



NHS

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Health Survey for England

2007

Healthy lifestyles: knowledge, attitudes and behaviour

Summary of key findings

A survey carried out on behalf of The NHS Information Centre

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Summary of key findings

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Introduction

The Health Survey for England

The Health Survey for England (HSE) is part of a programme of surveys commissioned by The NHS Information Centre for health and social care, and carried out since 1994 by the Joint Health Surveys Unit of the National Centre for Social Research (NatCen) and the Department of Epidemiology and Public Health at the UCL Medical School (UCL). The study provides regular information that cannot be obtained from other sources on a range of aspects concerning the public's health and many of the factors that affect health. The series of Health Surveys for England was designed to monitor trends in the nation's health, to estimate the proportion of people in England who have specified health conditions, and to estimate the prevalence of certain risk factors and combinations of risk factors associated with these conditions. The survey is also used to monitor progress towards selected health targets.

Each survey in the series includes core questions and measurements (such as blood pressure, anthropometric measurements and analysis of saliva and urine samples), as well as modules of questions on specific issues that vary from year to year. In recent years, the core sample has also been augmented by an additional boosted sample from a specific population subgroup, such as minority ethnic groups, older people or, as in this year's survey, children.

This is the seventeenth annual Health Survey for England. All surveys have covered the adult population aged 16 and over living in private households in England. Since 1995, the surveys have included children aged 2-15, and since 2001, infants under two years old, who live in households selected for the survey. Those living in institutions were outside the scope of the survey. This should be borne in mind when considering survey findings since the institutional population is likely to be older and, on average, less healthy than those living in private households.

The HSE 2007 included a general population sample of adults and children, representative of the whole population at both national and regional level, and a boost sample of children aged 2-15. For the general population sample, 7,200 addresses were randomly selected in 720 postcode sectors, issued over twelve months from January to December 2007. Where an address was found to have multiple dwelling units, one was selected at random. Where there were multiple households at a dwelling unit, up to three households were included, and if there were more than three, a random selection was made.

Each individual within a selected household was eligible for inclusion. At each address, all households, and all persons in them, were eligible for inclusion in the survey. Where there were three or more children aged 0-15 in a household, two of the children were selected at random. A nurse visit was arranged for all participants who consented.

In addition to the core general population sample, a boost sample of children aged 2-15 was selected using 26,100 addresses. 18,720 addresses were selected in the same postcode sectors as the core sample (26 per sector); and 7,380 addresses were selected in an additional 180 postcode sectors (41 per sector) to supplement the sample obtained in the core sectors. As for the core sample, where there were three or more children in a household, two of the children were selected at random to limit the respondent burden for parents. There was no nurse follow up for this child boost sample.

A total of 6,882 adults and 7,504 children were interviewed, with 1,727 children from the core sample and 5,777 from the boost. Among the general population sample, 4,998 adults and 1,233 children had a nurse visit. Interviews were carried out at 66% of households in the

general population sample, and at 75% of known eligible boost sample households. In the general population sample, 88% of adults in co-operating households were interviewed, and 64% saw a nurse. In the child sample (core and boost combined), 95% of (sampled) children in co-operating households were interviewed. 68% of children in the general population sample saw a nurse.

Topics covered in the 2007 Health Survey for England

Participants were given an interview, and for those in the core sample this was followed by a visit from a specially trained nurse. Adults and children were asked modules of questions including general health, fruit and vegetable consumption, alcohol consumption and smoking. Children in the boost sample only were also asked about physical activity. Knowledge and attitudes were covered in self-completion questionnaires.

Height was measured for those aged two and over and weight for all participants. Nurses measured infant length (aged at least six weeks and under two years), blood pressure (aged five and over), and waist and hip circumference (aged 11 and over). Demi-span measurements (the length between the sternal notch and the end of the outstretched arm) were taken for participants aged 25-44 and 65 and over. Spot urine samples were collected from adults aged 16 and over, and a saliva sample for cotinine assay from adults aged 16 and over and children aged 4-15. Nurses obtained written consent before taking samples from adults, and parents gave written consent for their children's samples. Consent was also obtained from adults to send results to their GPs, and from parents to send their children's results to their GPs.

Results

This booklet presents findings for adults and children from the 2007 Health Survey for England, looking particularly at knowledge and attitudes to health. All 2007 data in this report are weighted. Data for adults in the general population have been weighted to allow for non-response, and data for children (combining core and boost samples) are weighted for probability of selection and non-response. Both weighted and unweighted bases are given in each table. The unweighted bases show the number of participants involved. The weighted bases show the relative sizes of the various sample elements after weighting, reflecting their proportions in the population in England.

The full report consists of two volumes, published as a set as 'The Health Survey for England 2007':

1. Healthy lifestyles: knowledge, attitudes and behaviour
2. Methodology and documentation

The second volume, Methodology and documentation, provides details of the survey design, methodology and response.

Healthy lifestyles: knowledge, attitudes and behaviour among adults

The primary focus of the Health Survey for England in 2007 was knowledge and attitudes about key aspects of lifestyle: smoking, drinking, eating and physical activity. Lifestyle behaviours have a major impact on health and are among the important risk factors for many illnesses and health conditions. The HSE has traditionally measured lifestyle behaviour, and in 2007 a new area of questioning was introduced to explore the extent to which people are aware of current government recommendations, and their attitudes to key health issues. It is intended that the data will inform policy making and ensure that appropriate messages about adopting healthy lifestyles can be targeted at different groups within the population.

A secondary topic focus was the impact of the smokefree legislation introduced during 2007. From 1st July 2007, virtually all enclosed public places and workplaces in England became smokefree. The 2007 data allow an initial examination of the effect of the legislation by looking at adults' and children's smoking behaviour, and their exposure to other people's smoke, pre and post 1st July.

