

## Cooling Indoor Spaces Without Air Conditioning

Severe heat may cause illness or even death. When temperatures rise to extreme highs, you can reduce risks by taking steps to create cooling even when air conditioning is not available. This cooling can be accomplished in a manner that minimizes pushing air across the breathing zone of building occupants, which reduces the risk of spreading airborne diseases.

This document provides tips on creating cooler indoor air in a safe manner by opening windows, using fans, pulling window shades, and limiting use of heat-generating equipment. We discuss each of these approaches below.

### Pull Shades to Block Sun and Incoming Heat

- Pull the shades on any windows that get sun, including doors with windows. Keep shades pulled from early in the morning until sunlight is no longer hitting the window.
- Open shades at night, which allows windows to radiate heat outward.
- When selecting shades, choose light colors because they are more effective at reflecting visible wavelengths of light that generate heat. Also choose shades that completely cover the window or door and have a close fit.

### Use Fans to Create Cooling

- Air movement through a window can be enhanced by positioning a box fan in the window to blow exhaust air out and leaving an adjacent window open. This will cause cooler air to move in as shown in the picture.
- Position portable fans either at knee level, or at the top of the room (ceiling fans are a good option). It is important to position fans where they will not directly blow air across the breathing zone of room occupants.
- **Fans will only provide cooling if the air temperature is less than body temperature (about 99 degrees Fahrenheit).**



### Open Windows to Create Cooling

- Open windows when the outside air temperature is cooler if the air quality is safe.
- An open window is most effective when a door or additional window can be opened to provide a cross draft.
- As soon as the outside air becomes warm, close windows and use fans to move around the cooler inside air.

## Limit Use of Heat-Generating Equipment

- Many electronics produce heat. Limit use of cooking equipment, computers, printers, and lights to the extent possible during periods of extreme heat.
- When possible, replace incandescent bulbs with LED bulbs which produce minimal heat.

## Other Considerations

- If fans are at knee level, it is important to make sure floors are mopped or vacuumed daily to help decrease the circulation of dust settled on the floor.
- If fans are used in congregate areas where people are not wearing masks, consider placing portable air purifiers (HEPA units) in the area.
- Fans should be cleaned at least weekly; cleaning should include a wipe-down of fan blades where dust accumulates.
- For guidance on safe ventilation practices to prevent the spread of COVID-19, see DOH's [Ventilation and Air Quality for Reducing Transmission of Airborne Illnesses \(PDF\)](#).
- If your facility can purchase portable room air conditioners this is a preferred alternative to opening windows and using fans when outside air quality is poor. See the [Department of Energy's information on selecting Room Air Conditioners](#).
- During wildfire smoke events follow the [Improving Ventilation and Indoor Air Quality - Recommendations for Schools and Buildings with Mechanical Ventilation \(PDF\)](#).

For more information on these precautions, see the [Hot Weather Safety](#) information online.

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