## Health Survey for England



## Health, social care and lifestyles

## Summary of key findings

A survey carried out on behalf of the Health and Social Care Information Centre

Joint Health Surveys Unit
NatCen
Social Research that works for society

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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 Health and Social Care Information Centre. It has been carried out since 1994 by the Joint Health Surveys Unit of NatCen Social Research and the Research Department of Epidemiology and Public Health at UCL (University College London). 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 blood and saliva samples), as well as modules of questions on specific issues that vary from year to year. In some 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 children; there was no boost in 2012.

This is the 22nd 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 who live in households selected for the survey; children aged 2-15 were included from 1995, and infants under two years old were added in 2001. 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 less healthy than those living in private households.

The HSE in 2012 provided a representative sample of the population at both national and regional level. 9,024 addresses were randomly selected in 564 postcode sectors, issued over twelve months from January to December 2012. Where an address was found to have multiple dwelling units, a random selection was made and a single dwelling unit was included. Where there were multiple households at a dwelling unit, again one was selected at random.

All adults and children in selected households 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 to limit the respondent burden for parents. A nurse visit was arranged for all participants who consented.

A total of 8,291 adults and 2,043 children were interviewed. A household response rate of $64 \%$ was achieved. 5,470 adults and 1,203 children had a nurse visit. It should be noted that, as in 2011, there was no child boost sample in 2012. Thus the scope for analyses of some data for children may be limited by relatively small sample sizes.

Topics covered in the 2012 Health Survey

Topic coverage is shown in Figure 1. Core topics on general health, social care and lifestyles were continued from previous years, with the usual questions on drinking supplemented by further questions on regular drinking. The focus topic for the 2012 survey was physical activity. Additional non-core modules of questions were also included for adults, covering gambling behaviour, well-being and sexual health.

## Figure A

## Health Survey for England 2012: Contents

Household data

Household size, composition and relationships
Accommodation tenure and number of bedrooms
Economic status/occupation of Household
Reference Person

Household income
Type of dwelling and area
Smoking in household
Car ownership


| Interviewer visit |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| General health, longstanding illness, limiting longstanding illness, acute sickness | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ |
| Personal care plans |  |  |  |  |  |  |  | $\bigcirc$ |
| Self-reported height and weight |  |  |  |  |  |  |  | - |
| Doctor-diagnosed hypertension, diabetes |  |  |  |  |  |  |  | - |
| Social care |  |  |  |  |  |  |  | - |
| Adult physical activity |  |  |  |  |  |  |  | - |
| Child physical activity |  | - | $\bigcirc$ | $\bigcirc$ | - | - | - |  |
| Smoking |  |  |  |  | $0^{\text {a }}$ | ${ }^{\text {a }}$ | ${ }^{\text {a }}$ | ${ }^{\text {b }}$ |
| Drinking (heaviest drinking day last week, regular drinking) |  |  |  |  | $0^{\text {a }}$ | $0^{\text {a }}$ | ${ }^{\text {a }}$ | ${ }^{\text {b }}$ |
| Economic status/occupation, educational achievement |  |  |  |  |  |  |  | - |
| Ethnic origin | $\bigcirc$ | - | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | - | $\bigcirc$ | $\bigcirc$ |
| Reported birth weight | - | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ |  |
| Height measurement |  | - | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ |
| Weight measurement | - | - | $\bullet$ | $\bullet$ | - | - | $\bigcirc$ | - |
| Consent to linkage to NHS Central Register/Hospital Episodes Statistics |  |  |  |  |  |  |  | - |
| Self-completion |  |  |  |  |  |  |  |  |
| GHQ-12 |  |  |  |  |  |  |  | $\bigcirc$ |
| EQ-5D |  |  |  |  |  |  |  | $\bullet$ |
| Gambling |  |  |  |  |  |  |  | $\bigcirc$ |
| Sexual health |  |  |  |  |  |  |  | - |
| Perception of own weight/child's weight |  |  |  |  |  |  |  | $\bigcirc$ |
| Sexual orientation, religion |  |  |  |  |  |  |  | - |
| Nurse visit |  |  |  |  |  |  |  |  |
| Immunisations | $\bigcirc$ |  |  |  |  |  |  |  |
| Prescribed medicines | - | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ |
| Nicotine replacement products |  |  |  |  |  |  |  | - |
| Waist and hip circumference |  |  |  |  |  | - | - | - |
| Blood pressure |  |  |  | - | - | $\bigcirc$ | - | - |
| Saliva sample |  |  | - | - | - | - | - |  |
| Urine sample |  |  |  |  |  |  |  | $\bigcirc$ |
| Blood sample (non-fasting) |  |  |  |  |  |  |  | - |
| Nurse self-completion |  |  |  |  |  |  |  |  |
| Warwick-Edinburgh mental well-being scale |  |  |  |  |  |  |  | $\bigcirc$ |

[^0]Children aged 13-15 were interviewed themselves, and parents of children aged 0-12 were asked about their children, with the interview including questions on general health and physical activity. For children aged 8-15 and some young adults, details of drinking and smoking were collected by self-completion.

