

The “My Wildfire Smoke and Extreme Heat Action Plan”

Why is an Action Plan being used?

British Columbia is expected to continue experiencing wildfire smoke and extreme heat events every year. Exposure to smoke and/or heat affects health, with effects ranging from mild symptoms to serious medical illness and death. It is important to prepare members of our community by helping them:

1. understand ways to get information about changing conditions,
2. learn steps they can take to reduce exposure, and
3. make a plan for the resources they will use when smoke and/or heat events occur.

There are groups of people who are at higher risk of serious health effects, and for people in these groups it is *especially* important that they (and their support networks, including family and friends) receive this information. For wildfire smoke and extreme heat, you can use this tool with anyone, but try to prioritize working through this plan with people who have/are:

- Any lung disease (including asthma, emphysema)
- Any heart disease (including high blood pressure, angina, stroke)
- Other chronic diseases (including diabetes, kidney disease)
- Physical or mental disabilities (including dementia)
- Mental illness
- Social isolation/living alone
- Pregnant persons
- Older (especially 65+ years) or younger (especially children and infants) age
- Jobs that require outdoor work
- Poor quality housing or no housing
- Taking certain types of medication that may reduce the body’s ability to cool itself (including beta blocker) or medications that increase body temperature (antipsychotic)
- People who use substances, including alcohol

This guide and the associated Action Plan (it is recommended to complete one with each person; copies may be given to their families and or friends if they agree for support) will walk you through the steps to educate, support, and empower your community members to take action for their health during smoke and heat events.

Thank you for empowering your community members to prepare and take action.

Working through the Action Plan with a client:

We will walk through the Action Plan in the following pages highlighting key steps, common questions, and noting when to refer a client to their doctor for further advice. The goal of the visit is to work with your client to access resources appropriately (air quality alerts, heat alerts, etc) and walk away with a written plan for preparedness and action that they can post in an easily-accessible location in their home (refrigerator or other).

It may be helpful to keep the guide open and ready when working with clients, so that you can refer to the tips on these pages as needed.

Please consider reviewing this action plan annually with your client.

Key Definitions

Cool space: Anywhere indoors or outdoors where the temperature is below 26 °C (78 °F).

Cleaner air space: Anywhere with filtered air that can be safely accessed to seek relief from poor outdoor air quality.

Resources

Hyperlinks for key resources to be accessed during client education are provided throughout the document. In addition, accompanying QR codes are provided in the case that you or the client require access to resources via a mobile device.

My Wildfire Smoke and Extreme Heat Action Plan

Name: _____ Client Name _____ Date: xx / xx / xxxx (when plan filled out)

Care Professional Name: _____ (name) _____ Emergency Contact Name: _____ (name) _____
Care Professional's #: _____ (xxx) xxx-xxxx _____ Emergency Contact #: _____ (xxx) xxx-xxxx _____

Wildfire smoke and extreme heat can affect your health, but there are steps you can take to protect yourself. This action plan will help you *prepare and respond*.

I KNOW MY AIR QUALITY AND TEMP

Assist your client in signing up for all alerts that they are willing to receive, and showing them all additional sources of information that they are comfortable with and able to access. Ask the client to identify (and circle or highlight) which of the messaging options below (phone, online, radio) will be their primary way to receive alerts, in addition to a back-up if possible should they lose internet or cell service. Encourage them to circle their primary options on the plan, being careful not to mark the QR codes.

I will receive emergency alerts

1. phone (heat: emergency alerts active)

- Federal alerts: The extreme heat alert system is mandatory in Canada and activated on LTE or 5G network capable phones. If the client has a cell phone, check to see if it is LTE (Long-Term Evolution, a standard and wireless broadband; google the make and model of phone the patient owns). For additional information to help you in checking the client's phone, please see:

<https://www.alertready.ca/wireless/>

- For more information on how emergency alerting works in BC, and when a client may not receive an alert (e.g. not connected to an LTE cellular network at the time the emergency alert is issued), you may review the following link:

<https://www2.gov.bc.ca/gov/content/safety/public-safety/emergency-alerts/how-alerts-work>



2. email (Air Quality Subscription Service)

- If the client wishes to receive email alerts, assist them in signing up for alerts in all relevant regions when you are with them:

<https://aqss.nrs.gov.bc.ca/subscription.html>

- Metro Vancouver & Lower Fraser Valley** have their own subscription service not included in the provincial subscription; and they may receive email advisories from these regions if they sign up through the following link:

<https://metrovancover.org/services/air-quality-climate-action/mailling-list>



If I can see or smell smoke, I know the risk is high to very high

- Teach client that if they see or smell smoke the air quality is bad, but if they don't see smoke they should still check air quality. No visible smoke does not always mean healthy air quality.

