



Guidance for community cooling centres in the context of COVID-19

August 10, 2020

Extreme hot weather can pose a serious and immediate health threat. Risk of illness due hot weather is much higher than risk of illness due to COVID-19 when community transmission is low.

This guidance document is intended to help municipalities establish and run emergency community cooling centres during the COVID-19 pandemic. It may also be a useful resource for other types of operators, including community-based organizations and housing.

The guidance provided here may change as the regional or provincial situation changes, and as new scientific information becomes available. Refer to BC Centre for Disease Control website (www.bccdc.ca) for updates.

Introduction

Overheating during extreme hot weather can lead to dangerous health conditions [such as heat exhaustion and heat stroke](#). Some people are more susceptible to hot weather, including older adults, infants and children, those with chronic diseases, outdoor workers, and marginalized populations.

The best way for everyone to prevent adverse health effects associated with hot weather is to stay inside or seek cooler spaces.

Community cooling centres provide a comfortable environment during extreme hot weather, but steps should be taken to reduce risk of COVID-19 transmission in centres during the pandemic. These guidelines include general considerations that apply to all types of cooling centres, and more specific considerations for four different types of cooling centres:

1. Indoor spaces with *central* air conditioning
2. Indoor spaces with *portable* air conditioning
3. Indoor spaces with *no* air conditioning
4. Outdoor cooling centres

In addition to these guidelines, each community location should develop and document its own [COVID-19 Safety Plan](#) using [tools and strategies for safer operations during the COVID-19 pandemic](#) as recommended by the BCCDC. All staff and volunteers should be familiar with the COVID-19 Safety Plan, which must include information about staying home when they have any symptoms of COVID-19, even if the symptoms are mild.



Staying Cool

Overheating occurs when normal human body temperature cannot be maintained. There are two important strategies for staying cool during hot weather:

1. Create cooling spaces with ambient temperatures within a comfortable human range, usually lower than 26°C.
2. Maintain healthy body temperature by hydration and evaporative cooling through the skin.

The human body cools itself by sweating, so drinking lots of water is critically important during hot weather, even for those who do not feel thirsty. Sweat provides the most effective cooling when air from a natural breeze or a fan moves over the skin and evaporates the moisture. Applying water directly to the skin using a sprayer, a wet towel, or a wet shirt can also help to promote evaporative cooling, especially in situations when the ambient temperature is high. Other tips to beat the heat during COVID-19 can be found [here](#).

COVID-19 Safety Considerations for all Cooling Centres

Cooling centres can bring together large groups of people in a time when bigger spaces and fewer faces are needed. General public health COVID-19 safety principles apply during the setup, operation, and take down of cool spaces.

How a cooling centre looks, operates, and feels ensures that all visitors will feel safe to seek heat relief when they need it, including those with physical, mental, or communication barriers.

The following precautions should be in place to reduce risk of COVID-19 transmission among visitors and staff:

- **Be aware of COVID-19 symptoms:** Post [signs](#) outside the cooling centre asking people to not enter if they are sick or are required to self-isolate. Refer anyone who self-identifies with symptoms consistent with COVID-19 to the [COVID-19 Self-Assessment Tool](#) or 8-1-1 for further information.
Please note that the early signs of heat stress, such as headache, fatigue, and elevated body temperature, are similar to those of COVID-19 and people who self-identify with such symptoms should not be denied access. Instead, they should be asked to wear a mask and should be physically distanced from other users. Elevated body temperature due to heat stress may take up to 30 minutes to normalize in a cool environment. If body temperature does not normalize, additional assessment may be needed.
- **Provide more space:** Opening larger cooling centres and more locations will help to reduce crowding. Staff and volunteers should know the locations of other cooling centres nearby, so they can direct visitors if maximum capacity is reached. Municipalities may consider partnering with other businesses and organizations for alternative cooling sites.
- **Maintain physical distance:** A distance of two metres between people who are not part of the same group is ideal. Separate furniture so that people are not oriented face-to-face and are not sitting near fans or air conditioners that could blow air from one person to another. Consider installing a TV and having visitors facing in the same direction, or offer free WiFi access so that socializing with other visitors is not the only form of entertainment.



