

Health Index contents and definitions

The Health Index for England, which measures the health of the nation; definitions of the indicators used.

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1 . The Health Index and what it covers

The Health Index for England is a new measure of the health of the nation. It uses a broad definition of health, including:

- health outcomes
- health-related behaviours and personal circumstances
- wider drivers of health that relate to the places where people live

The Health Index provides a single value for health that can show how health changes over time. It can also be broken down to focus on specific topics to show the factors that influence these changes.

The Health Index measures health at local authority, regional and national levels. It also enables comparison between geographic areas, health topics and combinations of the two over time. At present the Health Index covers England, but in future the aim is to extend this to the rest of the UK, if possible.

The overall Health Index score can be broken down into three areas of health, known as domains, which are:

- Healthy People
- Healthy Lives
- Healthy Places

Each domain contains several subdomains, as shown in the Table of contents. These in turn contain a number of indicators.

Each indicator provides a measure of a particular aspect of health. Where we are repurposing existing data for use in the Health Index, those data do not always measure health concepts in the ideal way for our purposes. Because of this we have selected the best available measures. This is an accepted method when constructing an index but may mean the data chosen may not cover the whole of that aspect of health.

For example, the indicator for alcohol misuse consists of alcohol-related hospital admissions. We know that this does not measure all alcohol misuse, but it still indicates the patterns and trends expected to be present in alcohol misuse as a whole.

The indicator descriptions in this article focus on defining each indicator and how it is measured, rather than detailing the underlying data.

All data used in the Health Index come from publicly available sources, usually the Office for National Statistics (ONS) or other government departments. An overview of the data selection process and the methods used to construct the Health Index is provided in [Section 19. How we created the Health Index](#). More detail on the methods used is available in our [Health Index methods and development article](#), and on the data sources in our [Health Index datasets](#).

2 . Healthy People

Healthy People covers health outcomes, which for this index include mortality, and the impact of physical and mental health conditions. The physical health conditions included were chosen based on their status as top contributors to mortality or morbidity, according to the [Health profile for England: 2019, published on GOV.UK](#).

Definitions of health outcomes in research can include the outcomes of healthcare procedures. However, we avoid including measures of healthcare activity, such as waiting times, in the Health Index. This is because they are likely to reflect the performance and policy of healthcare services rather than describing the population's health in itself.

The subdomains of the Healthy People domain are:

- difficulties in daily life
- mental health
- mortality
- personal well-being
- physical health conditions

More detail on the data sources is available in our [Health Index datasets](#).

Within each of the subdomains for Healthy People there are a number of indicators, described in Sections 3 to 7.

3 . Healthy People: Difficulties in daily life

Disability

The percentage of working-age adults (aged 16 to 64 years) who are disabled under the Equality Act or work-limiting disabled.

Frailty

The number of emergency hospital admissions for a fractured neck of femur (hip) in people aged 65 years and over, per 100,000 people. This is age-standardised, which means it considers the number of people of different ages living in an area.

4 . Healthy People: Mental health

Children's social, emotional and mental health

The percentage of all school pupils who are both identified as having special educational needs (SEN) and have social, emotional and mental health needs as their primary SEN.

Mental health conditions

The percentage of people who have a mental health condition, such as depression or anxiety. This is based on people reporting their health conditions on a survey rather than coming from general practitioner (GP) records or similar.

Self-harm

The number of emergency hospital admissions for intentional self-harm, per 100,000 people. This is age-standardised, which means it considers the number of people of different ages living in an area. Hospital admissions do not include all instances of self-harm but are used here to indicate overall levels of self-harm.

Suicides

The suicide rate is defined as the mortality rate (deaths per 100,000 people) from intentional self-harm, in people aged 10 years and over, and from injury of undetermined intent, in people aged 15 years and over. This is age-standardised, which means it considers the number of people of different ages living in an area.

Please note, we use data that combine three years. For example, 2020 data in the Health Index are based on 2018 to 2020. This means the results may look different to annual figures published elsewhere. See our [Health Index methods and development methodology](#) for more information.

5 . Healthy People: Mortality

Avoidable mortality

Avoidable mortality refers to causes of death that can be mainly avoided. This is either through effective public health and primary prevention interventions (preventable mortality), or through timely and effective healthcare interventions, including secondary prevention and treatment (treatable mortality).

