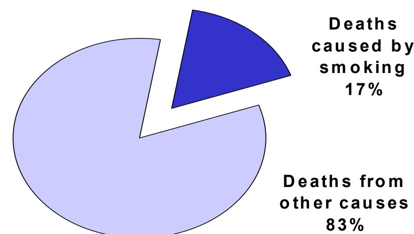
Smoking and Health Inequalities

"Smoking has been identified as the single greatest cause of preventable illness and premature death in the UK. …it is estimated that half the difference in survival to 70 years of age between social class I and V is due to higher smoking prevalence in class V."

Wanless D (2004) Securing Good Health for the Whole Population. London: TSO

Smoking – the health consequences

- Smoking kills more than 114,000 people in the UK every year.[1]
- Most smokers die from one of the three main diseases associated with cigarette smoking: lung cancer, chronic obstructive lung disease (bronchitis and emphysema) and coronary heart disease. One in two long-term smokers will die prematurely as a result of smoking – a quarter of these in middle age.[2]
- A smoker's life span is shortened by about five minutes for each cigarette smoked. On average, those killed by smoking have lost 10-15 years of life.[3]



Source: HDA (2004).The Smoking Epidemic in England. London: Health Development Agency

The UK's top 10 smoking related causes of death

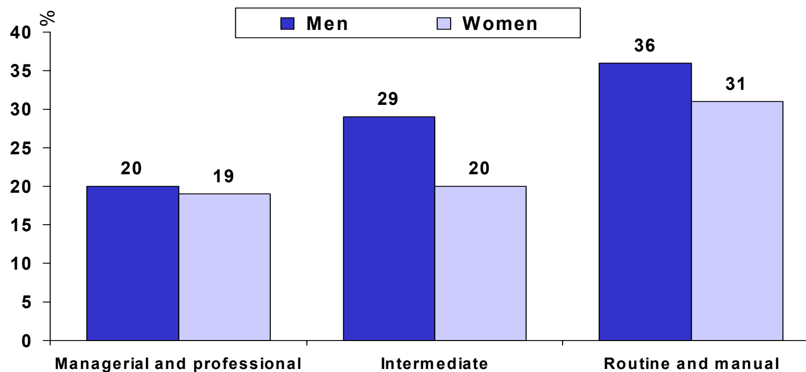
Disease	No of deaths caused by smoking in the UK	As % of all deaths from disease
Lung cancer	28,034	84
Chronic obstructive lung disease	23,878	84
Coronary heart disease	20,543	17
Myocardial degeneration	9,606	15
Cerebrovascular disease	6828	10
Aortic aneurysm	5591	57
Pneumonia	6062	17
Oesophagus	4991	68
Ulcer of the stomach or duodenum	1915	45
Bladder	1839	37

Source: ASH (2004) Factsheet 2. Smoking statistics: Illness and death.

Smoking rates among the poor are higher

- There is a clear social gradient in smoking: smoking rates are markedly higher among poorer people than among those who are better off. In 2003, 15% of men in higher managerial occupations smoked, compared with 39% in routine occupations.[4]

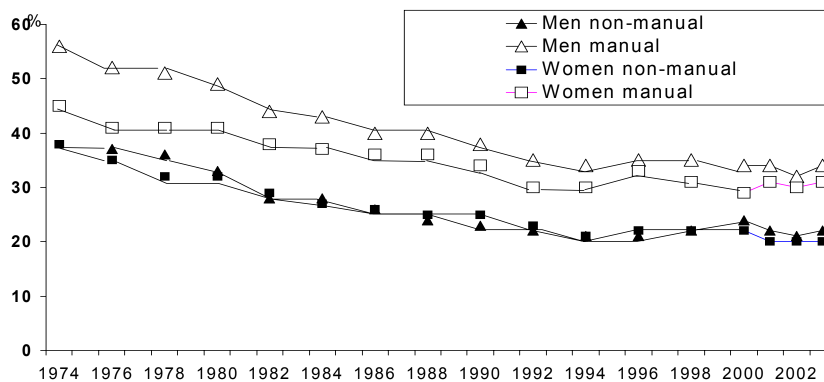
Prevalence of cigarette smoking among adults by sex and socio-economic group



Great Britain 2003. Source GHS 2003/04

- Despite a reduction in the overall prevalence of tobacco smoking in the UK over the past 30 years, there has been a slower reduction in smoking rates among lower income groups, and little or no change over the past decade.

