



NOISE POLLUTION

A fact sheet series for child care facility operators, architects, and designers

What is noise pollution and why is it a health and safety concern?

Noise pollution is unwanted or objectionable environmental sound. Sources include construction, commercial and/or industrial activity, and transportation (such as airplanes, trains, boats, and vehicles). Generally, the heavier and faster vehicles go and the more stops and starts they make - the noisier they are. Major roadways, truck routes, intersections, steep hills, and loading areas are particularly loud locations.

Noise pollution may increase the risk of stress-related chronic diseases such as ischemic heart disease and hypertension in adulthood. At child care facilities, noise pollution may interrupt children's sleep which is important for growth and cognitive development. It may impair staff's communication with children, posing safety risks.



What facility design factors help to provide quiet spaces for children?

Outdoor space:

- Locate the outdoor play space on the side of the building away from noise sources.
- Install landscape noise buffers and other noise barriers to reduce noise exposure in outdoor and indoor spaces (*more information sources at the end*).

Indoor space:

- Design the building layout and orient the rooms to keep sleeping and play areas far away from noise sources.
- Orient windows and the childcare space rooms away from local noise sources or add wing walls.
- Insulate the building and install sound-insulated windows and façade.

What operational strategies can I use to provide quiet spaces for children?

- Use the quietest space available.
- If keeping windows closed is a noise management strategy, ensure comfortable indoor air temperatures are maintained.

We do not recommend noise assessment without sufficient cause for concern as it can be complex and requires significant expertise and expense. Portable noise measuring devices available for consumer purchase are not yet reliable devices.

Note that there are considerations related to air quality and heat addressed in two other fact sheets in this series, including: **TRAFFIC-RELATED AIR POLLUTION and **EXTREME HEAT**.*

For additional information and fact sheets, visit:

- World Health Organization (WHO) – [Guidelines for community noise](#) (1999)
- WHO – [Environmental noise guidelines for the European region](#) (2018)
- Toronto Public Health – [How loud is too loud? Health impacts of environmental noise in Toronto](#) (2017)
- US Department of Transportation – [The audible landscape: A manual for highway noise and land use](#) (1974)

DID YOU KNOW...?

Maximizing the distance from and minimizing the exposure to local noise pollution sources for infants and children is a good way to protect them from the potential adverse effects of noise pollution.