Sex and Smoking: Comparisons between male and female smokers

A Report for No Smoking Day

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March 1999

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Summary and Discussion

This report presents findings from two new surveys and reviews the literature on men and women’s smoking habits. It compares the sexes in smoking patterns and motives, stopping smoking and health effects from smoking.

In many respects men and women are quite similar. There are still slightly more male smokers than there are female smokers (29% and 28% respectively). More teenage girls than boys are smokers, but this difference is reversed in early adulthood. Two thirds of men and women would like to stop smoking and equal proportions try to stop smoking each year. New evidence indicates that men and women succeed in stopping smoking at the same rate.

But interesting patterns emerge when analysing the reasons that men and women smoke, their motivations to stop, the process of stopping smoking and the barriers they face. It is important to understand these differences so that effective smoking cessation strategies can be developed. Most important are the different psychological and physical dependencies men and women have on their smoking habit.

**Men are heavier smokers**

Men tend to be heavier smokers than women, smoking more cigarettes per day and higher tar cigarettes. Twice as many women as men smoke low tar cigarettes.

**Women are more emotionally dependent**

Women generally feel more dependent on cigarettes than men. Almost half, 48%, feel they are unable to cope without cigarettes compared with 35% of men. Women tend to think of cigarettes as their main source of pleasure and 48% smoke to give them confidence in social situations.

**Men and women differ in reasons for wanting to stop**

Men and women smokers are similar in their assessment of the health risks of smoking, but their reasons for stopping differ. Men tend to cite more self-orientated reasons, including improving their own fitness and because of workplace policies, whereas women are twice as likely as men to want to stop for the sake of their family and children and because of pregnancy.

**Men and women experience pressure to stop smoking from different sources**

Men are more likely to report pressure from their partner to stop whereas women are more likely than men to be pressured by their children.

**Men tend to cut down cigarette intake whereas women switch to lower tar brands**

Both men and women commonly try to reduce their risks from smoking by cutting down or switching to lower tar cigarettes is healthier. Unfortunately smokers can easily obtain previous levels of nicotine intake from fewer cigarettes or lower tar cigarettes by puffing and inhaling more intensely. Men
are more likely than women to cut down to reduce their risk, whereas women are more likely to switch to lower tar cigarettes.

**Men tend to rely on willpower whereas women seek help**

When looking at how men and women go about stopping smoking a clear pattern emerges. Men tend to go it alone and rely on willpower to succeed, whereas women are more likely to have been advised to stop or to seek help. More women (41%) than men (31%) report intending to buy nicotine replacement therapies, but interestingly equal proportions of men and women use them. Perhaps women are taking the initiative in promoting nicotine replacement therapies.

**Physical versus emotional barriers to stopping smoking**

The barriers to stopping smoking reflect the dependencies men and women have on their cigarettes. For men, alcohol plays an important part, with three times as many men as women stating they started smoking again while drinking alcohol. Stress and fears of weight gain feature more strongly in women than men.

**The way forward**

This report provides an interesting insight into how men and women view their smoking habits and the different psychological and physical dependencies experienced. There is a tendency for women to be emotionally attached to their habit, whereas for men it is a more physical dependence. These findings suggest that within smoking cessation strategies there may be scope for individual advice that is tailored to men and to women.

Key messages for male smokers are:

- Willpower - do not rely on willpower alone. Investigate other forms of support that are available.
- Addiction – health professionals can advise on cessation products and methods to ease withdrawal symptoms.
- Personal support – enrol the support of partners, friends and family.
- Temptation – be prepared for situations where there will be powerful urges to smoke, such as an evening out drinking with friends.
- Cutting down – try to cut out cigarettes rather than cut down.
- Health risks – these do not just affect the smoker, but families and future children’s health.

