

Statistical bulletin

# Birth characteristics in England and Wales: 2018

Annual live births by sex, ethnicity and month, maternities by place of birth and with multiple births, and stillbirths by age of parents and calendar quarter.



Contact:  
Kathryn Littleboy  
vsob@ons.gov.uk  
+44 (0)1329 444110

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# 1 . Main points

- The average age of mothers and fathers in England and Wales increased for the 10th consecutive year in 2018, to 30.6 and 33.6 years respectively.
- There were more live births in the most deprived areas of England and Wales than in the least deprived, and the stillbirth rate in these areas was also higher.
- The proportion of live births at under 24 weeks completed gestation has increased in England and Wales since 2015, accounting for 0.13% of all live births in 2018; the majority of babies born this early only survive for a short time.
- For every 1,000 women who gave birth in 2018, just over 15 (15.4) had a multiple birth; this is the third consecutive annual decline in the multiple maternity rate.
- On average, more babies were born on a Thursday than any other day of the week.

## 2 . Things you need to know about this release

Important information for interpreting these birth statistics:

- birth statistics represent births that occurred in England and Wales in the calendar year, but include a very small number of late registrations from the previous year
- figures are compiled from information supplied when births are registered as part of civil registration, a legal requirement
- where relevant, birth registrations are linked to their corresponding NHS birth notification to enable analysis of further factors such as gestation of live births and ethnicity of the baby
- a maternity is a pregnancy resulting in the birth of one or more children including stillbirths; the number of maternities therefore represents the number of women having babies rather than the number of babies born

## 3 . The average age of mothers and fathers increased for the 10th consecutive year in 2018

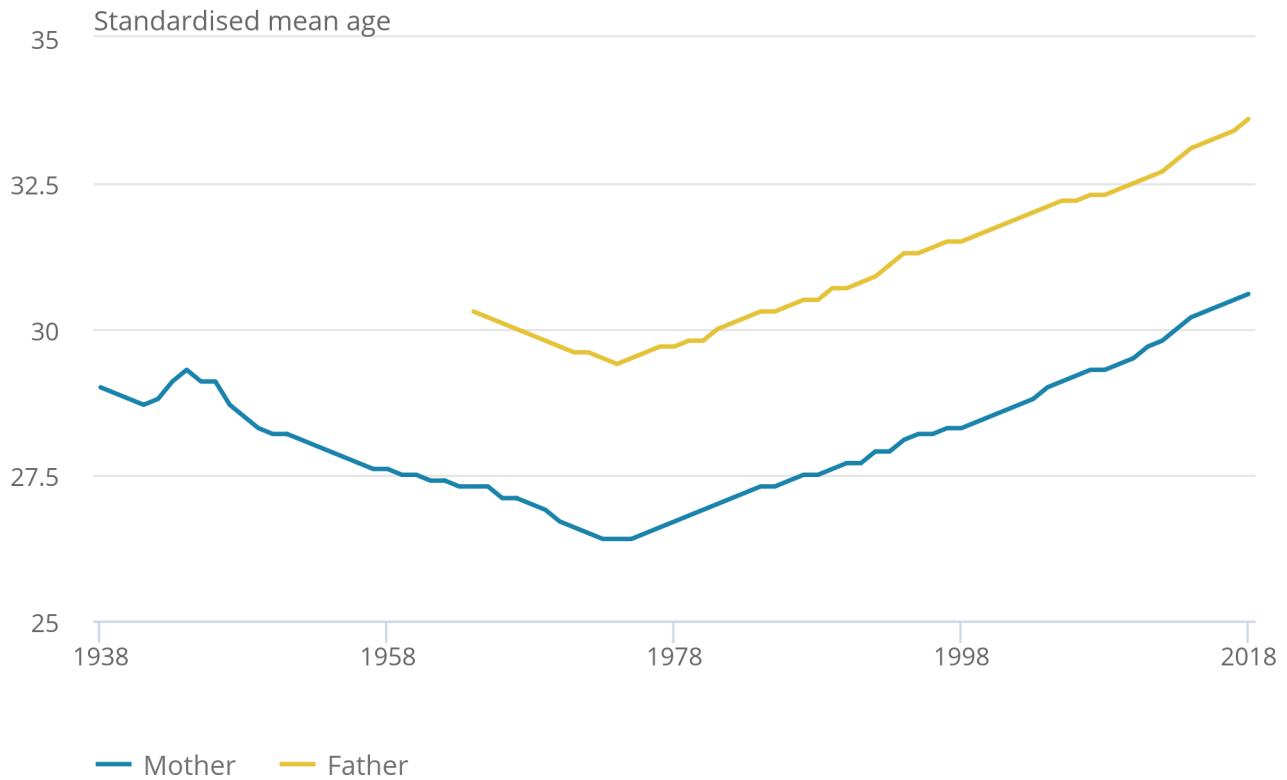
In 2018, the average (standardised mean) age of both mothers and fathers increased for the 10th year in a row, rising to 30.6 and 33.6 years respectively (Figure 1). The standardised mean age of both mothers and fathers has increased by a total of 4.2 years since they were at their lowest on record in 1975 and 1974 respectively. Parenthood is progressively being delayed until older ages.

