



Health Effects of Wildfire Smoke

Wildfire smoke is a complex mixture of fine particulate matter (PM_{2.5}) and gases, such as carbon monoxide, nitrogen oxides, and volatile organic compounds. The mixture can change depending on the fuels, the weather, and distance from the fire. Wildfire smoke causes episodes of the worst air quality that most people will ever experience in British Columbia.



Although wildfire smoke is different from air pollution caused by traffic or industry, it is also harmful to human health.

- Smoky air makes it harder for your lungs to get oxygen into your blood.
- Wildfire smoke can irritate your respiratory system and cause an immune response, which may lead to inflammation that affects other parts of your body.
- Common symptoms include eye irritation, runny nose, sore throat, mild cough, phlegm production, wheezy breathing, or headaches. Such symptoms can usually be managed without medical attention.
- Some people may have more severe symptoms, such as shortness of breath, severe cough, dizziness, chest pain, or heart palpitations. You should seek prompt medical attention if you experience any of these symptoms.
- Smoky air may increase risk of some infections, such as pneumonia COVID-19, and ear infections in children.

Reducing exposure to wildfire smoke is the best way to protect your health.

- Portable air cleaners that use HEPA filtration can effectively remove smoke particles from the indoor air. Do your research to find something suitable for your needs.
- If you have forced air heating, you can use different filters and settings to minimize the amount of wildfire smoke that comes into your home. Talk to your service provider about what will work best for your system.
- Libraries, community centres, and shopping malls often have cooler, filtered air that can provide a break from outdoor smoke.
- When driving, keep the windows up, the air conditioner on, and use the recirculate setting to limit intake of the outdoor air.
- The harder you breathe, the more smoke you inhale. Take it easy during smoky periods, consider exercising indoors, and drink lots of water to help your body cope with the smoke.
- If you have an outdoor occupation, refer to resources from WorkSafe BC <https://u.nu/4vl8>



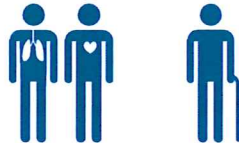
BC Centre for Disease Control
Provincial Health Services Authority

FOR MORE INFORMATION bccdc.ca/wildfiresmoke



Different people respond differently to wildfire smoke, and some people are at higher risk of experiencing health effects.

THOSE MOST AFFECTED



PEOPLE WITH CHRONIC LUNG/HEART DISEASE

OLDER ADULTS



PREGNANT WOMEN



INFANTS, YOUNG CHILDREN

It is especially important for the following groups to reduce their exposure.

- People whose health is compromised by an illness or chronic condition. Smoky air makes daily activities harder, both physically and mentally.
- **People with respiratory conditions** such as asthma or chronic obstructive pulmonary disease (COPD) are at highest risk of experiencing health effects caused by wildfire smoke. People with conditions such as heart disease, diabetes, cancer, or mental illness are also at increased risk.
- Unborn children and infants may be vulnerable. **Pregnant women and people caring for infants should consider using portable air cleaners.**
- Young children have sensitive lungs and may need to decrease their activities during smoky periods, especially when outdoors.
- Not everybody will experience noticeable effects from wildfire smoke. Even if you are not affected, remember to look out for others around you.

Most health effects of wildfire smoke are transient, meaning that they will disappear as the air quality improves.

There is very little research on whether there are longer-lasting health effects from seasonal wildfire smoke, and caution is recommended in the absence of scientific evidence.

- Remember that reducing exposure is the best way to protect against any health effects from wildfire smoke.
- Infants, unborn children, and those with obstructive lung conditions such as asthma and COPD are most likely to experience longer-term health effects.
- Wildfires are becoming more extreme and intense in British Columbia and elsewhere. Local and international scientists are working hard to understand how these changes affect health in populations exposed to wildfire smoke.



First Nations Health Authority
Health through wellness

Recognizing and Resolving Trauma in Children During Disasters

Disasters like wildfires affect individuals in many ways. The emotional effects may show up immediately or appear weeks to months later. Here are some helpful tips for recognizing and responding to trauma in children brought on by disaster situations:



Short to mid-term behaviours you may see in your children who are experiencing trauma could include:

- A return to earlier behaviour, (thumb sucking or bed wetting)
- Clinging to parents, crying and screaming
- Reluctance to go to bed
- Nightmares
- Fantasies that the disaster never happened
- Refusal to attend school
- Problems at school
- Inability to concentrate
- Withdrawal, immobility

It is important to understand that there is a natural grieving process following any loss and a disaster of any size can cause unusual or unwanted stress. If you are seeing any of these behaviours there are things you can do to support.

