



Health Survey for England 2017

Summary of key findings

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This report may be of interest to people working in public health, policy officials, commissioners of health and care services and to the general public to see the prevalence of obesity, some health conditions, and health related behaviours like smoking and also the need for and provision of social care.

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About the Health Survey for England

The Health Survey for England (HSE) monitors trends in the nation's health and care.

It provides information about adults aged 16 and over, and children aged 0 to 15, living in private households in England. The survey consists of an interview, followed by a visit from a nurse who takes a number of measurements and samples.

Adults and children aged 13 to 15 were interviewed in person, and parents of children aged 0 to 12 answered on behalf of their children for many topics.

Children aged 8 to 15 filled in a self-completion booklet about their drinking and smoking behaviour.

In total 7,997 adults (aged 16 and over) and 1,985 children (aged 0 to 15) were interviewed. 5,196 adults and 1,195 children had a nurse visit.

Each survey in the series includes core questions, and measurements such as blood pressure, height and weight measurements and analysis of blood and saliva samples. In addition there are modules of questions on specific topics that vary from year to year.

The 2017 Health Survey for England publication

This report summarises key findings from the Health Survey for England (HSE) 2017.

The full publication is online at <https://digital.nhs.uk/pubs/hse2017>.

In addition to this Summary, there are:

- Topic reports with supporting Excel tables:
 - Overweight and obesity in adults and children
 - Cardiovascular disease (CVD)
 - Adult health related behaviours
 - Multiple risk factors
 - Adult health (including diabetes, hypertension, high cholesterol and chronic pain)
 - Children's health
 - Social care
- Quick guide – introducing the survey.
- A methods report, describing the technical aspects of the survey and measurement protocols
- Estimates of the numbers of people with selected health related behaviours and in BMI categories and a user guide explaining how they were calculated
- Documentation, including questionnaires and field materials

Overweight and obesity – background

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

Successive governments have introduced a number of initiatives to tackle obesity in England.

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.

Waist circumference is measured, and categorised into desirable, high and very high, by sex-specific thresholds:

Men's waist circumference (cm)

Less than 94

94-102

More than 102

Women's waist circumference (cm)

Less than 80

80-88

More than 88

Description

Desirable

High

Very high

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)

Less than 18.5

18.5 to less than 25

25 to less than 30

30 or more

40 or more

BMI status

Underweight

Normal

Overweight, not obese

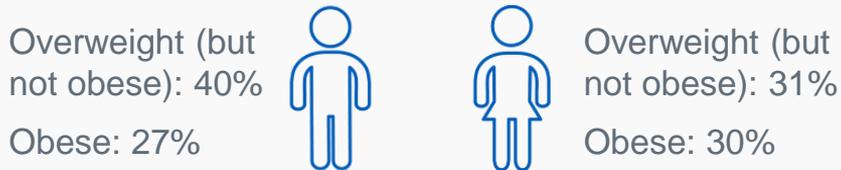
Obese, including morbidly obese

Morbidly obese

Overweight and obesity among adults

Overall prevalence

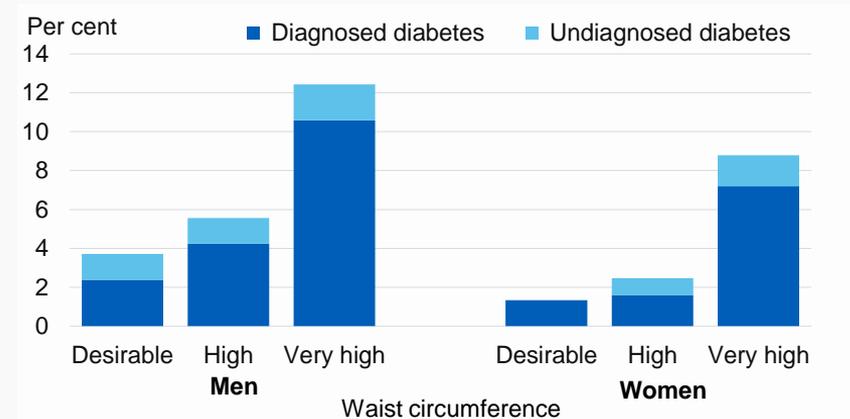
The majority of adults (64%) in England in 2017 were overweight or obese. Men were more likely to be overweight (but not obese) than women, but women were more likely to be obese.



2% of men and 5% of women were morbidly obese¹.

Diabetes prevalence² by waist circumference

Total diabetes was associated with waist circumference. 12% of men and 9% of women with a very high waist circumference had either diagnosed or undiagnosed diabetes. This compared to 6% of men and 2% of women with high waist circumferences and 4% of men and 1% of women with a desirable waist circumference.



1. 'Morbidly obese' are also included in the 'obese' figures.

2. Diagnosed diabetes prevalence was based on self-reported data.

Overweight and obesity among children (aged 2 to 15)

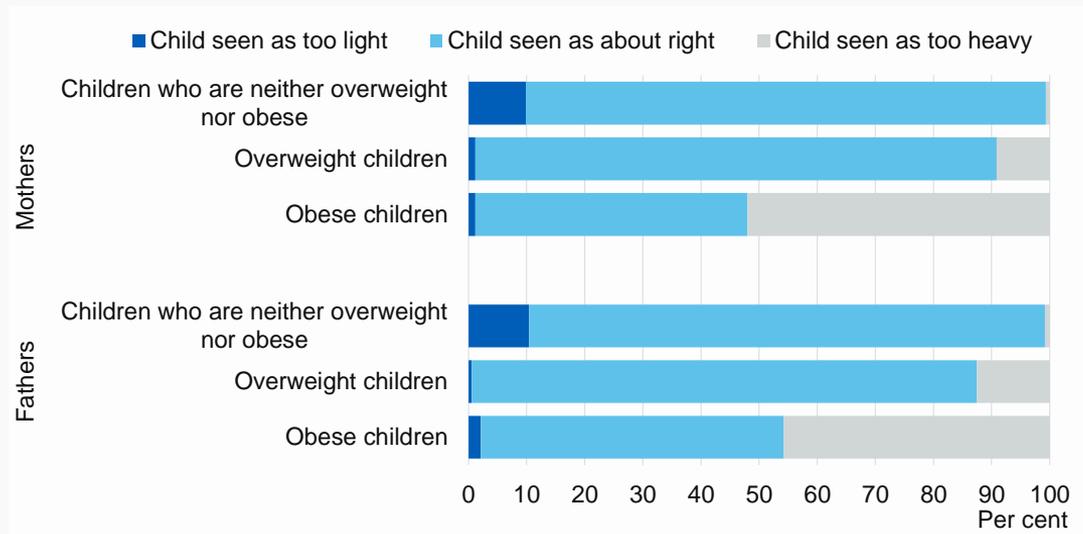
Overall prevalence

In 2017, 30% of children aged 2 to 15 in England were overweight or obese, including 17% who were obese. Boys and girls were equally likely to be overweight or obese.

