

Statistical bulletin

Health in England: 2015 to 2019

Insights into England's health before the coronavirus (COVID-19) pandemic at national and regional level, using the Health Index for England.

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Table of contents

1. [Main points](#)
2. [Understanding the Health Index](#)
3. [Health in England in 2019](#)
4. [Changes in health in England](#)
5. [Regional health differences](#)
6. [Health in England data](#)
7. [Measuring the data](#)
8. [Strengths and limitations](#)
9. [Related links](#)

1 . Main points

- Health in England, as measured by the Health Index, broadly remained stable between 2015 and 2019, before the coronavirus (COVID-19) pandemic.
- The Health Index has three domains, covering different areas of health: Healthy Lives has improved, while Healthy People and Healthy Places are slightly below 2015 levels
- Health risk factors for children and young people is the topic showing greatest improvement pre-coronavirus, while crime in 2019 shows the worst results compared with 2015.
- The South East is the region with the highest Health Index score and, together with the East Midlands, is one of only two regions to score above England 2015 levels in all three domains.
- The North West has the highest Healthy Places score, but lower scores on the other domains of health mean it has a low ranking overall.
- London scores highly for Healthy People, likely driven by a younger population, but scores poorly for Healthy Lives and Healthy Places.

These estimates are experimental and are still under development.

2 . Understanding the Health Index

The Health Index provides a single value for an area, representing a broad definition of health. The Index aligns with the World Health Organization's (WHO's) [definition of health](#), that health "is a state of complete physical, mental and social well-being, and not merely the absence of disease or infirmity".

Topics covered include health conditions, health-related behaviours, personal circumstances and wider drivers of health relating to the places people live. The Index can also be broken down into domains and subdomains. This is to allow users to better understand any changes over time or differences between areas.

View the [Health Index indicators and definitions article](#) for more detail on the domains, subdomains and the indicators within the Index.

Our [Health Index methods and development article](#) provides information on how the indicators are combined to produce the subdomain, domain and single Health Index scores for England and each local authority.

The current release covers 2015 to 2019 so presents health in England before the coronavirus (COVID-19) pandemic. We plan to release Health Index data for 2020 later this year.

3 . Health in England in 2019

Figure 1: Healthy Lives shows improvement while other areas of health remain stable

Headline health indicators, England, 2019

Download the data

[.CSV](#)

Figure 1 shows health in England in 2019, using Health Index scores. All scores are relative to the 2015 baseline of 100. To allow comparison across all parts of the Health Index, scores have been calculated so that a higher score on any aspect is better for health. This shows the overall Health Index score, as well as scores for three areas of health (or domains) within it: Healthy People, Healthy Lives and Healthy Places. It also shows the subdomains within those, and the indicators in each subdomain.

View the [Health Index indicators and definitions article](#) for more detail on the domains, subdomains and indicators, and what they cover.

You can also explore the [Health Index for local authority areas in England](#).

Health in England in 2019 was similar to health in 2015, according to the overall Health Index score. The picture for the underlying domains of Healthy People, Healthy Lives and Healthy Places was more varied.

Of the three domains, Healthy Lives scores were the highest in 2019, a little above 2015. Within this, the best score was for the children and young people subdomain, which includes measures of early years development, school attendance and attainment, teenage pregnancy and education and employment. The worst-scoring subdomain in Healthy Lives was physiological risk factors. This measures low birth weight, overweight and obesity in adults and children, and high blood pressure. Healthy People and Healthy Places scores were similar to one another, and England's scores for both declined slightly since 2015.

Across the whole Health Index, the children and young people subdomain within Healthy Lives has shown most improvement since 2015. The crime subdomain within Healthy Places has shown greatest decline in score of all subdomains in the Health Index. This means that crime rates have increased. This subdomain measures personal crime and low-level crime.

Further details of the underlying indicators driving these scores can be seen in Figure 1. The indicators within each subdomain are shown alongside each subdomain score.