Height was measured for participants aged 2 and over, and weight was measured for all participants. Nurses measured waist and hip circumference among those aged 11 and over and blood pressure among those aged 5 and over. Non-fasting blood samples and urine samples were collected from adults aged 16 and over, and saliva samples for cotinine analysis were collected from 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 to send results to their GPs if participants wished.

Results
This booklet presents findings for adults and children from the 2012 Health Survey for England. All 2012 data in this report are weighted; weighting for adults corrects for nonresponse, and weighting for children corrects for selection differences and non-response. Both weighted and unweighted bases are given in each table in the main report. 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 2012'

Volume 1: Health, social care and lifestyles
Volume 2: Methods and documentation.
The second volume, Methods and documentation, provides details of the survey design, methods and response.

## Physical activity

## Physical activity in adults

In 2011, the Chief Medical Officers of the four UK countries introduced revised guidelines for physical activity that reflect current evidence on what is needed to benefit health and the incremental benefits from undertaking physical activity. These include guidelines on aerobic activity; muscle-strengthening activities; and activities to improve balance and coordination.

Physical activity was selected as a major focus of the HSE 2012 because it coincided with the London 2012 Olympic and Paralympic Games. One of the planned legacies from the London 2012 Games was an increase in sports and exercise participation, including active travel (walking and cycling), by the general public across the country.

Physical inactivity contributes to a wide range of diseases, including psychological distress and depression, as well as being a major cause of obesity and diabetes. Conversely, regular physical activity brings a wide range of health benefits. Lack of physical activity is the fourth most important risk factor worldwide for chronic, non-communicable diseases, after tobacco use, raised blood pressure, and hyperglycaemia (raised blood sugar). Worldwide, it accounts for $6 \%$ of the burden of disease from ischaemic heart disease, $7 \%$ of Type 2 diabetes, and $10 \%$ of breast and colon cancers. It is estimated to have caused more than 5.3 million premature deaths worldwide in 2008 ( $9 \%$ of all premature deaths). In the UK, inactivity has been estimated to cause 3\% of disability-adjusted years of life lost in 2002 with a direct cost to the NHS of $£ 1.1$ billion; indirect costs to society brought this cost to a total of $£ 8.2$ billion.

In recent years, sedentary behaviour (characterised by activities involving prolonged sitting) has also been recognised as a potentially important risk factor for chronic disease in its own right, over and above lack of physical activity.

The periodic measurement of adult physical activity through the Health Survey for England provides valuable evidence for the prevalence of physical activity in the context of wider public health. In particular, the survey includes occupational activity for adults, as well as housework and DIY in the overall measure of physical activity - aspects of 'everyday' activity unlikely to be promoted through any community-based intervention but necessary for an understanding of overall volumes of activity.

Current UK guidelines for aerobic activity recommend that adults should spend at least 150 minutes per week in moderately intensive physical activity, in bouts of ten minutes or longer, or 75 minutes per week of vigorous physical activity, or a combination of the two. In 2012, $67 \%$ of men and $55 \%$ of women aged 16 and over met these new guidelines. In both sexes, the proportion who met the guidelines generally decreased with age, as shown in Figure 2.

The proportion of participants meeting the current UK guidelines for aerobic activity increased as equivalised household income increased. 76\% of men and $63 \%$ of women in the highest income quintile met the new guidelines, falling to $55 \%$ of men and $47 \%$ of women in the lowest quintile.

There was a clear association between meeting the guidelines for aerobic activity and body mass index (BMI) category. 75\% of men who were not overweight or obese met the guidelines, compared with $71 \%$ of overweight men and $59 \%$ of obese men. The equivalent figures for women were $64 \%, 58 \%$ and $48 \%$, respectively.

Summary activity levels, by age and sex


Among both men and women, the proportion meeting the recommendation was similar in 2008 and 2012, with no Olympic legacy yet apparent.

Compliance is higher for the new aerobic activity guideline, reflecting its more flexible definition compared with the former guidelines: the extent to which it was the requirement that activity should take place on at least five days a week or the minimum duration of 30 minutes is not clear. The new guidelines introduce greater flexibility in the ways that an individual can accumulate physical activity across the week, recognise activity that would have been discounted under the previous guidelines, and reflect the extra value of vigorous intensity activity.

Compared with the guidelines for aerobic activity, compliance was lower with the new guidelines for muscle-strengthening activities ( $34 \%$ of men and $24 \%$ of women). There are also guidelines for activities that help with balance and coordination for older people at risk of falls; the HSE does not identify those specifically at risk of falls, but examining those aged 65 and over, only a minority met these guidelines ( $31 \%$ of men and $22 \%$ of women who also met aerobic activity guidelines, but only $3 \%$ and $2 \%$ respectively among those classed as inactive). Future initiatives may need to emphasise these specific elements of the guidance.

Current UK guidelines recommend that adults should minimise the amount of time spent being sedentary for extended periods. Men were more likely than women to average six or more hours of total sedentary time on both weekdays ( $31 \%$ and $29 \%$ respectively) and weekend days ( $40 \%$ and $35 \%$ respectively).