Parents perception of child's weight by child's BMI status (2015 and 2016)¹

Parents of overweight and obese children often thought that their child was the right weight.

The majority of children who were overweight but not obese were described as being about the right weight by their mothers (90%) and fathers (87%). Around half of parents of obese children (47% of mothers and 52% of fathers) also said their child was about the right weight.



1. Parents were not asked to give their opinion on the weight of their children in 2017.

Overweight and obesity among children (aged 2 to 15)

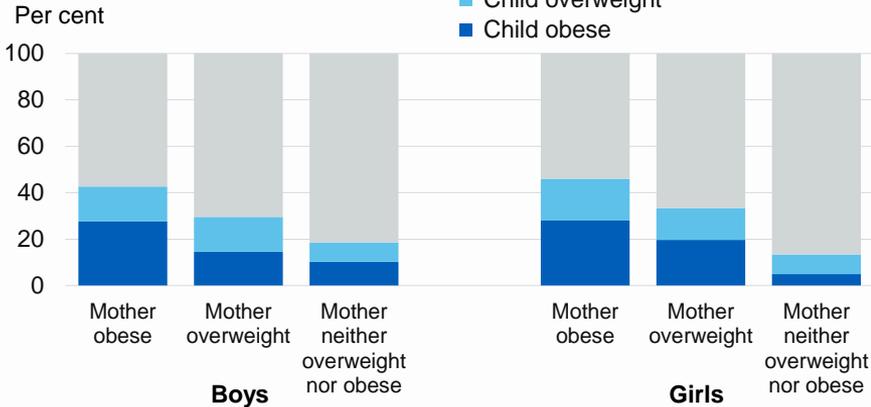
Child overweight and obesity by parental weight

Children's overweight and obesity was associated with that of their parents.

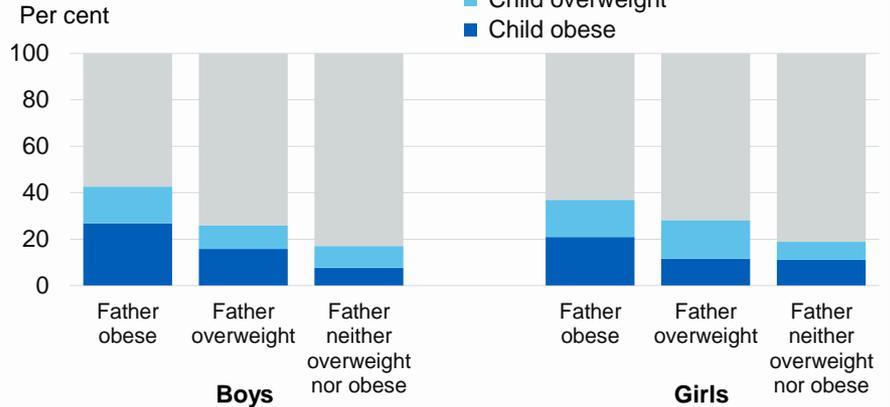
28% of children of obese mothers were also obese, compared with 17% of children whose mothers were overweight but not obese, and 8% of children whose mothers were neither overweight nor obese.

24% of children of obese fathers were also obese, compared with 14% of children whose fathers were overweight but not obese, and 9% of children whose fathers were neither overweight nor obese.

By mother's BMI status



By father's BMI status



Fruit and vegetable consumption – background

The protective health benefits of a diet rich in fruit and vegetables have been long recognised for both adults and children.

The 5 A DAY guidelines (see [NHS Choices: 5 a day guide](#)), were developed based on the recommendation from the World Health Organization that consuming 400g fruit and vegetables a day can reduce risks of chronic diseases, e.g. heart disease, stroke, and some cancers.

These guidelines state that everyone should eat at least five portions of a variety of fruit and vegetables every day.

Questions about fruit and vegetable consumption were first included in the HSE in 2001, and are designed to assess fruit and vegetable consumption in terms of portions per day (roughly 80g per portion).

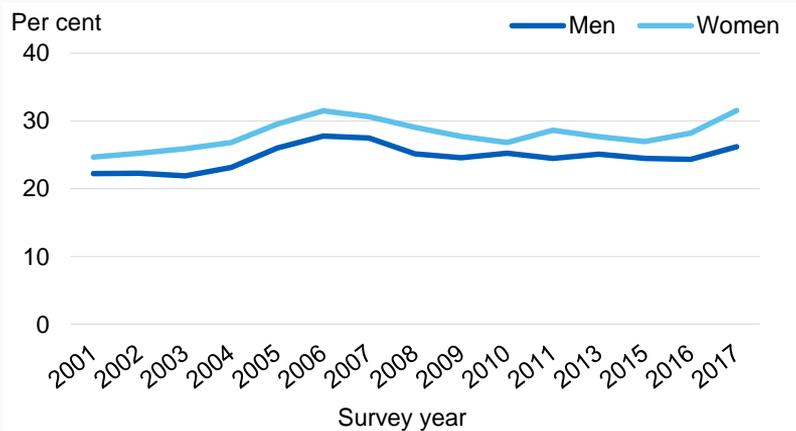
Findings in this part are taken from both the adult health related behaviours report, and the children's health report.

Fruit and vegetable consumption

Consumption among adults¹

In 2017, 29% of adults ate five or more portions of fruit and vegetables a day, with fewer men than women having done so.

Since 2008, the figures for men have remained stable at around 24-26%. For women, the proportion increased to 32% in 2017.



Consumption among children (aged 5 to 15)

In 2017, 18% of children aged between 5 and 15 ate the recommended five or more portions of fruit and vegetables a day.

The mean number of portions consumed per day was 3.2. This is similar to recent years.

1. No data on fruit and vegetable consumption was collected for 2012 or 2014.

Smoking – background

The World Health Organization Report on the Global Tobacco Epidemic 2017 stated that tobacco use remains the leading cause of preventable illness and premature death in England and worldwide.¹

Tobacco use contributed to around 20% of deaths in men and 12% of deaths in women aged over 35 in England in 2016.²

In 2017, the government published *Towards a smoke-free generation: a tobacco control plan*. This set out a five-year plan to reduce the harms of smoking, and aims by the end of 2022 to reduce the proportion of adults smoking to 12% or less, and to reduce the prevalence of 15 year olds who regularly smoke from 8% to 3% or less.³

In 2013, all adults were for the first time in HSE asked questions on their use of electronic cigarettes. There is a growing consensus that e-cigarettes are safer than tobacco cigarettes, since e-cigarettes contain no tobacco and thus no tar, with some estimating them to be around 95% safer⁴, although the longer term effects of e-cigarettes have not been established.

Findings in this part are taken from both the adult health related behaviours report, and the children's health report.