## Figure 1: The standardised mean age of mothers and fathers has increased over time

Standardised mean age of mother and father by year, England and Wales, 1938 to 2018

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Standardised mean age of mother and father by year, England and Wales, 1938 to 2018



Source: Office for National Statistics – Births in England and Wales

#### Notes:

1. The mean age of mother and father is standardised. This measure eliminates the impact of any changes in the distribution of the population by age and therefore enables trends over time to be analysed.
2. Birth registration data are not available electronically before 1964 and therefore data on standardised mean age of father is not available before 1964.

## **4 . There were more live births and stillbirths to mothers resident in the most deprived areas than the least deprived areas**

The Index of Multiple Deprivation (IMD) is an overall measure of deprivation based on factors such as income, employment, health, education, crime, the living environment and access to housing within an area. Deprivation measures are derived differently for [England](#) and [Wales](#) and are not, therefore, directly comparable.

### **Live births**

In England, 13.6% of all live births (84,863 babies) in 2018 were born to mothers resident in the 10% most deprived areas of the country, compared with 7.1% (44,654 babies) in the 10% least deprived areas.

The gap has narrowed slightly in recent years, with a drop in the proportion of births to mothers resident in the most deprived areas, down from 14.1% in 2014 (Figure 2). This may be at least due partly to the 2019 revision of IMD geography, which we have used for our 2018 figures.

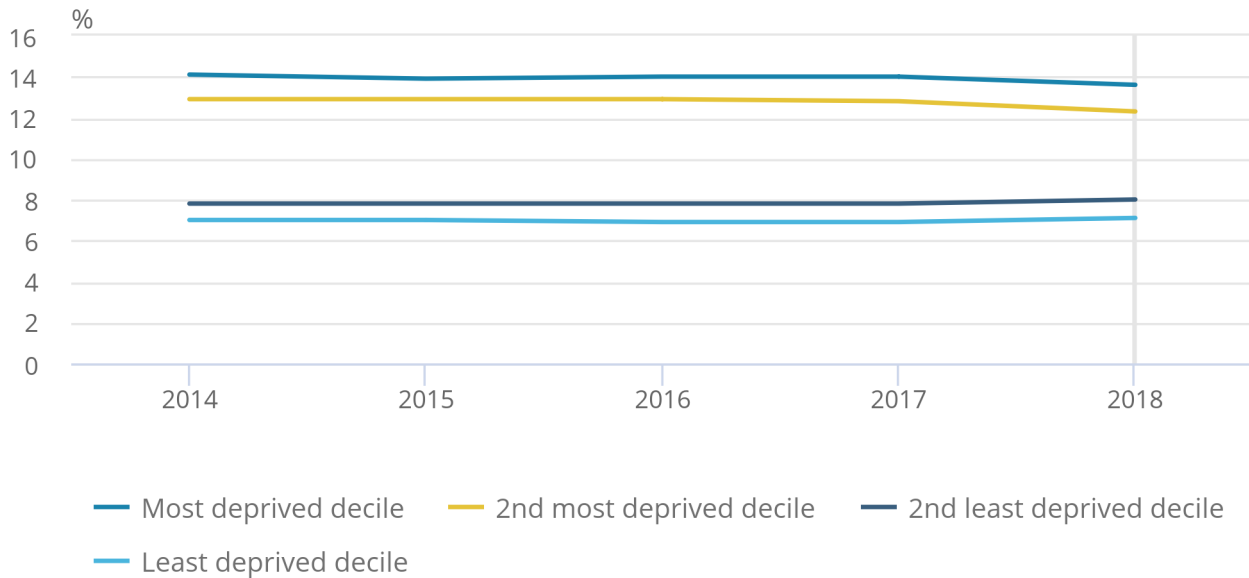
**Figure 2: The proportion of live births in the 20% most deprived areas in England decreased in 2018**