This indicator consists of avoidable deaths, defined as the mortality rate (deaths per 100,000 people) in people aged under 74 years for all causes within the avoidable mortality definition. This is age-standardised, which means it considers the number of people of different ages living in an area.

Please note, we use data that combine three years. For example, 2020 data in the Health Index are based on 2018 to 2020. This means the results may look different to annual figures published elsewhere. See our [Health Index methods and development methodology](#) for more information.

Infant mortality

The infant mortality rate, which is the number of deaths of infants aged under one year per 1,000 live births.

Please note, we use data that combine three years. For example, 2020 data in the Health Index are based on 2018 to 2020. This means the results may look different to annual figures published elsewhere. See our [Health Index methods and development methodology](#) for more information.

Life expectancy

Period life expectancy at birth, which is the average number of years a person born in a given year and area would live, if they experienced the particular area's age-specific mortality rates for that time period throughout their life.

Please note, we use data that combine three years. For example, 2020 data in the Health Index are based on 2018 to 2020. This means the results may look different to annual figures published elsewhere. See our [Health Index methods and development methodology](#) for more information.

Mortality from all causes

The number of deaths from any cause, per 1,000 people. This is age-standardised, which means it considers the number of people of different ages living in an area.

6 . Healthy People: Personal well-being

Activities in life are worthwhile

The average score of survey respondents (aged 16 years and over), when asked to what extent they feel the things done in their life are worthwhile.

Feelings of anxiety

The average score of survey respondents (aged 16 years and over), when asked how anxious they felt on the previous day.

Happiness

The average score of survey respondents (aged 16 years and over), when asked how happy they felt on the previous day.

Life satisfaction

The average score of survey respondents (aged 16 years and over), when asked how satisfied they are with their life.

7 . Healthy People: Physical health conditions

The indicators for physical health conditions are based on people reporting their health conditions on a survey rather than coming from General Practitioner (GP) records or similar.

Cancer

The percentage of people who have cancer (with a diagnosis or treatment in the last five years).

Cardiovascular conditions

The percentage of people who have a heart condition, such as angina or atrial fibrillation.

Dementia

The percentage of people who have Alzheimer's disease or another cause of dementia.

Diabetes

The percentage of people who have diabetes.

Kidney and liver disease

The percentage of people who have kidney or liver disease.

Musculoskeletal conditions

The percentage of people who have arthritis or an ongoing problem with their back or joints.

Respiratory conditions

The percentage of people who have a breathing condition such as asthma or chronic obstructive pulmonary disease (COPD).

8 . Healthy Lives

The two domains of Healthy Lives and Healthy Places contain indicators of wider social factors affecting health. Healthy Lives covers risk factors for health that relate directly to individuals. This includes both risk factors that can be modified or changed by individuals, and social factors that cannot always be controlled by individuals but affect the population at the individual level.

The most common physiological and behavioural risk factors that can be modified or changed by individuals are defined in the [Health profile for England, published on GOV.UK](#). They are also supported by [the World Health Organization's list of risk factors for non-communicable disease](#). In addition to more traditionally recognised measures, research suggests there are other emerging risk factors to health, such as sleeping patterns. However, it has been more difficult to find data that measure these.

The social factors included in Healthy Lives are taken from [The Health Foundation's Exploring the social determinants of health series](#).

The subdomains of the Healthy Lives domain are:

- behavioural risk factors
- children and young people
- physiological risk factors
- protective measures

More detail on the data sources is available in our [Health Index datasets](#).

Within each of the subdomains for Healthy Lives there are a number of indicators, described in Sections 9 to 12.

9 . Healthy Lives: Behavioural risk factors

Alcohol misuse

The number of alcohol-related hospital admissions per 100,000 people. This is age-standardised, which means it considers the number of people of different ages living in an area. Hospital admissions do not include all instances of alcohol misuse but are used here to indicate overall levels of alcohol misuse.

Drug misuse

The number of drug-related crimes recorded by the police, per 1,000 people. Drug-related crimes do not include all instances of drug misuse but are used here to indicate overall levels of drug misuse.

Healthy eating

The percentage of adults (aged 16 years and over) who report they eat five or more portions of fruit and vegetables on a "usual day".

Physical activity

The percentage of adults (aged 19 years and over) who report they are physically active for 150 minutes or more per week.

Sedentary behaviour

The percentage of adults (aged 19 years and over) who report they are physically active for less than 30 minutes per week.

