh air into the home.

If you do not have a central air system or access to a portable air cleaner, taking the steps above to limit smoke entering the home will still help to reduce smoke levels in the home. Ground floor or basement levels tend to be cooler and may be less impacted by smoke.

Portable air cleaners should meet these standards:

- Designated as HEPA or electrostatic precipitator
- CADR rated for tobacco smoke
- Sized for the room it will be used in

**Community clean air shelter (community-CAS)** is a building or area of a building, with filtration that is suitable for reducing smoke exposure and is made available to community members to provide temporary relief during smoke events.

- Buildings such as band halls or schools, shopping malls, libraries or community centres usually have appropriate cooling and air filtration equipment.
- Conventional filters provide some reduction in particulate levels.
- Consider installing HEPA filters in long-term care or Elders facilities, child care centres and schools to reduce exposure for these more vulnerable populations.
- Confirm with a professional if the building system is suitable for a HEPA filter.
- Any modifications to building HVAC systems should be done by a professional.
- Consider giving vulnerable populations priority access to these areas.

FNHA Environmental Health Officers can work with communities to identify suitable community-CAS and provide advice on home-CAS.

At this time, FNHA does not provide funding for the purchase of portable air cleaners. Communities are encouraged to prioritize purchases for vulnerable populations. Consult with emergency response programs to confirm eligible purchases.