Smoking prevalence by sex and socio-economic group 1974-2003



Smoking among deprived and disadvantaged groups

- Traditional measures of social class tend to underplay the extent to which smoking has become concentrated in the poorest sections of society. Studies of deprived and disadvantaged groups have shown smoking levels among lone parents in receipt of social security benefits in excess of 75%.[5] Smoking prevalence among prisoners is estimated to be over 80%[6] and smoking rates among vendors of the Big Issue were found to be over 90%.[7]

Consumption of tobacco

- Poorer smokers consume more tobacco than more affluent smokers. Smokers in routine and manual groups consume on average 15 cigarettes per day compared with smokers in managerial and professional groups who consume 13 cigarettes per day.[4] There is also evidence that poorer smokers consume more tobacco from each cigarette smoked – either by smoking cigarettes with a higher tar yield, by leaving a shorter stub or by drawing harder on the cigarette.

Costs of smoking

- A smoking habit of 20 cigarettes per day costs between £1,600 and £1,800 per year. Poorer smokers spend a disproportionately large share of their income on cigarettes compared with more affluent smokers. In 2003 the poorest 10 per cent of households spent 2.43 per cent of income on cigarettes per week, whilst the richest 10 per cent of households spent 0.52 per cent.[8] Among the most deprived groups – including lone parents in receipt of state benefits – three out of four families smoke and spend a seventh of their disposable income on cigarettes.[5]

Smoking among children and young people

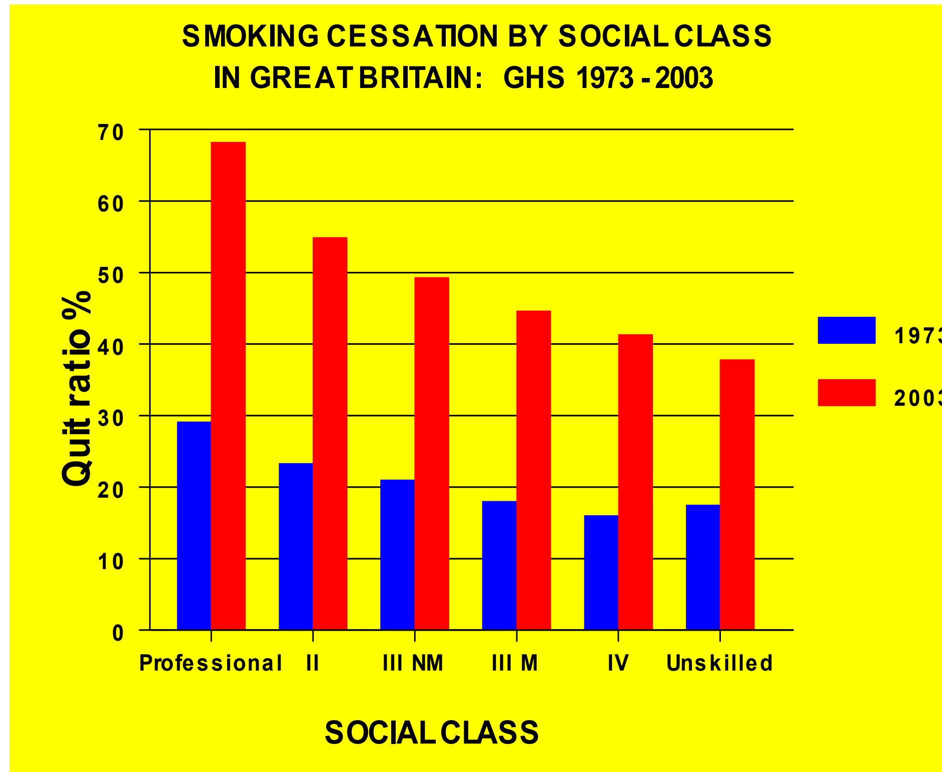
- Children from less advantaged social backgrounds are somewhat more likely to start smoking than children from more affluent backgrounds, but the difference is not great. However, by their 30s, half of the better off young people have stopped smoking while three quarters of those in the lowest income group carry on.[9]

