



Heat and Smoke Safety Guide

Guide to safety policies and resources for organizations
to develop a better response

Heat and Smoke Safety Guide

Here are some heat and smoke safety policies and resources to help organizations develop a response to extreme heat or smoky conditions. We encourage sport, physical activity, and recreation leaders to involve employees, volunteers, and participants in the development of policies and practices that will keep your people safe.

Heat Safety

When the body exercises in hot conditions, it attempts to maintain a stable internal temperature by increasing blood flow to the skin, which allows heat to dissipate. At the same time, sweating increases to cool the body down. However, these mechanisms put additional stress on the body. Increased sweat rates can lead to significant fluid loss, and if the lost fluids and electrolytes are not adequately replaced, the individual may experience dehydration. Dehydration can impair cardiovascular function, decrease blood pressure, increase heart rate, and reduce blood flow to the muscles, all of which can result in reduced performance and increase the risk of heat-related illnesses such as heat exhaustion or heat stroke.

Heat can worsen the risk when coupled with poor air quality, particularly from smoke, which is increasingly common due to wildfires. Smoke contains a mixture of gases and fine particles that can irritate the respiratory system, making breathing more difficult, and increasing the strain on the heart. For physically active individuals, inhaling these pollutants can reduce oxygen uptake, impairing performance and potentially leading to respiratory issues. Also, the presence of smoke can make the effects of heat stress worse as it is more challenging for the body to cool itself, increasing the risk of heat-related illnesses.^{1,2}

How Hot Weather Can Impact the Body

The combination of extreme heat and humidity can affect the body's natural cooling mechanisms leading to heat-related illness. Heat-related illness is an umbrella term for conditions caused by heat, such as heat rash, sunburn, heat cramps, heat exhaustion and, the most severe, heat stroke.^{3,4}

Signs and Symptoms of Heat Exhaustion:



Skin rash



Heavy sweating



Dizziness



Nausea or vomiting



Rapid breathing and heartbeat



Headache



Difficulty concentrating



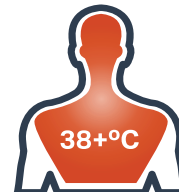
Muscle cramps



Extreme thirst



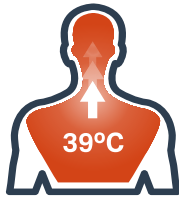
Dark urine and decreased urination



Body temperature over 38°C

If the individual shows these signs and symptoms, move them to a cooler location, if possible, give them water, and suggest ways to cool their body such as a cool bath or shower, wetting their clothes, or applying cool water to the skin. This is to try to prevent them from developing heat stroke, which is a medical emergency.

 Signs that illness has progressed to heat stroke, which is a medical emergency, include:



High body temperature
(over 39° C)



Drowsiness or
fainting



Very hot and
red skin



Confusion and/or
lack of coordination

Seek medical attention immediately at an emergency room or urgent care centre. Call 911 if necessary. While waiting for help, cool the individual right away by moving them to a cool place if you can, and apply cold water to large areas of the skin.

Risk of **heat-related** stress

Although individuals react differently to heat stress, specific factors can increase the risk of heat illness.⁵ Therefore, it is important to consider individual characteristics of participants, type of activity, and weather conditions.

Individual factors that increase the risk of heat-related stress

- Age: older adults, especially those aged 60 years or older; young children ^{6,7}
- People with pre-existing health/medical conditions such as diabetes, heart disease, respiratory disease, cardiovascular disease, or hyper extension, ^{6,8}
- People with previous history of heat illness ⁶
- People with mental illness such as schizophrenia, depression, anxiety, or dementia
- Persons with disabilities, particularly people with conditions that limits the body's ability to lose or react to heat, such as, but not limited to, multiple sclerosis, spinal cord injuries, or inflammatory conditions ⁹
- People who live alone
- People with substance use disorders, including alcohol and drugs
- People with limited mobility
- People experiencing homelessness or who are marginally housed

- Lack of acclimatization ⁶
- Lack of fitness ⁶
- Pregnancy ^{7,10}
- Certain medications that affect heat sensitivity and put people at risk:

Medications that can put people at risk

Medications that impair the body's ability to cool itself include:

