

## Smoking and Pregnancy

Smoking is known to have an affect on babies even before they are born. Cigarette smoke contains more than 4,000 harmful substances that both you and your baby are exposed to when you smoke.<sup>1,2</sup>

### Smoking and your unborn baby

The umbilical cord is your baby's lifeline. The blood that flows through this cord gives your baby all the oxygen and the nutrients they need to grow.

When you smoke a cigarette you inhale the gas carbon monoxide.<sup>1</sup> This means that the amount of oxygen available to your baby through the umbilical cord is reduced. This makes the baby's heart beat more rapidly, and increases overall stress on its developing body. Recent research suggests that cigarettes can also reduce the flow of blood in the placenta, which limits the amount of nutrients that reach the foetus.<sup>3</sup>

### Smoking, pregnancy and birth

- Smokers have a greater risk of ectopic pregnancy (a pregnancy outside the uterus)<sup>4</sup> and miscarriage. This risk is four times greater in smokers than non smokers, and six times greater in women who smoke more than 20 cigarettes a day.
- Smokers have a higher risk of having a premature baby.<sup>5</sup>
- Smokers are more likely to have complications during the birth.<sup>5</sup>
- Smokers are more likely to have a low weight baby.<sup>6,7,8</sup> Babies born with a lower than average birth weight are at more risk of infection and other health problems. If you quit in the first 3 months of pregnancy, your risk of having a low-weight baby will be similar to that of a non-smoker.
- Having a low-weight baby does not make things easier for you or your baby at birth. A smaller baby is more likely to become stressed during birth. Labour with a small, under-weight baby is no easier or shorter than labour with an average sized baby.
- Smoking during pregnancy increases the chances of the baby dying at or shortly after birth.<sup>1</sup>

### After baby is born

- The risk of sudden infant death syndrome (SIDS, or 'cot death') is increased in mothers who smoke during pregnancy.<sup>4</sup> Babies exposed to any tobacco smoke after birth also have an increased risk of SIDS.<sup>9</sup> Keep baby smoke-free by not letting anyone smoke near your baby.
- After a baby is born, many of the 4,000+ poisons the mother inhales through cigarettes are passed on to the baby through breast milk and through passive smoking.<sup>1,2</sup>
- Babies of smokers are more likely to suffer from asthma and other respiratory infections.<sup>10,11,12</sup>

- Even in later years, children of mothers who smoked during pregnancy tend to be slightly shorter than other children and have more difficulty with reading, mathematics and related skills.<sup>13</sup>
- Babies born to mothers who smoke during pregnancy have a higher risk of developing attention deficit hyperactivity disorder (ADHD ‘a chronic condition, characterised by the symptoms of inattention, hyperactivity and impulsivity’).<sup>14</sup>

### **Breastfeeding**

Breast milk protects your baby against infection, but nicotine and other harmful substances are also absorbed by the baby through breast milk. If you are having difficulty quitting smoking, try not to smoke just before or during feeds, and always go outside to smoke. If you can't give it up completely, keep working on it. Remember, even if you do smoke, breastfeeding is preferable to bottle-feeding because of the important nutrients and protective factors in breast milk.

### **Passive smoking**

Every time someone smokes around you or your children, you are all smoking too. This is called passive smoking. Exposure to environmental tobacco smoke (ETS) can affect the health of children:

- Young children have smaller, more delicate lungs than adults. This means that they are more affected by tobacco smoke and the chemicals it contains.
- Babies of smokers are more likely to suffer from asthma and other respiratory infections.<sup>15</sup>
- Children exposed to tobacco smoke are more likely to cough during the night.<sup>16</sup> This is probably due to the long-term effect of breathing in tobacco smoke.
- The long-term effects of parental smoking around children may be slower growth<sup>17</sup>, impaired learning and changes in behaviour.<sup>12</sup>
- Babies of mothers who are exposed to passive smoking during pregnancy are, on average, smaller at birth.<sup>18</sup>

### **Nicotine replacement therapy (NRT)**

- NRT is less harmful than smoking during pregnancy and breastfeeding, as the mother and the baby receive less nicotine and no exposure to carbon monoxide and other toxic substances.
- NRT is beneficial to highly dependent smokers who are likely to have greater difficulty in quitting and who also have a greater risk of developing problems during the pregnancy and birth.
- Nicotine replacement therapy (gum, lozenge, sublingual tablet or inhaler) may be considered if a woman is pregnant or breastfeeding and is otherwise unable to quit, but it is very important to discuss this with your doctor.