Physical activity is important for children. Obesity is a major adverse health consequence of physical inactivity, although not the only one. Habits track from childhood to adulthood, so active children are less likely to suffer the adverse health consequences of physical inactivity in adulthood. Physical inactivity in childhood also has direct health consequences, both in the short- and mid-term. In pre-school children, physical activity is critical for reduced adiposity, improved bone and muscle strength, motor development, and psychosocial health. In school-aged children, periodic physical activity can increase academic achievement, increase attention, and improve behaviour and attitudes, as well as increasing physical health.

The Chief Medical Officers of the four UK countries published new recommendations in 2011 for physical activity for children. For the first time, guidelines were published for children under five. Even for those unable to walk, physical activity should be encouraged from birth onwards, and those able to walk unaided are recommended to be active for at least 180 minutes ( 3 hours) per day, spread throughout the day. The recommendations for children aged 5 to 18 are twofold. As previously, it is recommended that children should be at least moderately active for at least 60 minutes every day. It was also recommended that vigorous intensity activity, including muscle- and bone-strengthening activities, should be undertaken at least three days each week.

In HSE 2012, among children aged 2-4, a similar proportion of boys and girls (9\% and 10\% respectively) were classified as meeting the current guidelines for children of their age of at least three hours of physical activity per day.

Among children aged 5-15, a higher proportion of boys than girls (21\% and 16\% respectively) were classified as meeting current guidelines for children and young people of at least one hour of moderately intensive physical activity per day. Among both sexes, the proportion meeting guidelines was lower in older children, as shown in Figure 3. The proportion of boys meeting guidelines decreased from $24 \%$ in those aged 5-7 to $14 \%$ aged 13-15. Among girls the decrease was from $23 \%$ to $8 \%$ respectively.


The proportion of children aged 5-15 meeting guidelines did not vary by equivalised household income quintile. However, the proportion of both boys and girls in the low activity group was greater in lower quintiles than higher quintiles of equivalised household income.

Among boys, there was a significant decrease over time in the proportion meeting current guidelines, falling from $28 \%$ in 2008 to $21 \%$ in 2012. The corresponding change among girls was not significant, 19\% in 2008 and 16\% in 2012. The decrease in the proportion meeting recommendations was more marked in the oldest age group: $28 \%$ of boys and $14 \%$ of girls aged 13-15 met the guidelines in 2008, compared with $14 \%$ and $8 \%$ respectively in 2012.

The physical activity recommendations for children aged $5-15$ specify that they should do at least an hour of activity each day, rather than a total of seven hours of activity over a week, which could involve being active for more than an hour on some days and less than an hour on others. It should be noted that the proportions of children in HSE 2012 who reported doing at least seven hours of activity in the last week ( $51 \%$ of boys and $45 \%$ of girls aged 5-15) were higher than the proportions that met the recommendations for an hour of activity daily ( $21 \%$ of boys and $16 \%$ of girls aged 5-15). Among those children aged 5-15 who participated in at least seven hours of any type of physical activity in the last week, only $40 \%$ of boys and $35 \%$ of girls met current recommendations for the daily as well as weekly total.

Two thirds of children aged 2-15 who had attended school or nursery in the last week had walked to or from school on at least one occasion ( $64 \%$ of boys and $67 \%$ of girls). More boys than girls cycled to or from school on at least one occasion in the last week ( $6 \%$ and $1 \%$ respectively). The proportion of both boys and girls who had walked and/or cycled to or from school on at least one occasion in the last week was similar in 2008 and 2012.

Average total sedentary time (excluding time at school) was similar for boys and girls on weekdays ( 3.3 hours and 3.2 hours respectively) and weekend days ( 4.2 hours and 4.0 hours respectively).

## Health, social care and lifestyle factors among adults

A number of topics were covered by the HSE in 2012, in addition to physical activity. Further topics include mental and physical health, well-being, alcohol consumption, gambling behaviour, social care and obesity. Key results on these topics are summarised here.

## General mental and physical health

Two interrelated topics were examined in the HSE 2012: self-reported mental health, as assessed by the General Health Questionnaire (GHQ-12), and self-reported health state, as assessed using the EQ-5D questionnaire.

Good mental health has been identified as an important factor behind improving life expectancy, quality of life and recovery from episodes of ill health. Individuals who exhibit severe mental illness are significantly more likely to have worse physical health than those without. The National Service Framework for Mental Health was published in 1999, and since then successive governments have reaffirmed their commitment to improving mental wellbeing and the provision of quality mental health services.

As with those that preceded it, the government's most recent mental health strategy highlights the fact that mental ill health represents a complex and multifaceted public health problem, and one which has wide-ranging social and economic implications, as well as stark consequences for physical health.

A 'high' GHQ-12 score, of 4 or more, is taken to indicate probable psychological disturbance or mental ill health in the HSE. Women were more likely than men to report a high GHQ-12 score ( $18 \%$ of women, $12 \%$ of men).

Prevalence of a high GHQ-12 score was lowest among men aged 16-34, at 9\%, and dipped to a similar level among those aged 65-84; among other age groups, $13 \%$ to $15 \%$ had a high score. Among women, prevalence also dipped among those aged 65-84.