- Beta blockers
- Antihistamines
- Medications with anticholinergic effects (e.g. oxybutynin or benztropine)
- Some antidepressants (e.g. amitriptyline or nortriptyline)

Medications that cause low blood pressure that can be worsened by hot temperatures include:

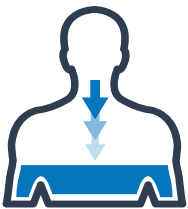
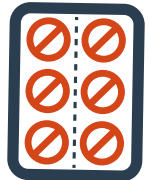
- Medications for heart disease (e.g. nitroglycerin and calcium channel blockers)
- Medications for high blood pressure (e.g. ACE inhibitors)

Medication that can increase body temperature include:

- Antipsychotic medications (e.g. risperidone, olanzapine, or quetiapine)
- Stimulation medications for attention disorders such as amphetamines (e.g. Dexedrine[®] or Adderall[®])

Medications that can cause dehydration or are affected by dehydration include:

- Diuretics
- Laxatives
- Some diabetes medications (e.g. canagliflozin or empagliflozin)
- Some antidepressants (e.g. fluoxetine or venlafaxine)
- Lithium
- Some antiepileptics (e.g. phenytoin)
- Warfarin
- Digoxin



Pharmacy Practice: Protecting your clients from extreme heat

Activity factors that increase the risk of heat-related stress

- High exercise intensity e.g., exercising close to personal physical limits ⁷
- Heavy clothing and protective equipment e.g., padding ^{6,11}
- Duration and frequency of the exercise

Weather factors that increase the risk of heat-related stress

- High air temperature and high humidity ¹² (see table below)
- Low air movement/no wind ¹²
- Prolonged exposure to hot conditions ¹³

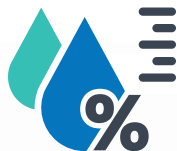
Physical Environment Factors that increase the risk of heat-related stress

- High air temperature and high humidity ¹² (see table below)
- Lack of tree shading
- Large windows
- High elevation
- Time of exercise (direct hot sunlight in afternoon hours)

Below is a useful guideline to help decision-making during periods of hot weather:

- 1.** Check the Government of Canada's [BC Weather Conditions and Forecast by Locations](#) for the specific location
- 2.** Take a note of the temperature and humidity
- 3.** Compare the temperature and humidity against the table below

Remember that this only serves as a guide for people without other risk factors, and other factors may need to be considered for decision-making.



Temperature (Celsius)	Risk of Heat Illness	Possible management for sustained physical activity
15 - 20	Low	Heat illness can occur in distance running
21 - 25	Low to moderate	Increase vigilance
26 - 30	Moderate	Reduce intensity and duration of play/ training. Take more breaks
31 - 35	High to very high	Uncomfortable for most people. Limit intensity, take more breaks. Limit duration to less than 60 minutes per session
36 and above	Extreme	Very stressful. Postpone to a cooler condition (or cooler part of the day) or cancellation

Sports Medicine Australia

TIPS for physical activity during periods of hot weather

- 1.** Hydration: Confirm adequate hydration, including before, during and after physical activity.
- 2.** Warm-ups: Duration and intensity of a warm-up should be reduced to minimize the increase in body heat and temperature before activity.
- 3.** Exercise Intensity and Conditions: Exercise intensity in training should be appropriate to current fitness and weather. This might include more frequent breaks, shorter overall duration, and if necessary, move activities to an indoor environment with cleaner and cooler air. Avoid direct sun exposure.

4. **Weather:** Check the weather forecast and schedule activity during the cooler parts of the day, such as early morning or late evening. The hottest time of day is usually between 2:00 pm and 6:00 pm.
5. **Air Quality:** Check the Air Quality Health Index (AQHI – see next section) to ensure that there is not an increase in air pollution.
6. **Clothing:** Where possible, loose, light-colored, breathable clothing, a hat, and sunglasses should be worn.
7. **Broad-spectrum Sunscreen** that is water-resistant with at least SPF 30 should be applied generously. Visual cues, like signs in locker rooms, can act as reminders for individuals to apply sunscreen.
8. **Location:** If possible, opt for cooler environments with green spaces, shade, and water.
 - a. If needed and possible, move activities indoors – but check that air conditioning is available and in working order.
9. **Watch for Symptoms:** Look out for symptoms of heat illness such as headaches, dizziness, confusion, excessive sweating, muscle cramps, nausea, extreme fatigue, and rapid breathing or heart rate. If you see these symptoms during extreme heat:
 - a. Immediately stop the activity and ensures the person rests; move them to a cool place; hydrate with water; directly apply cold water to the skin or clothing; fan the person as much as possible.¹⁴