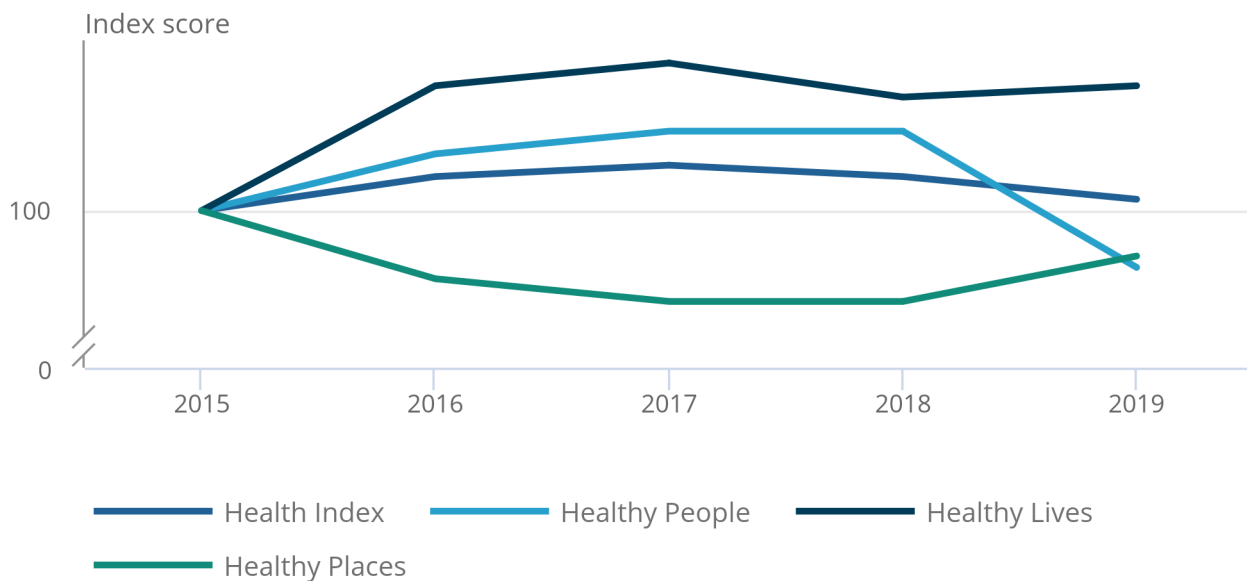
4 . Changes in health in England

Figure 2: Health in England showed small improvements between 2015 and 2017, before declining more recently; the Health Index domains show different patterns in different areas of health

Health Index and health domain scores, England, 2015 to 2019

Figure 2: Health in England showed small improvements between 2015 and 2017, before declining more recently; the Health Index domains show different patterns in different areas of health

Health Index and health domain scores, England, 2015 to 2019



Source: Office for National Statistics – Health Index for England

Notes:

1. The Health Index for England is an experimental statistic.
2. The Health Index is comprised of 56 indicators, summarised into 14 subdomains, 3 domains and then an overall score for each geographical area. The results presented here are for the overall Health Index score and the three domains.
3. A score of 100 means health is equal to England's health in 2015. A score higher than 100 means health is better; a score lower than 100 means health is worse.
4. Results are presented by calendar year. If an indicator's underlying data source used a different year format, such as academic year or financial year, those data are counted as the calendar year with greatest overlap. For example, financial year 2013 to 14 begins in April 2013 and ends in March 2014. The majority of the financial year overlaps with the 2013 calendar year, so the data for that financial year would be included in the 2013 Health Index results.

Healthy People covers health outcomes, which here include mortality, and physical and mental health. Healthy People showed some slight improvements between 2015 and 2018 but this aspect of health declined in 2019.

Healthy Lives covers risk factors for health that relate directly to individuals, such as healthy eating and high blood pressure. Healthy Lives showed small improvements between 2015 and 2017 then remained relatively stable between 2017 and 2019.

Healthy Places includes social and environmental risk factors for health that affect the population at a collective level, such as air pollution and access to green space. Healthy Places showed some small declines between 2015 and 2017 but this aspect of health improved slightly in 2019.

The following sections discuss changes in the subdomains that are driving these domain scores.

Healthy People

Between 2015 and 2018, most subdomains in Healthy People remained relatively stable. There was an improvement in personal well-being over this period, but this was followed by a fall in 2019, back to around 2015 levels. The biggest driver of the decline in 2019 for the personal well-being subdomain was increased feelings of anxiety.