Sexually transmitted infections

The number of new sexually transmitted infections (STIs) per 100,000 people. We adjust this to account for the rate of testing in an area because people with STIs can have no symptoms, so increases in diagnosis could result from increased testing rather than increased infection. This excludes chlamydia in those aged under 25 years, because this is excluded by the data producer.

Smoking

The percentage of adults (aged 18 years and over) who report they currently smoke cigarettes.

10 . Healthy Lives: Children and young people

Early years development

The percentage of children, aged 5 years, achieving a good level of development at the end of the Early Years Foundation Stage (EYFS). Children are defined as having reached a good level of development if they achieve at least the expected level in the early learning goals in the prime areas of learning. These areas are:

- personal
- social and emotional development
- physical development
- communication and language

This also includes the early learning goals in the specific areas of mathematics and literacy.

Pupil absences

The percentage of pupils (at state-funded primary and secondary, and special schools) who are persistent absentees, that is, have overall absences equating to 10% or more of their possible sessions.

Pupil attainment

The percentage of state school pupils achieving grades 4 or above (A* to C) in English and Mathematics GCSEs. Although this includes only GCSE attainment, we have found in analysis that levels of pupil attainment in an area remain quite similar across different ages. Because of this, we use it as an indicator of overall pupil attainment.

Teenage pregnancy

The number of conceptions in women aged under 18 years, relative to the population of females aged 15 to 17 years. The population does not include females aged under 15 years, for consistency with presentation in the Office for Health Improvement and Disparities' Public Health Profiles.

Young people in education, employment and apprenticeships

The percentage of pupils in sustained education, employment or an apprenticeship in the year after key stage 4 (after school Year 11) when they are aged 16 to 17 years.

11 . Healthy Lives: Physiological risk factors

High blood pressure

The percentage of people who have high blood pressure (hypertension). This is based on people reporting this on a survey rather than coming from GP records or similar.

Low birth weight

The percentage of live births (of at least 37 weeks' gestation) with a recorded birth weight of less than 2,500 grammes.

Overweight and obesity in adults

The percentage of adults (aged 18 years and over) who are overweight or obese, based on people reporting their height and weight on a survey.

Overweight and obesity in children

The percentage of children in school Year Reception and in school Year 6 (aged 4 to 5 years and aged 10 to 11 years, respectively) who are overweight or obese.

12 . Healthy Lives: Protective measures

Cancer screening attendance

The proportions of people eligible for screening for bowel, breast, and cervical cancer, who have had screening results recorded (which means they have attended a screening appointment), within the recommended timeframes.

Child vaccination coverage

The percentage of children who receive the [NHS recommended early childhood vaccinations](#). This does not include vaccination for coronavirus (COVID-19).

13 . Healthy Places

Healthy Places includes social and environmental risk factors for health that affect the population at a collective level. These relate to circumstances that can influence health outcomes, such as those included in Healthy People. They also relate to circumstances that can influence risk factors, such as those included in Healthy Lives. However, they often cannot be addressed solely at the individual level.

We used the [Marmot Review](#) and Public Health England's (PHE's) [Spatial planning for health: evidence review report, published on GOV.UK](#), in particular, to inform the topics included. These are:

- physical environment
- housing
- community services and safety

These are also supported by [The Health Foundation's Exploring the social determinants of health series](#).

The subdomains of the Healthy Places domain are:

- access to green space
- access to services
- crime
- economic and working conditions
- living conditions

More detail on the data sources is available in our [Health Index datasets](#).

Within each of the subdomains for Healthy Places there are a number of indicators, described in Sections 14 to 18.

14 . Healthy Places: Access to green space

Private outdoor space

The percentage of addresses (houses and flats) with access to private outdoor space, which includes private gardens, private communal gardens, balconies, yards or patio spaces.

15 . Healthy Places: Access to services

Distance to general practitioner (GP) services

The average minimum distance to travel to the nearest GP practice. Distances are calculated between postcodes based on the central point of each postcode.

Distance to pharmacies

The average minimum distance to travel to the nearest pharmacy or dispensary. Distances are calculated between postcodes based on the central point of each postcode.

Distance to sports or leisure facilities

The average minimum distance to travel to the nearest sports or leisure facility. Distances are calculated between postcodes based on the central point of each postcode.

Internet access

The percentage of premises unable to receive an internet connection of a speed of 10 megabits per second or more.