**OPT FOR
COOLER
ENVIRONMENTS
WITH GREEN
SPACES AND
SHADE**

10. **Acclimatization:** Generally, people can adapt to the heat within a few days. Gradual exposure to hot or humid environments can help a person's body adjust and minimize the risk of heat-related issues if they follow a professional plan and maintain hydration. After about a week of exercising in warmer conditions, it can become easier to manage. However, it's important for people to continue listening to their body, especially if temperatures continue to increase. It should also be noted that the body can start to lose heat acclimatization after a few days or weeks heat training.¹⁵
11. **Recovery:** Allow your body to recover after heat exposure. Spend a few hours in cooler areas (i.e. tree-shaded or air conditioned) such as your home, shopping centre, grocery store, community centre, public library etc., and drink lots of water

For more resources to help with decision-making during hot weather, visit these pages:

[Staying Healthy in the Heat](#)

[Extreme Heat Events Guidelines](#)

[Hot Weather Guidelines](#)

[Exercising outdoors in Canada: What the research tells us about exercising safely and effectively in extreme heat](#)

[You're active in the heat. You're at risk!](#)

[Feeling the heat? Stay safe this summer with these cool tips](#)

[Seven tips for exercising safely during a heatwave](#)

**ALLOW
YOUR BODY
TO RECOVER
AFTER HEAT
EXPOSURE**



Hot and dry weather can lead to higher risk of wildfires, which can negatively affect air quality and in turn, affect the health and performance of individuals.

Extreme heat can lead to higher risk of wildfires, which can negatively affect air quality and in turn, the health and performance of individuals engaging in outdoor physical activity, as well as other members of the public. While heat and smoke can both affect health, for most people heat tends to be the more harmful of the two.

Wildfire smoke and air quality

Wildfire smoke is a complex mixture of gases and small particles. The mixture can change depending on the weather, what is burning, the temperature of the fire, and how far the smoke has travelled. Wildfire smoke contains:

- Fine particles (PM2.5)
- Volatile organic compounds
- Sulfur dioxide
- Nitrogen dioxide
- Ground-level ozone

It is the fine particles (PM2.5), not visible to the human eye, that get deep into our lungs and bloodstream, that pose the greatest risk to health.

The effects of smoke on human health

We know from many scientific studies that PM2.5 can impact a person's health even at low levels. Air quality may be poor even if you can't see or smell smoke.

Exposure to smoke can lead to a range of health effects. The symptoms of smoke exposure are summarized below:

Milder and more common symptoms of smoke exposure	More serious symptoms
<ul style="list-style-type: none">• Irritation of the eyes, nose, and throat• Mild cough• Headaches• Runny nose• Phlegm	<ul style="list-style-type: none">• Dizziness• Chest pains• Severe cough• Shortness of breath• Wheezing (including asthma attacks)• Heart palpitations (irregular heartbeat)

Wildfire smoke 101: Wildfire smoke and your health

Although everyone is at risk, some groups, are more likely to experience health problems as a result of smoke,^{17,18} including:

- People with conditions such as asthma, chronic obstructive pulmonary disease (COPD), or respiratory infections
- People with a chronic health condition (e.g., diabetes, heart condition)
- Seniors/elders
- Pregnant individuals
- Infants and children
- People involved in strenuous outdoor activity

Smoke and Physical Activity

- There are three reasons why individuals are at risk during physical activity:^{18,19}
- Individuals increase how much air they breathe into their lungs, and so more smoke particles are inhaled compared to when at rest.
- A larger proportion of air is inhaled through the mouth, which bypasses the nasal filtration system.
- Air (and so smoke particles) are inhaled more deeply and may go into the bloodstream quicker.
- Children are particularly vulnerable because they generally breathe in more pollutants (faster breathing rates than adults, breathe in more air per pound body weight than adults) and have developing lungs.