Mental health remained similar between 2015 and 2017 but then declined below 2015 levels in 2018 and continued to decline into 2019. A decline was seen in most aspects of mental health in the Health Index in 2018, and again in 2019, although this was larger in some areas than others. The exception was between 2018 and 2019, self-harm remained relatively stable.

The difficulties in daily life subdomain also declined below 2015 levels in 2019. Both indicators in this subdomain - disability and frailty - had lower scores in 2019 than 2018. For disability, this was in line with the general trend of decline seen in this area since 2015. Frailty had generally improved between 2015 and 2018, before this slight decline in 2019; although it remained above 2015 levels.

Healthy Lives

The largest changes were in the children and young people subdomain, which saw large improvements in 2016 compared with 2015, and then continued to steadily improve. The increases were driven by improvements in early years development, pupil attainment and teenage pregnancy.

Behavioural risk factors and protective measures both saw small changes over the period, but by 2019 were back at around 2015 levels. In the behavioural risk factors subdomain, although the overall subdomain scores showed little change, there were large improvements (reductions) in numbers of people smoking. Healthy eating, drug misuse and alcohol misuse worsened between 2017 and 2019, which is why the subdomain as a whole does not show much change.

The physiological risk factors subdomain saw a small decline between 2015 and 2017. This was largely driven by worsening overweight and obesity rates in children. Child obesity improved slightly between 2017 and 2018 but returned to 2017 levels in 2019. The physiological risk factors subdomain overall remained quite stable between 2017 and 2019, such that the score for 2019 is only a little below that of 2015. Improvements in high blood pressure were offset by worsening adult obesity rates and low birth weights.

Healthy Places

The largest change was in the crime subdomain, which worsened between 2015 and 2018. It recovered a little in 2019, to 2017 levels, but remained worse than in 2015. Personal crime rates, which include sexual offences, robbery and criminal damage, were consistently worse compared with 2015 levels than low-level crime rates, which consist of bike theft and shoplifting. Personal crime was the biggest driver of the declining score in this subdomain. The slight recovery in the subdomain in 2019 was driven by small improvements on 2018 in low-level crime, while personal crime remained stable.

There were some improvements to economic and working conditions over the period. The change was small each year, but consistent, and 2019 levels remained above those of 2015. This was largely driven by improvements in unemployment and workplace safety. These improvements were partially offset by declines in housing affordability and job-related training between 2015 and 2017; although both remained stable in 2018 and improved slightly in 2019. Child poverty remained stable across the period.

Living conditions saw a decline in 2016 but in 2017 they returned to levels similar to 2015 and have remained stable. The decline and return were largely driven by changes in air pollution scores.