Percentage of live births by Index of Multiple Deprivation, England, 2014 to 2018

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Percentage of live births by Index of Multiple Deprivation, England, 2014 to 2018

2018 data use a different version of the Index of Multiple Deprivation which is not directly comparable with previous years.



Source: Office for National Statistics – Births in England and Wales

Notes:

1. Deprivation is measured using the Index of Multiple Deprivation (IMD). There are different measures for England and Wales, which are not comparable.
2. Index of Multiple Deprivation (IMD) deciles range from 1 to 10, with 1 being the most deprived and 10 being the least deprived.
3. For the years 2014 to 2017, the [English indices of deprivation 2015](#) have been used, whilst the [English indices of deprivation 2019](#) have been used for 2018. These are very similar but not strictly directly comparable.
4. Figures are based on mothers' usual area of residence, based on boundaries as of May 2019.

Wales had a similar trend to England, with a decrease in the difference between the most and least deprived areas compared with five years ago. Of all live births, 13.3% were to mothers resident in the 10% most deprived areas in Wales in 2018, a small decrease compared with 13.7% in the previous year. In comparison, 7.5% of live births were to mothers resident in the 10% least deprived areas in Wales.

## Stillbirths

Stillbirth rates are also higher to women resident in the most deprived areas, compared with the least deprived areas. In 2018, the stillbirth rate in the 10% most deprived areas in England was 5.7 stillbirths per 1,000 total births, compared with 2.7 stillbirths in the 10% least deprived areas. Whilst there were twice as many births overall in the most deprived areas in England compared with the least deprived in 2018, there were four times as many stillbirths.

It is difficult to detect whether this difference in outcomes has changed over recent years because there are a relatively small number of stillbirths each year. This means stillbirth rates can vary at a subnational level from year to year. Figure 3 compares the 50% most deprived areas in England with the 50% least deprived areas for the last five years for which data are available. This allows for a more robust comparison.