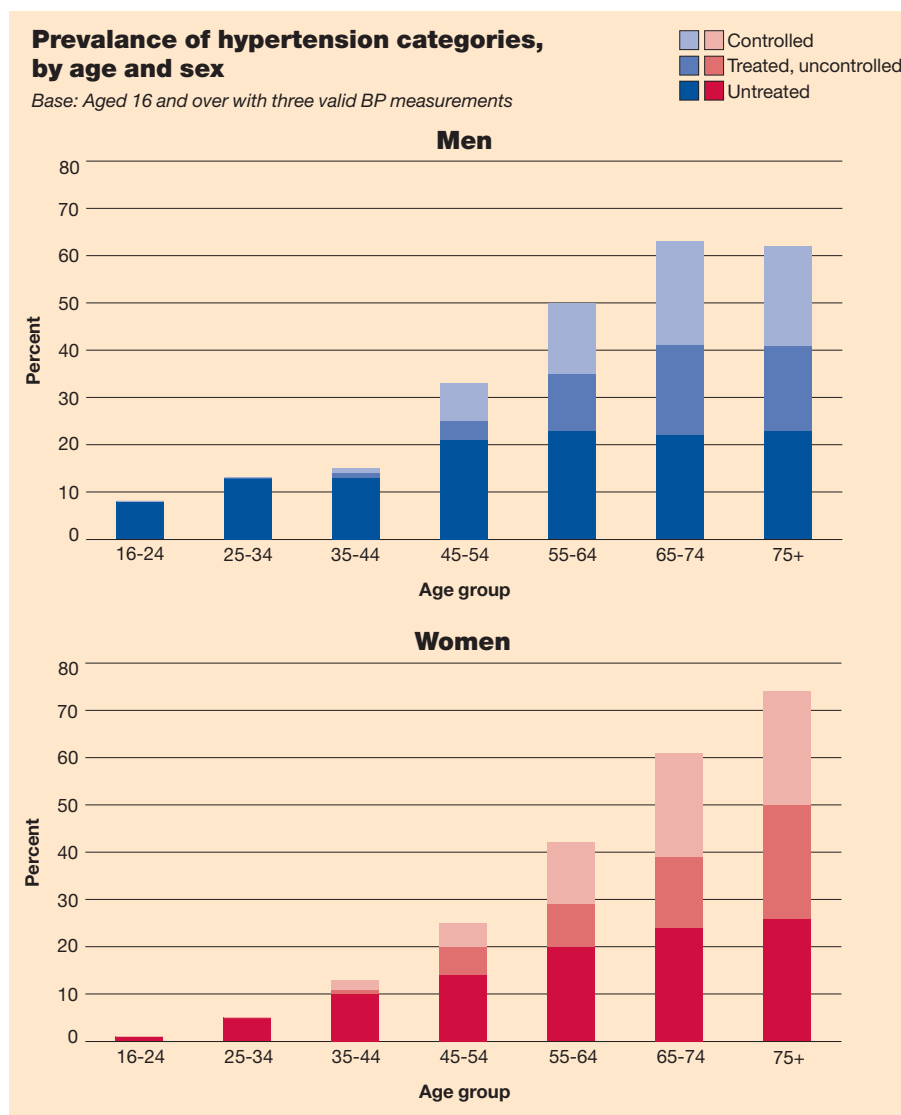
Hypertension

High blood pressure, or hypertension, is an important public health challenge worldwide because of its high prevalence and the concomitant increase in risk of disease. It is the most important modifiable risk factor for cardiovascular, cerebrovascular and renal disease.

It has been estimated that reducing the proportion of the population with high systolic blood pressure (140mmHg) by 50% would prevent more than 18,000 coronary heart disease events in England. An analysis of hypertension management in England from 1994 to 2003 showed a great improvement, with more awareness, treatment and control of hypertension; nevertheless in 2003 the majority of hypertensive adults in England had blood pressure levels above the currently recommended targets.

The prevalence of survey-defined hypertension (at least 140mmHg systolic and/or 90mmHg diastolic blood pressure and/or on treatment for hypertension) in HSE 2007 was 31% in men and 29% in women. Few below the age of 35 had hypertension, and prevalence increased with age in both sexes. Up to the age of 64, prevalence was higher among men than women, and by the age of 75 and over it was higher among women than men.

Among participants with survey-defined hypertension, 46% of men and 53% of women were taking medication to treat the condition, and 26% of men and 29% of women had their hypertension controlled, i.e. their blood pressure was below 140/90mmHg. The treatment rate increased with age in both sexes, ranging from 30% of men and 37% of women with hypertension aged 35-54 to 64% of men and 65% of women aged 75 and over.



Anthropometric measures, overweight and obesity

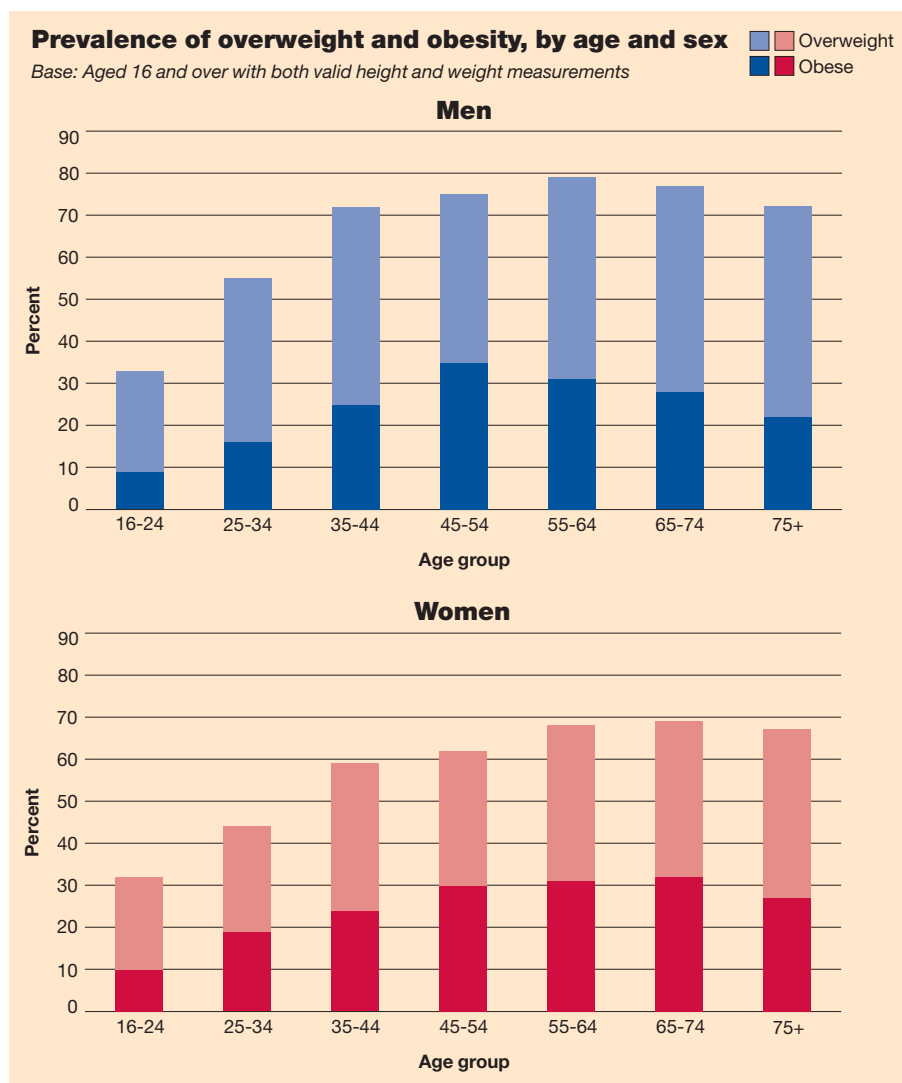
Overweight or obesity is of particular interest because it is a major risk factor for disease and mortality. Overweight and obesity have been shown to be associated with cardiovascular risk, cardiovascular related mortality, cancer, disability during older age and a large decrease in life expectancy. Furthermore, obesity is associated with serious chronic conditions such as Type 2 diabetes, hypertension and hyperlipidaemia (high levels of lipids (fats) in the blood that can lead to narrowing and blockages of blood vessels).