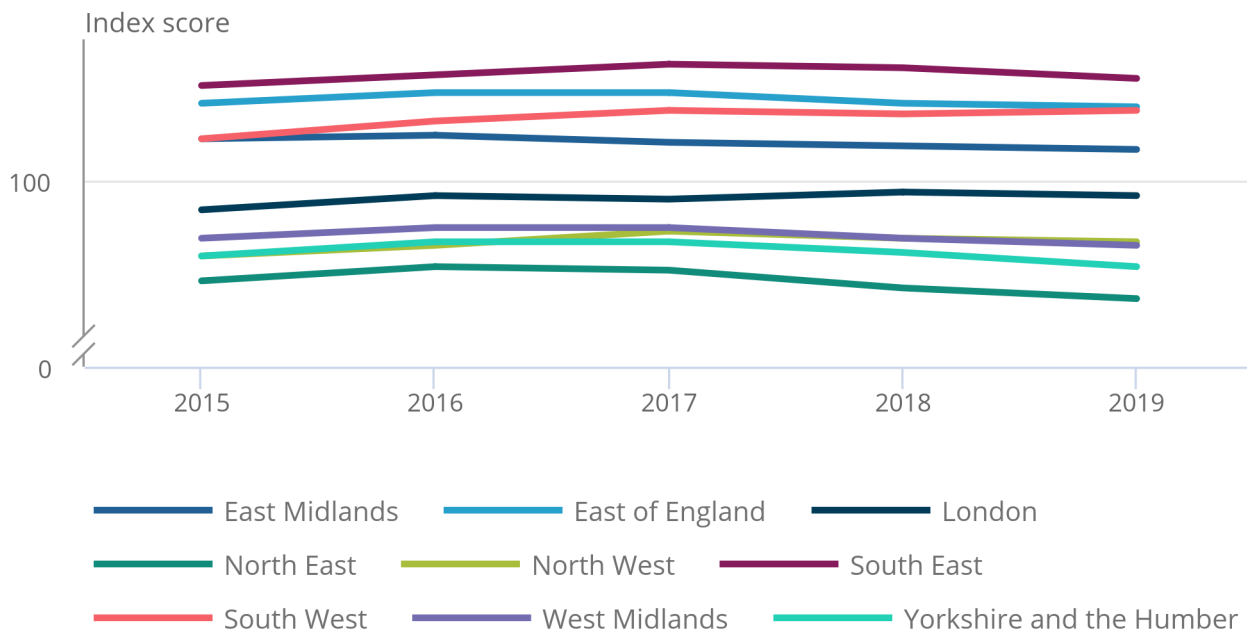
5 . Regional health differences

Figure 3: Regions in the south and east of England had the best health between 2015 and 2019

Health Index scores for regions of England, 2015 to 2019

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Health Index scores for regions of England, 2015 to 2019



Source: Office for National Statistics – Health Index for England

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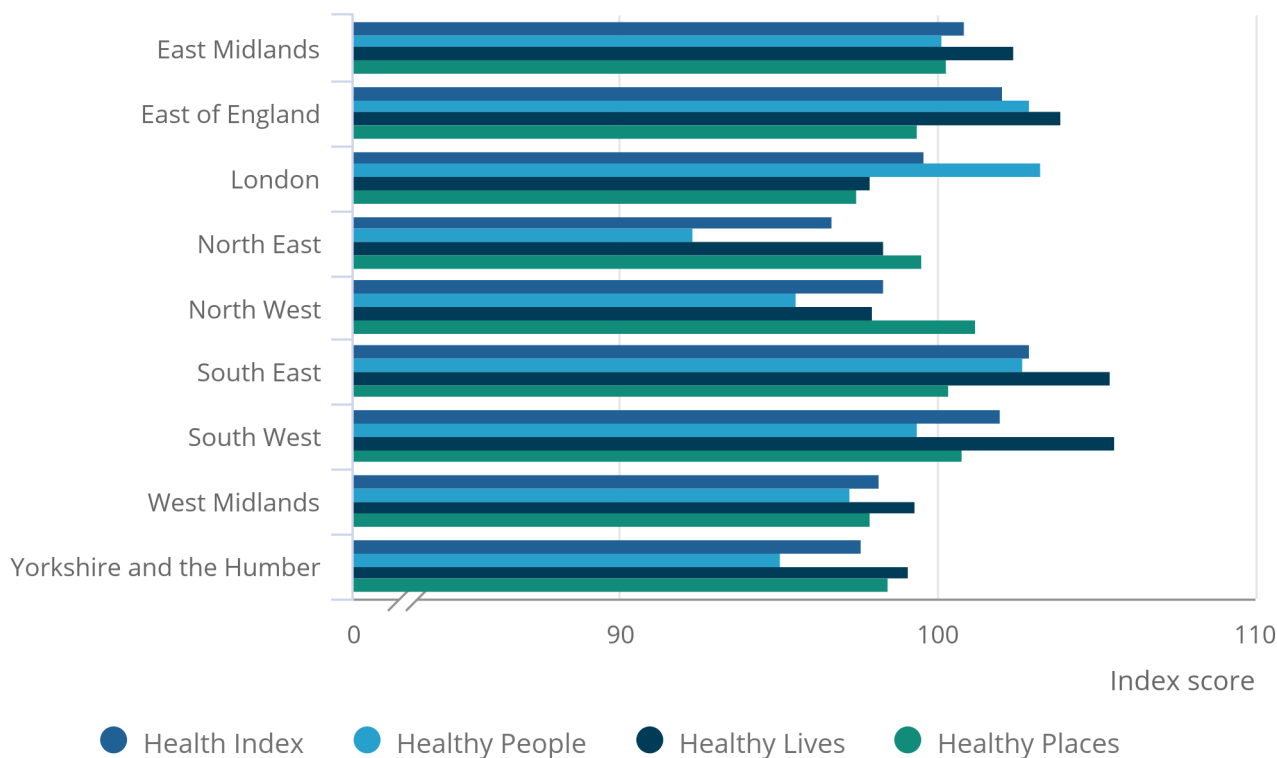
Regions in the south and east of England had better health between 2015 and 2019, than regions in the north and west of England, according to their overall Health Index scores. The South East region had the best health and the North East the worst. London's Health Index score was in the middle.