The prevalence of probable mental ill health was greatest among men and women in the lowest quintile of equivalised household income, with $24 \%$ of men and $27 \%$ of women reporting a high GHQ-12 score, compared with $7 \%$ of men and $16 \%$ of women in the highest income quintile.

There was a strong relationship between mental health, as measured by the GHQ-12, and self-reported general health. While $4 \%$ of men and $7 \%$ of women who reported their general health as 'very good' had a high GHQ-12 score, this rose to $61 \%$ of men and $75 \%$ of women who reported their general health as 'very bad', as shown in Figure 4.
The EQ-5D questionnaire is a standardised instrument used for the measurement of a person's health status and comes in two parts: a descriptive system and a visual analogue scale (VAS). The descriptive system consists of five dimensions: mobility, self-care, usual activities, pain or discomfort, and anxiety or depression. Across the five EQ-5D dimensions, problems were most commonly reported for pain or discomfort ( $28 \%$ of men, $34 \%$ of women), and anxiety or depression ( $16 \%$ of men, $23 \%$ of women).

Problems were more prevalent among women than men across all domains except for selfcare, for which the prevalence of reported problems was lowest for both sexes ( $4 \%$ of men, $5 \%$ of women). Older people reported more problems on all dimensions; the effect of age was strongest for mobility and weakest for anxiety/depression.

Figure 4
Age-standardised prevalence of a high GHQ-12 score, by self-reported general health and sex

Women
Base: Aged 16 and over


The EQ-5D Visual Analogue Scale (VAS) measures self-assessed health state on a scale of $0-100$. Men had a median value of 82 and women a median of 80 . Values fell as age increased for men and women, from a VAS value of 85 for men and women aged 16-24, to 70 for men and 60 for women aged 85 and over.

Regression models were fitted to look at the factors associated with a high GHQ-12 score, and with being in the bottom quartile of EQ-5D VAS scores. Both measures of poor health were strongly related to the presence of limiting longstanding illness and physical inactivity.

## Well-being

Well-being is an important element of people's overall health. Mental well-being is not just the absence of mental ill health; it includes the way that people feel about themselves and their lives. While there is no one definition of mental well-being, it is generally thought to be made up of things like positive affect (experience of positive emotions), people's perceptions that the things they do in their lives are meaningful and worthwhile, and life satisfaction.

Well-being is an area of focus for the government and in developed countries stands alongside more traditional measures such as gross domestic product (GDP) in telling the story of how well a nation is doing. Positive mental well-being is predictive of quality of life, improved life expectancy and greater life satisfaction. It is also linked to people's physical health and recovery from both physical and mental ill health.

Many factors may affect a person's subjective well-being, including personality, social and economic circumstances. The range and diversity of these factors suggests that subjective well-being is very complex, and can change across the life course as circumstances change.

The HSE uses the Warwick-Edinburgh mental well-being scale (WEMWBS). Scores range from 14-70; the mean score was 52.5 for men and 52.2 for women in 2012.

There was a U shaped relationship between age and well-being, with well-being for both men and women lower in middle age and peaking in those aged 65-74. Well-being scores remained relatively high in those aged 75-84 before falling in those aged 85 and over.

Those living in lower income households had lower well-being scores, on average, than those living in higher income households, as shown in Figure 5. Men living in the lowest quintile of equivalised household income had an average well-being score of 48.9, compared with 54.5 for those men living in the highest quintile. The same pattern was found for women ( 48.7 and 54.6 respectively).
Those with poorer self-reported health had lower well-being scores on average than those with better self-reported health. Men and women who said their health in general was 'very

bad' had average well-being scores of 40.6 and 38.0 respectively, compared with scores of 55.8 of men and 55.7 of women who rated their health as 'very good'.

Following a similar pattern, participants with a limiting longstanding illness had lower wellbeing scores than those without such an illness. Well-being scores were 46.8 for men and 47.0 for women with a limiting longstanding illness, and 53.8 for both sexes with no illness.

The association between well-being and other factors was examined: for instance, those who were of normal BMI on average had higher well-being scores than those who were overweight or obese, and similarly those who thought they were about the right weight had higher scores on average than those who thought they were too heavy. Those who met government guidelines for physical activity had higher well-being scores on average than those who were less active. Men and women with a high GHQ-12 score, indicative of probable mental ill health, had lower average well-being scores than those with lower GHQ12 scores.

## Alcohol consumption

Most adults in Britain drink alcohol, at least occasionally, and alcohol has an established place in British social life. In recent years, changes in the patterns of consumption and increasing awareness of the associated risks have given rise to widespread concern among policy makers, health professionals and the general public. Alcohol has been identified as a causal factor in many medical conditions, including some cancers, cirrhosis of the liver, high blood pressure and depression. The health harms of alcohol increase with the amount drunk. Additionally, alcohol increases the risk of accidents, violence and injuries. In the last ten years, governments have published successive strategies for promoting sensible drinking and reducing alcohol-related harm, culminating in the most recent, The Government's Alcohol Strategy in 2012.

The HSE examines adults' alcohol consumption in several ways: frequency; the maximum amount drunk on any day in the last week; and usual weekly consumption. Each of these measures provides a different perspective on individuals' drinking.

