

## Fact Sheet

# Smog and Children

### What is smog?

Smog is a brownish-yellow, hazy cloud of air pollution that can sometimes be seen over the city on hot summer days. Smog forms when heat and sunlight react with gases and fine particles in the air. The word *smog* comes from the words "smoke" and "fog".

#### **Smog can:**

- Cause difficult breathing conditions
- Cause eye, nose and throat irritation
- Cause wheezing, coughing and shortness of breath
- Lower resistance to infections
- Worsen heart and lung conditions

### Where does smog come from?

Smog comes from many sources, including:

- Gasoline and diesel cars, trucks, and buses
- Factories and utilities
- Oil-based paints, solvents and cleaners
- Pesticides
- Road paving (asphalt) and construction
- Lawnmowers
- Barbecues

The most harmful components of smog are ***ground level ozone*** and ***fine airborne particles***.

***Ground level ozone*** forms when pollutants released from gasoline and diesel powered vehicles, and oil-based paints, solvents and cleaners react with heat and sunlight.

***Fine airborne particles*** come from many sources, including factories, wind-blown dust from construction sites and roads, and vehicle exhaust.

## **How can smog affect the health of my child?**

Children are more likely to experience respiratory effects from smog such as wheezing, coughing and shortness of breath, because:

- Children breathe in more air than adults and they breathe faster than adults, especially during strenuous activity and play.
- Children tend to breathe through their mouths and by-pass the natural filtering system in the nose. This allows large amounts of polluted air to get directly into their lungs.
- Children spend more time outside than adults.
- Smog increases a child's risk of getting sick. Children are more susceptible to infections than adults; smog reduces the respiratory system's ability to fight infection and remove foreign particles.
- Smog can worsen the symptoms of childhood asthma and allergies.

## **How do I protect the health of my child on a Smog Alert day?**

- Reduce your child's outdoor work, play or exercise.
- Children with asthma and allergies should avoid being outside.
- Plan activities for your child that can be done indoors in a cool, well-ventilated place.
- If your child must be outside, try to schedule his/her activities for early in the morning when pollution levels are lowest.
- If your child must be outside, avoid peak rush hour times and being around high traffic areas to reduce the exposure to smog.
- Avoid the sun and make sure that your child drinks plenty of water or natural juice.
- If your child experiences symptoms such as tightness in the chest, coughing or wheezing, see your doctor or call 911 for emergency medical care.

## What is a Smog Alert?

The Provincial Ministry of Environment monitors the air we breathe and provides a rating on how clean the air is. The Ministry of Environment and Environment Canada issue an **Air Quality Advisory** when the **Air Quality Index** exceeds **50** due to ground level ozone.

Public Health monitors Air Quality Advisories issued by the Ministry of Environment.

When the Ministry of Environment issues an Air Quality Advisory because the Air Quality Index will exceed 50 due to the ground level ozone, the Medical Officer of Health calls a ***Smog Alert***.

## What can I do about smog?

Everyone can help reduce smog and make the air we breathe cleaner. Take these clean air actions every day if you can, but especially on *Smog Alert* days.

- Reduce car use, take public transit, car-pool or walk.
- If you must drive, keep your car engine in good repair, and avoid any unnecessary vehicle idling.
- Set the temperature on your air conditioner warmer.
- Do not use pesticides or oil-based paints, solvents and cleaners.
- On *Smog Alert* days take a break. Don't mow the lawn.
- Refuel the car in the evening after the sun has set and the air has cooled. Vapors that escape while gasoline is being pumped contribute to smog.

## Where can I get more information?

For more information about smog conditions, watch for pollution reports in the media or visit the Ministry of Environment site at [www.ene.gov.on.ca](http://www.ene.gov.on.ca).

For information about the *Toronto Smog Alert Response Plan*, visit the City of Toronto website at [www.city.toronto.on.ca](http://www.city.toronto.on.ca).