



## Women and Smoking

**Tobacco smoking is the single most preventable cause of ill health and death in Australia. It is a major risk factor for coronary heart disease, stroke, peripheral vascular disease, many cancers and a variety of other diseases and conditions.<sup>1</sup> Leading health agencies around the world have also documented the adverse effects of exposure to second-hand smoke on the respiratory and circulatory systems in both adults and children, and its role as a carcinogen in adults.**

Research has found that women may be more susceptible to smoking-related diseases such as lung cancer and chronic obstructive pulmonary disease (COPD), due to a greater decline in lung function as result of smoking compared to men. Various research studies have suggested that these types of diseases are more severe and occur earlier in women because of the way their bodies react to tobacco smoking.<sup>2</sup> Smoking also causes a range of other cancers and diseases in women – including ovarian cancer and bone diseases such as osteoporosis – and it affects women's reproductive health. Smoking reduces a woman's ability to become pregnant, and exposes her to complications during pregnancy and delivery. This fact sheet explains some of the effects smoking has on a women's body, focusing on fertility and childbearing, and how important it is to encourage women to quit smoking and to live in a smoke-free environment for the sake of their health and the health of their babies.

### Infertility

Women who smoke experience a reduced rate of fertility. Overall, female smokers are on average twice as likely to be infertile as non-smokers, and female smokers may also be less likely to respond to infertility treatments such as in vitro fertilisation (IVF), having lower rates for successful fertilisation, implantation and ongoing pregnancy. Smokers are also more likely to have shorter menstrual cycles and are at higher risk of not ovulating regularly, which also reduces fertility.<sup>3</sup> Research has found that women who smoke experience earlier menopause compared to non-smoking women, and this is because the toxins in cigarette smoke affect the release of hormones in the body.<sup>4</sup>

## Miscarriage/stillbirth

Smoking has a negative impact on the health of both the mother and the unborn child. Cigarette smoke contains many potentially harmful chemicals including nicotine, cyanide, cadmium, mercury, carbon monoxide and polycyclic aromatic hydrocarbons (PAHs). Oxygen supply to the baby is reduced as a result of the carbon monoxide in cigarette smoke. Women who smoke may also be at higher risk of spontaneous abortion or miscarriage.<sup>3</sup>

Maternal smoking is associated with an increased risk of stillbirth (foetal death after 28 weeks' gestation) and neonatal mortality (death of an infant within the first 28 days of life). In Australia, babies born to mothers who smoked during pregnancy had a 50% greater risk of dying than babies of non-smoking women. As well, it is estimated that about 14% of all deaths due to low birth weight were attributable to tobacco use in pregnancy.<sup>3</sup>

Pregnant women exposed to second-hand smoke are estimated to be 23% more likely to experience stillbirth and 13% more likely to give birth to a child with a congenital malformation.<sup>5</sup>



Women who smoke may also be at higher risk of spontaneous abortion or miscarriage.



## Pregnancy and labour complications

Smoking is associated with a greater likelihood of ectopic pregnancy (the implantation of a fertilised egg occurring outside the uterus, usually in the fallopian tubes). It has been estimated that women who smoke more than 20 cigarettes a day are 4 times more at risk of having an ectopic pregnancy than non-smoking women, and the risk is still present even if fewer cigarettes are smoked.<sup>6</sup> This may occur because nicotine slows down the movement of the fertilised ovum in the fallopian tubes, or because smokers have a higher risk of developing pelvic inflammatory disease, which is also associated with ectopic pregnancy.<sup>3</sup> Ectopic pregnancies are very dangerous and are a life-threatening condition to the mother – and the baby (foetus) cannot survive.<sup>7</sup>

**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.**

Smoking also increases the chance of giving birth too early. Several of the major causes of infant death are due to 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 among children of non-smokers.<sup>3</sup> 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.<sup>8</sup> Many of these conditions can persist into adulthood, regardless of later exposures, due to decreased lung function during infancy and childhood.<sup>3</sup>

On average, babies of women who smoke are up to more likely to have a low birth weight (i.e. weigh less than 2500g at birth) than babies of women who do not smoke.<sup>9</sup> Some people believe that a small baby will mean an easier labour and delivery. However, smaller babies are weaker, which means the delivery is more likely to take longer and involve complications such as caesarean section. As well, 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.<sup>9</sup>

**Smoking tobacco and exposure to second-hand smoke are detrimental to the health and wellbeing of everyone, and have major implications for women's fertility and pregnancies, and the health of their babies.**

### Useful links to more information

Cancer Council SA'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](http://www.cancercouncil.com.au/tacklingtobacco)

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## References

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