Key issues for female smokers:

- Emotional support – turn to family and friends for support.
- Confidence - try not to see the cigarette as an emotional prop in social situations.
- Weight gain - put concerns about weight gain into perspective - the damage caused by smoking usually far outweighs the effects of the weight gained.
- Stress relief - remember that this is probably an illusion - smokers tend to feel less stressed once they have stopped than they did while they were still smoking.
• Brand switching – the healthy option is to stop smoking rather than switch to lower tar alternatives.
Introduction

There are 13 million smokers in Britain of whom some 8 million want to stop and 4 million make at least one attempt to do so each year (Department of Health, 1998). This leads to about 120,000 smokers, representing 1 per cent of the total, stopping for good each year (Jarvis, 1997).

Two of No Smoking Day's aims are to encourage more attempts to stop smoking, and to provide help and advice to smokers on how to make the most of these attempts.

Smoking and stopping smoking do not necessarily affect men and women in exactly the same way - and sometimes the differences are not what people think.

This report compares men and women in their smoking habits, the effects of smoking and the process of stopping. To do this it presents findings from two new surveys on smoking. One of these is a European Union survey of a random sample of smokers in the UK. The fieldwork for this survey was carried out in 1998 and it formed part of a Europe-wide survey of smoking habits. The second is a Health Education Authority survey of a random sample of smokers in England. The original fieldwork for this survey was carried out in 1996 and a cohort of these were followed up in 1997. This report also reviews the scientific literature on smoking to provide a more complete picture.

Details of the methods used in the two surveys are given in the Appendix. Where sex differences are mentioned in this report the statistical comparison is by chi-squared test and the p-value is two tailed.

This report is structured to make it as easy as possible for readers to find comparisons of interest. Within each section there is an overview drawing together the key points and then a series of statements comparing men and women. Each statement is then supported by reference either to the scientific literature or one or other of the two new surveys.

Where a given statement is supported by the scientific literature a citation is given to the article or report in question. Where a statement is supported by the European Union survey or the Health Education Authority survey, this is indicated in the text.
Smoking patterns and behaviour

Overview

It is still the case that more men than women smoke. The proportion of adults who smoke has been in steady decline for more than 20 years in both sexes - until now when there is a suggestion that prevalence is starting to rise. It is true that more teenage girls than boys smoke, but it seems that by early adulthood the sex difference is reversed.

Men tend to be heavier smokers than women and they tend to smoke higher tar cigarettes. They are also much more likely to smoke hand-rolled cigarettes.

Data

More adult men than women smoke

According to the most recent figures, 29% of men and 28% of women smoke cigarettes (Office for National Statistics, 1997a). The gender gap in smoking is actually wider than that if we take into account that 6% of men smoke cigars and 2% smoke pipes. Fewer than 1% of women smoke cigars (Office for National Statistics, 1997a).

Figure 1 shows that over the past 20 years there has been a steady fall in the number of men and women who smoke cigarettes (Office for National Statistics, 1997a). However, there is a worrying suggestion that prevalence is beginning to rise again according to the most recent survey.

Men have always smoked pipes and cigars more than women but in the past couple of decades there have been dramatic decreases in the prevalence of cigar and pipe smoking: 6% of men smoked cigars in 1996 compared with 34% in 1974, pipe smoking fell from 12% to 2% over the same period (Office for National Statistics, 1997a).

Figure 1: Cigarette smoking prevalence by sex (ONS, 1997a)
Smoking prevalence is still very low among women in some ethnic minority groups

Figure 2 shows that African-Caribbean women smoke less than their male counterparts and smoking among Indian, Pakistani and Bangladeshi women is still very uncommon (HEA, 1994).

Figure 2: Current regular smokers by gender in different ethnic groups (HEA, 1994)

Men are heavier smokers than women

Male smokers consume an average of 16 cigarettes per day compared with 14 among women smokers (Office for National Statistics, 1997a).