Inequalities in the burden of ill health caused by smoking

- Smoking has been identified as the biggest single cause of inequalities in death rates between rich and poor in the UK. It accounts for over half of the difference in risk of premature death between social classes.[9]
- Death rates from tobacco are two to three times higher among disadvantaged social groups than among the better off.[10]
- Long-term or persistent smokers bear the heaviest burden of morbidity and mortality related to their smoking habit. Persistent smokers are disproportionately drawn from lower socio-economic groups. Among those in unskilled manual occupations, persistent smokers make up 2 out of 3 of those who ever smoked, compared with those in professional occupations where only 1 in 3 of those who ever smoked are current smokers.[4]
- People in poorer social groups who smoke, start to smoke at an earlier age: 47% of men and 41% of women in routine and manual occupations were regular smokers by 16 compared to 32% of men and 25% of women in managerial and professional occupations.[4]

Stopping smoking

- Much of the reduction in smoking prevalence over the past 30 years has come about as a result of better off groups giving up smoking. All available evidence indicates that the desire to give up is similar across social groups. Around two thirds of smokers want to stop smoking.[4] But poor smokers find it hardest to quit. Rates of stopping smoking are three times lower among the least well off in society, compared with the wealthiest. [9]



- The NHS Stop Smoking Services – established over the past 6 years represent the most effective source of help for smokers wishing to quit.[12] Recent research suggests that these NHS services have succeeded in attracting poorer smokers wishing to quit in areas of social deprivation. However, the overall contribution of the services to a fall in smoking prevalence is estimated to be only 0.1%-0.3% per year.[13, 14]

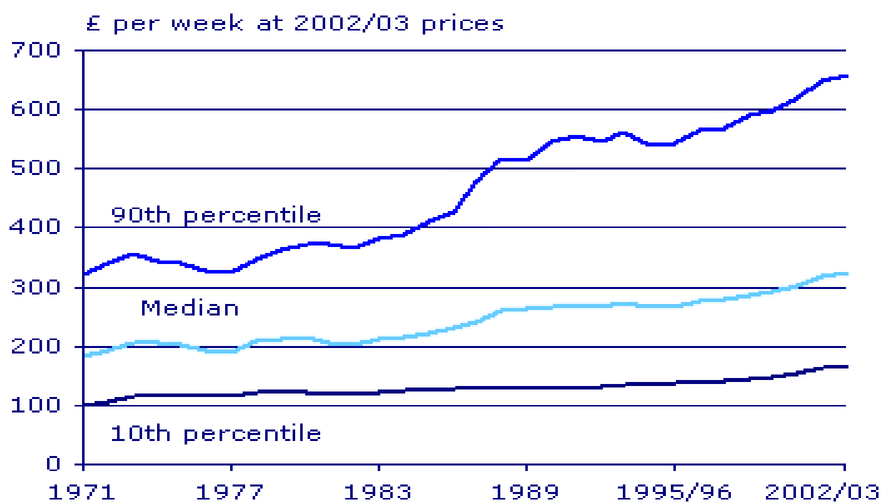
Social hierarchies and health inequalities

- The fact that economic and social factors affect the health of individuals is well known. What is less clear is the mechanism by which inequalities in health between individuals and groups are created and maintained.
- The Whitehall Study has investigated the health and well being of British civil servants over the past 25 years. This study has showed that for people who have equivalent levels of smoking, blood pressure, and plasma cholesterol, where that individual lies in the hierarchy is powerfully related to their disease risk. Lifestyle risk factors including smoking, sedentary life-style and eating fatty foods, account for up to a third of the difference in the risk of coronary heart disease deaths between the top and the bottom grades.