Alert = Risk, but NO Alert ≠ NO Risk

- Similarly, an emergency alert means that smoke and/or temperature have reached a level that the province or Canada has identified to issue an alert, and precautions should be taken. However, just because there has not been an alert released does not mean that conditions are safe for everyone. Your client should also check smoke and weather conditions at least daily to inform their activities.

I can check smoke and weather conditions at least daily

1. phone (WeatherCAN app, Hello Weather)

- If the client has a smart phone, assist them in installing the WeatherCan app. They can use the url listed: <https://www.canada.ca/en/environment-climate-change/services/weather-general-tools-resources/weathercan.html> ,or search within the app store on their phone to download the application.
- Assist your client in determining their local code for [Hello Weather](#); they may dial this number at any time to receive information on weather, including air quality **and heat alerts**. They would write this code into the action plan within the space provided.

2. online (BC Air Quality Reports for smoke, BC Weather Alerts)

- BC Air Quality Reports (<https://www.env.gov.bc.ca/epd/bcairquality/data/aqhi-table.html>) will tell the client the AQHI in their area. This provides more detailed information than the BC Weather Alerts alone.
- BC Weather Alerts (<https://weather.gc.ca/>) issues heat alerts and an alert that skies are/will be smoky but does not provide more air quality details.

3. radio channel: _____AM/FM

- Phone and online are recommended, however if these are unavailable (routinely or during an event), your client may wish to identify a preferred radio station. Alert your client that reports on the radio, outside of formal emergency alerts, may not derive from government regulated data and information sources.

If I cannot access this information on my own, I will call: _____(fill in name)_____ at (xxx) xxx-xxxx

- Ask them who they can call who will be able to help them get this information (i.e., family, friend, or 8-1-1)

MY HOME AND SUPPLIES ARE READY

- Help your client understand their personal risk.
With your client, review the factors that contribute to a higher risk of effects from smoke and heat. As you go through, ask them to identify whether one or more of these apply to them (they do not have to reveal which ones, but having one or more will place them into a higher risk category for activity recommendations later in the plan).

As a reminder, these include people who have/are:

- Any lung disease (including asthma, emphysema)
- Any heart disease (including high blood pressure, angina, stroke)
- Other chronic diseases (including diabetes, kidney disease)
- Physical or mental disabilities (including dementia)
- Mental illness
- Social isolation/living alone
- Pregnant persons
- Older (especially 65+ years) or younger (especially children and infants) age
- Jobs that require outdoor work
- Poor quality housing or no housing



- Taking certain types of medication that may reduce the body's ability to cool itself (including beta blocker) or medications that increase body temperature (antipsychotic)
- People who use substances, including alcohol

Note: having multiple factors can further increase their risk

If a client is unsure or has questions about their health or medication, refer them to their healthcare provider and ask them to bring this tool.

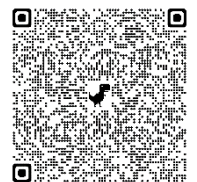
- Encourage advanced preparation (before May).
Encourage your clients to do any/all of the activities below **well** ahead of heat and smoke to ensure preparedness and that there is an adequate supply of items (e.g., fans, air conditioning units, heat pump installation, air cleaners in stock at stores).
- Empower your client.
There may be some clients that can only do one or two of these things; let them know that having read and worked through this they are already more prepared this season. For those things that they will not be able to acquire, consider crossing them off. **The goal is to empower your client with the knowledge and the resources they have and remind them that each thing they now know and can do makes them that much more prepared.**

If applicable, I have....