Men tend to smoke higher tar cigarettes than women

Almost two-thirds (62%) of male smokers smoke high tar cigarettes compared with 52% of female smokers (Office for National Statistics, 1997a). Amongst younger smokers (16-19 year olds) 79% of men and 66% of women smoke high tar cigarettes (Office for National Statistics, 1997a).

The European Union (EU) survey revealed that more than twice the proportion of women smokers (27%) smoke Low/Light or Ultra-light cigarettes than men (12% - p<.05).

Many more men than women smoke hand-rolled cigarettes

In 1996, 23% of male smokers smoked mainly hand-rolled cigarettes compared with 6% of female smokers (Office for National Statistics, 1997a). Figure 3
shows that there has been a marked increase over the past 6 or 7 years of the proportion of smoking men and women who use hand-rolled cigarettes, possibly because it offers a cheaper alternative to manufactured cigarettes.

It appears that this trend is continuing because in the EU survey this proportion was even higher: 32% of men smokers and 12% of women smokers smoked hand-rolled cigarettes (p<.05 for the male female comparison). This raises important questions about the toxicity of hand-rolled cigarettes compared with manufactured cigarettes, an issue that needs urgent attention.

Figure 3: proportion of smokers who smoke mainly hand-rolled cigarettes (ONS, 1997a)

More girls than boys smoke but the sex difference is reversed in young adulthood

Teenage girls are more likely to smoke than teenage boys (Figure 4). For example, 14 year-old girls are nearly twice as likely to smoke cigarettes (24%) as 14 year-old boys (13%) (Office for National Statistics, 1997b). In the 16-19 year-old age group 32% of girls and 26% of boys smoke cigarettes. It should be noted, however, that this trend is reversed in the 20-24 year-old age group, with 43% of men smoking cigarettes compared with 36% of women (Office for National Statistics, 1997a).
Despite efforts to reduce smoking among teenagers, since 1993 there has been an increase in the proportion of 11-15 year-olds who smoke cigarettes. The proportion of boys who smoke cigarettes rose from 8% in 1993 to 11% in 1996. During the same period the proportion of girls who smoke cigarettes rose from 11% to 15% (Office for National Statistics, 1997b).

Smokers’ attempts at harm reduction

Overview

There is good evidence that many men and women are attempting to reduce their risk by cutting down or switching to lower tar cigarettes. Men seem to be slightly more likely to cut down while women seem to be more likely to switch brands. Unfortunately in both cases it is far from clear that these behaviours are having the desired health benefits. It is better to stop completely as, in the case of cutting down, it is clearly easy for the amount of cigarettes smoked to escalate to previous levels. The smokers desire for accustomed levels of nicotine also means that they may puff and inhale more intensively on fewer cigarettes or lower tar cigarettes to achieve this.

Data

Women tend to be less successful in efforts to cut down their smoking

According to the HEA survey similar proportions of men and women tried to cut down in a given year: 50% of men and 51% of women. Unfortunately those attempts frequently fail. There is evidence that this is more of a problem for women than men: some 38% of women and 28% of men returned to their previous level within the year (p<.05).
**Women are more likely to change to a lower tar cigarette**

Women are more likely than men to have changed to a lower tar brand of cigarettes in a given year: in the HEA survey 21% of women smokers had attempted this compared with 16% of men (p<.05).

The HEA survey found that, having attempted to change to a lower tar cigarette men and women have similar success at staying with that lower tar brand and not returning to smoking their previous higher tar cigarettes (30% of men versus 35% of women).

**Reasons for smoking**

**Overview**

Women tend to smoke more to help them cope, to help them socialise and to keep their weight down. Women generally feel more dependent on their cigarettes and they tend to think of them as their only source of pleasure.

This pattern of findings suggests that women tend to think of cigarettes in terms of the psychological functions they can provide and they come to rely on them for this reason.

**Data**

**Women feel more dependent than men on cigarettes**

Women smokers are more likely than men smokers to say they would find it difficult to go a whole day without a cigarette: 61% of women compared with 56% of men (Office for National Statistics, 1997a).

