

Tobacco Control Resource Centre [www.tobacco-control.org](http://www.tobacco-control.org)

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# Maternal smoking and reproductive life

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1<sup>st</sup> March 2005, Perinatal Institute, Birmingham

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## Smoking and reproductive life

The impact of smoking on sexual, reproductive and child health



British Medical Association  
Board of Science and Education  
& Tobacco Control Resource Centre  
[www.bma.org.uk](http://www.bma.org.uk)



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**SMOKING AND REPRODUCTIVE LIFE**  
The impact of smoking on sexual, reproductive and child health

**SEXUAL HEALTH**   **CONCEPTION**   **PREGNANCY**   **CHILD HEALTH**

**Smoking & Reproductive Life:**  
The impact of smoking on sexual, reproductive and child health

**Tobacco Fact File**

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*sexual health*

*child health*

*fertility*

*pregnancy*

*breastfeeding*

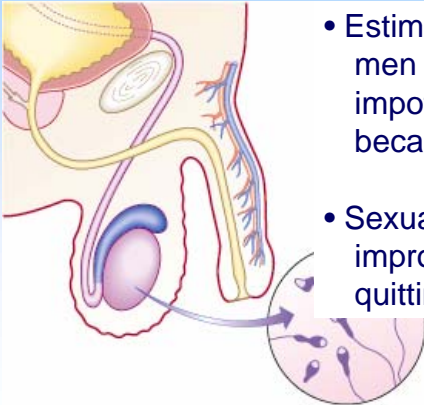
*infant health*

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## Male sexual impotence

Smoking may increase the risk of male sexual impotence by 50%



- Estimated 120,000 men aged 30-49 impotent in the UK because of smoking
- Sexual function can improve rapidly on quitting

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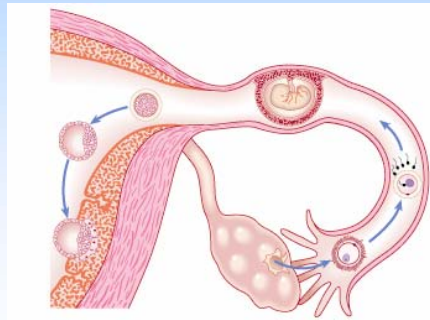
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## Women's health

- Alterations in sex hormone metabolism
- Smoking may increase the risk of irregular and painful periods
- Smokers tend to develop male-like body shape
- Early menopause – smokers go through menopause on average two years earlier than non-smokers
- Cervical cancer – up to 40% of cases in the UK linked to smoking

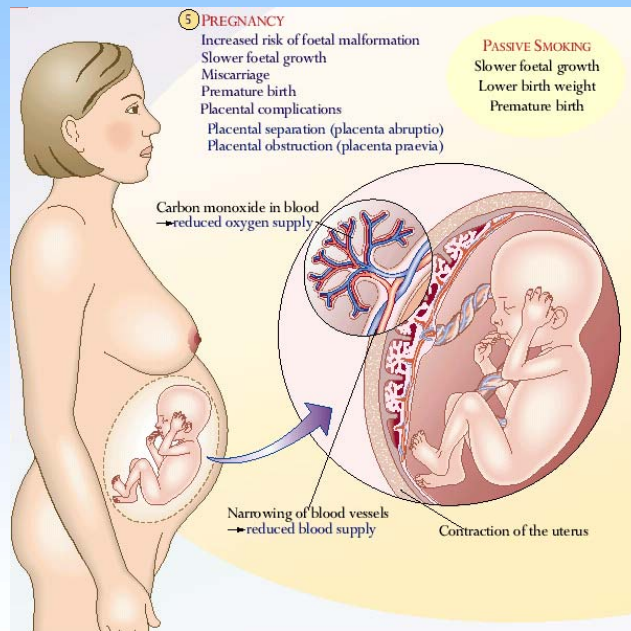
# Conception

- Men – reduced semen quality, sperm damage
- Women – conception reduced by 10-40% per cycle
- delayed conception
- risk of infertility doubled