The prevalence of overweight and obesity is indicated by Body Mass Index (BMI) as a measure of general obesity, and/or waist circumference as a measure of abdominal obesity. BMI, defined as weight in kilograms divided by the square of the height in metres (kg/m^2) was calculated in order to group people into the following categories:

BMI (kg/m^2)	Description
Less than 18.5	Underweight
18.5 to less than 25	Normal
25 to less than 30	Overweight
30 or more	Obese
40 or more	Morbidly obese

Overall, mean BMI was similar for men and women ($27.1 \text{ kg}/\text{m}^2$ and $26.8 \text{ kg}/\text{m}^2$ respectively). Mean BMI was generally higher in older age groups.

65% of men and 56% of women were either overweight or obese. A greater proportion of men than women were overweight (41% and 32% respectively). There was no difference in the proportion of men and women that were obese (24%). Overweight and obesity showed a similar pattern to mean BMI, being lowest in the 16-24 age group, and higher in the older age groups among both men and women.



A raised waist circumference is defined as greater than 102cm in men, and greater than 88cm in women. Mean waist circumference was 96.7cm in men and 86.5cm in women. Women were significantly more likely than men to have a raised waist circumference (41% and 33% respectively). Both mean waist circumference and the prevalence of a raised waist circumference were generally higher in older age groups.

National Institute for Health and Clinical Excellence (NICE) guidelines recommend the use of both BMI and waist circumference to assess overweight and obesity and to identify the risk of co-morbidities. Different levels of health risk have been defined for different combinations of these two measures. For those with a BMI of less than 35 kg/m², waist circumference is another useful measure of disease risk, with a raised waist circumference indicating increased risk.

Using the NICE categories, most men and women who were overweight or obese tended also to have a high or very high waist circumference, and were therefore at increased health risk. Using combined categories of BMI and waist circumference to assess risk, 19% of men were estimated to be at increased risk, 13% at high risk and 21% at very high risk. The equivalent percentages for women were 15% at increased risk, 16% at high risk and 23% at very high risk.

Physical activity: knowledge and attitudes

Physical activity is an important public health issue: physically active adults have 20-30% reduced risk of premature death and up to 50% reduced risk of developing major chronic diseases. Moreover, participation in regular physical activity can increase the quality of life and independence in older age. The amount of habitual physical activity accrued is also closely linked with all-cause mortality risk, yet the majority of people in many countries do not accumulate sufficient exercise to derive health-related benefits.

The Chief Medical Officer's recommendation is that adults should be active at moderate or greater intensity on at least five days a week, for at least 30 minutes a day, either in one session or through a number of shorter bouts of activity of 10 minutes or longer. The UK government set a target in its 'Game Plan: a strategy for delivering government's sport and physical activity objectives' in 2002 for '70% of the population to be reasonably active (for example 30 minutes of moderate exercise five times a week) by 2020'.

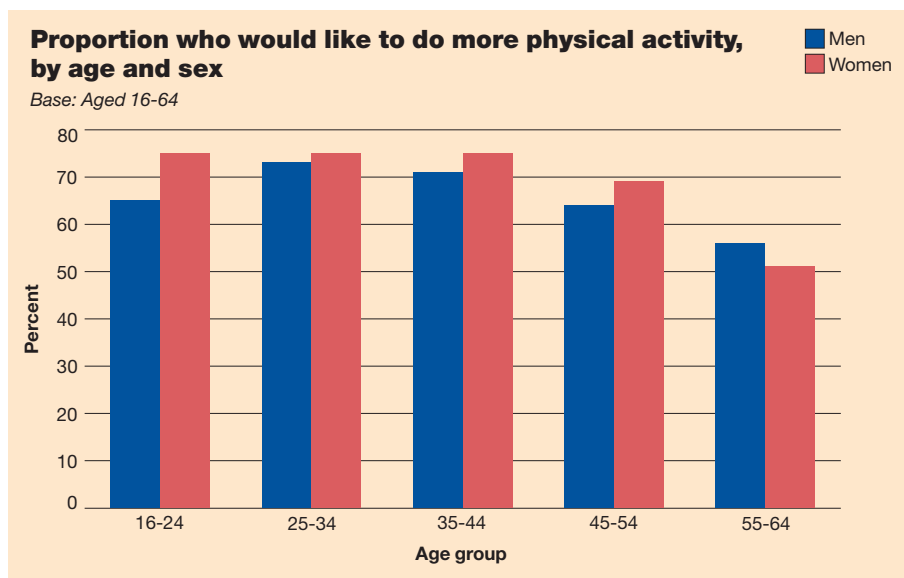
The 2007 HSE did not include questions about adults' participation in physical activity, but explored knowledge and attitudes among adults aged 16-64.

Knowledge and attitudes

About a quarter of adults aged 16-64 (27% of men and 29% of women) thought they knew the current recommendations for physical activity, but when asked how much physical activity they thought people their own age should do, fewer than 1 in 10 adults specified a level equivalent to the Chief Medical Officer's (CMO's) minimum recommended target. A further 25% of men and 23% of women specified a level of physical activity greater than the minimum recommendations, while most either under-estimated how much physical activity adults should do or did not know.

Attitudes to physical activity were very similar between men and women aged 16-64. 44% of men and 45% of women agreed that they could get enough physical activity in their daily life without specific activities such as jogging or going to the gym. A high proportion of adults agreed that physical activity was good for health even if it was moderate, even if it was for only for 10 minutes at a time, and if it lasted at least 30 minutes. Around half agreed that physical activity is better 'if it gets you out of breath' (51% and 50% respectively).

A high proportion of men and women aged 16-64 perceived themselves to be either very or fairly physically active compared with other people in their age group (75% of men and 67% of women). Women were slightly more likely than men to want to do more physical activity than at present (69% and 66% respectively).



Barriers and encouraging factors

Barriers to doing more physical activity included work commitments (45% of men, 34% of women) and lack of leisure time (38% of men, 37% of women). Caring for children or older people was cited by a quarter of women (25%) but only 13% of men. Other barriers to doing

more physical activity included lack of money (13% of men, 16% of women) and poor health (10% of men, 13% of women). 21% of men and 25% of women reported they were not motivated to do more; however, almost no one thought exercise was a waste of time.

Factors that would encourage more physical activity, as well as more leisure time or self-motivation, included motivations relating to the participant's own ill health or advice from a doctor or nurse.

Diet and healthy eating

There is a clear link between unhealthy diet and poor health and premature mortality across the world. This not only has increasing social costs in England, but is placing a financial burden of more than £2 billion on the NHS. A government consultation into issues concerning healthy eating (2004) highlighted the need for the population to have sufficient information and knowledge to make informed choices about their diet. The subsequent government white paper *'Choosing a better diet: a food and health action plan'*, identified a number of priorities for action surrounding health and nutrition, and to contribute to a reduction in cardiovascular disease, cancer and obesity, through encouraging the population to adopt a healthy lifestyle.

Eating patterns

Overall, 27% of men and 31% of women met the recommended guidelines of eating five or more portions of fruit and vegetables per day. The proportions meeting the guidelines were lowest among adults aged 16-24 (18% of men, 23% of women in this age group). The mean daily number of portions of fruit and vegetables was 3.6 for men and 3.9 for women.

