

COVID-19 health and safety

Designing effective barriers

To help prevent the spread of the virus that causes COVID-19, employers must implement measures to reduce the risk of person-to-person transmission. Employers must also implement effective cleaning and hygiene practices. The first and most effective way to prevent person-to-person transmission is to ensure that sick workers remain at home and that public health measures are applied consistently and correctly.

This document was developed from [research](#) produced by the [National Collaborating Centre for Environmental Health](#), which may be reviewed for more detailed guidance.

When to use barriers

Barriers can help prevent the spread of COVID-19 by blocking the rapid exchange of respiratory particles that occurs when two people interact. Barriers should be used in conjunction with masks, which reduce the emission of respiratory particles, and also with adequate ventilation to prevent the accumulation of respiratory particles over longer periods.

As an employer, you should consider barriers for jobs in which workers will have numerous contacts with people whose health status is unknown, especially if they are not adequately masked. Examples where barriers might be useful include retail checkouts or kiosks.

As a protective measure, barriers may be preferable to masks in some circumstances because of the following:

- Their effectiveness doesn't rely on correct usage, as is the case with masks.
- They don't need to be continually supplied.
- They protect people on both sides of the barrier from breathing the other person's respiratory emissions.

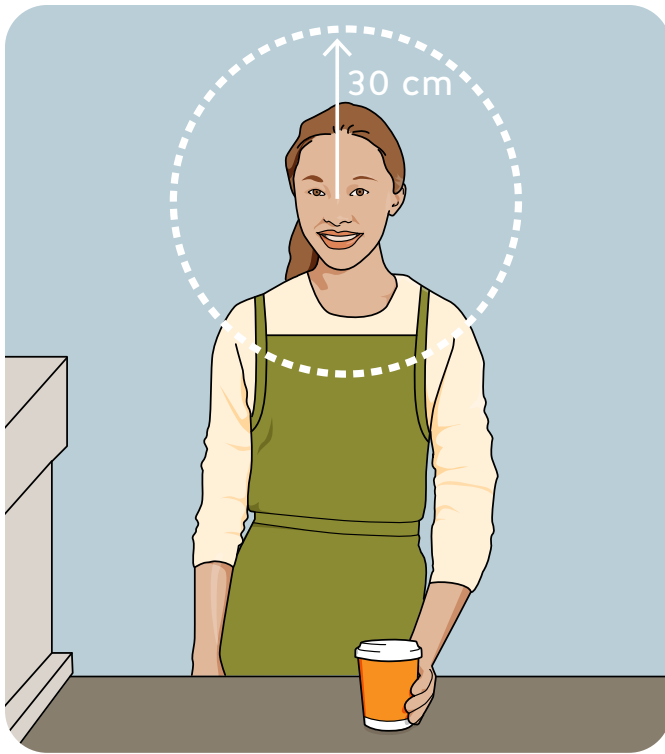
- They can serve as a visual reminder of physical distancing requirements.

Materials and dimensions

Barriers can be made of any material that blocks the transmission of air. For many work tasks, barriers need to be transparent. Transparent barriers can be made of plexiglass, acrylic, polycarbonate, or similar materials. Opaque barriers may work for some applications, such as cubicles.

Barriers must be large enough to create an effective barrier between the breathing zones of the people on each side. A person's breathing zone has a diameter of about 60 cm (24 in.), which means it extends 30 cm (12 in.) in every direction from the person's nose.

A barrier should be positioned to accommodate the heights of the tallest and shortest people who will likely be near it. If one person is standing and the other is seated, the barrier should extend 30 cm (12 in.) below the seated person's nose and 30 cm (12 in.) above the standing person's nose. Barriers should also be wide enough to account for the normal movement of both people.



A person's breathing zone extends about 30 cm (12 in.) in every direction from that person's nose.

If a barrier needs an opening to pass documents, money, or other materials, that opening should be positioned so that it is out of the breathing zone of both people.

Barriers should not be designed or installed in such a way that they impede ventilation in the room.

Installation

Some barriers are free standing and supported by brackets, wings, or side panels. You can also hang barriers from the ceiling or fasten them to walls, desks, or counters. When installing barriers, ensure the following:

- Free-standing barriers are stable so they won't fall and injure anyone.
- Hanging barriers won't swing, which can waft air from one side of the barrier to the other.
- The barrier won't hinder a person's escape in case of emergency.

When installing barriers in vehicles, ensure the following:

- Barriers must be installed in such a way that the vehicle remains in safe operating condition in accordance with [B.C.'s Motor Vehicle Act Regulations](#), [Canada's Motor Vehicle Safety Regulations](#), Occupational Health and Safety Regulations [4.3](#) and [17.8](#), and the [Passenger Transportation Act](#) as applicable. Identify and consult any applicable standards or codes before making any modifications to a vehicle.
- The barrier is not mounted rigidly on the vehicle or in any way that might injure someone or become a projectile in the vehicle in the event of an accident or other unexpected event.
- The barrier will not create a tripping hazard or impede occupants' entry or exit, including through a secondary exit in the event that their door becomes unusable.
- The barrier doesn't hinder the driver's vision, impede passenger safety, or obstruct the safe operation of the vehicle.

Cleaning and maintenance

Your [cleaning and disinfecting](#) process must include your barriers. The entire barrier needs to be cleaned regularly to prevent the accumulation and transmission of contaminants. Barriers with openings that people pass materials through should be included in your inventory of commonly touched surfaces and cleaned more frequently. Follow the manufacturers' instructions for both the barrier and the cleaning product used, to ensure they do not damage or degrade the barrier.

Let's all do our part

When workplaces in British Columbia are healthy and safe they contribute to a safe and healthy province. For more information and resources on workplace health and safety visit worksafebc.com.