- Researchers have shown that much of the remaining gap in health inequalities is likely to be explained by psychological factors – including the amount of control an individual has over their life circumstances, the quality of relationships with friends and family and their position within the social hierarchy.
- Increasingly, research evidence suggests that societies with narrower gaps between rich and poor have better population health.[15]

Income inequality: UK distribution of household disposable income

- The picture of income inequality in the UK has changed considerably over the last three decades. For much of this period the gap between rich and poor has widened. During the 1980s disposable income in real terms grew by 38 per cent for those in the top income bracket. This was more than five times the rate of growth of 7 per cent for those at the lowest end of the income scale.



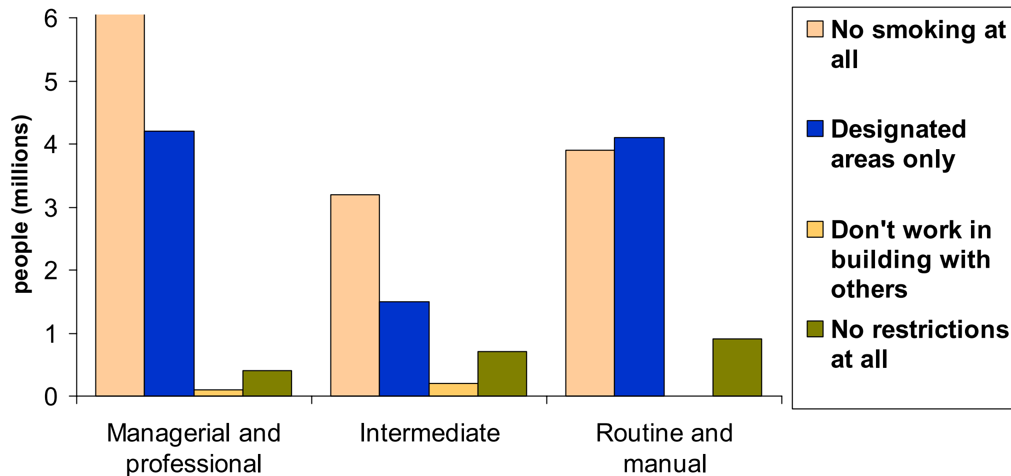
Source: Office for National Statistics (2005) www.statistics.gov.uk/cci/nugget.asp?id=1005

Exposure to secondhand smoke

- About 8% of the workforce, 2.3 million people in the UK, are exposed to secondhand smoke at work: the most vulnerable are hospitality workers. About 10.4 million people work in places where smoking is permitted in designated areas and may, therefore, be partially exposed to tobacco smoke. Exposure to secondhand smoke at work is likely to be responsible for the deaths of more than two employed people per working day (617 deaths per year), including 54 deaths in the hospitality industry each year. Each year passive smoking at home might account for another 2,700 deaths in persons aged 20-64 years and 8,000 deaths among people aged over 65[16].
- Support for a smokefree workplace law is strong across all social classes – ranging from 72% among social groups D and E to 86% among groups A and B[17].

Exposure to secondhand smoke at work

Exposure to smoke at work by socio-economic classification



Great Britain 2004. Source Labour Force Survey and ONS Omnibus survey 2004

Exposure to secondhand smoke in pubs and bars

- Research conducted for ASH has revealed that people living in poorer communities are more likely to be exposed to smoke in pubs and clubs if smoking is banned in places that serve food. Pubs in poorer areas are significantly less likely to serve food – 59% compared to 86% in affluent areas.
- The same survey revealed that overall 40% of publicans said they would not serve food and would allow smoking but in areas of deprivation the proportion of pubs opting for smoking over the provision of food rises to 50%.