In 2012, $86 \%$ of men and $80 \%$ of women said they had drunk alcohol in the last 12 months. Men and women in the youngest and oldest age groups were least likely to have drunk alcohol in the last 12 months.

Men were more likely than women to have drunk in the last week; $67 \%$ of men and $53 \%$ of women did so, including $18 \%$ of men and $10 \%$ of women who drank on five or more days in the week. More of those in the highest income quintile drank in the last week ( $81 \%$ of men, $69 \%$ of women) than those in the lowest income quintile ( $51 \%$ and $39 \%$ respectively). There was a similar pattern for frequent drinking.

Among adults who had drunk alcohol in the last week, $55 \%$ of men and $53 \%$ of women drank more than the recommended daily amounts, including $31 \%$ of men and $24 \%$ of women who drank more than twice the recommended amounts. Drinking above recommended levels was highest among men aged 16-24 and women aged between 16 and 34, and lowest among men and women aged 75 and over.

The majority of men who had drunk alcohol in the last week had drunk normal strength beer, cider or shandy (62\%); a third had drunk wine (33\%), and just over a fifth had drunk spirits (22\%). In contrast, the majority of women had drunk wine (64\%); a quarter had drunk spirits (26\%), and a fifth had drunk normal strength beer, cider or shandy (19\%).

Assessment of average weekly alcohol consumption showed that $62 \%$ of men usually drank up to 21 units a week and $61 \%$ of women usually drank up to 14 units a week, the level of drinking defined as lower risk. Almost a quarter of men (24\%) drank more than 21 units a week, at an increased risk level, including $5 \%$ who drank more than 50 units (higher risk). Among women, $18 \%$ usually drank more than 14 units a week (increased risk), including 4\% who drank more than 35 units (higher risk). For both men and women, drinking at levels with increased risk of harm was highest between the ages of 45 and 64, as shown in Figure 6. Men were more likely than women to drink at the level defined as higher risk. For men, higher risk drinking was most likely between the ages of 55 and 64 (7\%); among women there was little variation in the proportion who drank at this level between the ages of 16 and 64.


In the last decade, the gambling landscape in Britain has changed significantly. This is evident with the rise of online gambling opportunities and also with the implementation of the UK Gambling Act 2005, which overhauled the way commercial gambling is regulated, licensed and advertised in the UK.

Gambling is positioned as a legitimate recreational and leisure activity. However, there is widespread recognition among policy makers, industry and health care professionals alike that, like alcohol consumption, some people who engage in gambling can experience harm. Unlike alcohol consumption, there are no specific policy targets relating to harm minimisation. Recognition of the (potential) harm associated with gambling has seen increased interest in gambling behaviour as a public health issue. Problem gamblers suffer from a range of adverse consequences, including a range of mental and physical health issues, as well as experience of comorbid disorders such as alcohol abuse or dependence.

In 2012, questions on gambling activity were included in the HSE, providing data on last year participation in all forms of gambling, and estimates of problem and at-risk gambling according to two different measurement instruments, the American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders IV (DSM-IV) and the Problem Gambling Severity Index (PGSI).

In the last 12 months, more men than women had participated in gambling activity (68\% and $61 \%$ respectively). The most popular forms of gambling were purchase of tickets for the National Lottery (men 56\%, women 49\%); purchase of scratchcards (19\% and 20\% respectively), participation in other lotteries ( $14 \%$ for both men and women) and betting on horse racing ( $12 \%$ and $8 \%$ respectively).

Excluding those who only participated in the National Lottery, $46 \%$ of men and $40 \%$ of women had gambled on some other activity in the last 12 months.

Among both men and women, prevalence of gambling in the last year varied by age, as shown in Figure 7: prevalence was highest among the middle age groups (those aged 2564) and lowest among the very young or very old. Because participation in the National Lottery is much higher than in any other gambling activity, the age profile of National Lottery players naturally dominates the overall age pattern for all gambling activities. By removing participants who only played the National Lottery, a different participation pattern by age is observed, as shown in Figure 8. Participation rates for both men and women in this group were highest for 16-34 year olds, and decreased steadily as aged increased.


Gambling prevalence was highest in the top quintiles of equivalised household income (with very similar levels across these), and lowest among the lowest income households. Exceptions to this general pattern were bingo and scratchcards, where those in lower income households were more likely than higher income households to participate.

## Figure 8

Participation in any gambling activity (excluding National $\square$ Men Lottery play only) in the last 12 months, by sex and age $\square$ Women


On average, men took part in 1.7 different forms of gambling in the last year whereas women took part in fewer activities, 1.2. Among both men and women, the average number of gambling activities varied by age and tended to be higher among younger than older age groups. Overall, $4 \%$ of men and $1 \%$ of women had engaged in seven or more different gambling activities in the last year.

In 2012, $0.8 \%$ of men and $0.2 \%$ of women were identified as problem gamblers according to the DSM-IV; the 95\% confidence interval for men was $0.4 \%$ to $1.4 \%$ and for women was $0.1 \%$ to $0.4 \%$. This means there is a $95 \%$ probability that the true estimates for men and women lie between these values. According to the PGSI, the problem gambling rate in 2012 was $0.6 \%$ of men and $0.1 \%$ of women, with $95 \%$ confidence intervals of $0.3 \%$ to $1.2 \%$ and $0.04 \%$ to $0.3 \%$ respectively.