Success rates for **assisted reproduction** lower for both men and women smokers

Smoking may increase the risk of **ectopic pregnancy** by up to 250%

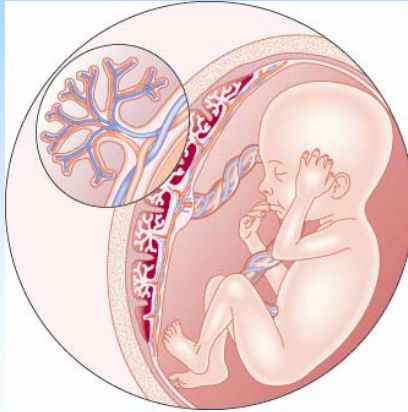


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## Smoking in pregnancy: mechanisms

Carbon monoxide – displaces oxygen      Nicotine – vasoconstriction      Lack of oxygen – hypoxia



Contraction of the uterus

Disruption of vascularisation – establishment/growth of the placenta, growth/development of foetus


Impairment of brain systems regulating breathing/heart beat?

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## Smoking in pregnancy


Smoking increases the risk of:



- miscarriage – 25%
- stillbirth – 40%
- death of the newborn – 40%
- low birth weight – 300%
- premature birth – 200%
- premature rupture of the membranes – 300%
- foetal malformation (cleft lip, palate) – 30%
- placental abruption – 240%
- placenta praevia – 300%

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## Pregnancy

Each year in the UK, smoking accounts for:

- at least 5000 miscarriages
- at least 14,000 low birth weight babies
- up to 400 stillbirths
- up to 260 deaths in the first four weeks of life

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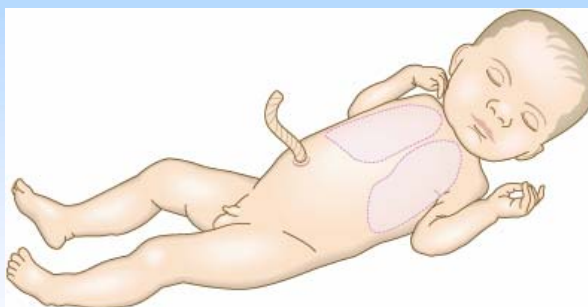
## Second-hand smoke and pregnancy

Exposure to second-hand smoke during pregnancy increases the risk of:

- low birth weight – 20%
- miscarriage, premature birth
- 1 in 5 pregnant non-smokers exposed at home – 2000 LBW babies each year in UK
- 3 in 10 pregnant workers exposed at work – 1200 LBW each year

## Smoking and infant health

Stillbirth  
Low birth weight  
Death of the newborn



Impaired lung function  
Respiratory illnesses  
Cot death (first year of life)

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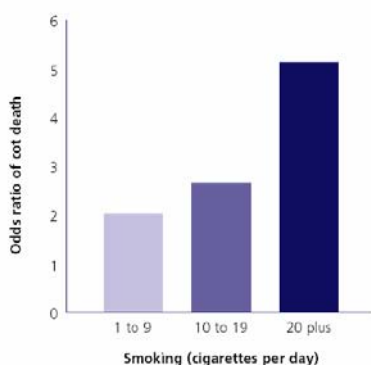
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## Smoking and cot death

Figure 6: Household smoking and cot death



Smoking during pregnancy increases the risk of cot death

Exposure to second-hand smoke after birth is also a risk

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## Smoking and breastfeeding



Reduced milk supply  
Reduced milk quality

- Less likely to breastfeed
- Breastfeeds for a shorter time

Smoking affects **prolactin**, the hormone involved in establishment and maintenance of breastfeeding

Exposure to **second-hand smoke** also compromises breastfeeding



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## Smoking and child health

Middle-ear disease

Development of asthma  
Exacerbation of asthma

Respiratory illnesses

Impaired growth, development – CVD, diabetes, obesity  
Behavioural problems – colic, attention, hyperactivity



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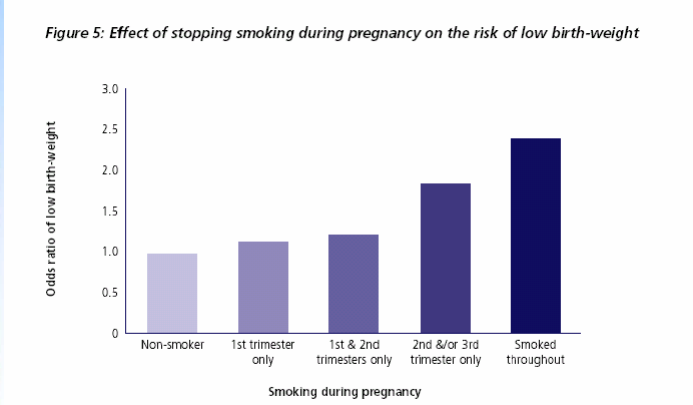
**Smoking in pregnancy is the largest preventable cause of foetal and infant ill-health and death**