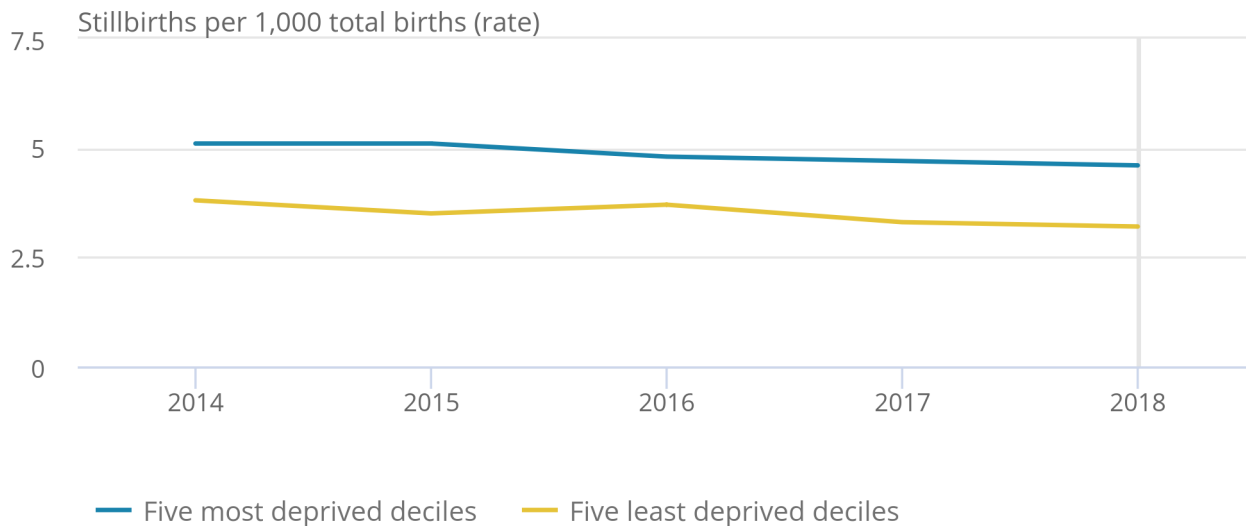
In 2018, the stillbirth rate in the 50% most deprived areas in England was 4.6 stillbirths per 1,000 births. The rate in the 50% least deprived areas was 3.2 stillbirths per 1,000 births, 1.4 lower. This difference has ranged from a high of 1.6 stillbirths per 1,000 births in 2015 to a low of 1.1 in 2016. As a result, there is no clear evidence that it has narrowed or widened since 2014, but during this time the national stillbirth rate has declined from 4.7 to 4.1 stillbirths per 1,000 births.

**Figure 3: The stillbirth rate in the 50% most deprived areas in England has been consistently higher than in the 50% least deprived areas**

**Stillbirth rates by Index of Multiple Deprivation, England, 2014 to 2018**

Figure 3: The stillbirth rate in the 50% most deprived areas in England has been consistently higher than in the 50% least deprived areas. 2018 data use a different version of the Index of Multiple Deprivation which is not directly comparable with previous years.

Stillbirth rates by Index of Multiple Deprivation, England, 2014 to 2018



Source: Office for National Statistics – Births in England and Wales

Notes:

1. Deprivation is measured using the Index of Multiple Deprivation (IMD). There are different measures for England and Wales, which are not comparable.
2. Index of Multiple Deprivations (IMD) deciles range from 1 to 10, with 1 being the most deprived and 10 being the least deprived. In this chart, deciles 1 to 5 have been grouped together, and deciles 6 to 10 have been grouped together, to produce more robust stillbirth rates.
3. For the years 2014 to 2017, the [English indices of deprivation 2015](#) have been used, whilst the [English indices of deprivation 2019](#) have been used for 2018. These are very similar but not strictly directly comparable.
4. Figures are based on mothers' usual area of residence, based on boundaries as of May 2019.

It is difficult to draw conclusions from rates in Wales because of the relatively small number of stillbirths occurring.