1. [World Health Organization, Switzerland, 2017](#) 2. [NHS Digital, Statistics on Smoking, 2018](#)

3. [Department of Health, 2017. Towards a Smokefree Generation - A Tobacco Control Plan for England](#)

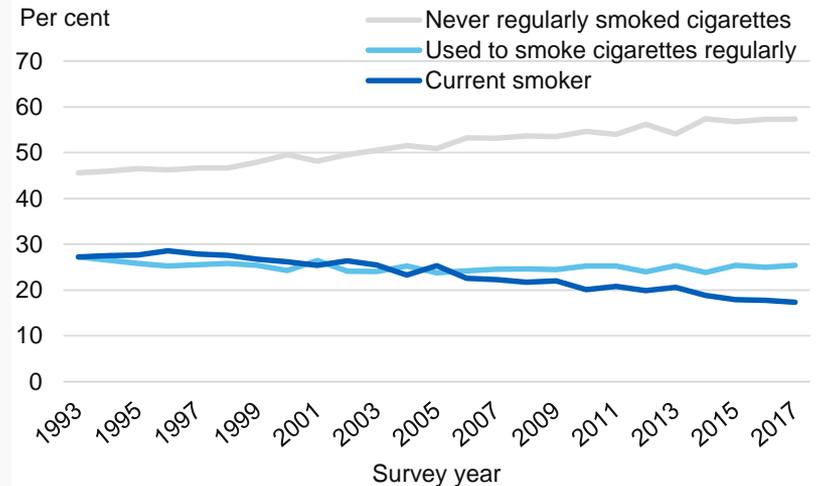
4. [Public Health England. E-cigarettes: an evidence update, 2015](#)

Smoking among adults

Self reported smoking prevalence

Current cigarette smoking among adults has steadily declined between 1993 and 2017 (from 27% to 17%).

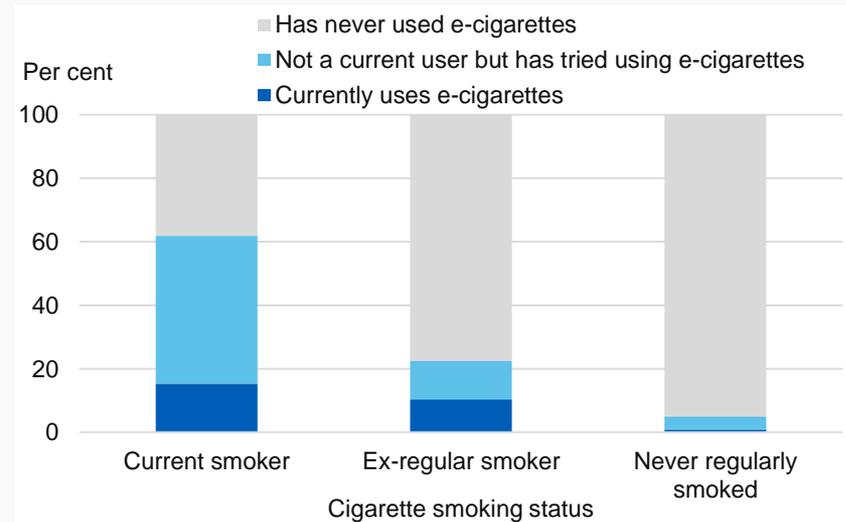
Adults that have never regularly smoked cigarettes increased from 46% to 57% over the same period.



Use of e-cigarettes (vaping)

6% of all adults were current users of e-cigarettes.

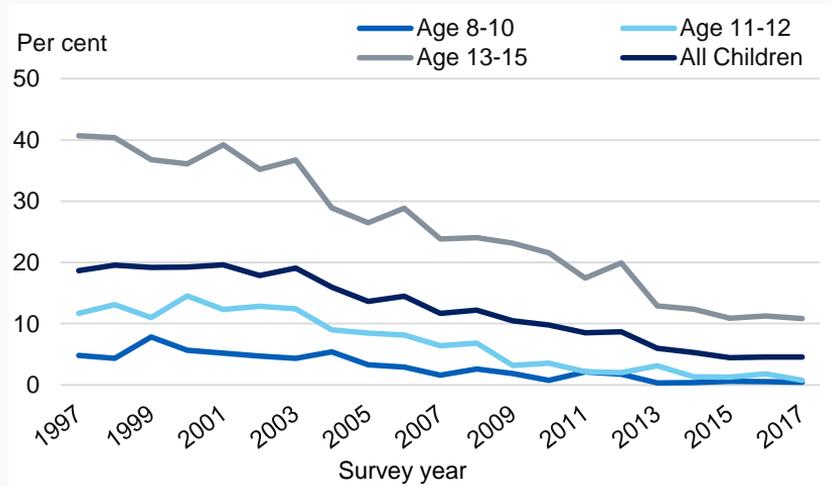
15% of current cigarette smokers were using e-cigarettes. 38% of current smokers had never used an e-cigarette.



Smoking among children

Ever smoked a cigarette (aged 8 to 15)

The proportion of children aged 8 to 15 who had ever smoked has decreased, from 19% in 1997 to 5% in 2017. The downward trend was apparent in all the age groups. Levels have been similar since 2013. 11% of children aged 13 to 15 had ever tried smoking.



Exposure to 2nd hand smoke (aged 4 to 15)¹



80% of non-smoking children aged 4 to 15 living in a household where one or both parents currently smoked had detectable cotinine.



23% of non-smoking children aged 4 to 15 whose parent(s) did not report being current smokers had detectable cotinine.

1. See the Child Health Report for more details on measurement of Cotinine levels.

Alcohol consumption – background

Alcohol has been identified as a causal factor in many medical conditions, including cancers, cirrhosis of the liver, high blood pressure and depression. Additionally, alcohol increases the risk of accidents, violence and injuries. There is interest and concern about the impact of alcohol consumption among policy makers, health professionals and the general public.

In 2016/17 there were 337 thousand estimated admissions where the main reason for admission to hospital was attributable to alcohol, with men more likely than women to be admitted for these reasons.¹

Findings in this part are taken from both the adult health related behaviours report, and the children's health report.

The Chief Medical Officer's guidelines about drinking are that:

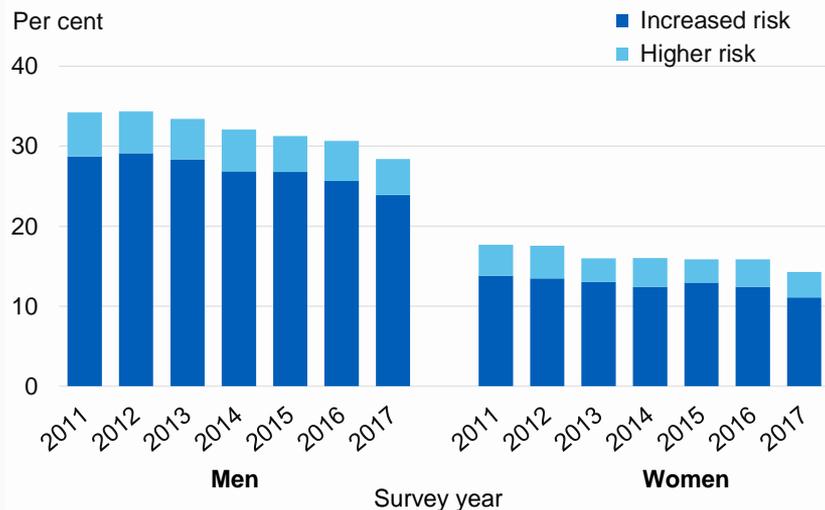
- men and women should not regularly drink more than 14 units a week.² This level is considered to be 'low risk'.
- Increased risk is drinking:
 - over 14 units and up to 50 units a week for men, and
 - over 14 units and up to 35 units a week for women.
- Higher risk drinkers are:
 - men who drink more than 50 units a week, and
 - women who drink more than 35 units a week.