- extra medications (pharmacy delivery contact: (pharmacy name/pharmacist/phone #))
 - I asked my pharmacist/doctor about any of my medications that might affect my reaction to heat
- If you are working through the Action Plan with a client *during* wildfire/heat season (June-September), suggest they arrange an appointment with their care provider or pharmacist as soon as they are able to discuss getting extra medications.
- If you are working through the Action Plan with a client *outside* of wildfire/heat season (October-May), suggest they plan an annual visit to their care provider or pharmacist ahead of wildfire smoke and heat (i.e., ~April/May)
- Remind your patient to review their medication list with their doctor or pharmacist to ask about any medications that might affect their response to heat. **Clients should be reminded not to adjust medications unless it is under the direct advice of a doctor or other healthcare professional.**
- extra food (grocery/food delivery contact: (delivery service number/friend/family))
 - Ask if they need any additional support for supplies, and help them to identify how they can have food delivered if needed during an event.
- home thermometer and extra batteries as needed
- window coverings to block sun and heat
 - Ask if they are able to install window coverings, or have a friend assist if there a lightweight option they could more easily install? Do they feel comfortable asking a building manager to provide or install window coverings?
 - A blanket or cardboard can also be used if the other coverings are not available.

☐ heat pump, or an air conditioning unit and/or fan

- Let them know that \$1,000 or 50% of the amount paid for an air conditioner (whichever is less), for a person with a severe chronic ailment, disease, or disorder, can be claimed on tax returns as a medical expense (they will need a prescription for this).
<https://www.canada.ca/en/revenue-agency/services/tax/individuals/topics/about-your-tax-return/tax-return/completing-a-tax-return/deductions-credits-expenses/lines-33099-33199-eligible-medical-expenses-you-claim-on-your-tax-return/details-medical-expenses.html>
- If unable to purchase an air conditioner or heat pump, explain the importance of monitoring indoor temperatures and moving to the cooler air space identified below if the indoor temperature is high. For people at higher risk from heat, risk for heat-related illness may increase at indoor temperatures over 26 °C (78 °F) and may significantly increase at indoor temperatures over 31 °C (88 °F).
- Fans may not effectively reduce body temperatures or prevent heat-related illness in people at risk. Do not rely on fans as the primary cooling method. At night, when the outdoor temperature is cooler than indoor temperatures, consider using fans to bring cool air inside from windows. Kitchen and bathroom fans vent outside of living spaces and can be used to move hot air outside. For more information see the [Fraser Health Fans in Extreme Heat FAQ](#) (info sheet #19).
- Caution your client that portable air conditioners may pull outside air inside, so in the setting of a combined heat/smoke event this may increase smoke exposure. It is important to address both where possible. If both smoke and heat are not able to be addressed, for most people at risk, overheating is more dangerous. It is important to prioritize staying cool (info sheet #20).



☐ air cleaner (with HEPA filter)

- Reference sheets #3 (type to purchase) and #8 (home-made), links at the end of this document, if they have questions.
- If they have an air cleaner, do filters need to be replaced? (Newer models typically have an indicator light to signal when the filter should be replaced)
- Let them know that an air filter, cleaner, or purifier used by a person to cope with or overcome a severe chronic respiratory ailment or a severe chronic immune system disorder can be claimed on tax returns as a medical expense (they will need a prescription for this, and should see their healthcare provider for this).
<https://www.canada.ca/en/revenue-agency/services/tax/individuals/topics/about-your-tax-return/tax-return/completing-a-tax-return/deductions-credits-expenses/lines-33099-33199-eligible-medical-expenses-you-claim-on-your-tax-return/details-medical-expenses.html>



☐ supply of well-fitted masks (N-95 respirator or similar)

- See info sheet #9, attached at the end of this document, for full details.
 - Cloth masks, whether wet or dry, will not reduce wildfire smoke exposure
 - Well-fitted triple-layer medical masks provide moderate protection. Respirators (N-95 or KN-95s) that are well-fitted provide the best protection in situations where your client is not able to avoid smoke, however do not replace the need to seek an area with cleaner air.
 - It is NOT SAFE to wear a mask while sleeping.

☐ a designated cleaner air/cool room

- Suggest selecting the bedroom and use the air cleaner during sleeping hours – even if it might be noisy.