Patients offered acceptable GP practice appointments

The proportion of people who were not satisfied with the type of appointment offered by their GP practice, and who therefore did not accept an appointment.

16 . Healthy Places: Crime

Low-level crime

The number of police recorded low-level crimes per 1,000 people. The low-level crime offences included here are bicycle theft and shoplifting. There are other low-level crimes, but bicycle theft and shoplifting are used to indicate overall numbers.

Personal crime

The number of police recorded personal crimes per 1,000 people. Personal crime offences are defined as violence against the person, sexual offences, robbery, theft, criminal damage and arson.

17 . Healthy Places: Economic and working conditions

Child poverty

The percentage of children (aged under 16 years) living in families with absolute low income. The threshold for absolute low income is income below 60% of the national median household income.

Job-related training

The percentage of working-age employed adults who received job-related training in the last 13 weeks. This is included as a measure of employment quality.

Unemployment

The number of people (aged 16 years and over) without a job, who have been actively seeking work within the last four weeks and are available to start work within the next two weeks. This is relative to the economically active population, that is, those in work plus those seeking and available to work.

Workplace safety

The number of non-fatal injuries per 100,000 employees, reported under the Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (RIDDOR). This is included as a measure of employment quality.

18 . Healthy Places: Living conditions

Air pollution

The annual concentration of air pollution in an area, adjusted to account for how much people are likely to be exposed to it. Air pollution specifically measures fine particulate matter (PM2.5).

Household overcrowding

The percentage of households that are overcrowded. Overcrowding is based on a standard calculation of the required number of rooms, compared with the actual number of rooms the household has.

Noise complaints

The number of complaints to local authorities about noise per year (per 1,000 people).

Road safety

The number of personal injury road traffic accidents on public roads reported to the police. They are classified either as fatal, serious, or slight, relative to the size of the area in square kilometres (not including inland water and to average high tide mark).

Rough sleeping

The number of people sleeping outdoors on a single given night in October or November, per 100,000 residents.

19 . How we created the Health Index

The data used for each indicator come from publicly available sources, usually the Office for National Statistics (ONS) or other government departments. This means that certain quality standards will have already been met. To meet the needs of the Health Index, we checked:

- data were available for enough years to make comparisons over time
- there was reasonable certainty that the data would continue to be available into the future, to make sure that comparisons over time are based on consistent data as far as possible
- data were available for lower-tier local authority areas (LTLAs), which is the smallest geographical breakdown available for most health data sources suitable for the Health Index's needs

Once the data were collected, they needed imputation and transformation for use in the Health Index. All techniques used to make these changes follow standard statistical procedures, which have been reviewed for suitability by experts.

There were sometimes missing values at local authority level, which needed to be filled (a process known as imputation). We also needed to get data into a format where they could be compared with other data in the Index (processes known as standardisation and normalisation).

Some indicators could fit in more than one place in the Health Index. For example, some are both health outcomes and risks to future health, such as children's social, emotional and mental health. Such indicators could be placed within the Healthy People domain as an outcome of poor health, or in another domain as they influence other outcomes.

To guide the decisions on placing these indicators, and to support our groupings more broadly, we have used statistical tests (called factor analysis). This is to understand which indicators should be placed together. They have also been used to decide what weights indicators should be given, that is, how important they are in measuring health.

The results have then been used to produce the values for individual indicators. This includes the subdomains they group into, the domains those group into, and the single Health Index number overall. Values were calculated for the local authorities, then combined with respect to population size to give values for regions and England as a whole.

Further detail is available on the data selection and on methods in our [Health Index methods and development report](#), and on the data sources in our [Health Index datasets](#). The datasets also include details of the weights given to indicators.

20 . Related links

[Health in England: 2015 to 2020](#)

Bulletin | Released 09 November 2022

Insights into England's health in the earlier stages of the coronavirus (COVID-19) pandemic at national, regional and local authority level, using the Health Index.

[How health has changed in your local area: 2015 to 2020](#)

Digital article | Released 09 November 2022

Use our interactive tool to explore how health changed in each local authority area across England between 2015 and 2020, as measured by the Health Index.

[Health Index methods and development: 2015 to 2020](#)

Methodology | Released 09 November 2022

The Health Index is a new tool which measures a broad variety of health outcomes and risk factors over time, and for different geographic areas. This methodology article explains how we have constructed the Health Index.

21 . Cite this methodology

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