Exposure to secondhand smoke at home

- Children who grow up in homes where parents smoke every day are three times more likely to get lung cancer than the children of non-smokers, even if they do not take up the habit themselves as adults.[18]
- Estimates of the proportion of children who are exposed to tobacco smoke at home vary from 32% - 42%.[19, 20] .
- Children in social class V are exposed more exposed (54%), compared with children in social class 1 (18% exposed)[20]. Children living in poorer households are more exposed to tobacco smoke at home because more of their parents and family members smoke.
- Parents are role models for the young and are a main source of primary socialisation. It has been shown that a significant reduction in the number of children taking up smoking is dependent on reducing smoking among adult role models. Children are almost three times as likely to become regular smokers if both their parents smoke, than if neither does.[21]

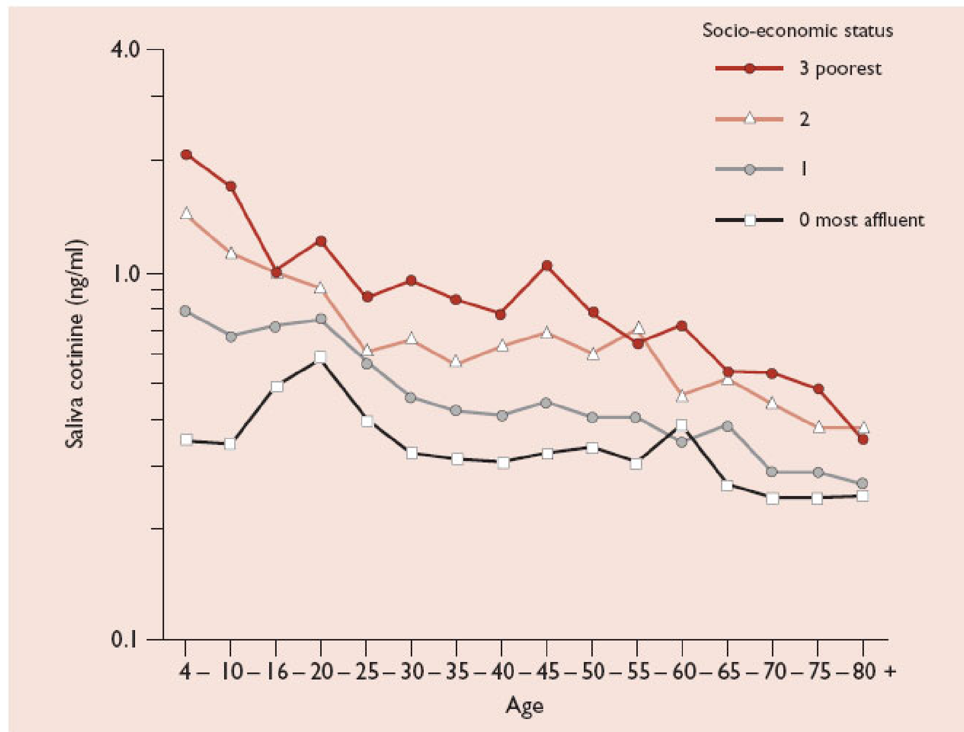
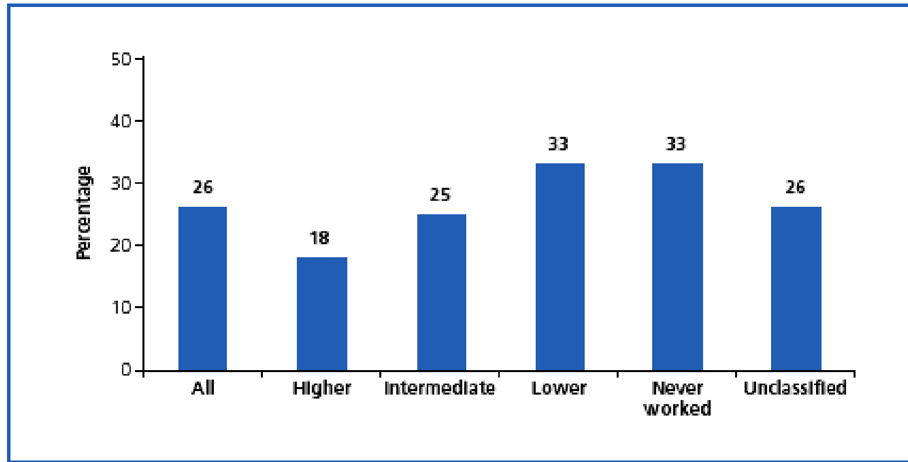