- Ask about common spaces in any rental units (e.g., laundry rooms, rec rooms, gardens) and encourage clients to inquire with building managers to learn whether these spaces can be used as shared cool/cleaner air spaces.
 - Sometimes it is safer to be in outdoor shaded spaces, such as forests trails and shaded parks during heat events.
 - Consider sports or other recreational activities (see back page of action plan for individualized health messaging)
 - Some communities in BC open cooling centres or cleaner air spaces but some communities do not. Call the local government to ask or check for additional information on their website, facebook page or twitter account. Sometimes information is not added until the event is declared
- Spending time in a cool space allows the body to rest and take a break from fighting the heat. It is recommended that people spend at least two hours at a time in a cool space, but ideally they should spend as much time as possible, especially in the afternoon and early evening when indoor temperatures peak. People may feel refreshed from the time spent in the cool space, but once someone returns to a hot environment, the risk of heat-related illness returns. After leaving a cool space, people should continue monitoring the indoor temperature of their home and take actions to cool their body.
 - A note on indoor and outdoor temperatures: Outdoor temperatures peak around 2-4pm, indoor temperatures peak around 8-10pm and indoor environments may be most dangerous overnight. Seek cooler spaces during the day but especially overnight if the indoor temperature is high. If it is safe, consider sleeping outdoors if it is cooler.

If I need cooler and/or cleaner air, I will go to:

COOL AIR (day) _____ location _____ / (night) _____ location _____

CLEANER AIR (day) _____ location _____ / (night) _____ location _____

COOL & CLEANER AIR (day) _____ location _____ / (night) _____ location _____

Non-Emergent Questions: Call 8-1-1 or your Family Doctor
Medical Emergency: Call 9-1-1

My Wildfire Smoke and Extreme Heat Action Plan

Name: _____ Client Name _____ Date: xx / xx / xxxx (when plan filled out)

Overheating is more dangerous than smoke for most people at risk.
During an event, call your buddy *daily!*

Wildfire Smoke

	1-Hour PM _{2.5} (µg/m ³)	BC AQHI	AQHI Risk Category	Health Message for <u>ME</u>
	0-10	1	LOW (blue)	<i>Normal air quality - continue normal activities.</i>
	11-20	2		
	21-30	3		
	31-40	4	MODERATE (yellow/orange)	
	41-50	5		
	51-60	6		
	61-70	7	HIGH (pink/red)	
	71-80	8		
	81-90	9		
	91-100	10		
	101+	10+	VERY HIGH (maroon)	

(AQHI = Air Quality Health Index; PM_{2.5} = fine particulate matter)

***If you have a respiratory infection you may have a *higher* risk from wildfire smoke: take extra precautions.

- Review the messages for general and at-risk groups. For wildfire smoke specifically, people who should follow the health message for “people at higher risk” are those with:
 - Lung disease (including asthma, emphysema, etc.)
 - Other chronic diseases (including heart disease, diabetes, kidney disease, etc.)
 - Pregnancy
 - Older (especially 65+ years) or younger (especially children and infants) age
- Help your client determine which group (Higher Risk or General Population) they are in for wildfire smoke, and use the table below (from reference link #4, at end of document) to help them fill in their activity levels at different air quality measures.

	1-Hour PM _{2.5} (µg/m ³)	BC AQHI	AQHI Risk Category	Health Message for People at Higher Risk	Health Message for General Population
	0-10	1	LOW (blue)	Enjoy your usual outdoor activities.	Enjoy your usual outdoor activities.
	11-20	2			
	21-30	3			
	31-40	4	MODERATE (yellow/orange)	Consider reducing or rescheduling strenuous activities outdoors if you experience symptoms.	No need to modify your usual outdoor activities unless you experience symptoms.
	41-50	5			
	51-60	6			
	61-70	7	HIGH (pink/red)	Reduce or reschedule strenuous activity outdoors.	Consider reducing or rescheduling strenuous activities outdoors if you experience symptoms.
	71-80	8			
	81-90	9			
	91-100	10			
	101+	10+	VERY HIGH (maroon)	Avoid strenuous activity outdoors.	Reduce or reschedule strenuous activity outdoors, especially if you experience symptoms.

- Discuss activities that the client engages in during the summer months and what the decision-making process looks like for them and record it in the table
- Ask if your client is aware of the UNBC Purple Air monitoring system. Note that this is not regulatory quality measurement tool and there is some degree of inaccuracy. However, there may be monitors closer to help in decision-making processes: <https://cyclone.unbc.ca/aqmap/>

***If you have a respiratory infection you may have a *higher* risk from wildfire smoke: take extra precautions.

If your client has specific concerns or questions about symptoms and when to seek healthcare, refer them to speak with their healthcare provider either during or in advance of wildfire smoke and heat season.