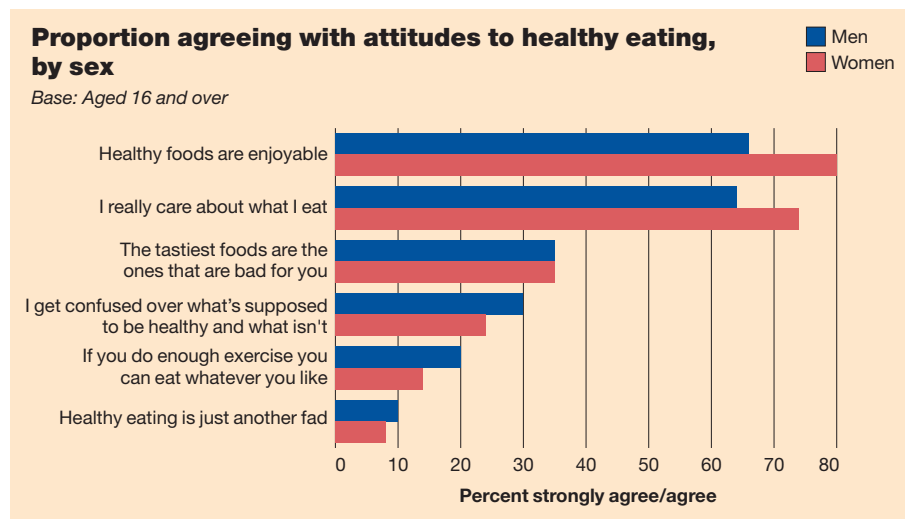
Mean fat scores were higher among men than women, with a mean of 26.5 for men and 23.4 for women. There were fewer men than women with a low fat score (below 30), representing a fat intake of 83g or less (67% and 76% respectively).

Knowledge and attitudes

When presented with a list of options 14% of men and 11% of women correctly selected the option that represented a portion of fruit or vegetables and no others. A further 76% of men and 80% of women selected the correct option but also selected one or more of the incorrect options. A higher proportion of women than men knew that the recommended number of portions of fruit and vegetables per day was five (78% and 62% respectively).

The majority of participants believed their diet to be 'quite' healthy (71% of men and 72% of women). Women were more likely to consider their diet 'very healthy' compared with men (19% and 16% respectively) and less likely to report that their diet was 'very unhealthy'.

There were differences between men and women in their attitudes to healthy eating. More women than men agreed that 'Healthy foods are enjoyable' and 'I really care about what I eat', and more women than men disagreed that 'Healthy eating is just another fad'.

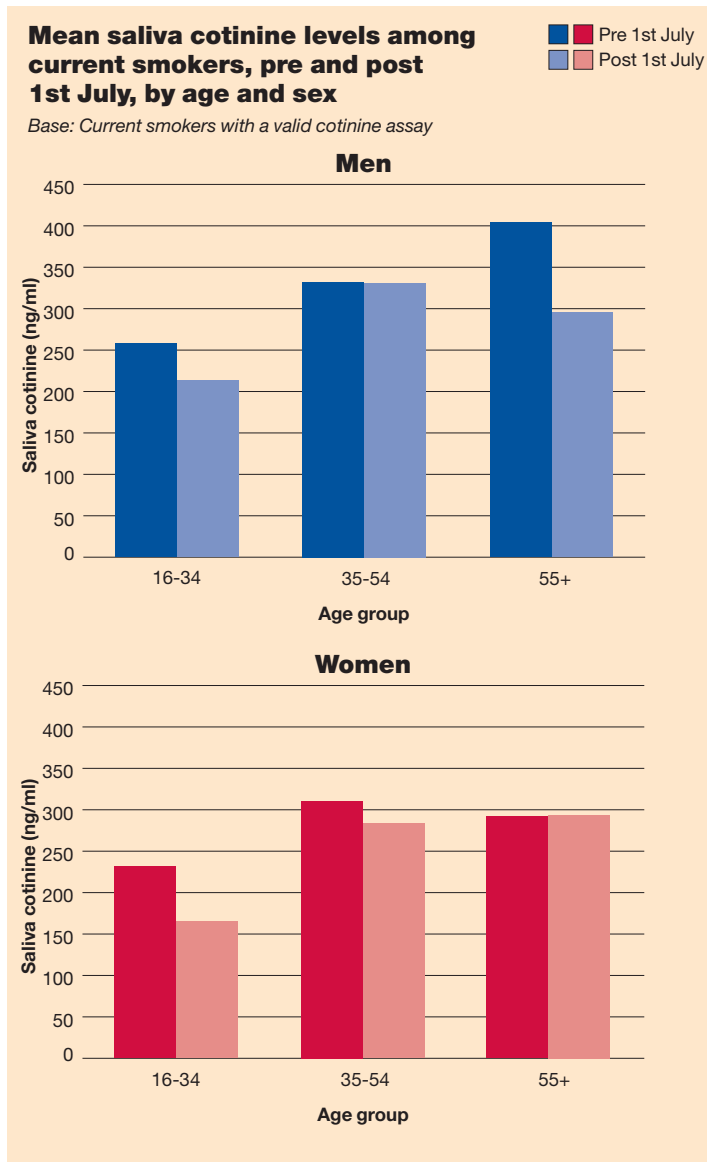


Conversely, more men than women agreed with the statements 'I get confused over what's supposed to be healthy and what isn't' and 'If you do enough exercise you can eat whatever you like'. The only statement for which there was no significant difference between men and women was 'The tastiest foods are the ones that are bad for you'.

80% of men and 77% of women thought that they would benefit from making changes to their diet, and were asked about any barriers that would prevent them from making improvements to the way they eat. The most common barriers were 'I don't have time' (28% of men and 29% of women), 'It is hard to change my eating habits' (29% of men and 28% of women), and 'It costs too much' (22% of men and 21% of women).

Cigarette smoking

Smoking is recognised to be the greatest single cause of preventable illness and premature death in the United Kingdom. Figures from the report *Statistics on Smoking: England 2008* showed that in England in 2007 around 82,900 deaths among adults aged 35 and over were estimated to be caused by smoking, accounting for 23% of deaths in men and 14% of deaths in women aged 35 and over. Smoking is acknowledged as the greatest contributor to inequalities in health and mortality in this country. There is no threshold for exposure to secondhand smoke below which it is harmless. On 1st July 2007, smokefree legislation was implemented within England, making it illegal to smoke in any enclosed public place. The 2007 HSE report provides a preliminary assessment of the immediate impact of the smokefree legislation.



In 2007, 24% of men and 21% of women aged 16 and over reported that they were current smokers. Among both men and women, smoking prevalence was highest among younger adults and decreased with advancing age from age 55 onwards. Cigarette smoking prevalence has gradually decreased over the past decade. Smoking prevalence among men has fallen from 28% in 1993 to 24% in 2007, and among women from 26% in 1993 to 21% in 2007.