Among men, problem gambling prevalence varied with age, being typically higher among younger age groups and decreasing as age increased.

## Social care: need for and receipt of care

Social care involves provision of help with personal care and domestic tasks to help people live as independently as possible. It affects the daily lives of several million people in England. Some 1.1 million receive care arranged by their local authority and at least a further 270,000 buy care privately. While those who need care and support are of all ages, many are older people needing help because of problems associated long-term physical or mental ill-health, disability or problems relating to old age.

Under successive governments there have been substantial developments in policy on adult social care and how it is funded. Parliament is presently considering legislation to reform aspects of adult social care. The Care Bill takes forward proposals set out in the Caring for our future White Paper, including provisions relating to the care and support system and to care standards in health and social care.

The social care questions were asked in both 2011 and 2012, and data from the two years have been combined to provide robust sample sizes. Participants aged 65 and over were asked whether they needed help with a list of Activities of Daily Living (ADLs) and Instrumental Activities of Daily Living (IADLs); these are activities relating to personal care and mobility about the home, and other activities important to living independently. Around a quarter of men aged 65 and over reported a need for help with ADLs and/or IADLs (27\% and $25 \%$ respectively) and around a third of women reported such need ( $34 \%$ and $36 \%$ ). Help was received by $14 \%$ of men for at least one ADL and by $20 \%$ for at least one IADL, while $16 \%$ of women received help for at least one ADL and $32 \%$ for at least one IADL.

The ADL for which help was needed most often was getting up and down the stairs (21\% of men and 29\% of women). Higher proportions said that they needed help with IADLs than
with ADLs. The most frequently mentioned were help with shopping for food ( $20 \%$ of men and $31 \%$ of women) and routine housework ( $20 \%$ and $27 \%$ respectively).

For the majority of ADLs the need for help and receipt of help increased with age. This was most prominent with help getting up and down stairs, having a bath or shower, dressing or undressing and getting in or out of bed.

For each ADL and IADL there was a proportion who reported needing help with the activity, and who did not receive any help with the activity in the last month. This provides some indication of the level of potential unmet need. Fewer men than women reported unmet need for an ADL ( $22 \%$ and $30 \%$ respectively), while similar proportions had unmet need for help with IADLs ( $14 \%$ and $15 \%$ respectively). Levels of unmet need for ADLs and IADLs increased with age, as Figure 9 shows.

Figure 9
Proportion who needed help with at least one ADL or IADL and received no help in the last month, by age and sex

Base: Aged 65 and over and needed help with at least one ADL/IADL


The majority of people aged 65 and over who received help in the last month were helped by an informal helper, rather than a formal one. For ADLs, $75 \%$ of men and $71 \%$ of women had informal helpers only, and the equivalent proportions for IADLs were $78 \%$ and $74 \%$ respectively.
$14 \%$ of men and $19 \%$ of women reported receiving direct payments, $8 \%$ and $7 \%$ respectively reported a personal budget, and $7 \%$ of both men and women reported that they had care arranged by the local authority but neither a personal budget nor direct payments. A large majority reported no local authority involvement in arranging their care (74\% of men and $71 \%$ of women).

Social care: provision of care

The most recent Census established that in 2011, around 5.8 million people in England and Wales reported providing unpaid care to family and friends, representing just over a tenth of the population. This was an increase of around 600,000 between 2001 and 2011, and the number is set to rise in the future. This increase reflects the increasing demands for care from an ageing population, and the essential role informal carers play in the current policy context where partnership between individuals, communities, the voluntary and private sectors is increasingly important in meeting diverse support needs.

Data from 2011 and 2012 have been combined to allow more robust analysis.
Women were slightly more likely than men to provide informal help or support (18\% and $15 \%$ respectively). Provision of informal care increased with increasing age among those aged 16 to 64, and then decreased among older adults, as shown in Figure 10. Adults aged 55-64 were most likely to report providing care ( $23 \%$ of men and $29 \%$ of women in this age group).

Figure 10


Most of those who provided care did so for one person (11\% of all men, $14 \%$ of all women). Provision of care tended to decrease with increasing income. Men and women in the lowest income quintile were most likely to provide informal care (18\% and 21\% respectively), and those in the highest income quintile least likely (14\% and 15\%).

Care was most commonly provided to a parent ( $46 \%$ of men and $47 \%$ of women who provided care). Just under a quarter of men provided help or support for their spouse or partner (22\%), compared with 15\% of women. Older carers were more likely than younger ones to mention helping their spouses.

Most of those who provided help or support did so for 1 to 9 hours in the last week (49\% of both men and women). However, around a quarter of men and a third of women ( $26 \%$ and $31 \%$ respectively) provided 10 or more hours care in the last week, while just under a fifth (17\% and 20\% respectively) provided 20 or more hours care in that period.

## Anthropometric Obesity

Overweight and obesity are defined as abnormal or excessive fat accumulation that may impair health. Obesity is associated with an increased risk for a number of common causes of disease and death including diabetes, cardiovascular diseases and some cancers. For individuals classified as obese, the risk of poor health increases sharply with increasing BMI.