The air quality health index (AQHI)

The AQHI can be used to understand the impact of air quality on health. It can be used to help monitor local air quality and make informed decisions about taking part in outdoor physical activity.

The AQHI is usually based on the combined levels of three different air pollutants:

ground-level ozone (O₃), nitrogen dioxide (NO₂), and fine particulate matter (PM 2.5).

Of all the pollutants in wildfire smoke, PM_{2.5} poses the greatest risk to human health. In British Columbia, the AQHI reflects this risk.

The AQHI is presented on a scale of 1 to 10+, which are grouped into four health risk categories ranging from low risk (1 to 3), moderate risk (4-6), high risk (7-10) and very high risk (10+).²⁰

The AQHI was originally developed to communicate about the health risks associated with changes in urban air pollution. Wildfire smoke causes much larger and faster changes in PM2.5. Every hour the AQHI in British Columbia is calculated two different ways, and the **higher** of the two values is reported:

1. Using levels of PM2.5, NO2, and O3 together: Latest air quality data map: [Air Quality Health Index](#)
2. Using the level of PM2.5 alone: [Latest particulate matter - PM2.5 data map](#)

The table below shows messages provided by Health Canada, and actions recommended to reduce wildfire smoke exposure. People at higher risk or anyone experiencing symptoms should consider these actions at **Moderate AQHI values**, while others may not need them until High or Very High values are reached.

Below are some general guidelines on how the AQHI can be used for outdoor physical activity planning:

1. Check the [local AQHI conditions](#)
 - a. During wildfire season be especially vigilant. The wind can change direction quickly and impact air quality
2. When the health risk is low (AQHI 1 to 3), it is the ideal time to schedule and participate in outdoor physical activity
3. When the health risk is moderate (AQHI 4 to 6), outdoor physical activity may still be held but the activity should be adjusted by reducing the intensity, duration, and adding more rest periods. Particular attention should be given to individuals who are in the at-risk groups (for example: children with asthma, those who are pregnant, seniors, or anyone else with a chronic conditions).
4. When the health risk is high (AQHI 7 or above), outdoor physical activities should be cancelled, re-scheduled, or moved to an indoor location with cleaner air, whenever possible.



Summary of air quality health messages by category

1-HOUR PM _{2.5} ($\mu\text{g}/\text{m}^3$)	PROVINCIAL AQHI	AQHI RISK CATEGORY	HEALTH MESSAGE FOR PEOPLE AT HIGHER RISK	HEALTH MESSAGE FOR GENERAL POPULATION	ACTIONS TO REDUCE WILDFIRE SMOKE EXPOSURE
0 – 10	1	LOW	Enjoy your usual outdoor activities.	Ideal air quality for outdoor activities.	Normal air quality in British Columbia
11 – 20	2				
21 – 30	3				
31 – 40	4	MODERATE	Consider reducing or rescheduling strenuous activities outdoors if you experience symptoms.	No need to modify your usual outdoor activities unless you experience symptoms.	<ul style="list-style-type: none"> Use a portable air cleaner or DIY box fan air cleaner to reduce smoke in your home Stay inside with doors and windows closed, but keep cool – heat-related illness is more risky than breathing smoke for most people Visit places with cleaner and cooler air, such as libraries, community centres, and shopping malls Wear a well-fitted respirator (e.g. N95) outdoors.
41 – 50	5				
51 – 60	6				
61 – 70	7	HIGH	Reduce or reschedule strenuous activity outdoors.	Consider reducing or rescheduling strenuous activities outdoors if you experience symptoms.	<ul style="list-style-type: none"> Visit places with cleaner and cooler air, such as libraries, community centres, and shopping malls Wear a well-fitted respirator (e.g. N95) outdoors.
71 – 80	8				
81 – 90	9				
91 – 100	10	VERY HIGH	Avoid strenuous activity outdoors.	Reduce or reschedule strenuous activity outdoors, especially if you experience symptoms.	<ul style="list-style-type: none"> Wear a well-fitted respirator (e.g. N95) outdoors.
101+	10+				

Air Quality Health Index Messages (BCCDC)

*Unsure if you are at risk? Consult this [health guide](#) to help you determine if you are at risk from air pollution. People with heart or breathing problems are at greater risk. Follow your doctor's usual advice about exercising and managing your condition.