Fig 3.2 Geometric mean saliva cotinine in non-smokers by age and socio-economic status. Health Survey for England 1996–2003 combined.[1]

Exposure to secondhand smoke during pregnancy

- Exposure to passive smoking during pregnancy is an independent risk factor for low birth weight. Babies exposed to their mother's tobacco smoke before they are born, grow up with reduced lung function. Parental smoking is also a risk factor for sudden infant death syndrome (cot death).[22]
- The Infant Feeding Survey for 2000, found that 21% of non smoking pregnant women were exposed to the smoke of someone else – usually a partner - who smoked in the home throughout their pregnancy. Living with a partner who smoked was highly correlated with social class.[23]
- Smoking in pregnancy causes adverse outcomes, notably an increased risk of miscarriage, reduced birth weight and perinatal death. If parents continue to smoke after pregnancy, there is an increased rate of sudden infant death syndrome.
- The Infant Feeding Survey shows that in the UK in 2000, 20% of mothers smoked throughout pregnancy. 36% of mothers classed as 'never worked' smoked throughout pregnancy compared with only 8% of mothers in managerial and professional occupations.[23]
- Younger mothers were more likely to smoke throughout pregnancy than older mothers; 40% of mothers aged under 20 smoked throughout pregnancy compared with 13% of mothers aged 35 and over.

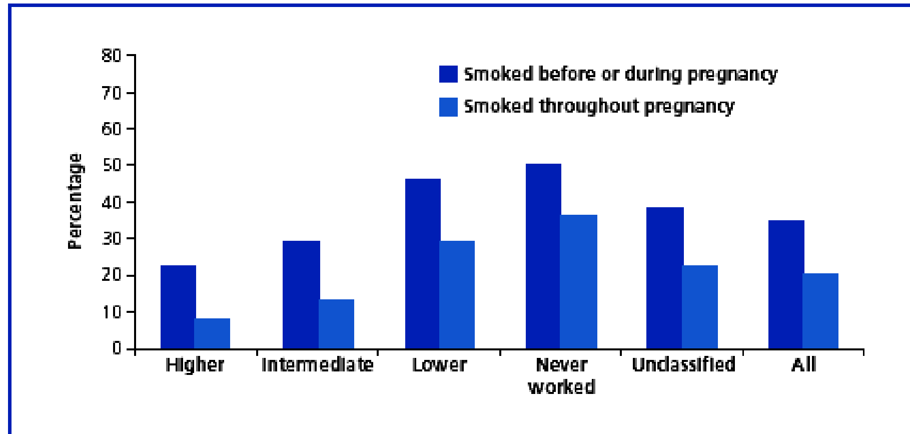
Figure 4.3
Partners smoking at stage 1 by mother's social class (2000, UK)
Base: All Stage 1 mothers



Source: Hamlyn et al 2002

People on low incomes are:	
more likely to	**less likely to**
• start smoking at a younger age • be nicotine dependent • be exposed to other peoples tobacco smoke • Children living in low income households are more likely to be exposed to tobacco smoke. Not only is this in itself harmful to children's immediate health, but parental smoking is a strong influence on the likelihood of a child becoming a smoker[3]	• succeed in giving up smoking