The Chief Medical Officer's guidance on consumption of alcohol by children and young people is that alcohol consumption during any stage of childhood can have a detrimental effect on development, and young people may have a greater vulnerability than adults to the harmful effects of alcohol use. An alcohol-free childhood is the healthiest and best option, and children under 15 should not drink alcohol at all.³

Alcohol consumption among adults¹

Drinking at increased or higher risk of harm

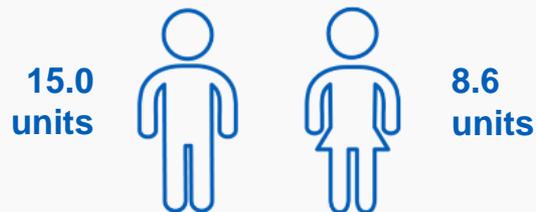
The proportion of both men and women drinking at increased or higher risk of harm (more than 14 units per week) decreased between 2011 and 2017; from 34% to 28% of men, and from 18% to 14% of women.



Average weekly alcohol consumption

In 2017, among adults that drank alcohol, the average (mean) amount typically drunk in a week was 11.8 units.

Men consumed more units on average than women.



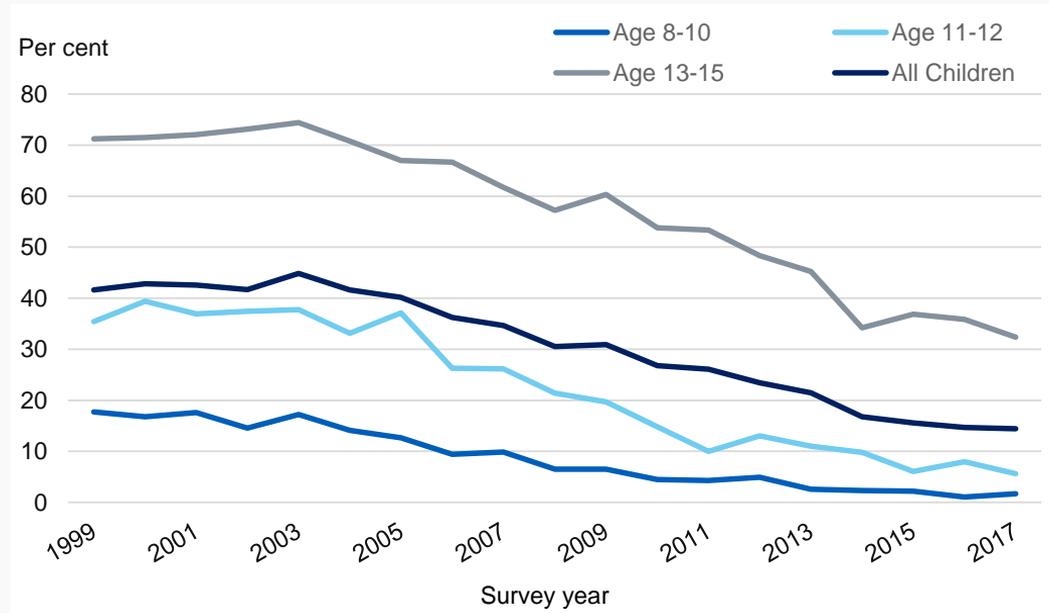
1. Based on their usual weekly consumption of alcohol.

Alcohol consumption among children (aged 8 to 15)

Children who reported they had ever had an alcoholic drink

The proportion of children aged 8 to 15 reporting ever having had a proper alcoholic drink - a whole drink, not just a sip - fell from 45% in 2003 to 14% in 2017.

The proportion increased from younger to older children. Only small proportions of younger children had tried drinking: 2% aged 8 to 10 and 6% aged 11 to 12, compared with 32% aged 13 to 15 in 2017.



Multiple risk factors – background

This part examines multiple risk factors among adults in England using data from 2016 and 2017. It looks at 5 risk factors:

- reported current cigarette smoking
- above low risk alcohol consumption (over 14 units per week)
- below the recommended fruit and vegetable consumption of 5 portions a day
- physical inactivity
- obesity based on measured height and weight

It describes the number of risks adults have, and the most common combinations.

This part also presents new analysis about the extent to which individuals have multiple uncontrolled biological risk factors based on three biophysical measurements, referred to as ‘raised biomarkers’, comprising:

- Raised blood pressure: systolic blood pressure (SBP) 140mmHg or above and/or diastolic blood pressure (DBP) 90mmHg or above;
- Raised total cholesterol: 5mmol/L or above
- Raised glycated haemoglobin: HbA1c 48mmol/mol or above (diagnostic of diabetes)

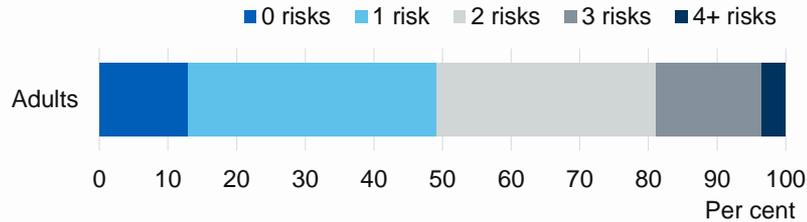
Taken together, the multiple risk factors report includes analysis on the majority of the risk factors thought to be driving most of the death and disability in the UK¹.

1. According to the 2016 ranking, the top eleven risk factors thought to be driving the most death and disability combined in the UK are as follows: tobacco; dietary risks; high blood pressure; high body mass index; alcohol and drug use; high total cholesterol; high fasting plasma glucose; occupational risks; air pollution; impaired kidney function; and low physical activity. Institute for Health Metrics and Evaluation (<http://www.healthdata.org/united-kingdom>).

Prevalence and combinations of multiple risks

Overall number of risk factors

13% of adults had no risk factors, and 36% had only one risk. 32% of adults had a combination of two risks and 19% had three or more. A very small proportion of adults had all five risks (below 1%).