Successive governments have introduced a number of initiatives to tackle obesity in England. The current government has renewed their commitment to reduce the level of excess weight by working with a range of partners on prevention and treatment.

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 $\left(\mathrm{kg} / \mathrm{m}^{2}\right)$ was calculated in order to group people into the following categories:

BMI ( $\mathbf{k g} / \mathbf{m}^{2}$ )
Less than 18.5
18.5 to less than 25

25 to less than 30
30 or more

## Description

Underweight
Normal Overweight Obese

## Mean BMI, obesity and overweight

In 2012 mean interviewer-measured BMI was higher among men $\left(27.3 \mathrm{~kg} / \mathrm{m}^{2}\right)$ than women $\left(27.0 \mathrm{~kg} / \mathrm{m}^{2}\right)$. Around a quarter of adults ( $24 \%$ of men and $25 \%$ of women) were obese. This was similar to the level in recent years, for example 2011 when $24 \%$ of men and $26 \%$ of women were obese. Obesity was strongly related to age, as shown in Figure 11, rising from $12 \%$ of men and $14 \%$ of women aged 16-24, to $33 \%$ of men and women aged 65-74, before falling again to $19 \%$ of men and $18 \%$ of women aged 85 and over.

## Figure 11

Interviewer-measured obesity, by age and sex
Base: Aged 16 and over with valid height and weight measurement


Overweight was more common than obesity, with $42 \%$ of men and $32 \%$ of women being overweight but not obese. Thus overall in 2012, $67 \%$ of men and $57 \%$ of women were either overweight or obese.

There has been a marked increase in the proportion who were obese between 1993 and 2012. 13\% of men were categorised as obese in 1993, compared with $24 \%$ in 2012, and $16 \%$ of women were obese in 1993 compared with $25 \%$ in 2012. The rate of increase in obesity prevalence has been slower in the second half of the period than the first half, and from 2005 to 2012, obesity prevalence has been 24-26\%.

## Self-reported estimates and perception of weight

In 2012, as in 2011, the HSE provided both interviewer measurements for height and weight, and participants' self-reported estimates. Comparisons show that self-reported measures of mean height and mean weight reflected similar patterns to the interviewer measures. However, mean height estimates were consistently higher, and mean weight estimates consistently lower than interviewer-measured estimates. This leads to underestimation of BMI. Over a quarter of overweight men and a third of overweight women would have been in the 'not overweight' category by their own height and weight estimates ( $26 \%$ and $29 \%$ ), while similar proportions of obese men and women would have been in the overweight or 'not overweight' category ( $30 \%$ and $28 \%$ respectively).

When asked about their perception of their weight, around half of women and two fifths of men felt that they were too heavy for someone of their age and height ( $51 \%$ and $42 \%$ respectively). A minority felt that they were too light (3\% and 6\% respectively). Similarly substantial proportions of adults were trying to change their weight (among women, $55 \%$ trying to lose, and $3 \%$ trying to gain weight; among men, $37 \%$ trying to lose and $8 \%$ trying to gain weight). There tended to be a gap between perception of weight and classification of BMI, which was greater for men than for women. Half of men who felt that their weight was 'about right' were in fact overweight (45\%) or obese (5\%); the equivalent proportions for women were $22 \%$ and $3 \%$.

## Waist circumference

A raised waist circumference is defined as greater than 102 cm in men, and greater than 88 cm in women. Mean waist circumference was 97.0 cm for men and 87.6 cm in women. A higher proportion of women than men had a raised waist circumference ( $45 \%$ and $34 \%$ respectively). Prevalence of a raised waist circumference increased substantially between the age groups 16-24 and 65-74 among both men and women. The proportion with a raised waist circumference increased with age from $11 \%$ of men and $19 \%$ of women aged 16-24, to $52 \%$ of men and $64 \%$ of women aged 75 and over, as shown in Figure 12.

## Figure 12

Raised waist circumference, by age and sex
Base: Aged 16 and over with valid waist measurement Women


## Health risk from obesity

Both BMI and waist circumference contribute to the NICE (National Institute for Health and Care Excellence) calculation of health risk caused by overweight and obesity. By these definitions $20 \%$ of men had increased risk, $12 \%$ a high risk and $22 \%$ a very high risk. $13 \%$ of women had increased risk, $18 \%$ a high risk and $24 \%$ a very high risk.

# Obesity among children 

## BMI, overweight and obesity


#### Abstract

There is considerable evidence that childhood overweight and obesity can be linked with numerous long-term and immediate health risks. Childhood and adolescent obesity can persist into adulthood, where the direct health risks of obesity are severe and well established. Childhood and adolescent overweight/obesity have been linked directly to middle-age mortality and morbidity.

In addition to the increased risk for health problems in later life, children face immediate health consequences of obesity, including increased risks for an abnormal lipids profile and elevated blood pressure. Associations between childhood obesity and increased asthma prevalence and incidence of Type 2 diabetes mellitus have been reported. Being overweight or obese can also have psychological effects.