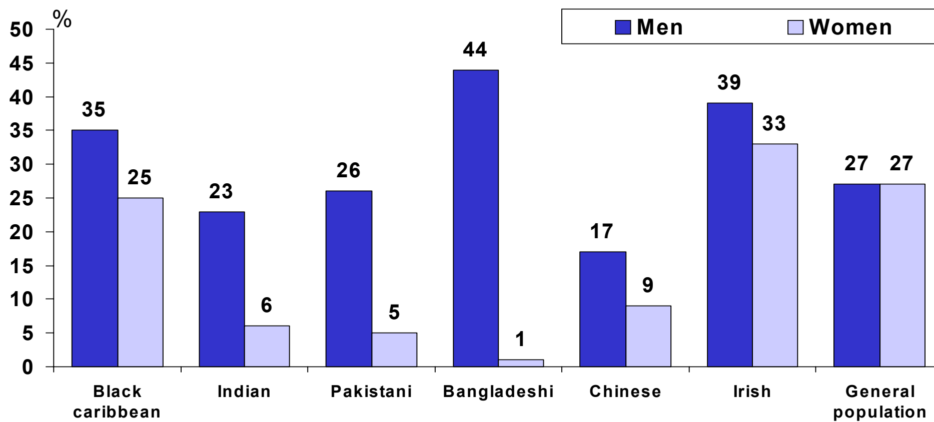
Figure 4.2
Prevalence of smoking before and throughout pregnancy by mother's NS-SEC (2000, UK)
Base: All Stage 1 mothers



Black and minority ethnic groups

- The Health Survey for England found that many minority ethnic groups have smoking rates that are lower than that of the rest of the population. An exception to this was the smoking rate among Bangladeshi men, of whom 44% smoked. The survey also found that the proportion of 'heavy smokers' – those smoking 20 or more cigarettes per day - in all minority groups, was lower than the proportion of heavy smokers in the rest of the population (37%). The lower smoking rates among some groups reflects cultural and religious differences, particularly among some Muslim women. However, rates of chewing tobacco – almost unknown of among the wider population – are a health concern among some minority ethnic groups.[24]

Prevalence of cigarette smoking among adults by ethnicity and sex



Source: Erens et al 2001

Ethnicity and social class

The higher smoking rates among some minority ethnic groups may be attributable to the socio-economic position of these groups. The Office for National Statistics reported that minority ethnic groups were more likely than white groups to live in low income households in 2000/01, although this varied by ethnic group. The highest rate was among the Pakistanis and Bangladeshis of whom 60% were living in low income households compared with 16% of the white population. Nearly a half of Black non-Caribbean households also lived on low incomes.

People with mental health problems

Smoking prevalence is significantly higher among people with mental health problems than among the general population. Prevalence is highest among those with a diagnosis of a psychotic disorder and studies show that smoking rates are as high as 80% among people with schizophrenia.[25] Over 70% of people with psychotic disorders who live in institutions smoke, including 52% who are heavy smokers.[26]

A national survey of psychiatric morbidity among over 8,000 people in the general population found that people with neurotic disorders such as depressive episodes, phobias or obsessive compulsive disorders were twice as likely as those with no neurotic disorder to smoke. Having more than one neurotic disorder was associated with heavy smoking.[27]

The consequence of such high smoking rates among people with mental health disorders is that a high proportion of such people become ill and subsequently die prematurely from smoking- related diseases, thus exacerbating health inequalities. On average, between one half and two-thirds of all life-long smokers die prematurely. Given the high rate of smoking among people with mental health disorders, it is therefore likely that the majority will die from a smoking-related disorder. A 17-year prospective study in Finland, for example, found that having a mental disorder predicted an elevated risk of death from cardiovascular disease, respiratory disease and suicide. [28] A new finding of the study was the association of schizophrenia with mortality from respiratory disease which the authors suggest could be caused by smoking.