### **Quit tips**

If you've decided to stop smoking:

- Call the Quitline and speak to a trained counsellor (131 848 local call cost)
- Talk to your doctor and plan a quitting strategy together. This may include using NRT.

- If your partner smokes, encourage them to consider quitting too.

### Remember

There is no safe level of smoking. Even a few cigarettes a day means your baby is exposed to poisons that might affect your baby's development and growth.

If you need help making phone calls in English, ring the Translating and Interpreting Service (TIS) on 131 450.

You can find more health information in your language on the Multicultural Communication website at <http://mhcs.health.nsw.gov.au>

Telephone numbers are correct at time of publication but are not continually updated. You may need to check the numbers in the telephone directory.

### References

1. US Department of Health and Human Services. (1989) *Reducing the Health Consequences of Smoking: 25 Years of progress. A Report of the Surgeon General*. Rockville, Maryland: US Department of Health and Human Services, Public Health Service, Centers for Disease Control, Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health. DHHS Publication No (CDC) 89-8411
2. US Environmental Protection Agency (1992) *Respiratory Health Effects Of Passive Smoking: Lung Cancer And Other Disorders*, Office of Health and Environmental Assessment Office of Research and Development U.S. Environmental Protection Agency Washington, D.C.
3. Larsen LG. et al. (2002) Stereologic examination of placentas from mothers who smoke during pregnancy. *Am J Obstet & Gynecol.* 186: 531-537
4. Winstanley M, Woodward S, Walker N. (1998) Tobacco in Australia. Facts and Issues 1995. Victorian Smoking and Health Program.
5. US Department of Health and Human Services. (1980) *The Health Consequences of Smoking for Women: A report of the Surgeon General*. Rockville, Maryland: US Department of Health and Human Services, Public Health Service, Office on Smoking and Health.
6. Surgeon General. (1989) *Reducing the Health Consequences of Smoking: 25 Years of Progress*. Washington, D.C.: U.S. Government Printing Office.
7. Kramer MS. (1987) *Determinants of low birth weight: methodological assessment and meta-analysis*. Bulletin WHO; 663-737.
8. Cnattingius S, Haglund B. (1997) Decreasing smoking prevalence during pregnancy in Sweden: the effect on small-for-gestational-age births. *American Journal of Public Health*; 87:410-413.
9. Southall DP, Samuels MP. (1992) Reducing the risks in sudden infant death syndrome [editorial]. *Br Med J*;304:265–266.
10. National Cancer Institute. (1999) *Health effects of exposure to environmental tobacco smoke: a report of the California Environmental Protection Agency*. Smoking and Tobacco Control Monograph No. 10. Bethesda, MD: U.S. Department of Health and Human Service, National Institutes of Health, National Cancer Institute, NIH Pub No 99-4645.
11. National Health and Medical Research Council. (1997) *The health effects of passive smoking. November 1997. A scientific information paper*. Canberra: Australian Government Publishing Service.
12. World Health Organisation. (1999) *International Consultation on Environmental Tobacco Smoke (ETS) and Child Health. 11-14 January 1999*. Geneva, Switzerland. Consultation report. World Health Organisation, Division of Noncommunicable Diseases.
13. Fogelman KR and Manor O. (1988) Smoking in pregnancy and development into early adulthood. *BMJ*; 297(6658): 1233-1236.
14. Millberger S, Biederman J, Faraone et al. (1996) Is maternal smoking during pregnancy a risk factor for attention-deficit disorder in children? *Am J Psychiatry*, 153:1138.
15. Strachan DP, and Cook DG. (1998) Health effects of passive smoking: parental smoking and childhood asthma: longitudinal and case-control studies. *Thorax* 53: 204-12.

16. Cook DG and Strachan DP. (1997) Health effects of passive smoking. Parental smoking and prevalence of respiratory symptoms and asthma in school age children. *Thorax* 52: 1081-94.
17. British Medical Association. (2004) *Smoking and reproductive life. The impact of smoking on sexual, reproductive and child health*. London, UK: British Medical Association.
18. UD Department of Health and Human Services. (2001) *Smoking and women's health. A report of the Surgeon General*. Rockville, Maryland: US Department of Health and Human Services, Public Health Service, Office on Smoking and Health.