Wildfire seasons are getting longer and more extreme in British Columbia, so planning for poor air quality is important for protecting people's health.

TIPS for physical activity during wildfires

1. Monitor [local AQHI conditions](#) regularly. If the AQHI is 7+, cancel, reschedule, or move physical activity indoors with cleaner air.
2. Be aware of air quality advisories issued in your area. The advisories provide information about the pollutant(s) of concern, generally how long air quality is expected to be impacted, vulnerable populations and actions to reduce exposure. It's possible to sign up for email alerts:
 - a. For the Lower Mainland, this would be through [Metro Vancouver Air Quality Data and Advisories](#).
 - b. For the rest of BC via the province's [Air Quality Subscription Service](#).
3. If physical activity is moved indoors, make sure the building has adequate air filtration system, or use a portable air cleaner that uses HEPA filtration to remove smoke from the indoor air.
4. If physical activity is continuing outdoors during a period of moderate air quality,
 - a. Consider reducing the intensity and duration, incorporate more rest periods, or reschedule to another day or time, monitor all participants, particularly people who are at increased risk.
 - i. If physical activity is continuing indoors, keep windows and doors closed and ensure that indoor temperatures are kept

KEEP
WINDOWS AND
DOORS CLOSED
IF ACTIVITIES
MOVE INDOORS

below 26 C. Use a space that has an HVAC system equipped with high efficiency induct filters (MERV 13 or higher). If this is not possible, use portable air cleaners that use HEPA filtration, or DIY air cleaner.

1. BCCDC guidance on purchasing a portable air cleaner ([Portable air cleaners for wildfire smoke](#)).
 2. BCCDC guidance making a simple air cleaner ([How to make a simple DIY air cleaner](#)).
- b. Hydration: Staying well-hydrated helps the kidneys and liver to remove toxins, which can reduce systemic inflammation caused by smoke exposure.
- c. Individuals may consider wearing a face mask that has been verified to remove 95% of airborne particles (i.e., N95, KN95, FFP2). Cloth and surgical masks are not recommended given the variability in forming tight face seals.
- i. However, masks during physical activity might not be tolerated by all individuals and are likely to be better tolerated during light physical activity like walking, rather than moderate-vigorous physical activity such as running. Be aware that masks are less effective when they get wet from sweat.
- d. Self-monitoring: Individuals should be encouraged to monitor their own signs and symptoms and make their own decisions on whether and how they participate in physical activity.

**MAKE
SURE MASKS
ARE AVAILABLE
FOR PEOPLE
TO USE**



5. Weather: Check the weather forecast and schedule activity during the cooler parts of the day, such as early morning or late evening. The hottest time of day is usually between 2:00 pm and 6:00 pm.
6. Develop and implement an air quality policy using the template created by the [Sport Information Resource Centre](#).
7. Complete the free eLearning module on [Air Pollution and Sport Safety](#) developed by Sport Information Resource Centre and Health Canada.

More details about physical activity and air quality can be found in the following resources:

[Wildfire smoke 101: Wildfire smoke and your health](#)

[The composition of wildfire smoke](#)

[Wildfire smoke and outdoor exercise](#)

[Personal strategies to mitigate the effects of air pollution exposure during sport and exercise](#)

[Understanding air quality: a guiding document for sport organizations](#)

[Air Quality Health Index Module](#)

[10 tips for coping with wildfire smoke, from a public health expert](#)

[Clearing the air around air quality and outdoor sport safety](#)

[Wildfire smoke and outdoor exercise](#)

**SCHEDULE
ACTIVITIES
DURING COOLER
PARTS OF THE
DAY**



Ultraviolet radiation (UV) exposure

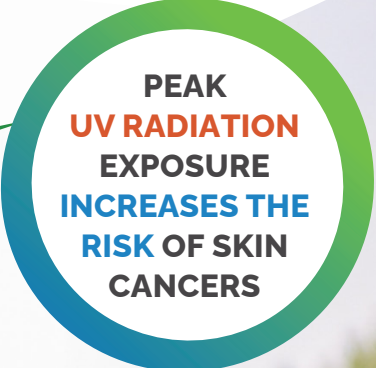
Heat itself doesn't make UV radiation stronger, hot sunny days often mean more time outdoors, and fewer clouds to block UV radiation - this means we might get more sun exposure. Even on a cool day in summer, or on a warm day in the spring UV radiation can be high.