## 5 . The proportion of live births at under 24 weeks completed gestation has increased slightly in recent years

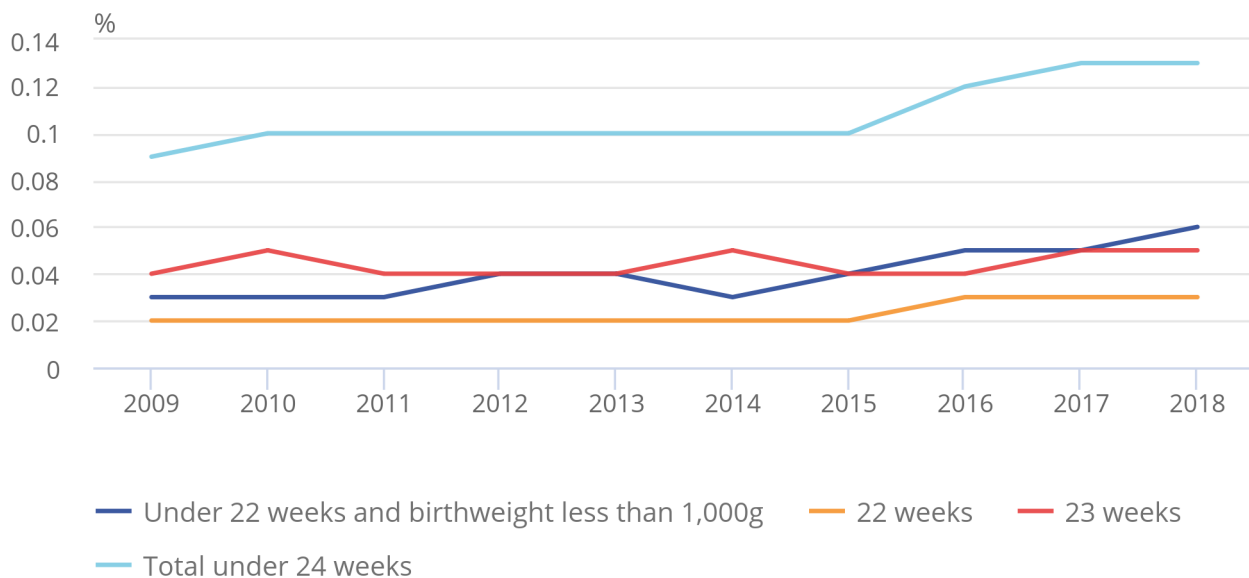
During most of the last decade, the proportion of births under 24 weeks completed gestation accounted for 0.10% of all live births. However, this has increased slightly in recent years, reaching 0.12% in 2016, then 0.13% in 2017, where it remained in 2018 (Figure 4). This proportion represents 861 live births under 24 weeks completed gestation in 2018.

**Figure 4: The percentage of live births born at under 24 weeks completed gestation has increased since 2015**

Proportion of live births under 24 weeks completed gestation, England and Wales, 2009 to 2018

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Proportion of live births under 24 weeks completed gestation, England and Wales, 2009 to 2018



Source: Office for National Statistics – Births in England and Wales

**Notes:**

1. Gestational age in completed weeks is recorded for all live births on the NHS Birth Notifications system. It is not available for live births from registration data. Gestational age is highly correlated with birthweight.
2. For gestational age below 22 weeks, birthweight was checked and was considered "inconsistent" for values of 1,000 grams or more.

Between 2015 and 2018, the number of babies born alive under 24 weeks completed gestation increased by 19.6%, despite a 5.7% decrease in the total number of live births in the same period. This increase was driven mostly by a 43.1% rise in the number of live births at under 22 weeks completed gestation.



[A large proportion of these babies born at very early gestations will only survive a short time](#). For example, in England and Wales in 2016, which is the latest year of birth occurrences for which infant mortality statistics have been released, there were 837 live births under 24 weeks gestation. Of these babies, 589 (70%) died within one day of birth. A further 111, making a total of 700 (84%) altogether, died within four weeks of birth (neonatal deaths).

There are several possible reasons for the increase in the number of live births recorded at less than 24 weeks completed gestation, [including changes in obstetric and neonatal practice](#). We will be looking in more detail at how this has contributed to the recent [increase in the neonatal mortality rate](#) in our next [Child mortality statistical release](#) in early 2020.

## **6 . The rate of maternities with multiple births declined for the third consecutive year**

Out of every 1,000 women giving birth, 15.4 had a multiple birth in 2018. This was the lowest multiple maternity rate since 2007 and marks a decrease in the multiple maternity rate for the third consecutive year. There were 9,873 women who gave birth to twins in 2018, and 132 women gave birth to triplets or above.

Babies born from multiple births tend to have lower birthweights than singletons. Multiple pregnancies are also associated with a [higher risk of stillbirth, infant deaths and child disability](#). Although most multiple births occur naturally, many occur because of fertility treatment. It is estimated that [IVF \(In Vitro Fertilisation\) conceptions are seven times more likely to result in a multiple birth than natural conceptions](#).