- **Moderate the number of visitors:** Determine the safe occupancy of the space depending on its size and layout, then post the maximum capacity outside the centre and in any online information. Use personnel to moderate how many people may enter the space while maintaining appropriate physical distance. Within the space, also determine limits for the number of people in washrooms or other rooms and post [signs](#) that indicate occupancy limits for rooms. Floor decals or directional signs can help ensure spacing while people gather.
- **Maintain records:** Ask people to register with a name and phone number at the time of entry, but not as a barrier to access. Tell visitors that in the case that a COVID-19 outbreak occurs, collecting contact information will help public health tracing. Create a data handling protocol to ensure the privacy of users and keep records for at least 30 days. Consider the use of [physical barriers](#) at the point of registration.
- **Promote hand hygiene:** Hand hygiene facilities and [posters](#) should be available at the entrance, exits and throughout the space. Washrooms should remain open to visitors. Washing hands with soap and water is best, but if not available use hand sanitizer with at least 60% alcohol.
- **Establish enhanced cleaning protocols:** Routine cleaning should be conducted daily, with enhanced cleaning of high-touch surfaces (e.g. washrooms, drinking fountains, tables, chairs) at least twice daily. Follow [BCCDC cleaning and disinfecting recommendations](#) and choose furniture that can be easily cleaned. All recycling and garbage bins should be lined with plastic bags.
- **Consider the role of masks:** When recommended distancing measures are applied, there should be limited contact between individuals, and visitors should be allowed to choose whether to wear non-medical masks or face coverings as an additional layer of protection. Masks should not be worn by young children, anyone who has trouble breathing, or anyone who cannot remove the mask without assistance.

Specific Technical Guidance for Different Types of Cooling Centres

Indoor spaces with central air conditioning

Large facilities with mechanical heating, ventilation, and air conditioning (HVAC) systems are the best option for indoor cooling during COVID-19. It is very important to ensure that the HVAC system is operating properly, as poor ventilation is a risk factor for COVID-19 transmission.

- Consult with HVAC professionals to ensure that the system is working properly prior to establishing the cooling centre.
 - Reduce air recirculation and increase the fresh air intake as much as possible while maintaining comfortable indoor temperature and humidity.
 - Check to assure that fresh air dampers are operating properly.
 - Leave the ventilation system fans running to keep the air fresh – turn them *down* rather than *off*, to save power when the space is unoccupied.
 - Keep areas near HVAC air supply and exhaust clear of people and objects.
- Consider using passive methods such as outdoor awnings, shades, window films, or greenery to reduce cooling costs by limiting heating by direct sunlight.



Indoor spaces with portable air conditioning

Portable air conditioners can be used to provide cooling in smaller spaces with adequate mechanical ventilation. They should not be used in spaces without mechanical ventilation, as they may lead to recirculation of the COVID-19 virus when doors and windows are closed.

- Follow the same HVAC guidance provided above.
- If purchasing new air conditioning units, consider the similarities and differences between single and dual hose units:
 - Both types intake, cool, and recirculate air from the room. Mechanical ventilation is required to introduce adequate fresh air into the room.
 - Neither type is typically equipped with high efficiency (HEPA) air filters.
 - Single hose units use air from the room to maintain their internal temperature, and then vent that air outdoors. This creates negative pressure and leads to air from outside of the room being drawn in to replace the air that has been lost.
 - Dual hose units use outdoor air to maintain their internal temperature, and then vent it back to the outdoors. This leads to slightly more recirculation of air in the room, because air from outside of the room not being pulled inwards.
 - In general, dual hose units cool more effectively and single hose units use less energy.
- Direct airflow from the air conditioner away from people, so that respiratory droplets from one person cannot be carried into the breathing zone of another person.
- Seating should not be arranged near the air conditioner.

Indoor spaces without air conditioning

Some indoor spaces without mechanical ventilation or air conditioning can be effectively cooled with natural ventilation and fans.

- Choose a space that is naturally cooler, such as a well-ventilated basement or north-facing room, preferably with high ceilings.
- Choose a space that has windows and doors on multiple walls, to increase the natural cross breeze.
- Open windows and doors as much as possible.
- Use outdoor awnings, shades, or greenery to reduce direct sunlight coming through the windows.
- Use ceiling or oscillating wall fans to direct air downwards.
- Avoid pedestal, tabletop, and floor fans that could circulate respiratory droplets at breathing height.
- Avoid power breezers, blowers, or air conditioning units with strong, horizontal airflow across the breathing zone.
- Consider evaporative (swamp) coolers when the relative humidity is lower.

Outdoor spaces

Risk of COVID-19 transmission is lower outdoors than indoors, which makes outdoor cooling areas an attractive option during the pandemic.