30% of male smokers and 21% of female smokers reported smoking more than 20 cigarettes per day. Looking at the mean number of cigarettes smoked, male smokers reported smoking more cigarettes a day on average than female smokers (14.0 cigarettes and 12.4 cigarettes respectively).

As in previous years, there were pronounced differences in cigarette smoking prevalence by quintile of equivalised household income.

Cotinine is a derivative of nicotine, and a high cotinine level (15ng/ml or more) is indicative of personal tobacco use. 26% of men and 22% of women had a cotinine level consistent with having smoked in the past 24 hours. The proportions with a cotinine level of 15ng/ml were two percentage points higher among men and one percentage point higher among women than self-reported estimates of cigarette smoking, pointing to a low but persistent level of under-reporting of smoking behaviour among adults.

There was no significant difference in cigarette smoking prevalence after the implementation of the smokefree legislation on 1st July. Among smokers the mean number of cigarettes smoked per day did not fall significantly overall, but there were significant reductions among men aged 35 and over. However, these decreases were in contrast to a slight increase among men aged 16-34. There were no overall differences in the proportion of men and women with a cotinine level of 15ng/ml or more, pre and post 1st July. However, the mean cotinine level among current cigarette smokers was significantly lower after 1st July, indicating a reduction in cigarette consumption after the legislation was introduced.

All adults were asked to estimate their total hours of exposure to other people's tobacco smoke. The mean number of hours reported was significantly lower after the introduction of the smokefree legislation, falling from 7.2 hours (pre 1st July) to 3.8 hours (post 1st July) among men and 5.2 hours to 3.1 hours among women.

Alcohol consumption

The damage caused by alcohol misuse to individuals and society has become an increasing focus of public concern in recent years. The government's *Alcohol Harm Reduction Strategy*, published in 2004 and updated in 2007, acknowledged the positive role that alcohol plays in British life, but also identified ways in which alcohol misuse contributes to poor health.

Drinking patterns

Most adults in England said that they drank alcohol, at least occasionally (90% of men, 84% of women), and the majority of adults had also drunk alcohol in the last week (73% of men, 57% of women). 22% of men and 13% of women had drunk alcohol on five or more days in the last week. Frequent drinking was most common among men and women aged 45 and over and in higher income households.

The current recommendations for daily alcohol intake are that it should not regularly exceed three to four units for men and two to three units for women. In the last week, 42% of men and 31% of women had drunk more than the recommended maximum on at least one day.

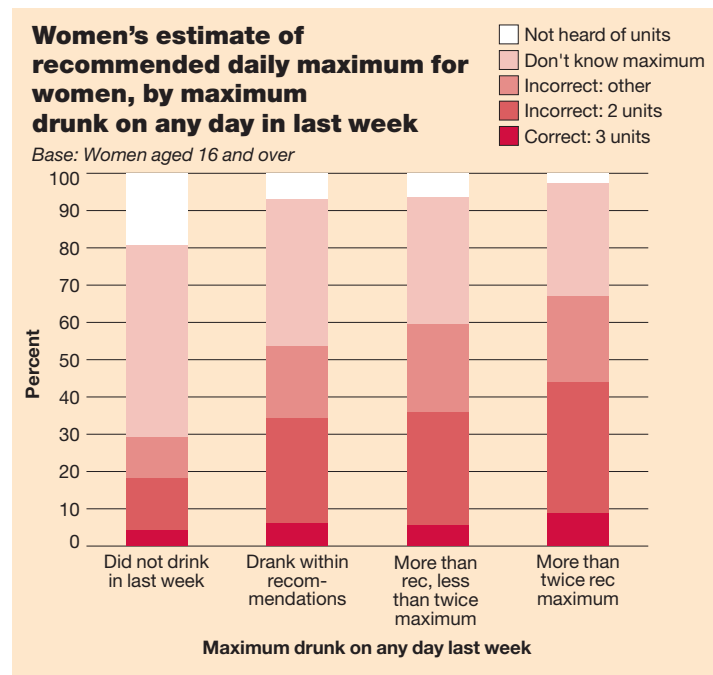
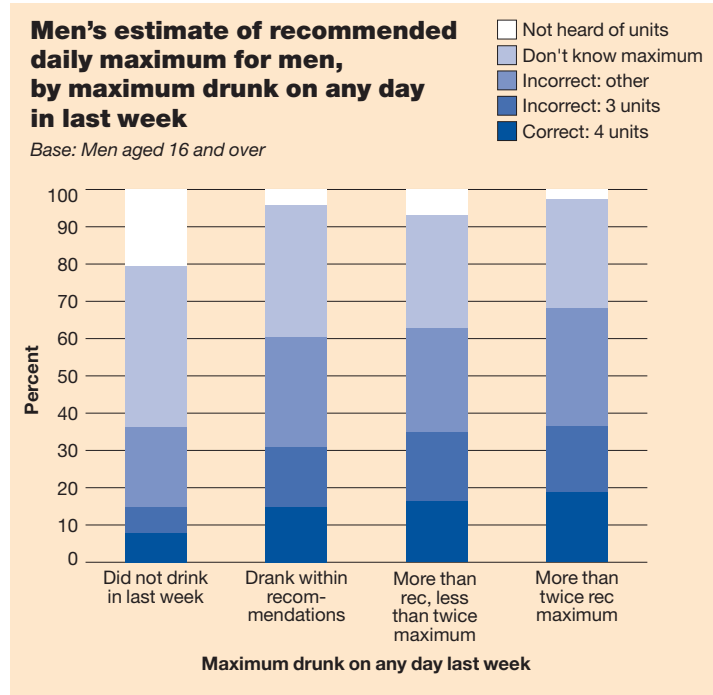
Among those adults who drank in the last week, the majority exceeded recommendations on at least one day; 59% of men and 55% of women had done so. 35% of men and 27% of women had drunk more than twice the recommended levels on at least one day in the last week. This was most common among the youngest age group (56% of men and 52% of women aged between 16 and 24), and declined with age.

On average, men consumed 8.5 units on the day they drank most in the last week, and women consumed 5.5 units. Average consumption was higher than the recommended

levels for all age groups except the oldest, and more than twice recommendations in younger age groups.

Knowledge and attitudes

Most adults (92% of men and 89% of women) had heard of units of alcohol. However, fewer adults knew what the recommended maximum daily intake was (35% of men and 43% of women had heard of units but said that they didn't know what the recommendations were for their sex). Those who attempted to define the recommendations were more likely to be wrong than right. Accurate knowledge of the alcohol content of different drinks varied with age, with those aged 25 to 54 being most knowledgeable.



The majority of adults believed that 'drinking is a major part of the British way of life'. There was also agreement that 'people in some other parts of Europe tend to drink more sensibly than people in Britain'. Only a minority of adults agreed that 'there is nothing wrong with people getting drunk regularly'. Similarly, only a minority agreed that 'the government should tax alcohol more heavily to encourage people to drink less'.

Healthy lifestyles: knowledge, attitudes and behaviour among children

The Health Survey for England 2007 focused on knowledge and attitudes about healthy lifestyles among adults and children. Knowledge and attitude questions were usually asked of children aged 11-15, unless otherwise stated.