The prevalence of multiple risk factors was higher in men than in women:

2 or more risk factors: 54%



2 or more risk factors: 47%



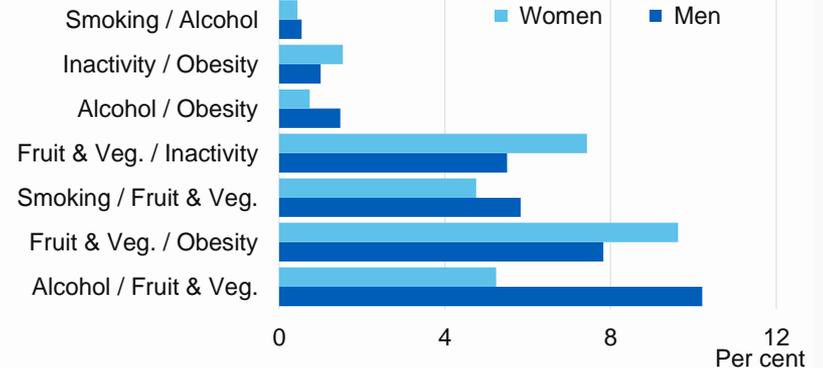
3 or more risk factors: 21%

3 or more risk factors: 17%

Combinations of risk factors

33% of men and 31% of women had two risks.

Among men with two risk factors, drinking more than 14 units of alcohol a week with low fruit and vegetable consumption was the most prevalent combination (10%). Among women, the most common combination was low fruit and vegetable consumption with obesity (10%).



Prevalence of multiple raised biomarkers

Number of raised biomarkers¹

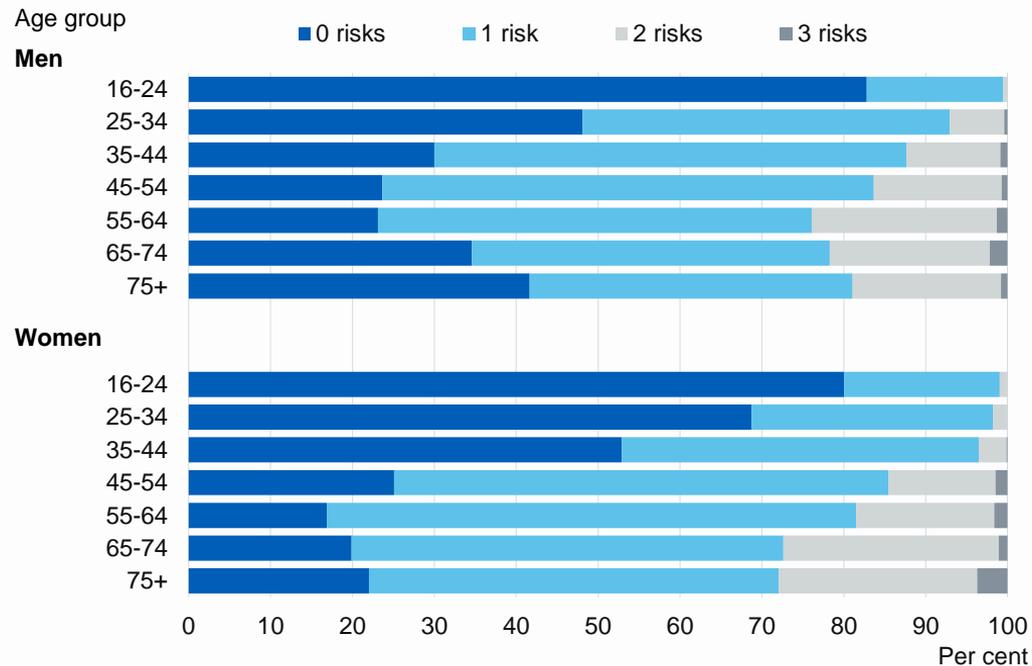
41% of adults had no raised biomarkers.

46% had only one of the three, and 12% had two.

A very small proportion of adults had all three (1%).

The prevalence of multiple raised biomarkers (2 or more) was higher for men than for women between the ages 25 and 44.

It was higher for women than for men among those aged 65 and over.



1. Based on adults (16 and over) with valid blood tests.

Adult health conditions – background

Cardiovascular disease (CVD) is one of the leading contributors to the global disease burden. It accounted for just over a quarter of all deaths registered in England and Wales in 2016¹.

Ischaemic heart disease (IHD) and stroke are the two main CVDs.

Diabetes is characterised by high blood glucose levels (hyperglycaemia). Untreated, hyperglycaemia is associated with damage and possible failure of many organs, especially the eyes, kidneys, nerves, heart, and blood vessels.

HSE measures diabetes in two ways; The prevalence of self-reported doctor-diagnosed diabetes, and additionally, glycated haemoglobin (HbA1c) levels are measured in blood samples collected at the nurse visit. Raised levels HbA1c 48mmol/mol or above are diagnostic of diabetes.

High cholesterol is considered one of the risk factors for cardiovascular diseases, including narrowing of the arteries (atherosclerosis), heart attack, and stroke.

Cholesterol levels were measured via blood samples taken at the nurse visit. Raised total cholesterol is defined as total cholesterol equal to or greater than 5mmol/L.

Hypertension (**high blood pressure**) is an important public health challenge worldwide because of its high prevalence and the associated increase in risk of other diseases. It is defined as a systolic blood pressure (SBP) at or above 140mmHg, or diastolic blood pressure (DBP) at or above 90mmHg, or on medication prescribed for high blood pressure.

Chronic pain has far-reaching consequences to its sufferers, including a lower quality of life, impacts on mental health, job losses, and can limit daily activities. Chronic pain in HSE is defined as pain or discomfort that had troubled the participant all of the time, or on and off, for more than the last three months.