In the HEA survey 48% of women reported that they would not be able to cope without cigarettes compared with only 35% of men (p<.05).

**Women are more likely to think of cigarettes as their main source of pleasure**

In the HEA survey women were more likely to regard smoking as their main source of pleasure; 44% versus 38% respectively (p<.05).

**Women are more likely than men to use smoking to give them confidence in social situations**

In the HEA survey 48% of women reported that they felt more confident in social situations if they had a cigarette compared with 43% of men (p<.05).
Reasons for wanting to stop smoking

Overview

Men and women are similar in their assessments of the health risks from smoking. More women than men tend to want to stop for the sake of their family, to save money and because of the smell of smoke on their person, while more men than women want to stop for the sake of their health and fitness. Pregnancy is a minor trigger to stopping smoking but triggers quit attempts more in the women themselves than their partners.

Data

Pregnancy is a more significant trigger to stopping for women than their partners

The HEA survey found that women are more likely to cite pregnancy as a trigger for stopping smoking than their partners are (5% versus 1%, p<.05). The failure of partners of pregnant smokers to stop smoking is a major barrier to the woman's success at stopping.

In fact, smoking rates among pregnant women are still very high at 28% (Owen et al, 1998). Moreover, most women who stop smoking during pregnancy start again within a month of the birth of the child (McBride et al, 1990).

Men are more likely to cite health/fitness reasons for wanting to stop smoking

In the HEA survey, 47% of men who made an attempt to stop said they had wanted to stop smoking to improve their health compared with only 39% of women (p<.05, see Figure 5).

The same survey also found that 8% of men smokers wanted to stop smoking to improve their fitness compares with only 3% of women smokers (p<.05).

Women are more likely to want to stop for family reasons

In the HEA survey, nearly twice as many women said they wanted to stop smoking for the sake of their family and children as male smokers: 13% compared with 7% (p<.05).

More women want to stop for financial reasons

In the HEA survey 64% of women cited saving money as a reason for wanting to stop compared with 58% of men (p<.05, see Figure 5).

More women than men want to stop because of the smell of smoke on their person

In the HEA survey 8% of women compared with only 5% of men cited the smell of smoke in their hair, hands or clothes as a reason for wanting to stop (p<.05, see Figure 5).
**Women are more likely than men to be pressured to stop by their children**

In the HEA survey, 42% of women smokers reported that their children had tried to persuade them to stop smoking compared with only 31% of male smokers (p<.05, see Figure 5).

**Men are more likely to be pressured to stop by their partner**

The HEA survey found that 51% of men smokers said their girlfriend, wife or partner has attempted to persuade them to stop smoking compared with only 33% of women smokers (p<.05, see Figure 5).

**More men than women cite workplace restrictions as a trigger for trying to quit**

According to the HEA survey, 15% of men said that workplace restrictions were a trigger for trying to quit smoking compared with 10% of women (p<.05).

Figure 5: Pressures to stop, and reasons for stopping smoking, cited by men and women

**Men and women are similar in their assessment of the health risk from smoking**

The HEA survey found that 51% of all smokers believed smoking was adversely affecting their current health and there was no difference between men and women smokers. More than two thirds of smokers (68%) believed that
smoking would adversely affect their future health; again there was no difference between the sexes.

Stopping smoking

Overview

In contrast to popular belief, there is little evidence for genuine sex differences in desire to stop or success at stopping smoking.

Data

Equal proportions of men and women want to stop smoking

Two-thirds of UK smokers (67% of women and 66% of men) say they would like to give up smoking altogether (Office for National Statistics, 1997a); that is around 8 million people in the UK.

Equal proportions of men and women try to stop smoking each year

In the HEA survey, a cohort was followed up after one year and it was found that 35% of the male smokers and 30% of female smokers had made an attempt to stop in the preceding 12 months. This translates into about 4 million smokers making one or more attempts to stop each year in the UK.