When there's wildfire smoke, it can change how much UV radiation we get from the sun. The smoke, full of small particles, can either block or scatter the sun's radiation, which might lower the UV levels we experience. However, the smoke doesn't block all UV light; some can still reach us in a scattered form, which can still harm our skin. So, even when there's smoke in the air, it's important to take other precautions to protect yourself from the sun's radiation.²¹

As outdoor sports activities can often occur during periods of peak UV radiation exposure, the risk of developing skin cancers like melanoma increases.. Other factors such as sweat production, high altitudes, and reflective environments like snow and water further magnify the risks.

1. Check the Government of Canada's [BC Weather Conditions and Forecast by Locations](#) for the specific location
2. Take note of the UV Index score
3. Compare the UV Index score against the table below

Remember this is only a guide, and other factors may have to be considered depending on the activity, population or personal risk factors and organizational needs.



**PEAK
UV RADIATION
EXPOSURE
INCREASES THE
RISK OF SKIN
CANCERS**

UV Index	Description	Sun protection actions
0 - 2	Low	<ul style="list-style-type: none"> Minimal sun protection required Wear sunglasses on bright days. If outside for more than one hour, cover up and use broad-spectrum sunscreen
3 - 5	Moderate	<ul style="list-style-type: none"> Take precautions – cover up, wear a hat, sunglasses and broad spectrum sunscreen – especially if outside for more than 30 minutes Look for shade near midday when the sun is strongest
6 - 7	High	<ul style="list-style-type: none"> Protection required – UV damages the skin and can cause sunburn Reduce time in the sun between 11:00 am and 6:00 pm when UV and temperatures are at their highest. Seek shade, cover up, wear a hat, sunglasses, and broad-spectrum sunscreen
8 - 10	High to very high	<ul style="list-style-type: none"> Extra precaution required – unprotected skin will be damaged and can burn quickly Avoid time in the sun between 11:00 am and 6:00 pm when UV and temperatures are at their highest. Seek shade, cover up, wear a hat, sunglasses, and broad-spectrum sunscreen
11+	Extreme	<ul style="list-style-type: none"> Take full precautions. Unprotected skin will be damaged and can burn in minutes. Avoid sun between 11:00 am and 6:00 pm when UV and temperatures are at their highest. Seek shade, cover up, wear a hat, sunglasses, and broad-spectrum sunscreen

Environment and Climate Change Canada's UV Index

Planning **TIPS**

1. Plan: anticipate that extreme weather will happen during the summer and fall months and may even start earlier in the spring.
 - a. Make space available for people who need to get away from the heat or smoke.
 - b. Consider extending hours or reducing rates so people are encouraged to be active while staying safe from extreme heat and air pollution.
2. Share resources and information with staff and/or volunteers early on so they can plan accordingly and know what actions to take during heat and smoke events.
 - a. [Preparing for Heat Events \(BCCDC\)](#)
 - b. [Preparing for Wildfire Smoke Season \(BCCDC\)](#)
 - c. [Wildfire smoke and your health \(BCCDC\)](#)
 - d. [Sun Safety \(BC Cancer\)](#)

Programming

3. Expect that there will be times when it is necessary to reschedule, move or cancel outdoor events or training sessions. Remember, it's ok to move events indoors or even cancel them, especially if it's unsafe outdoors!
 - a. Develop an [Air Quality Policy \(TriathlonBC\)](#)
 - b. Monitor the air quality in the area; make sure your organization uses this information to guide events or training sessions:
[Air Quality Health Index \(Government of BC\)](#)

**MAKE SPACE
AVAILABLE FOR
PEOPLE TO
GET AWAY FROM
HEAT OR SMOKE**



- c. Ensure that staff know the signs of heat stress and what to do: [How to Beat the Heat: A Guide for Coaches and Parents](#) and [Know the symptoms of heat & smoke exposure \(Government of Canada\)](#)

