



TOOL

CHILDREN ARE NOT LITTLE ADULTS¹

WHAT KIND OF HAZARDS ARE CHILD WORKERS EXPOSED TO?

Children can be exposed to many different dangers and hazards. The field of occupational health uses the following categories:

- **Biological hazards:** dangerous animals and insects, poisonous or sharp plants, bacteria, parasites or viruses (HIV, hepatitis).
- **Chemical hazards:** toxic gases, liquids (solvents, cleaners), metals (asbestos, mercury, silica, lead), fumes (vehicle exhaust, glues), agrochemicals (pesticides, herbicides and insecticides), explosives.
- **Ergonomic hazards:** work that requires lifting, carrying or moving heavy loads, repetitive or forceful movements, or work postures that are awkward or which must be held for a long period of time.
- **Physical hazards:** extreme temperatures (hot or cold), noise, vibrations or radiation.
- **Psychological hazards:** Stress, intimidation, monotonous work, lack of control or choice, insecurity, harassment, abuse (sexual or physical violence), heavy sense of responsibility.
- **Social hazards:** isolation from peers and family, association with drugs or adult behaviour.
- **Other physical risks:** risk of falling, being struck by objects, being caught in or between objects, being cut or burned.
- **Working conditions:** long working hours, night work or work in isolation, an obligation to commute to or work in insecure areas.

WHY ARE CHILDREN MORE VULNERABLE TO WORKPLACE HAZARDS AND DANGERS?

Many people assume that the work children do is not particularly dangerous, or that workplace dangers and hazards for adults affect children in the same way. However, children are affected more significantly by the same hazards because their bodies are still growing and they are still developing socially and emotionally, which makes them more vulnerable to workplace hazards than adults.

- **Children are smaller in size and strength:** Children are often asked to perform tasks beyond their physical strength and build. Their bodies are developing throughout adolescence.
- **Children have thinner skin:** A child has 2.5 times more skin per kilogram of body weight than an adult, and children have thinner skin; both these factors can result in greater absorption of toxins. Skin structure is only fully developed after puberty.
- **Children breathe more deeply and more frequently:** A child breathes more deeply

and frequently than an adult and thus can take in more pathogens and toxic substances/pollutants. A resting child has twice the volume of air passing through the lungs compared to a resting adult over the same period.

- **Children's brains are still developing:** Brain development continues until a person is 24 years old. Alcohol, drugs, diseases, metals and toxic substances can severely harm developing brains, especially during the two critical windows of rapid brain development which take place between birth and 5 years and 9 to 14 years.
- **Children's bodies process toxins slower:** Children's enzyme systems are still in development, resulting in a lower ability of a child's body to break down toxins and other hazardous substances that they are exposed to.
- **Children's internal systems are still developing:** Gastro-intestinal, endocrine, and reproductive systems and renal function are still maturing during childhood and are therefore less efficient in breaking down hazardous agents. Moreover, exposure to toxins can also hinder the full development of internal systems. The endocrine system and hormones play a key role in growth and development and can be especially vulnerable to disruption by exposure to chemicals.
- **Children have higher energy consumption:** Because children are growing, they consume high levels of energy, water and air. As their intake is greater, they receive higher doses of whatever diseases, toxins and contaminants are present in the air, water or food.
- **Children are more likely to dehydrate:** Children lose more water per kilogram of body weight than adults, through their lungs (greater passage of air through them), skin (larger surface area) and kidneys (less able to process concentrated urine).
- **Children require more sleep:** 10- to 18-year-olds require about 9.5 hours of sleep a night for proper development.
- **Children are more sensitive to heat and cold:** Children have increased sensitivity to heat and cold as the sweat glands and thermo-regulatory system are not fully developed.
- **Physical strain can lead to injuries and impairments:** Physical strain, especially when combined with repetitive movements, on growing bones and joints can cause stunting, spinal injury and other life-long impairments.
- **Children are still developing cognitively and behaviourally:** Children's ability to assess their own safety, recognise health risks at work and take decisions about their own protection and wellbeing is still developing; younger children especially may not be able to keep themselves safe from harm at work.
- **Working children have a lower life expectancy:** While difficult to quantify, the earlier a person starts working, the more premature the ageing that will follow.

Other factors make children more vulnerable to dangers and harm during work:

- **Limited prior work and life experience** means that children are less able to make informed judgements.
- **Children have less power than adults to take their own decisions** and thus they may more easily comply with tasks that are dangerous for them.
- **They may learn incorrect health and safety behaviour** from (adult) co-workers.
- **They have little or no safety, protection or health** training, be inadequately supervised or be bullied in the workplace.

ASSESSING RISK AND VULNERABILITY

It is typically not one specific hazard or risk factor that determines the vulnerability of children, but usually several inter-related factors. For example, when a child has not eaten all day and carries heavy loads in the soaring sun, they become more at risk of exhaustion or illness. Or when children are treated harshly by their employer, they might push themselves harder and the risk of an accident increases even more. Girls and boys may face different risks as a result of the types of tasks they carry out, the circumstances at work or the way they are treated.