

FACT SHEET:

children and their environment



From birth to adolescence children are at an increased risk from environmental hazards compared to adults in the same environment.^{1,2}

For young children (0-4 years) exposure to the environment is one of the top 10 causes of injury that results in transportation to hospital by ambulance.³

The risks^{1,2}

Main exposure pathways:

- Ingestion – swallowing
- Inhalation – breathing
- Dermal contact – touching.

Unique exposure pathways:

- In the womb, toxic agents can cross the placenta.
- Pollutants can pass into a mother's milk
- Specific behaviour according to age group or circumstance, for example, crawling.

Young children like to put almost everything they see and touch into their mouths. This places them at high risk of exposure to pollutants found in air, water and food in the places that they spend most of their time, including:

- home and surroundings
- childcare
- school
- playgrounds and recreational areas.

Health effects in children^{1,2}

Exposure to chemicals early in life can have consequences later in life, during childhood or even into adulthood – asthma, chronic bronchitis and some cancers are linked to exposures to air pollutants early in life. Wheezing and asthma are more common in children whose mothers used more cleaners and household chemicals during pregnancy.

Prevention

Be aware of your child's environment even before they are born. The best way to reduce exposure to chemicals is to keep them out of your surroundings.

For many products – cleaning products particularly – less toxic alternatives or methods are available. For example, substitute white vinegar for bleach. Always wash fruit and vegetables. Get into the habit of washing hands, toys and surfaces around the home.

Is the exposure worth it?

The choices we make as consumers, parents and childcare providers can make a difference in environmental exposures children face. Please take time to understand potential exposures and how children in your care can avoid them.

The breathing zone of a small child is about **25 cm** above the floor, compared to an adult's breathing zone which is about **100-150 cm** above the floor.

Household testing results – conducted to measure contaminants after household pesticide use or floor cleaning – found that contaminate concentrations in the child breathing zone were **five to 10 times higher** than in the adult zone. Therefore, children are exposed to a greater amount of contaminants than adults.

Sources

1. Pronczuk-Garbino J (ed), *Children's Health and the Environment: a Global Perspective*, World Health Organization, 2005: who.int/ceh/publications/handbook/en/index.html
2. Sly PD, Flack F, *Susceptibility of Children to Environmental Pollutants*, *Annals of the New York Academy of Sciences* 2008; 1140:163-83.
3. Watt K, 2012. *Injury in Queensland – A Snapshot*, Report to the Queensland Injury Prevention Council. Anton Breinl Centre, James Cook University.