A secondary objective was to examine results on childhood obesity, as well as other health risk factors for children, including fruit and vegetable consumption, physical activity, drinking and smoking.

BMI, overweight and obesity

There is increasing evidence that childhood overweight and obesity can be linked with numerous long-term and immediate health risks. Childhood obesity is associated with many illnesses, and in adulthood is linked to increased mortality and reduced life expectancy. Data from the HSE has demonstrated that levels of obesity among children are increasing, and the Public Service Agreement (PSA) shared by the Department of Health, Department for Children, Schools and Families and Department of Culture, Media and Sport aims to 'Reduce the proportion of overweight and obese children to 2000 levels by 2020 in the context of tackling obesity across the population'.

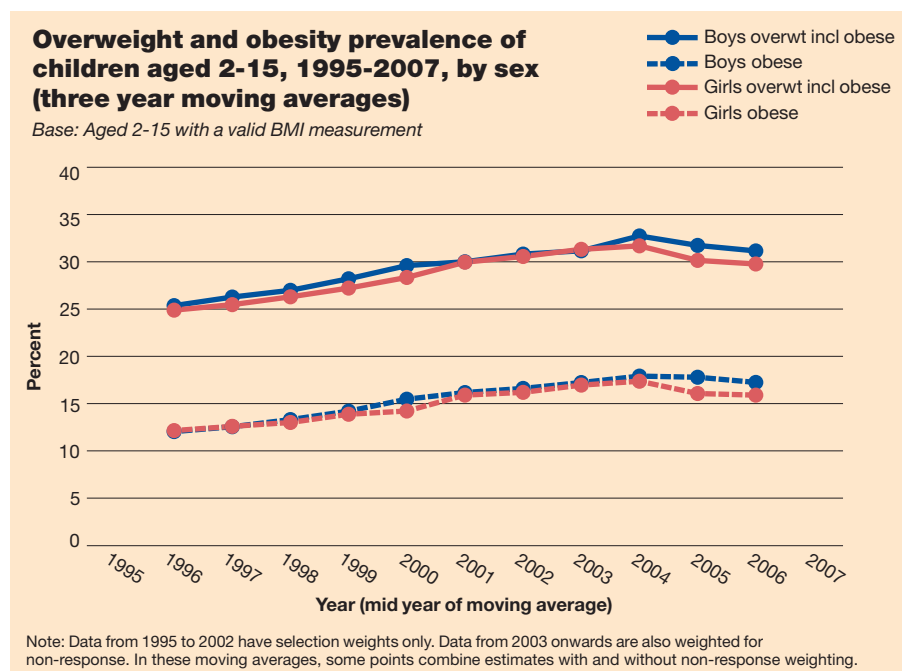
Overweight and obesity prevalence

According to the UK National BMI percentiles classification, around three in ten boys and girls aged 2-15 were classed as either overweight or obese (31% and 30% respectively).

Between 1995 and 2007 there were yearly fluctuations in obesity levels. However, overall among children aged 2-15, obesity has risen from 11% of boys and 12% of girls in 1995 to 17% of boys and 16% of girls in 2007. There have been increases over the period among boys and girls aged 2-10 and boys aged 11-15.

The Public Service Agreement (PSA) target is to reduce the proportion of overweight and obese children to 2000 levels by 2020. Looking at the period covered by the target so far, between 2000 and 2007 the percentage of boys aged 2-15 classed as either overweight or obese increased overall from 27% to 31%. This overall increase reflected an increase in obesity among boys aged 2-10, and an increase in overweight among boys aged 11-15. While there was no significant change among girls aged 2-15 overall, there was an increase in overweight including obesity among girls aged 2-10.

There was no significant change in mean BMI or overweight/obesity prevalence between 2006 and 2007, and there are indications that the trend in obesity prevalence may have begun to flatten out over the last two to three years. The next couple of years' data will be important in confirming whether this is a continuing pattern, or whether the longer term trend continues upward.



Obesity and physical activity

Among girls, obesity prevalence rates varied by overall physical activity levels. 21% of girls aged 2-15 in the low physical activity group were classed as obese, compared with 15% of the high group. Among children aged 11-15, those classed as obese were more likely to say that they would like to do more physical activity than those with normal weight (71% compared with 57% for boys, 84% compared with 71% for girls).

Physical activity: behaviour, knowledge and attitudes

The range of benefits to children of a physically active lifestyle include reduced overweight/obesity, increased psychological well-being, increased social interaction, improved self-esteem, skeletal health and growth, and reduction in other health-related risk factors.

The Chief Medical Officer (CMO) of England has recommended that children and young people should do a minimum of 60 minutes of at least moderate intensity physical activity each day. In order to achieve this target it is important to understand how and when children develop knowledge and attitudes about physical activity. There is some evidence that suggests young people's attitudes towards and perceived ability in sport and exercise are largely developed by the time they complete secondary school, and this is highly predictive of whether they become physically active adults.

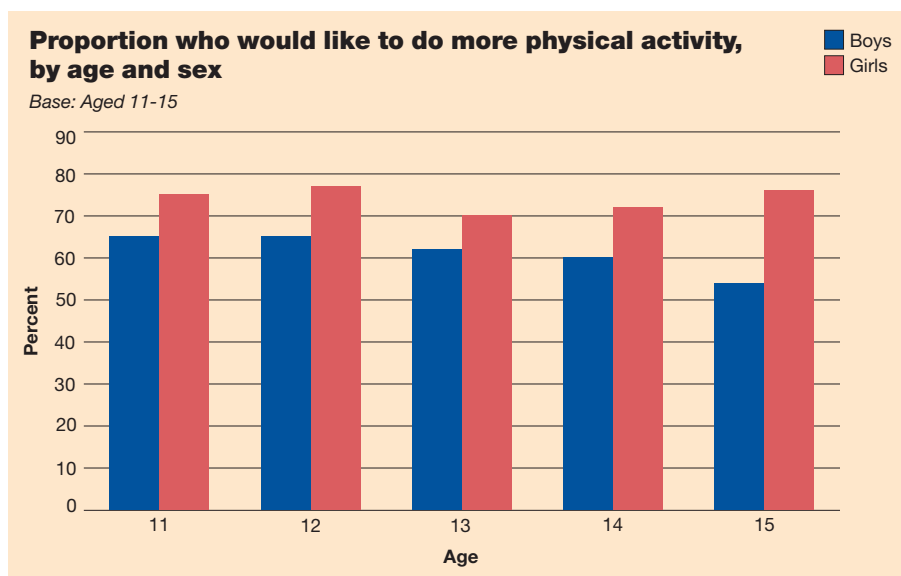
Physical activity levels

More boys (72%) than girls (63%) met the government recommended targets for physical activity. A similar proportion of boys met the targets across all age groups, but for girls the proportion steadily declined after the age of nine.

Knowledge and attitudes

When asked how much physical activity children should do, only one in 10 children aged 11-15 suggested that it should be 60 minutes on all seven days per week, i.e. at the minimum level recommended by the government. A further 8% of boys and 3% of girls overestimated the minimum recommendations. Most boys and girls perceived themselves to be either very or fairly physically active compared with other people their age (90% and 84% respectively). This includes 68% of boys and 67% of girls in the lowest activity group, who thought they were very or fairly physically active compared with others.