Men and women succeed in stopping at the same rate

Although some studies have reported higher success rates in men trying to stop smoking than women, there is always a problem of comparing like with like, especially given that women are generally more likely to take part in such studies than men. To obtain a picture of the situation in the population as a whole it is necessary to look at representative samples of smokers. Jarvis (1997) has shown that cessation rates in the UK are similar for men and women overall, with women tending to stop more in early adulthood and men more in middle age and the two sexes being equal in the older age groups.

The HEA survey provided an opportunity to explore this in more detail. As noted above, a cohort of smokers was followed up for a year to see how their smoking changed. At the follow-up survey, 35% of men and 30% of women had made an attempt to stop smoking in the last 12 months and of these 12% of the men and 11% of women had not smoked for at least six months.

Methods used to stop smoking

Overview

Women appear to be more likely to be the target of advice to stop from their doctor than men. This may be related to pregnancy. Only about a quarter of smokers use nicotine replacement therapy in attempts to stop smoking and men and women do not differ in this, although women appear to be more likely to purchase the products.
Very few smokers use smokers clinics or professional advice to help them stop, but more women than men do this.

**Data**

**Women are more likely to have been advised to stop by their doctor**

In the EU survey, 49% of women smokers said they had been advised to stop smoking by their doctor compared with only 36% of male smokers (p<.05).

**More women than men use advice from a nurse to help them stop**

Use of professional advice to help with stopping smoking is rare in Britain. However according to the HEA survey, more than twice as many women as men use advice from a nurse or other health professional to help them stop smoking: 5% of women and 2% of men (p<.05).

**More women than men attend stop smoking clinics or groups**

Jarvis (1997) has noted the preponderance of women in studies involving smokers clinics. The EU survey also found that while the proportion of smokers who had used a smoking cessation clinic were very low, it was more than twice as high in women as men (5% versus 2%, p<.05).

**Women are more likely to buy nicotine replacement therapy but men and women use it at about the same rate**

In the EU survey, 41% of women smokers said they were 'very' or 'quite' likely to purchase nicotine replacement therapy. This compared with only 31% of men (p<.05).

Despite this, men and women report using nicotine replacement therapy at the same rate; in the HEA survey, 25% of male smokers and 26% of female smokers said they had used nicotine replacement therapy to help them give up smoking.

**Barriers to stopping smoking**

**Overview**

Stress appears to be an important barrier to stopping smoking. Weight gain is less of a barrier but is more of an issue for women than men. Men are more likely to cite alcohol as a factor in relapse than women. Men and women do not differ significantly in citing problems at home, irritability or depression as reasons for going back to smoking.
Data

More women than men cite fear of weight gain as a reason for not stopping smoking

In the EU survey, 30% of women smokers said they were prevented from attempting to stop smoking by fear of gaining weight compared with only 14% of men smokers (p<.05).

Women are more likely than men to cite stress and weight gain as reasons for starting smoking again once stopped

In the EU survey, 5% of women who failed in an attempt to stop said they started smoking again having stopped because they gained weight compared with only 1% of men (p<.05).

Also in the EU survey, 29% of women who failed in an attempt to stop said that being under stress was the reason for them starting smoking again compared with only 19% of male smokers (p<.05).

It is interesting to note that, although many smokers cite stress as a reason for relapse to smoking, evidence suggests that smoking actually increases stress rather than reducing it. Smokers report higher levels of stress than never-smokers or ex-smokers and stress levels go down rather than up after stopping smoking (see West, 1997).

Only 2% of men and women cite problems at home as a factor in their relapse according to the EU survey. Again in the EU survey, irritability is cited by less than 1% of men smokers and 2% of women smokers as a reason for starting smoking again, boredom accounts for 3% of men smokers and 1% of women smokers who relapse.

Men are more likely to relapse while drinking alcohol

In the EU survey, nearly three times as many men as women said they started smoking again while drinking alcohol: 11% compared with 4% (p<.05).