- Whenever possible, choose an area that is:
 - Shady and breezy throughout the day.
 - Surrounded by large trees and other vegetation, which provide shade and evaporative cooling.
 - Away from heavy traffic, to reduce urban heat, and air and noise pollution.
 - Near natural or constructed water features such as oceans, lakes, rivers, streams, large fountains, or [spray parks](#).
- Ensure that water for drinking and cooling is easily accessible:
 - Nearby washrooms facilitate hand hygiene and water access. Remember to post maximum recommended capacity signs.
 - Nearby water fountains provide drinking water and cooling water that can be used to spray on, soak towels or clothing.
 - Consider establishing sprinklers.

Other Considerations

Humidity

Higher humidity affects evaporative cooling, which makes hot weather more uncomfortable. The [humidex](#) value is often reported in Canada. Cooling options with air conditioning offer the best protection when the reported humidex is greater than 40°C.

Wildfire smoke

Hot and dry weather is often associated with wildfires in British Columbia. Extra considerations are needed for cooling centres under smoky conditions during the pandemic:

- Indoor spaces without air conditioning and outdoor spaces should not be used.
- Indoor spaces with mechanical ventilation should consider increasing air filtration by the air handling units in the HVAC system. Filters with a minimum efficiency reporting value of 13 or higher are recommended whenever possible.
- Supplementary air filtration with portable air cleaners should be considered, especially in smaller spaces using portable air conditioners.
- Only well-fitted certified N95 respirators provide effective protection from the particles in wildfire smoke. Non-medical masks and face coverings offer limited protection.

Legionella

The bacteria that cause Legionnaires disease can grow in stagnant water. Follow guidance provided by [WorkSafeBC](#) for proper maintenance of hot and cold water systems, including all cooling towers, piping, faucets, shower heads, ice machines, and decorative water features.



Frequently Asked Questions

What is the most important thing to consider when opening cooling centres during the pandemic?

- Cooling centres provide heat relief, especially for vulnerable individuals. Extra risks due to COVID-19 can be managed with precautions. Extreme hot weather can pose a serious and immediate health threat. Risk of illness due to hot weather is much higher than risk of illness due to COVID-19 when community transmission is low.

What kind of cooling devices should be used, and what kinds should be avoided?

- Central air conditioning should be prioritized over portable air conditioning. If portable air conditioners must be used, they should only be used in facilities with mechanical ventilation to provide fresh air. Without mechanical ventilation, portable air conditioners will simply recirculate the air in a room with doors and windows closed, which can lead to higher risk of COVID-19 transmission.
- Ceiling and wall fans that blow air downwards are better than floor, pedestal, and table fans that may blow respiratory droplets from one person into the breathing zone of another person.
- Power breezers, blowers, or air conditioning units with strong, horizontal airflow across the breathing zone should be avoided.
- Evaporative foggers and misters can provide effective cooling when the humidity is low.

What kind of features should be avoided?

- Spaces that are too small for adequate physical distancing.
- Seating such as picnic tables, where people who are not in the same social circle are sitting directly across from each other.
- Seating that is too close to fans or air conditioning units.
- Spaces with no running water for hand hygiene, drinking, and evaporative cooling.

What if there are more people in need than the maximum capacity of the cooling centre?

- When community transmission of COVID-19 is low, heat is a bigger health risk for most people.
- Refer individuals to other nearby cooling centres whenever possible.
- Occupancy limits should not be used to deny access, but they should be used to guide management of the cooling centre.
- If the cooling centre is beyond the maximum capacity designed to support physical distancing, non-medical masks and face coverings should be used to help reduce the COVID-19 risks. Cooling centres should keep a supply of disposable masks available for such contingencies.
- Some private facilities or housing complexes may be able to establish their own centres using resources available from [BC Housing](#) (video; 1:17:02).

What can be done for people who are currently infected with or recovering from COVID-19?

- People infected with or recovering from COVID-19 may be more vulnerable to heat stress.
- Those who are recovering from COVID-19 can attend cooling centres if they meet the requirements for [ending isolation](#).



- Those currently infected with COVID-19 should be supported in their own homes.
- Family and friends should check in with COVID-19 patients via telephone to ensure that they are able to cope with heat. It may be necessary to supply cooling equipment to those who cannot leave their home, including patients with active infections, people who are recovering, and those who are self-isolating for other reasons.
- People who are unsheltered should refer to the BCCDC's website for assistance or call 1-888-COVID19 (1-888-268-4319).

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