Cardiovascular disease

CVD by sex and age

Any doctor diagnosed CVD: 15%



IHD: 6%

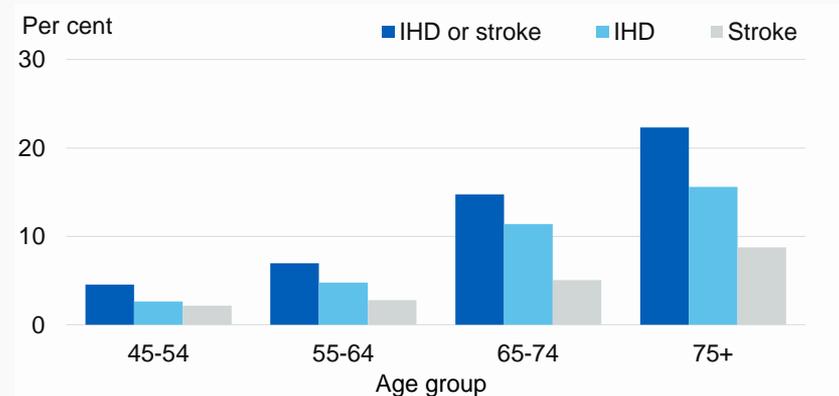
Stroke: 3%

Any doctor diagnosed CVD: 13%

IHD: 3%

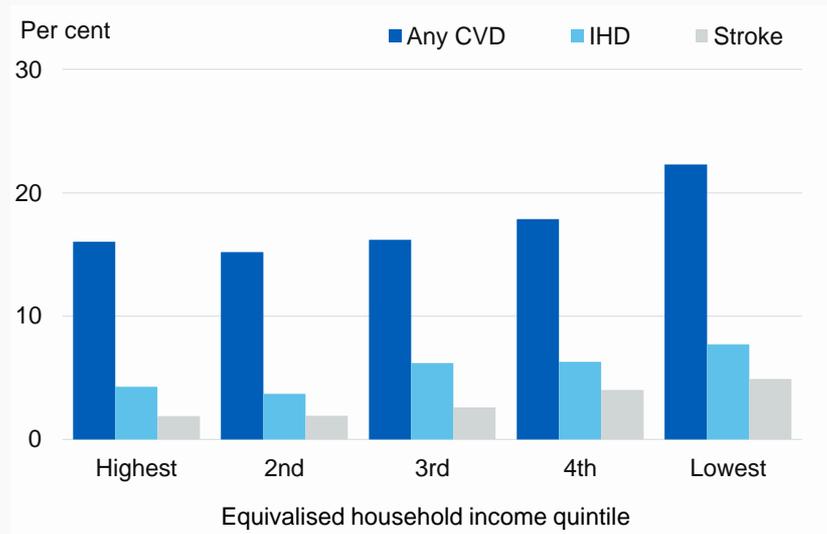
Stroke: 2%

Prevalence of IHD and/or stroke increases with age.



CVD by equivalised household income

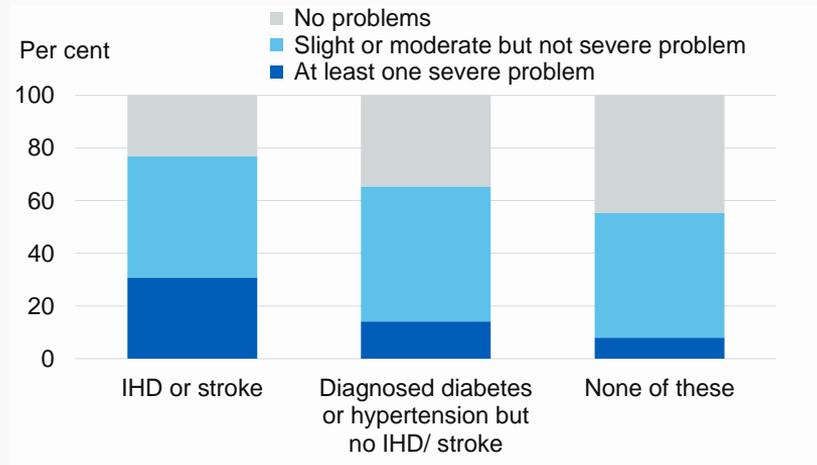
CVD was more prevalent in lower income households. 22% of adults aged 35 and over in the lowest income quintile and 16% in the highest income quintile reported any CVD.



Cardiovascular disease

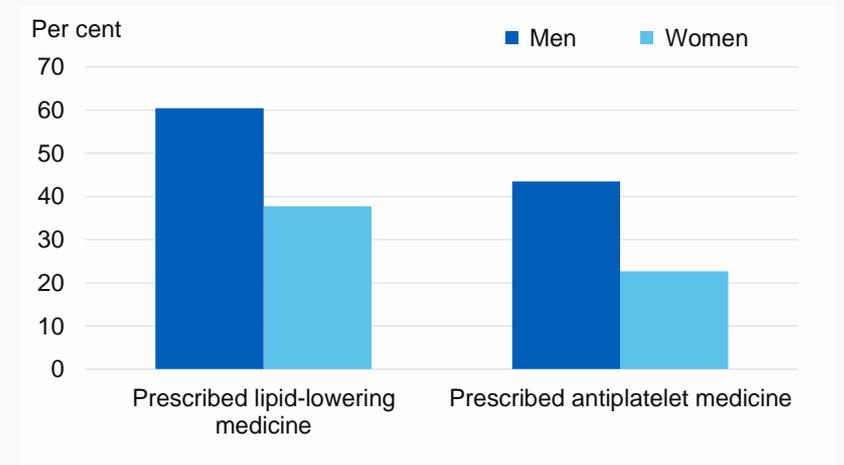
CVD condition by health problems¹

31% of adults aged 35 and over with IHD or stroke reported at least one severe health problem, compared with 14% of those who reported diagnosed diabetes or hypertension (but no IHD or stroke), and 8% of those with none of these conditions.



Prescribed medicine use for adults with any CVD

Among people aged 35 and over with any CVD condition, 60% of men and 38% of women were taking prescribed lipid-lowering medicines, and 43% of men and 23% of women were taking prescribed antiplatelet medicines.

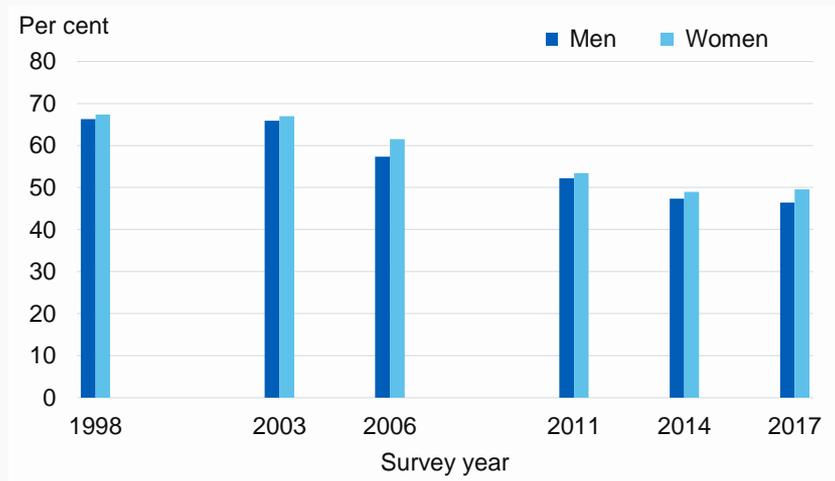


1. Health problems as self-reported through the EQ-5D questionnaire. See CVD report for more details.

Raised cholesterol and hypertension

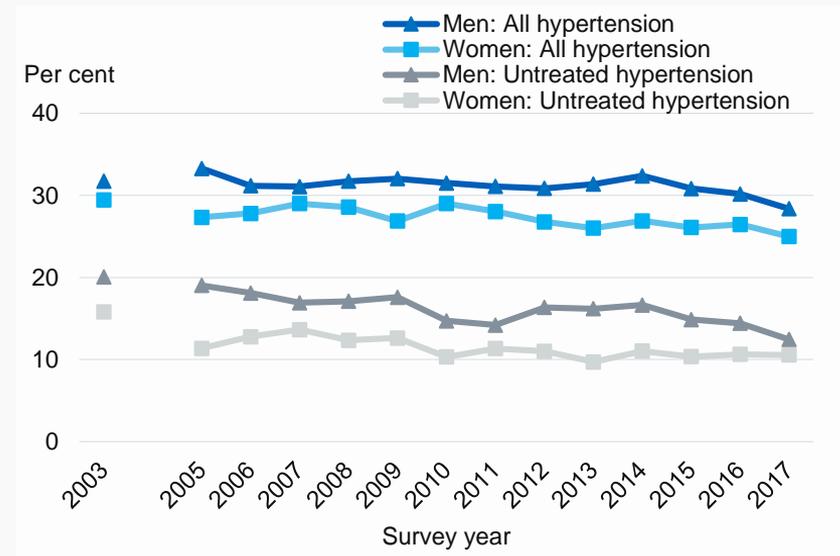
Raised total cholesterol

From 1998 to 2017, there has been a decline in the proportion of adults with raised total cholesterol from 67% to 48%. Throughout the period, the prevalence of raised total cholesterol peaked at an older age for women than men.