Prisoners

The Government estimates that at least 80% of people in prison smoke. The prison population is made up predominantly of young men, most of whom spend weeks or months in prison rather than years. In England and Wales there were around 74,500 people in prison in 2004 – 61,000 of whom had been convicted of a crime and 12,500 who were on remand.[29]

References

1. Peto R, Lopez A, Boreham J, Thum M and Health C J (2004) Mortality from smoking in developed countries: 2004 update. www.ctsu.ox.ac.uk
2. Doll,R et al. (1995) Mortality in relation to smoking: 50 years' observations on male British doctors. BMJ. 328: 1519-1527
3. RCP (2000) Nicotine Addiction in Britain. A report of the Tobacco Advisory Group of the Royal College of Physicians. RCP. London
4. Office for National Statistics (2004). General Household Survey 2003/04. http://www.statistics.gov.uk/ghs
5. Marsh A and McKay S (1994) Poor Smokers. London: Policy Studies Institute
6. Department of Health (2004) Choosing Health: Making Healthier Choices Easier. London: Department of Health
7. Big Issue (2002). Coming Up from the Streets: What Big Issue Vendors Need to Escape Homelessness. Vendor Survey October 2002. Cardiff: The Big Issue Cymru.
8. ONS (2004) Family Spending. A report of the 2002/03 Expenditure and Food Survey
9. Jarvis, M. J. and Wardle, J (2005) Social patterning of health behaviours: the case of cigarette smoking. In: Marmot, M. and Wilkinson, R. (eds) *Social Determinants of Health.* Oxford: Oxford University Press,2nd edition.
10. Acheson (1998) Independent Inquiry into Inequalities in Health. London: TSO
11. Jarvis, M. (1997). Patterns and predictors of smoking cessation in the general population. In Bolliger, C.T., and Fagerstrom, K.O. (Eds), (1997). The Tobacco Epidemic. Progress In Respiratory Research, 28, 151-164
12. West R, McNeill A and Raw M (2000) Smoking cessation guidelines for health professionals: an update. Thorax. 55: 987-999
13. Milne E (2005) NHS smoking cessation services and smoking prevalence: observational study. BMJ 330:76
14. Tocque K, Barker A and Fullard B (2005). Are Stop Smoking Services Helping to Reduce Smoking Prevalence? Tobacco Control Research Bulletin No 3. Centre for Public Health. Liverpool John Moores University
15. Bosma H, Marmot MG, Hemingway H, Nicholson A, Brunner EJ, Stansfeld S. (1997) Low job control and risk of coronary heart disease in the Whitehall II (prospective cohort) study. BMJ 314: 558-565
16. Jamrozik K (2005) Estimate of deaths attributable to passive smoking among UK adults: database analysis. BMJ 330: 812
17. ASH/MORI (2004) Overwhelming backing for workplace smoking law. ASH press release, 11/6/04 www.ash.org.uk/html/press/040611NAT.html
18. Vineis P et al (2005) Environmental tobacco smoke and risk of respiratory cancer and chronic obstructive pulmonary disease in former smokers and never smokers in the EPIC prospective study. BMJ.330:277
19. Sproston K and Primatesta P (2002) The Health of Children and Young People. London: TSO
20. Office for National Statistics (1998) General Household Survey 1997. London: ONS
21. Office for National Statistics (1997) Teenage Smoking Attitudes in 1996. London: ONS
22. Gilliland FD et al (2000) Maternal smoking during pregnancy, environmental tobacco smoke exposure and childhood lung function. Thorax 55: 271-276
23. Hamlyn B, Brooker S, Oleinkiova K and Wands S (2002) Infant Feeding Survey 2000. London: TSO
24. Erens B, Primatesta P and Prior G (2001) The Health Survey for England. The Health of Minority Ethnic Groups 1999. London: TSO

25. McNeill A (2001) Smoking and Mental Health: a Review of the Literature. London: SmokeFree London
26. Meltzer H, Gill B, Petticrew M, Hinds K (1995) OPCS Surveys of Psychiatric Morbidity in Great Britain, Report 1: The prevalence of psychiatric morbidity among adults living in private households. London: HMSO
27. HDA (2004) Smoking and patients with mental health problems. London: Health Development Agency
28. Joukamaa, M et al. Mental disorders and cause-specific mortality. Br J Psychiatry 2001; 179; 498-502
29. Home Office (2005) Prison Population Projections 2005-2011

Contact details/further information

ASH
102 Clifton Street
London
EC2A 4HW

www.ash.org.uk

Compiled by:
Adam Crosier
Public Health Research Consultant

November 2005