The prevalence of obesity and overweight was similar among girls and boys aged 2-15: $14 \%$ of both boys and girls were classed as obese, and $28 \%$ were classed as either overweight or obese. Older children were more likely than younger children to be obese (19\% of both boys and girls aged 11-15, compared with $11 \%$ and $10 \%$ respectively among children aged 2-10).

Levels of obesity varied according to socio-economic status. Among children aged 2-15, levels of obesity were highest for boys in the lowest quintile of equivalised household income (19\%) and for girls in the three lowest quintiles (15\% to 17\%); boys and girls in the highest income quintile were least likely to be obese ( $8 \%$ and $7 \%$ respectively). Similarly, the prevalence of obesity was higher among those living in the two most deprived quintiles of the Index of Multiple Deprivation (16\% to 19\% for both boys and girls, compared with $9 \%$ to $14 \%$ in higher quintiles).


Figure 13 shows trends in obesity and overweight between 1995 and 2012. The prevalence of obesity has increased since 1995, when $11 \%$ of boys and $12 \%$ of girls aged $2-15$ were obese. There was a steady increase up to around 2004 and 2005, where obesity peaked at $18 \%$ to $19 \%$ among both boys and girls. Levels have been slightly lower than this peak in the last few years, with little change, with $17 \%$ of boys and $16 \%$ of girls obese in 2011. The levels in 2012, at 14\% for both boys and girls, were lower than in 2011 though not statistically significantly so. ${ }^{1}$

## Perceptions of children's weight

When children aged 8-15 were asked about their perception of their weight, $61 \%$ of boys and $54 \%$ of girls felt that they were about the right weight, while $11 \%$ of boys and $15 \%$ of girls felt that they were too heavy, and $8 \%$ of boys and $4 \%$ of girls thought they were too light ( $19 \%$ of boys and $26 \%$ of girls were not sure). The majority of children who thought themselves too heavy were obese (65\%). Of those children who thought of themselves as about the right weight, $21 \%$ were overweight or obese.

Parents of children aged 4-15 were asked whether they felt their child was about the right weight or too heavy or too light. The majority of parents with children of this age were able to judge accurately whether their child was too heavy. However, just under a quarter of parents who thought that their child was about the right weight in fact had a child who was overweight or obese ( $23 \%$ among both fathers and mothers).

[^1]
## Figure 13

Overweight and obesity prevalence for children aged 2-15, 1995-2012, by sex (three year moving averages)

- Boys obese
-     - Boys overweight incl obese
- Girls obese
- O= Girls overweight incl obese

Base: Aged 2-15 with valid height and weight measurements



The majority of children aged 8-15 said that they were not trying to change their weight ( $68 \%$ of boys and $66 \%$ of girls), while $21 \%$ of boys and $32 \%$ of girls said they were trying to lose weight. Among those who said they were trying to lose weight $26 \%$ were overweight and $48 \%$ were obese. However, $25 \%$ of children aged $8-15$ who were obese were not trying to change their weight, and neither were $50 \%$ of those who were overweight.

Reports on the 2012 Health
Survey

This booklet is a summary of the findings from the 2012 Health Survey for England: Craig R, Mindell J (eds). Health Survey for England 2012: Health, social care and lifestyles.

Volume 1: Health, social care and lifestyles
Volume 2: Methods and documentation.
Health and Social Care Information Centre, Leeds, 2013.
Full results are available in the survey report at www.hscic.gov.uk/pubs/hse2012, and also in an anonymised data file lodged with the UK Data Service. Reports and data files from earlier surveys are similarly available.

Tables showing selected trends from 1993 to 2012 will be found on the Health and Social Care Information Centre website at www.hscic.gov.uk/pubs/hse12trend or at the address below.

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## NatCen Social Research

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## Research Department of Epidemiology and Public Health, UCL (University College London) <br> www.ucl.ac.uk/epidemiology

The Research Department of Epidemiology and Public Health, chaired by Professor Richard Watt, is a leading centre for research into the social determinants of health, and has a strong interdisciplinary structure. The Department houses 180 staff in 11 main research groups, including the Joint Health Surveys Unit, part of the Health and Social Surveys Research Group (HSSRG). The HSSRG studies population health (including health behaviours and treatments) and inequalities in health. Much of the group's research is carried out using large population surveys that collect data on health, economic and social issues, using a variety of survey methods and statistical techniques, while qualitative methods are also used by the group. The group is multidisciplinary, with epidemiology, sociology, statistics, public health nutrition, demography and geography all represented.

The Joint Health Surveys Unit has been created by NatCen Social Research and the Health and Social Surveys Research Group within the Research Department of Epidemiology and Public Health at UCL. The JHSU enables collaborative working, combining the strengths and talents of each organisation, to carry out major health surveys such as the Health Survey for England.

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[^0]:    ${ }^{\text {a }}$ This module was administered by self-completion for children aged 8-15.
    ${ }^{\text {b }}$ This module was administered by self-completion for those aged 16-17 and some aged 18-24.

[^1]:    ${ }^{1}$ The sample size for children in 2011 and 2012 is smaller than in previous years, as child boost samples were used between 2005 and 2010. The margins of error are larger with the smaller base sizes, and thus larger differences are required before significant changes can be detected.