Health Effects

Overview

The number of women dying from lung cancer has shown a dramatic increase while the number of men dying from lung cancer has shown a gradual reduction. This reflects the increase in smoking among women after the Second World War. In Scotland and the US lung cancer deaths now exceed those from breast cancer in women.

Smoking is linked with poor reproductive health in both men and women. In men it has been linked with impotence and reduced sperm count while women who smoke have greater difficulty becoming pregnant and suffer early menopause. The risks to the fetus of smoking during pregnancy are well known.
and include increased incidence of miscarriage, neonatal death, low birth weight and 'cot death'.

**Data**

**Women are catching men up in the number of deaths caused by smoking**

Differences in rates of death caused by smoking for men and women reflect the differences in rates of smoking 25 years ago. Smoking currently causes approximately 120,000 deaths in the UK every year, one in five of all deaths (Health Education Authority, 1998). More than 80,000 men (one in four) and 40,000 women (one in eight) die each year from a smoking related disease (Health Education Authority, 1998) - see Figure7.

One in two men who continue to smoke and just under one in two women who continue to smoke will die prematurely as a result of their smoking (Health Education Authority, 1998).

Of 35 year olds who smoke: men will on average die seven years earlier and women six years earlier than those who have never smoked (Health Education Authority, 1998).
Figure 7: Percentage of deaths from various diseases caused by smoking in men and women

More women are dying of lung cancer than ever before

The number of women dying from lung cancer has nearly doubled in the past 20 years (6,961 in 1973 to 12,800 in 1992) while there has been a decrease for men (from 29,463 to 25,941 during the same period) (WHO, 1998).

In Scotland and the US, lung cancer is now responsible for the deaths of more women than breast cancer (Joossens, 1999). The rest of the UK is likely to follow soon (Joossens, 1999).

Women may be more susceptible to lung cancer than men

Women may have an increased susceptibility to lung cancer caused by smoking. In one study women smokers had a 28-fold greater odds of developing lung cancer than non-smokers while smoking men the odds were increased by a factor of 10. Thus the risk of smoking for women was more than twice that for men (Risch et al, 1993).

Smoking, heart disease and strokes

In 1995 24,400 people died from ischaemic heart disease caused by smoking; that is, 23% of male deaths and 11% of female deaths from ischaemic heart disease. Cigarette smoking accounts for an even higher percentage of younger deaths (under 65) from ischaemic heart disease with very little difference between men (45%) and women (40%) (HEA, 1998).

Similarly, for deaths from stroke caused by smoking (7,300 in total) there is virtually no difference between the proportion of men under 65 (40%) and women under 65 (41%) who die (HEA, 1998).
For women, smoking and taking the contraceptive pill is a major risk factor for cardiovascular and cerebrovascular disease

It has been suggested that women may be more sensitive to the harmful effects of smoking compared with men (Prescott et al, 1998). If a woman smokes and takes the contraceptive pill, she is more likely to have a heart attack or stroke than a woman who does not smoke but takes the pill (Petitti et al, 1998).

Women who smoke have a greater risk of osteoporosis

Smoking is linked with vertebral, hip and other fractures (Baron et al, 1990). A study of twins one of whom smoked while the other did not found that the twin who smoked had 5-10% lower bone density than the non-smoking twin (Hopper et al, 1994).

Smoking is associated with facial wrinkling in both men and women

There is evidence that similar-aged smokers appear older than non-smokers as a result of increased wrinkling of the face (Ernster et al, 1995). These changes may be more obvious in women around the eyes and in women who wear lipstick.

Smoking is linked with impotence in men

Cigarette smokers appear to be more likely to suffer from erectile dysfunction than non-smokers. For example, in a study of 4,462 US Army veterans the prevalence of impotence was 2.2% among never smokers, 2.0% among ex-smokers and 3.7% among smokers. The increase in risk of impotence remained once other possible confounding factors had been controlled for (Mannino et al, 1994).