Below are five tips to keep in mind as communities continue to face the wildfires.

Talk to your children about their feelings and your feelings. You will find that many feelings are shared, regardless of age.

Encourage your children to draw pictures of the disaster. This will help you understand how they view what happened.

Talk with your children about what happened, providing factual information that they can understand. Talk about your family's preparedness, including the role your children can take.

Reassure your children that you and they are safe. Repeat this assurance as often as necessary.

Hold your children. Touch provides extra reassurance that someone is there for them. Spend extra time with them, especially at bedtime. Sing songs or say prayers with them and maintain the spirit of regular family or cultural practices.



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Recognizing and Addressing Trauma and Anxiety During Disasters

Disasters like wildfires affect individuals in many ways and may affect your emotional, spiritual, physical and mental well-being. The emotional effects may show up immediately or appear weeks to months later.

If you are feeling stressed or anxious this time of year, you are not alone. The fear of having to flee your home, and possibly leave animals and possessions behind can cause distress, fear and anxiety for you and your loved ones. Even the prospect of living with smoky skies during wildfire season can cause distress.

The risks of disasters, like wildfire season, can also trigger stressful thoughts and feelings related to loss of connection to land, home, and traditional foods and medicines. For some First Nations people it can trigger trauma associated with memories of being forcibly removed from home and sent to residential school, Indian hospitals or foster homes. We would like to offer some support.



Recognizing Anxiety and Trauma

Anxiety and trauma related to disasters affect people in different ways. Physical and emotional signs may include:

- Overwhelming feelings of fear, stress and emotional distress – a feeling of being unable to cope
- Acute anxiety, excessive worry and panic attacks
- Feeling down or depressed, angry, sad, confused, low mood
- Trouble breathing
- Trouble eating (including overeating or not eating enough)
- Trouble sleeping (including nightmares, over-sleeping or not sleeping enough)
- Irritability and agitation, feeling jumpy, tense or hypervigilant
- Avoidance or withdrawal – feeling or being unable to meet the demands of what needs to be done (e.g., preparing for evacuation)

Four Tips to Stay Well

It is important to understand that there is a natural grieving process following any loss and a disaster of any size can cause unusual or unwanted stress.

Below are four tips to help you stay mentally, emotionally, physically and spiritually well during wildfire season:

1. Prepare yourself, your family and loved ones

Having a clear emergency or safety plan and kit ready for your family and pets can ease your mind and allow you to focus on other needs. Even if your community has an emergency plan, it is still important to make a plan that addresses the specific needs of your family and household.

2. Take care of the basics

Stress takes a toll on our physical and mental health. Try to eat well and get enough sleep. Be kind to yourself. Give and accept support. Follow your daily routine if possible. Take a break from disaster news coverage and from thinking and talking about disaster events.

3. Ask for help

Whether it's with family, friends, an Elder, cultural supports, doctor, nurse or counsellor—talking helps. Crisis lines are available to listen and help anytime—not just during a crisis*. Those with moderate to severe symptoms that last more than two to four weeks should consult a family physician, if available. Otherwise, reach out to your nearest Mental Health and Substance Use Centre or community nurse.

4. Help others

Check in on Elders and children. Coping may be more difficult for Elders living alone and those who have mental health and wellness concerns, or those with few social supports. Reaching out to connect with them can be a big help.

Other simple actions that you may find helpful are to keep a journal, stay active (and exercise indoors if the air quality is poor), do volunteer work or participate in activities you enjoy (e.g., beading or sewing, singing and drumming).

***IF YOU ARE STRUGGLING RIGHT NOW, confidential, culturally safe support is available 24/7 through the KUU-US Indigenous Crisis Line at: 1-800-558-8717**

More support resources can be found at:

www.fnha.ca/wildfires

Gov.bc.ca/NaturalDisasterHealth.ca

Visit PreparedBC for resources to help you understand the hazards in your location and to create a family emergency plan:

<https://www2.gov.bc.ca/gov/content/safety/emergency-preparedness-response-recovery/preparedbc>

Visit BC Centre for Disease Control for information on wildfire smoke and steps you can take to protect your health, both indoors and outdoors:

<http://www.bccdc.ca/health-info/prevention-public-health/wildfire-smoke>