Girls were more likely than boys aged 11-15 to want to do more physical activity (74% and 61% respectively). This proportion declined with age among boys, but not among girls. The most frequently mentioned sports and activities boys would like to do more were ball sports (39%), riding a bike and swimming (both 35%). For girls the most frequently mentioned sport was swimming (47%).



Diet and healthy eating

Behaviours and attitudes towards diet formed in early life extend into later childhood and adulthood, ultimately having an impact on health over an individual's lifespan. For this reason many government papers outline the importance of developing positive attitudes and behaviours towards diet in children, particularly through education.

Fruit and vegetable consumption

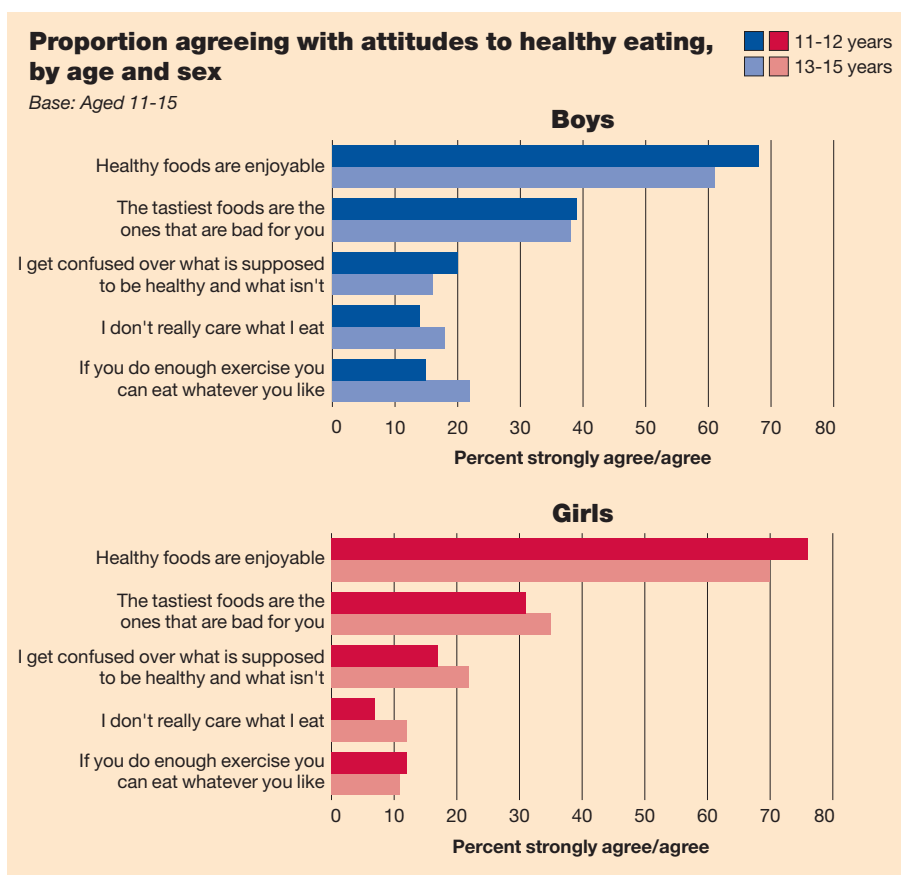
Among children aged 5-15, 21% of both boys and girls reached the target of five portions of fruit and vegetables per day. The main source of fruit and vegetables was from fresh fruit, with 68% of boys and 72% of girls having consumed fresh fruit in the previous 24 hours.

Knowledge and attitudes

63% of boys and 73% of girls aged 11-15 knew that five portions of fruit and vegetables should be eaten each day. However, only 22% of boys and 21% of girls could correctly identify what a portion was from a list of options.

Most children aged 11-15 thought that their diet was 'quite healthy' (70% of boys and 72% of girls), and only 1% of children thought that their diet was 'very unhealthy'.

The majority of children aged 11-15 agreed that 'Healthy foods are enjoyable', with more girls than boys agreeing with the statement (72% compared with 64%). 38% of boys and 34% of girls agreed that 'The tastiest foods are the ones that are bad for you'. For the statements, 'I get confused over what's supposed to be healthy', 'If you do enough exercise you can eat whatever you like' and 'I don't really care what I eat', much larger proportions of children disagreed than agreed. Attitudes towards healthy eating were strongly associated with children's perceptions of their diet. For example, those who judged their diet to be healthy were more likely to agree with the statement 'Healthy foods are enjoyable' than those who judged their diet to be unhealthy.

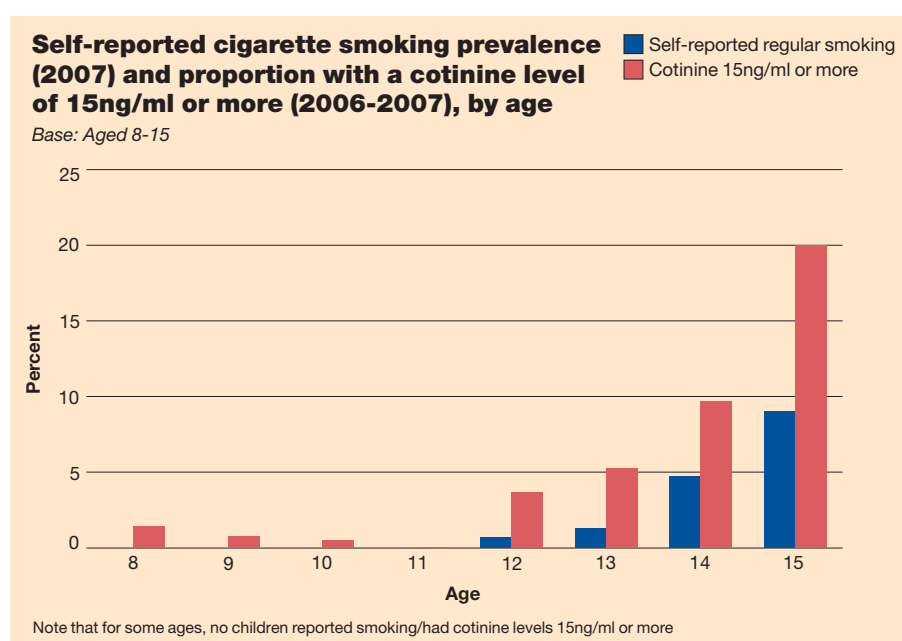


Cigarette smoking and exposure to others' smoke

Exposure to secondhand tobacco smoke is widely accepted to have a negative impact on health. Children are particularly at risk from the effects of this exposure. A recent British Medical Association (BMA) Scientific Board report summarised the evidence that exposure to secondhand smoke causes illnesses including cot death, respiratory illnesses, impaired lung function, middle-ear disease and asthma. As well as the risks children face from exposure to secondhand smoke, many children suffer ill-health from smoking themselves.