Facilities

4. Have access to drinking water and shade for staff, volunteers, clients and/or participants.
 - a. [Health and safety resources for wildfire season \(WorkSafeBC\)](#)
 - b. [Heat stress \(WorkSafeBC\)](#)
 - c. [How to Beat the Heat: A Guide for Coaches and Parents](#)
5. Here is a resource with guidance for facilities providing cleaner air space in the community.
 - a. [Guidance for Cleaner Air Spaces during Wildfire Smoke Events \(Government of Canada\)](#)

Communications

6. Be ready with clear communication to ensure that staff, volunteers, clients, athletes and community members know the risks of exposure to heat, sun and smoke, how they can mitigate those risks and where to find information if there are any changes in programming. Here are some useful resources for distribution:
 - a. [Sun safety basics \(Government of Canada\)](#)
 - b. [Personal strategies to mitigate air pollution exposure \(CSEP\)](#)
 - c. [Wildfire smoke 101: Combined wildfire smoke and heat \(Government of Canada\)](#)
 - d. [How can you mitigate exposure to air pollution during exercise? \(University of the Fraser Valley\)](#)
 - e. A social media toolkit, which includes graphics as well as messaging for extreme heat days or smoky days is available for use at [this link](#).

Heat and Smoke Safety Checklist

This checklist is a starting point to create heat and smoke safety guidelines for your organization. Guidelines should aim to keep your employees, volunteers, clients, and participants safe by minimizing their exposure to extreme heat or wildfire smoke. Each organization, community and population group have different needs, so treat the following checklist as a template that can be customized.

1. Location



- Use AQHI to monitor air quality before and during events, and plan accordingly
- If the AQHI value is between 4 to 6 (moderate risk), plan a modified version of the outdoor activity*
- If the AQHI value is over 7 (high risk), move practice indoors or reschedule the activity for when the forecasted value is low

2. Shade/shelter

- Move practice indoors where there's cooler, cleaner air
- Have the event indoors where there's cooler, cleaner air instead of outdoors in the event of extreme smoke or heat
- Train or host games where there is ample shade
- Check participants for signs of heat illness in warmer conditions.



3. Schedules



- Can you schedule training or games when it's cooler (mornings)?
- Can you schedule training or games when it's less smoky?
- Can you shorten training sessions?
- Do you have a cancellation policy that you can share with staff, volunteers, clients, athletes, participants, and parents?

4. Access to water

- Ensure everyone (staff, leaders, volunteers, coaches, athletes, and participants) has access to water at your facility
- Ensure staff, leaders, volunteers, coaches, athletes, and participants know where to get water if they are outdoors
- There are flexible hydration breaks in hot weather conditions
- Provide reminders to bring a water bottle



5. Education and information

- Share resources with your staff so they can prepare for extreme weather events and can minimize their own risks
- Share resources with your clients/athletes/participants/parents so they can also work to minimize their risks
- Share and display prominently Information such as the current UV Index score and AQHI during periods of extreme weather
- Create a venue-specific orientation map of the local facilities that depicts places such as shady areas, water dispensers, bottle filling stations, defibrillators and first-aid stations.



6. Access to clean air

- Extend facility hours so more community members can have access to cleaner, cooler air
- If possible, offer "low cost" days to lower cost barrier for some community members



7. Outdoor practice/events



- If training or games must be outdoors, make sure you remind athletes, camp participants and their families to bring masks to minimize their air pollution exposure
- Make sure you have masks/respirators available to coaches, staff, and clients to purchase at a reduced cost or for free, where possible
- When the UV Index is 3 or higher, remind participants to protect your skin as much as possible e.g., Using sunscreen labelled "broad-spectrum" with an SPF of at least 30; where possible, wearing light-colored, long-sleeved shirts, pants, a wide-brimmed hat; wearing sunglasses that provide protection against both UVA and UVB rays
- During periods of extreme heat, try not to schedule outdoor events in the hottest hours of the day (typically between 11:00 am and 6:00 pm) when the sun's rays are at their strongest or any time when the UV Index is forecast to reach 3 or higher
- Check on participants regularly to ensure their health and safety.

References

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