Smoking is linked with reduced sperm quality in men

Research has shown that cigarette smokers have lower quality semen than non-smokers in a number of respects. One recent study found that in men undergoing fertility investigation, smokers had poorer sperm density, a lower percentage of motile sperm, and a lower percentage of normal sperm morphology (Merino et al, 1998).

Smoking is linked with greater difficulty conceiving in women

Women who smoke have decreased fertility. A woman who smokes decreases her chances of conception by approximately one-third per cycle (Stein, 1996) and is more than three times more likely to take over a year to conceive (Baird et al, 1985).
Smoking is linked with early menopause in women

Women who smoke have menopause 1-4 years earlier than non-smokers (Kaufman et al, 1980). Recent research suggests that they are also more likely to experience menopausal hot flushes (Staropoli et al, 1998).

Smoking during pregnancy increases the risk to the fetus

The risks from women smoking while pregnant are well established. There is an increase in prematurity, low-birth-weight, miscarriage and death of the baby during or just after the birth (SCOTH, 1998). Smoking has also been associated with placenta previa (Meyer et al, 1976), ectopic pregnancy (Chow et al, 1988) and premature rupture of the membranes (ACOG, 1990). There is a considerably increase in risk of sudden infant death syndrome in the baby (SCOTH, 1998).

A very recent paper has linked maternal smoking during pregnancy with lower bone mass in the offspring (Jones et al, 1999).
References


Acknowledgements

We are grateful to the English Health Education Authority, the European Union and SmithKline Beecham for giving permission to analyse data from their surveys in this report. We are also grateful to Carolyn Dresler for help with the section on smoking and health. Finally, we are grateful to Katie Chambers and Alison Munroe and the No Smoking Day Committee for comments on drafts of this report.
Appendix: Survey methods

Health Education Survey
A total of 1911 smokers were interviewed face-to-face in their homes during Spring and early Summer of 1996. The sample was selected to be representative of the adult population. A random probability sampling technique was employed using postcodes in England and Wales as the basic sampling frame. Three-hundred postcode sectors were selected with a probability proportional to population after stratification by local authority and social class indicators. Within each postcode sector one address was selected at random and then every 15th address subsequently with a total of 38 addresses being selected in each postcode sector.

At least four attempts were made to contact a responsible adult (16+) at each address. Where contact was made (successful contact was made with 81% of all valid addresses) demographic details, and details of smoking habits were collected for each adult in the household.

In households where it was established that one current smoker or recent ex-smoker (given up in the past 6 months) existed, a further interview was attempted. Where there were two or more, the one with the most recent birthday was selected and the interview attempted. The response rate was 61% among households where there was a smoker or recent ex-smoker present.

The findings presented here are based on only those who were smokers at the time of the interview. The gender comparisons were based on unweighted data. Most of the gender comparisons in this report are based on this survey.

One year after the initial interview an attempt was made to re-contact the smokers for a follow-up interview. A total of 301 respondents had moved or died. No contact was achieved in 132 cases; a further 232 cases refused to be interviewed; and in another 170 cases interviews could not be completed. The data were unusable for 55 cases leaving a total of 1051 usable interviews in the follow-up sample (62% of the traceable cases).

The fieldwork was carried out by BMRB International.

European Union Survey
A total of 609 smokers underwent face-to-face interviews in their homes. Interviewers visited households and if a smoker was present and willing to be interviewed that person was included in the sample. Broad quotas were set on sex and age designed to reflect the cigarette smoking population in the UK. All respondents were 18 years or over. The interviews lasted approximately 30 minutes and were based on a semi-structured questionnaire. Unweighted data were used for the male female comparisons.
The fieldwork was carried out in the Summer of 1998 by INRA.

This sampling method may not permit unbiased estimates of the actual prevalence of behaviours, beliefs etc. in the UK population but there is no reason to believe that male female comparisons were distorted.