Hypertension

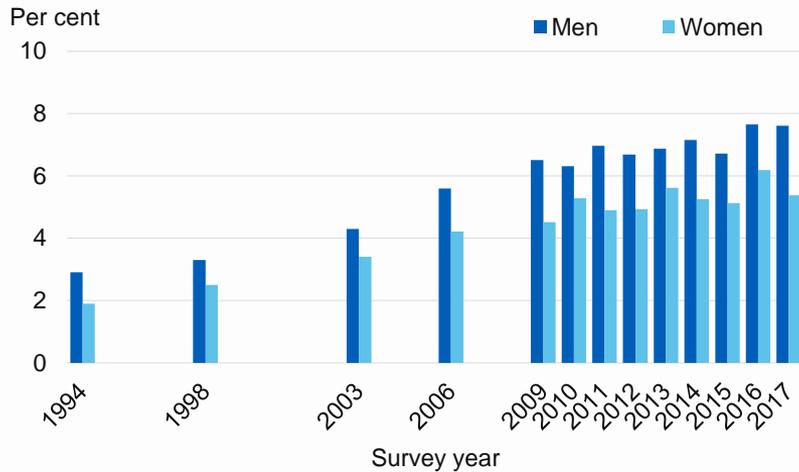
The proportion of adults with untreated hypertension declined from 2003 to 2017 for both men (20% to 12%) and women (16% to 11%).



Diabetes

Doctor diagnosed diabetes

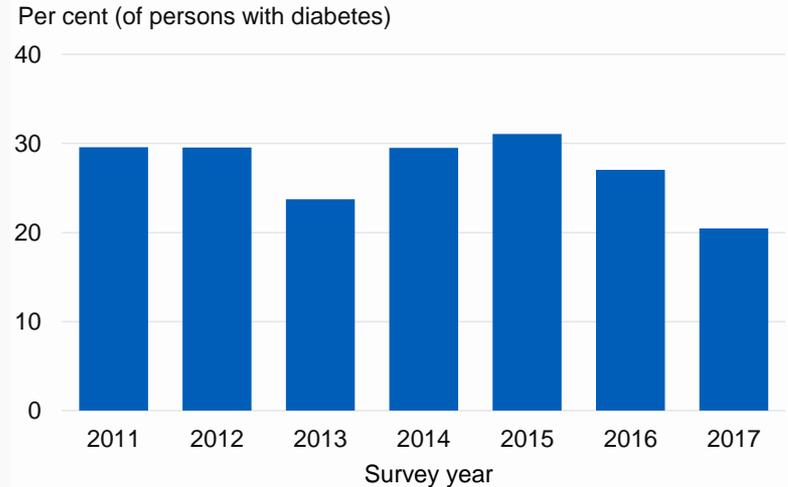
The proportion of adults reporting doctor-diagnosed diabetes increased between 1994 and 2017, with some year-on-year fluctuation; from 3% to 8% among men, and from 2% to 5% among women.



Undiagnosed diabetes

In 2017, 20% of adults with diabetes¹ were undiagnosed.

This is lower than in previous years when it was often about 30%.



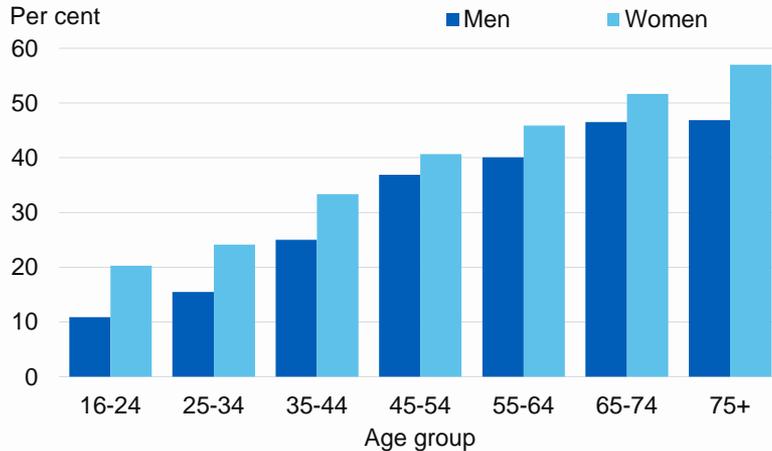
1. Comprises those with doctor diagnosed diabetes and those with an HbA1c level of 48mmol/mol or above who did not report having doctor-diagnosed diabetes.

Chronic pain

Chronic pain by age and sex

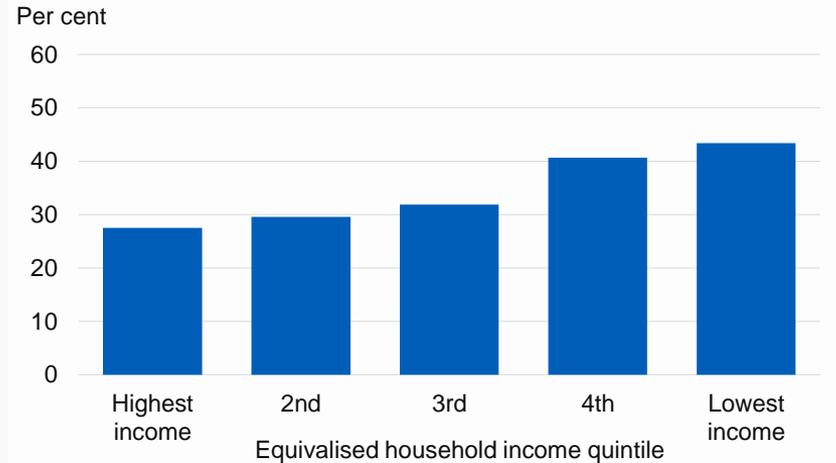
In 2017, 34% of all adults had chronic pain. It was more common among women (38%) than among men (30%) .

Prevalence increased with age, ranging from 16% among adults aged 16 to 24, to 53% among adults aged 75 and over.



Chronic pain by income group

Chronic pain was more prevalent among lower income groups: in 2017, 43% of adults in the lowest income quintile had chronic pain compared to 27% in the highest income quintile.



