



The effect of second-hand smoke on children

Second-hand smoke (also called environmental tobacco smoke), affects the health of everyone – but babies, infants and children are particularly at risk. It is estimated that 28 Australian children under the age of 15 years died from illnesses related to second-hand smoke in 2004-05.¹

Impact of maternal smoking on pregnancy

Smoking during pregnancy not only affects the mother, but also impacts on the progress of the pregnancy and the development of the foetus, placenta, amniotic sac and fluid. Maternal smoking alters the blood flow to the placenta and exposes the developing baby to toxins such as cadmium, and reduces the amount of oxygen and nourishment the baby receives. Maternal smoking can cause ectopic pregnancies, spontaneous abortions and placenta praevia, and can increase the risk of a preterm birth.²

On average, babies of women who smoke are more likely to have a low birth weight (i.e. weigh less than 2500g at birth) than babies of women who do not smoke. Some people believe that a small baby will mean an easier labour and delivery. However, smaller babies are weaker, which means the delivery is very likely to take longer and involve complications, such as requiring a caesarean delivery. Underweight babies have higher rates of bronchitis and pneumonia and are more at risk of developing emotional and behavioural problems, such as hyperactivity, in childhood. Later in life, underweight babies have higher risks of developing diabetes, stroke and heart disease.³

Impact of exposure to second-hand smoke on babies

Several of the major causes of death during infancy are associated with exposure to second-hand smoke in utero (by maternal smoking) and following birth. These include infant death from low birth weight, preterm delivery and sudden infant death syndrome (SIDS). The infant mortality rate for children of smokers is 58% higher than the rate for children of non-smokers.⁴

Babies exposed to second-hand smoke are more likely to have thickening and inflammation of the airways, and are more susceptible to allergies and lung infections.⁴ Many of these conditions can persist into adulthood, regardless of later exposures, due to decreased lung function during infancy and childhood.⁴

Impact of exposure to second-hand smoke on infants and children

Infants and children are very susceptible to the effects of second-hand smoke because they breathe faster (and so take in more smoke) and their lungs are still developing. It is difficult for children to avoid exposure if their caregivers and others around them smoke.⁴

Infants and children are most likely to be exposed to second-hand smoke in the home and car. Residue from second-hand smoke is present in household dust and on surfaces, and may be present in these places for many months, thus making young infants even more susceptible, due to their contact with floors, carpets and blankets. As well, exposure to tobacco smoke adversely affects children in many outdoor settings, such as backyards, playgrounds, cafes and shopping centres.⁴ Parents' role in limiting their children exposure to second-hand smoke is crucial, as exposure to such smoke has many negative effects on children, in both the short and long term.

Respiratory illness and children

Children exposed to second-hand smoke experience a range of upper and lower respiratory illnesses and symptoms, such as colds and flu, cough, phlegm production, breathlessness, wheezing and pneumonia.⁴

The prevalence of asthma is also greater among children living in households with smokers, with the risk increasing with the number of smokers in the home.⁴ The National Health and Medical Research Council (NHMRC) has estimated that about 8% of childhood asthma cases in Australia are caused by second-hand smoke, with children of mothers who smoke more than 10 cigarettes daily being most severely affected.⁵

Infectious diseases – increased risk of meningitis and meningococcal disease for children

An increased incidence of bacterial meningitis has been reported in children from smoking households in Australia. Australian research has shown that exposure to second-hand smoke is also a risk factor for both children and young adults in contracting invasive meningococcal disease. Invasive meningococcal disease is an important cause of illness and death in children and young adults in Australia.⁴

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Other health impacts for children from second-hand smoke exposure

▶ Middle ear disease

Exposure to second-hand smoke causes middle ear disease, including acute and recurrent otitis media and chronic middle ear effusion ("glue ear"). Chronic middle ear disease is 20–50% more common in children who are exposed to cigarette smoke. Episodes of glue ear in early life are associated with hearing loss, and may lead to long-term problems with speech, and a range of developmental, behavioural and social consequences.⁶

▶ Injuries

Smoking-related injuries are common for children of smokers. There are higher risks of poisonings (children eating cigarette butts, for example) and burns, as well as an increased risk of house fires and motor vehicle accidents.

▶ Behavioural disorders

The long-term effects of exposure to second-hand smoke, including in utero, are not just physical but include behavioural problems, attention deficit disorders, hyperactivity, learning disabilities and increased risk of smoking later in life. Research shows a strong link between maternal smoking during pregnancy and attention deficit hyperactivity disorder (ADHD) and antisocial behaviour in children.² Children exposed to second-hand smoke also have double the rate of stuttering: it is believed that this occurs because of the toxins in the cigarette smoke affecting their brain function.⁷

Useful links to more information

Cancer Council NSW's Tackling Tobacco program provides resources for social and community service organisations on how to address tobacco issues and help their clients to quit smoking. Available at: www.cancercouncil.com.au/tacklingtobacco

Every parent wants the best for their children. Parents can help give their children a better, stronger and healthier start to life by limiting their exposure to tobacco smoke as much as possible.



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