Figure 4: Regions in England had varying scores across the three domains of the Health Index in 2019

Health Index and domain scores for regions of England, 2019

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Health Index and domain scores for regions of England, 2019



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Notes:

1. The Health Index for England is an experimental statistic.
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The regional pattern presented in Figure 3 for the overall Health Index score was not consistent across all areas of health, because regions have varying performance across the three domains of the Index, as shown in Figure 4. For the Healthy People and Healthy Lives domains this pattern tended to reflect the overall Health Index pattern, but the picture was much more mixed in Healthy Places.

For example, the North West region had the best score for Healthy Places but was below England's 2015 levels for Healthy People and Healthy Lives. As Healthy Places measures social and environmental risk factors for health, it could be that the higher scores in this area drive future improvements in health outcomes, as measured by Healthy People. However, the lower scores for Healthy Lives, which measures risk factors relating to individuals, may offset any improvements that could be seen.

London's domain scores were the most varied of all the English regions. It scored among the best for Healthy People and among the worst in Healthy Lives and Healthy Places. This makes sense because the resident population in London has a younger age distribution than many other regions. This would be expected to lead to a high Healthy People score. The urban environment's air pollution, crime rates and overcrowding would drive down London's Healthy Places score. Although London scores well for Healthy People currently, the poorer scores across the two domains that cover risk factors for health could mean that Healthy People scores decline in future. However, if older generations tend to move out of London and more young people move in, this pattern may not be observed in this region.

[Explore the Health Index by local authority areas in England.](#)

6 . Health in England data

[Health Index scores, England](#)

Dataset | Released 18 March 2022

Health Index scores at national, regional and upper- and lower- tier local authority levels for England. Includes indicator details to construct the Index.

[Health Index underlying data, England](#)

Dataset | Released 18 March 2022

Underlying data used to construct the Health Index for England including indicator details.

7 . Measuring the data

Developing the Health Index

The Health Index has been produced with the input from expert advisors in and outside government, and improved from its [initial provisional release](#) following a [public consultation](#).

Data sources

The data used for each of the Health Index's 56 indicators come from publicly available sources, the majority of which are produced by 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 Index's needs

For further information on data sources, see the [Health Index indicators and definitions article](#) and [Health Index datasets](#).

Method

To use the data within the Health Index, they required imputation to fill missing values, and transformation so that statistical analysis could meaningfully group indicators into domains and subdomains. All techniques used to make these changes follow standard statistical procedures, which have been reviewed for suitability by experts.

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

We used the results to produce the values for individual indicators, 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.

For further detail on the methodology used to construct the Health Index, see [Health Index methods and development: 2015 to 2019](#).

8 . Strengths and limitations

The Health Index presents a collection of indicators representing how health changes over time. Data have been selected to represent specific topics considered to be relevant to health. There are aspects of health that cannot currently be included in the Health Index because no suitable data are available, and there are topics that are included but could be represented more fully if more comprehensive data were available.

Index scores have been calculated using time-indexed normalisation, which means every score can be compared with the same base of 100 representing England's health in 2015. The Health Index can be broken down to different geographic and topic levels. At every level a score greater than 100 means health is better than England's health in 2015, and a score lower than 100 means health is worse than England in 2015. This method of standardising scores means comparisons can be made between scores at any geography, time and health topic combination.

The statistical tests to group indicators involve subjective decision-making, and interpretation of what these groups (the Index's subdomains) represent. All subjective decisions are tested with statistical analysis and checked with expert advisors to maximise validity.

9 . Related links

[How health is changing in your local area](#)

Digital article | Released 18 March 2022

Use our interactive tool to explore how health has changed in each local authority area across England between 2015 and 2019.

[Health Index methods and development: 2015 to 2019](#)

Methodology | Released 18 March 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.

[Health Index indicators and definitions](#)

Methodology | Released 18 March 2022

Descriptions of the indicators used to create the Health Index for England, which measures the health of the nation.