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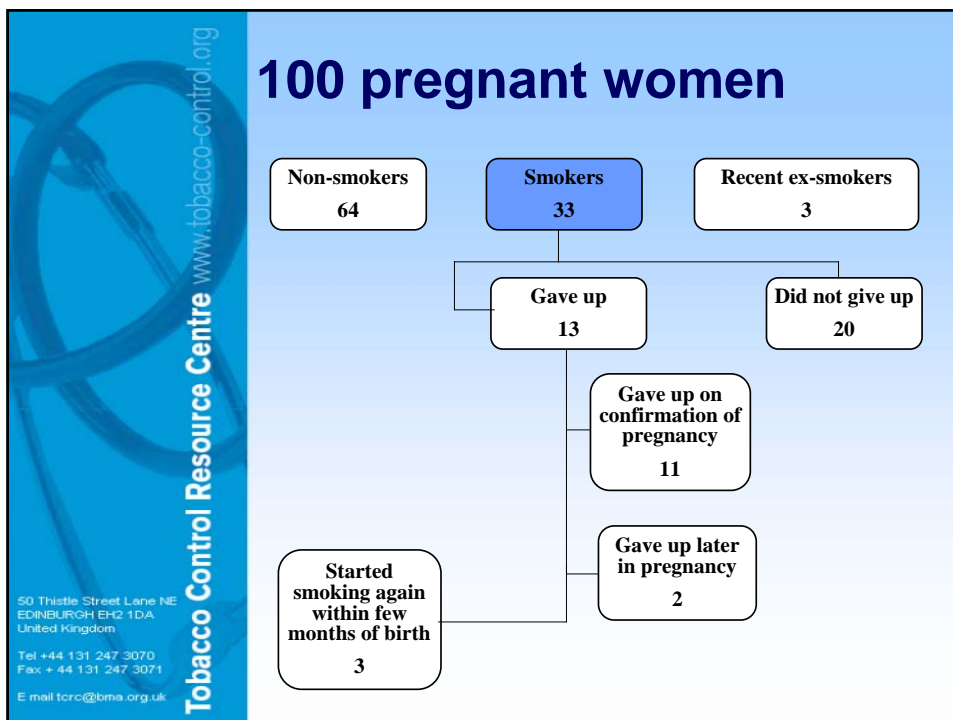
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**Stopping smoking at any stage during pregnancy is beneficial**

*Figure 5: Effect of stopping smoking during pregnancy on the risk of low birth-weight*



Smoking during pregnancy	Odds ratio of low birth-weight
Non-smoker	1.0
1st trimester only	~1.1
1st & 2nd trimesters only	~1.2
2nd &/or 3rd trimester only	~1.8
Smoked throughout	~2.4



**Who is most likely to smoke during pregnancy?**

- Poorer
- Younger
- Lone parents
- Most addicted
- Women whose partners smoke

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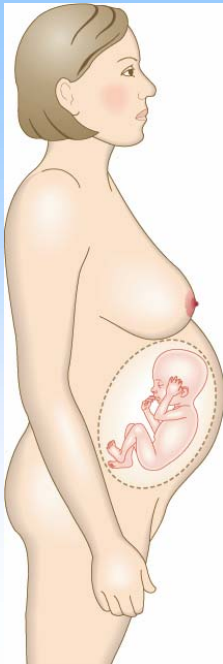


## Who quits and stays quit?

- Intend to breastfeed
- Women whose partners don't smoke
- Women who are supported
- Women who do it for their own health too

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## What works?

**Public health!**

- ✓ mass media
- ✓ price (tax)
- ✓ smokefree public places
- ✓ ending all tobacco promotion

**Intensive support**

- ✓ with resources

**Health professionals**

- ✓ need to campaign for change
- ✓ develop skills
- ✓ (and change attitudes?)



## Want to use these slides?

**Please feel free!!**

Just three things we ask in return

1. Please credit the original source of all the material:  
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3. Please let us know how you think they could be improved.

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