Social care - background

The social care report examines need for social care among adults aged 65 and over in England in 2017 and the extent to which these older adults receive the support they need.

It also looks at adults aged 16 and over who provide unpaid care to family members or friends.

Questions on social care have been asked in the survey since 2011. The need for and receipt of social care among older people is measured using a number of Activities of Daily Living (ADLs) and Instrumental Activities of Daily Living (IADLs).

ADLs are activities relating to personal care and mobility about the home that are basic to daily living. IADLs are activities which, while not fundamental to functioning, are important aspects of living independently.

ADLs

- Having a bath or shower
- Using the toilet
- Getting up and down stairs
- Getting around indoors
- Dressing or undressing
- Getting in and out of bed
- Washing face and hands
- Eating, including cutting up food
- Taking medicine

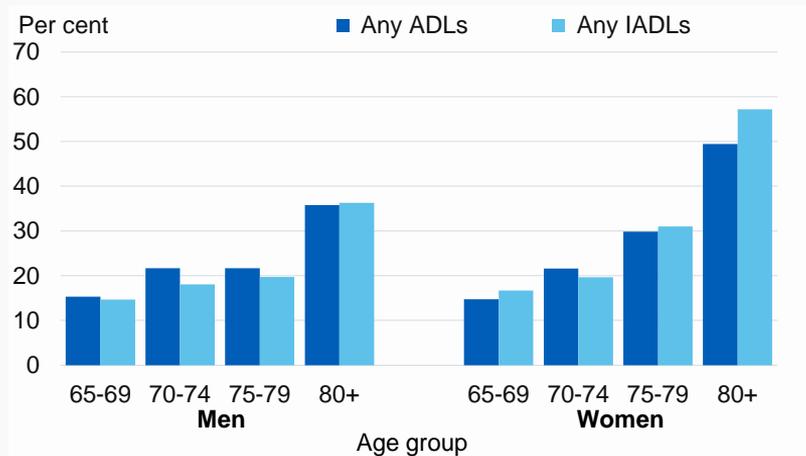
IADLs

- Doing routine housework or laundry
- Shopping for food
- Getting out of the house
- Doing paperwork or paying bills

Need and unmet need of care for older adults

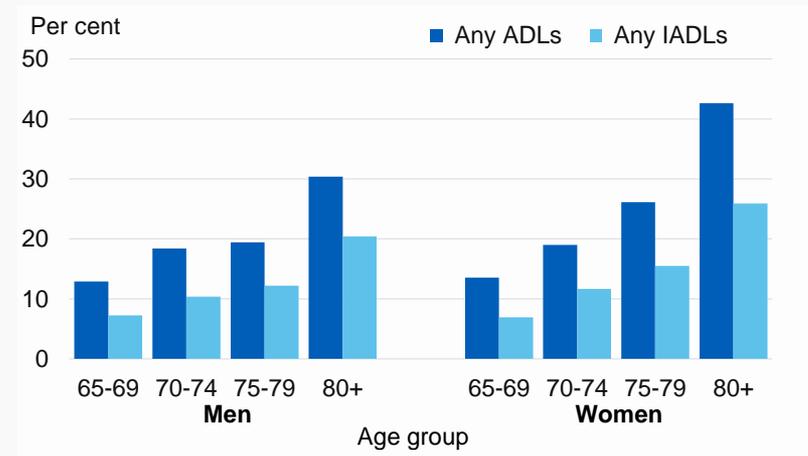
Need for help in last month

23% of men and 28% of women aged 65 and over needed help with at least one ADL. 22% and 30% respectively needed help with at least one IADL. Need for help increased with age for both ADLs and IADLs.



Unmet need in the last month

20% of men and 25% of women aged 65 and over had some unmet need with at least one ADL. 12% and 15% respectively had some unmet need with at least one IADL. Unmet need for care increased with age for both ADLs and IADLs.

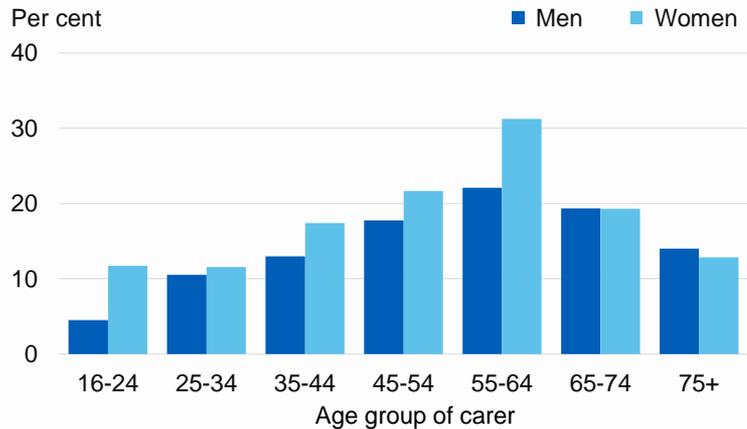


Provision of unpaid care

Provision of unpaid care in the last month

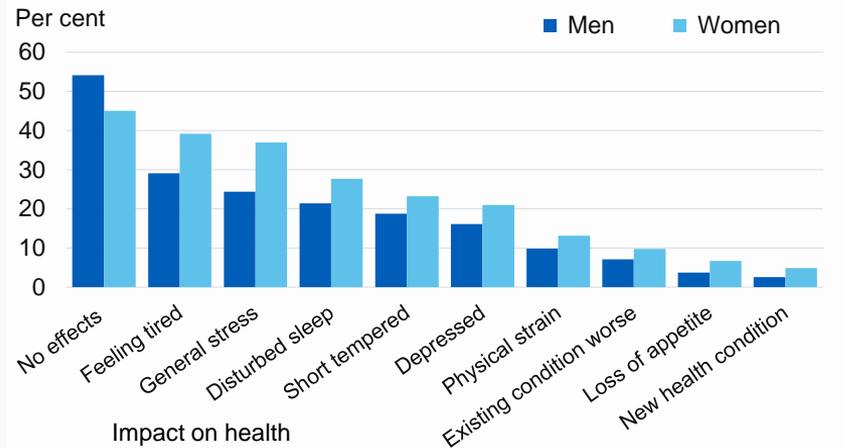
16% of adults reported providing unpaid help or support to at least one person with long-term mental or physical health problems, a disability, or with problems related to old age.

Women were more likely than men to have done so (18% and 14% respectively).



Impact on carers' health

51% of adults said their caring role had an effect on their health, with women more likely than men to report these effects. The most common impacts were feeling tired, general feelings of stress, and disturbed sleep.



56% said that they had received no support in providing care.

Further information

Reports about the Health Surveys for England from 2004 onwards are available at <https://digital.nhs.uk/data-and-information/publications/statistical/health-survey-for-england>

The survey is commissioned by NHS Digital. It has been carried out by NatCen Social Research and UCL since 1994.

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