A small proportion (2%) of children aged 8-15 reported that they were regular smokers (at least one cigarette a week). This was higher among older children, with 8% of boys and 10% of girls aged 15 reporting that they smoked regularly.

Salivary cotinine is likely to be a more accurate indicator of children's smoking status than self-report. Overall, the proportion of children aged 4-15 who had a cotinine level indicative of smoking (15ng/ml) was small: 3% of children. However, the proportion of children aged 8-15 with a cotinine level of 15ng/ml or more (indicative of smoking) was higher than the proportion of children that reported regular smoking. This was particularly true of older children, with 20% of those aged 15 having a cotinine level of 15ng/ml or more, but only 9% reporting that they were regular smokers.



Mean cotinine levels were significantly higher for children living in a household where one or more adults smoked regularly than where no adults smoked regularly (11.5ng/ml compared with 1.5ng/ml), as was the percentage of children with cotinine levels indicative of actual smoking (7% compared with 1%).

No differences were found in self-reported smoking behaviour or cotinine levels before and after the introduction of the smokefree legislation in England on 1st July 2007. Similarly, no significant differences were found in the exposure to smoke of children before and after 1st July. However, the proportion of children aged 0-12 who were exposed to smoke for two or more hours by a carer was lower than in 2006.

Experience of alcohol: behaviour and attitudes

Unhealthy drinking patterns in adolescence may be associated with the risk of physical health problems, and also to other negative effects such as poor school performance and mental health problems. Adolescent drinking has also been linked to dependence in adulthood. Government strategies for young people have focused on educating them about making responsible choices about alcohol, and restricting the supply of alcohol to underage drinkers. In taking the alcohol strategy forward, the government has recently announced plans to provide authoritative age-based guidelines on safe, sensible drinking, designed to help young people and parents make better informed decisions about when and how much they drink.

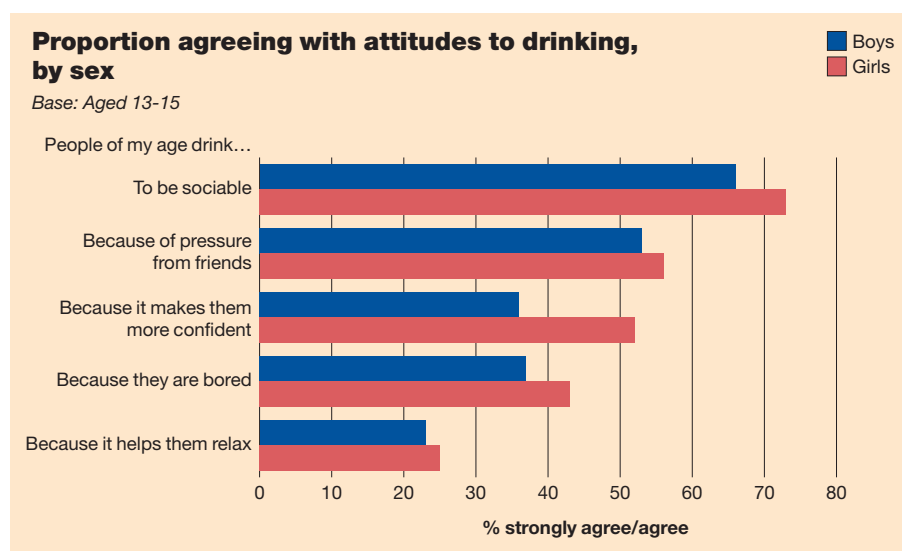
Drinking patterns

The proportion of children aged 8-15 who reported ever having had a proper alcoholic drink increased with age, from 7% of boys aged 8 to 79% of boys aged 15, and from 8% of girls aged 8 to 74% of girls aged 15. Overall, 35% of boys and 34% of girls aged 8-15 reported having experience of drinking alcohol.

4% of boys and 3% of girls aged 8-15 reported usually drinking once a week or more. Frequency of drinking was clearly related to age. The proportion who reported drinking at least once a week increased from less than 1% of both boys and girls aged 8 to 21% of boys and 13% of girls aged 15 (the difference between boys and girls not being statistically significant). 15% of both boys and girls aged 13-15 reported drinking alcohol in the last 7 days.

Attitudes

Children aged 13-15 were asked about their attitudes to why people their age may drink alcohol. Girls were slightly more likely than boys to agree that 'People of my age drink to be sociable with friends' (73% and 66% respectively). Girls were also more likely than boys to agree that young people drink because it gives them confidence (52% and 36% respectively) and because they are bored (43% and 37% respectively). More than half of both boys and girls agreed that young people drink because of pressure from friends (56% of girls and 53% of boys). Only around a quarter agreed that young people drink because it helps them relax (23% of boys and 25% of girls).



Reports on the 2007 Health Survey

This booklet is a summary of the findings from the 2007 Health Survey for England: Craig R and Shelton N (eds) *Health Survey for England 2007*.

Volume 1: Healthy lifestyles: knowledge, attitudes and behaviour;

Volume 2: Methodology and documentation.

The NHS Information Centre, 2008.

Full results are available in the survey report, and also in an anonymised data file lodged with the Data Archive at the University of Essex. Reports and data files from earlier surveys are similarly available.

For the general population, tables showing selected trends from 1993 to 2007 will be found on The NHS Information Centre website at www.ic.nhs.uk/pubs/hse07trends or at the address below.

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National Centre for Social Research

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The National Centre for Social Research is the largest independent social research institute in Britain, specialising in social survey and qualitative research for the development and evaluation of policy. NatCen specialises in research in public policy fields such as health, housing, employment, crime, education and political and social attitudes. Projects include ad hoc and continuous surveys, using face-to-face, telephone and postal methods; many use advanced applications of computer assisted interviewing. NatCen has approximately 300 staff, a national panel of over 1,000 interviewers and 200 nurses who work on health-related surveys.

Department of Epidemiology and Public Health, UCL Medical School

www.ucl.ac.uk/epidemiology

The Department of Epidemiology and Public Health, chaired by Professor Sir Michael Marmot, is a leading centre for research into the social determinants of health. The department has a strong interdisciplinary structure. The Department houses over 170 staff, in 11 main research groups, namely the Joint Health Surveys Unit, part of the Health and Social Surveys Research Group; Cancer Research UK-funded Health Behaviour Research Centre; Central and Eastern Europe Research Group; Dental Public Health; Health Care Evaluation Group; International Centre for Life Course Studies; MRC Unit for Lifelong Health and Ageing (including the National Survey of Health and Development); Psychobiology Group; Clinical Epidemiology Group; Genetic Epidemiology Group; and the Whitehall II Study. Collaborative research is conducted through the International Institute for Society and Health and across the Division.

The Department's research programme is concerned particularly with social factors in health and illness and inequalities in these, including national cross-sectional surveys of health and behaviour (such as diet), longitudinal studies of cardiovascular disease (Whitehall studies) and the English Longitudinal Study of Ageing (ELSA); international studies of cardiovascular disease and diabetes; sociodemographic indicators of need; and the socio-economic and policy implications of an ageing population.



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