

## Reducing Exposure to Traffic-Related Air Pollution

### Air Quality and Health in Toronto

Over the past decade, air quality in Toronto has improved. Policies and programs implemented at all levels of government over the past decade to reduce emissions have led to downward trends in pollutant emissions, ambient air pollution levels, and related health impacts. However, air pollution still poses a significant burden of illness in Toronto, and there is still much work to be done to reduce emissions that are harmful to health.

The biggest local source of air pollution is motor vehicle traffic. Exposures to traffic-related air pollution (TRAP) are highest near highways and busy roads, and studies of people living close to roads find higher risks of health outcomes typically associated with exposure to air pollution, including a range of breathing problems, heart problems, cancer, and mortality. New research also suggests that TRAP could increase risks of other diseases such as dementia. People who are especially vulnerable to TRAP include children, the elderly, and people with certain pre-existing medical conditions who live, work, play or commute near major roadways.

### Reducing risks from traffic-related air pollution (TRAP)

Toronto Public Health and the City of Toronto continue to work with partners to reduce emissions from vehicles, by advocating for tougher emissions standards and better fuel efficiency, supporting changes to our city infrastructure that encourage people to walk, bike, or take transit instead of driving, and exploring technologies and practices that reduce congestion.

At the same time, there are opportunities for people who live, work, and play near busy roadways to reduce current exposures to traffic-related air pollution. Some actions are easier to take than others, and not all will work for everyone. Each one offers opportunities to reduce your risk, and combining actions is even better for your health.

#### Reduce exposure to traffic-related air pollution outdoors

Torontonians are exposed to traffic pollution while travelling to and from their daily activities. These exposures can occur while walking, cycling, or riding in a vehicle. For drivers, exposure can be effectively reduced in a variety of ways:

- ensuring vehicles are equipped with air intake filters
- closing car windows and using the air recirculation setting in heavy traffic
- when possible, avoiding travel during rush hour, and
- maintaining your distance from the vehicle in front of you to avoid high levels of pollution

Most literature suggests that the benefits of physical activity outweigh the risks associated with exposure to air pollution. If you are walking, cycling, or exercising, you can reduce your exposure to air pollutants by:

- choosing alternate walking or cycling routes, away from busy roads
- exercising indoors or reducing the intensity of exercise when pollution levels are high
- exercising in parks and green spaces, away from major roads
- avoiding exercise in times of peak traffic or during poor air quality events
- using the AQHI (see below) to make informed decisions on when to exercise

The Air Quality Health Index (AQHI) is a tool that measures air quality in terms of health. You can use the Index to check the health risk level in your community before heading outdoors. The AQHI provides a number from 1 to 10+ to indicate the level of health risk associated with local air quality. The higher the number, the greater the health risk and the need to take precautions. If you check the AQHI regularly, you will get to "know your number" – the AQHI number that means you may start to feel unwell. This is especially useful for people with breathing conditions.

Further information about the AQHI can be found at the [Toronto Public Health website](#).

You can also reduce your personal contribution to TRAP by doing the following:

- walking, cycling, using public transit, or carpooling when possible
- driving low emission or fuel efficient vehicles
- reducing fuel consumption and emissions by maintaining the vehicle and its engine, and
- not idling your vehicle, driving at a steady speed, and avoiding rapid acceleration

#### Reduce exposure to traffic-related air pollution at home

There are many different types of homes in Toronto. Measures to control the amount of TRAP have to be adapted to the type of home or building. Typically outside air is brought into buildings by opening windows or doors, or by a ventilation system that takes outside air and distributes it through the home. If you live near a busy traffic corridor, a mechanical ventilation and air filtration system can effectively prevent traffic emissions from entering the building. You may be able to coordinate the timing of your air intake to correspond with times of lower traffic.

Many newer buildings have filters as part of the mechanical air system. The ability of filters to remove air pollutants is related to their Minimum Efficiency Reporting Value (MERV) rating. Typically, higher MERV rating means better particle removal. TPH recommends that you use the highest rated MERV filter that is suitable for your building's air handling system. When changing your filter, always follow the manufacturer's directions. Further information about ventilation and filtration and how they can control traffic pollutants in your home can be found at the [US Environmental Protection Agency website](#).

Some buildings do not have central ventilation and filtration systems and instead rely on air being supplied through open windows or doors. For all types of buildings, you can reduce the infiltration of traffic pollutants by keeping your windows and doors closed during peak traffic times and when air quality is poor. You can further reduce indoor TRAP by using stand-alone portable air filtration units. There are many different types available for purchase. Further information on portable air filtration units can be accessed from the [National Collaborating Centre for Environmental Health](#).

You can further improve indoor air quality by reducing air pollutants that are emitted from smoking, cooking, and the use of gas or kerosene space heaters, fireplaces, and wood and gas stoves by:

- not smoking indoors
- using stove exhaust fans that vent outside during cooking
- properly maintaining combustion equipment such as wood burning fire places and gas stoves
- limiting the burning of candles and incense, and
- avoiding the use of air fresheners and fragrant consumer products

### **Who can I contact if I am concerned about my exposure to TRAP?**

If you have specific health concerns related to your exposure to traffic pollution contact your primary health care provider. For general questions about traffic pollution and health and how to reduce your personal exposures, please contact Toronto Public Health at 416-338-7600.