Body

Extreme Heat



Home/Indoor

36.5-37°C (97.7-98.6°F)	<i>Normal, monitor for symptoms</i>	<i>Usually safe, monitor</i>	Less than 26°C (<78.8°F)
37.1-39°C (98.7-102.2°F)	<i>Above normal; possible heat-related illness</i>	<i>Risk increasing</i>	26-31°C (78.8-87.8°F)
Over 39 °C (>102.2°F)	<i>Seek immediate medical help</i>	<i>High risk; leave for cooler air</i>	Over 31 °C (>87.8°F)

- There is no one set outdoor temperature for all of BC that will be used for heat alerts. A “Heat Warning” means that the daytime and overnight temperatures are higher than usual, but they are not getting hotter every day. An “Extreme Heat Emergency” means that daytime and overnight temperatures are higher than usual, and they are getting hotter every day.
- Regardless of thermometer reading or lack thereof, clients with concerning symptoms should be encouraged to seek medical evaluation. Review these symptoms with your client.

SYMPTOMS	Poor Air Quality	Extreme Heat
Sore throat	✓	
Eye Irritation	✓	
Runny Nose/Cough/Phlegm	✓	
Wheeze	✓	
Headaches	✓	✓
Confusion		✓
Dizziness/Unsteadiness		✓
Nausea/Vomiting		✓

If any of these symptoms do not quickly resolve, or the client develops new or worsening shortness of breath, severe cough, dizziness, chest pain, heart palpitations, fainting, confusion, less coordination, hot red skin, or nausea/vomiting, then they should seek call 911 immediately.



Cooling Your Body

- (1) Cool your home or relocate to a cooler place
- (2) Make ice and prepare jugs of cool water
- (3) Take off extra layers of clothing to expose skin
- (4) Cool damp towels in the fridge to use
- (5) Take cool showers
- (6) Sit with feet in cool water
- (7) Use a spray bottle to mist cool water on your skin
- (8) Limit physical activity

Cooling Your Home



- (1) Use thermometer to monitor indoor temp, check batteries
- (2) Turn on air conditioner*
- (3) Turn on fans to move cool air into living spaces
- (4) Use shades, curtains, blankets, and/or cardboard to block sunlight from windows
- (5) Close windows during heat of the day
- (6) Open windows at night or with cool breeze*
- (7) Turn off appliances that generate heat

*if outdoor air quality is poor, #2 and #6 may worsen indoor air quality; consider carefully.

- Consider placing cool towels around the back and sides of the neck, or at other pulse points (ie wrists, etc) when safe to do so for potential enhanced effectiveness.
- Review these actions with your client to confirm understanding. Remind clients that portable AC devices pull some outside air indoors, which may increase their exposure to smoke on smoky days. *Caution that portable air conditioners pull outside air inside, so in the setting of a combined heat/smoke event this may increase smoke exposure. It is important to address both where possible.*
- The province of BC advises the following: **For most people, exposure to extreme heat is a bigger risk to health than exposure to wildfire smoke. If you cannot get cool inside, go outside even if there is smoke.**
<https://www2.gov.bc.ca/gov/content/safety/emergency-management/preparedbc/know-your-hazards/severe-weather/extreme-heat>
 Ideally relocate to somewhere that is both cool and has clean air.



Wildfires (BCCDC)

1. [Health effects of wildfire smoke](#)
2. [How to prepare for the wildfire smoke season](#)
3. [Portable air cleaners for wildfire smoke](#)
4. [Wildfire smoke and air quality](#)
5. [The composition of wildfire smoke](#)
6. [Wildfire smoke and outdoor exercise](#)
7. [Wildfire smoke and Air Quality Health Index \(AQHI\)](#)
8. [Home-made box air fan filters](#)
9. [Face masks for wildfire smoke](#)
10. [Translated Content](#)

Extreme Heat

11. [VCH: Extreme Heat Poster](#)
12. [HealthLinkBC: Beat the Heat](#)
13. [BCCDC: Preparing for Dangerous Heat](#)
14. [Health Canada: Staying Healthy in the Heat](#)
15. [PreparedBC: Extreme Heat Preparedness Guide](#)
16. [Health Checks During Extreme Heat Events](#)
17. [Protect yourself during hot weather – Cool Kits](#)
18. [Translated Heat Resources](#)
19. [Fans in Extreme Heat FAQ](#)

Combined

20. [Wildfire Smoke During Extreme Heat Events](#)