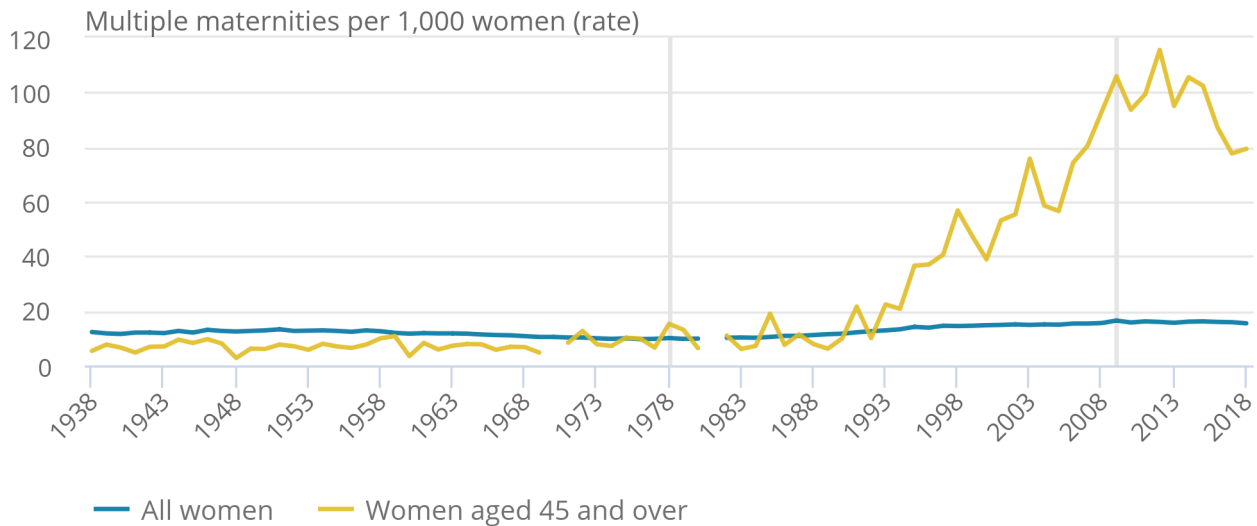
Since the [first successful full-term pregnancy through IVF in 1978](#) and the subsequent rise in assisted fertility treatments, the multiple maternity rate for women aged 45 years and over increased from 15.2 maternities with multiple births per 1,000 maternities in that age group in 1978, to a peak of 115.5 in 2012 (Figure 5).

**Figure 5: The multiple maternity rate has decreased for women aged 45 years and over in recent years**

Maternities with multiple births per 1,000 maternities, England and Wales, 1938 to 2018

Figure 5: The multiple maternity rate has decreased for women aged 45 years and over in recent years

Maternities with multiple births per 1,000 maternities, England and Wales, 1938 to 2018



Source: Office for National Statistics – Births in England and Wales

Notes:

1. A maternity is a pregnancy resulting in the birth of one or more children including stillbirths.
2. The multiple maternity rate is expressed as the number of maternities with multiple births per 1,000 maternities.
3. Maternity figures for 1981 are not available due to a registrars' strike. Due to the delay of live birth returns only a 10% sample was processed.
4. The multiple maternity rate for women aged 45 and over is not available for 1970 due to the small number of maternities for this age group in that year. We do not calculate rates based on such low numbers as they are considered unreliable.

In January 2009, the Human Fertilisation and Embryology Authority (HFEA) introduced a [policy to minimise the risk of multiple births from IVF treatment](#). The policy set an overall goal to reduce the national multiple birth rate through IVF to 10% and set a maximum multiple birth rate that clinics must not exceed, which has been lowered each year since 2009.

This may be why the multiple maternity rate for women aged 45 years and over has decreased from 115.5 per 1,000 women of this age giving birth in 2012, to 79.3 per 1,000 women of this age giving birth in 2018.

## 7 . More babies were born on a Thursday than any other day of the week

The day of the year with the most births in 2018 was Thursday 27 September. Whilst the most common date of birth has varied over the last decade, it has been in September 8 out of 10 times. Also, it fell on a Thursday 8 times out of 10, with the exceptions being 2017 and 2015, when it fell on a Monday and Friday respectively.

The greatest number of births tend to occur on Tuesdays, Wednesdays, Thursdays and Fridays, whilst fewer births occur at weekends (Figure 6). This could be because [elective caesarean births are typically planned for weekday mornings to concentrate births into daytime hours.](#)

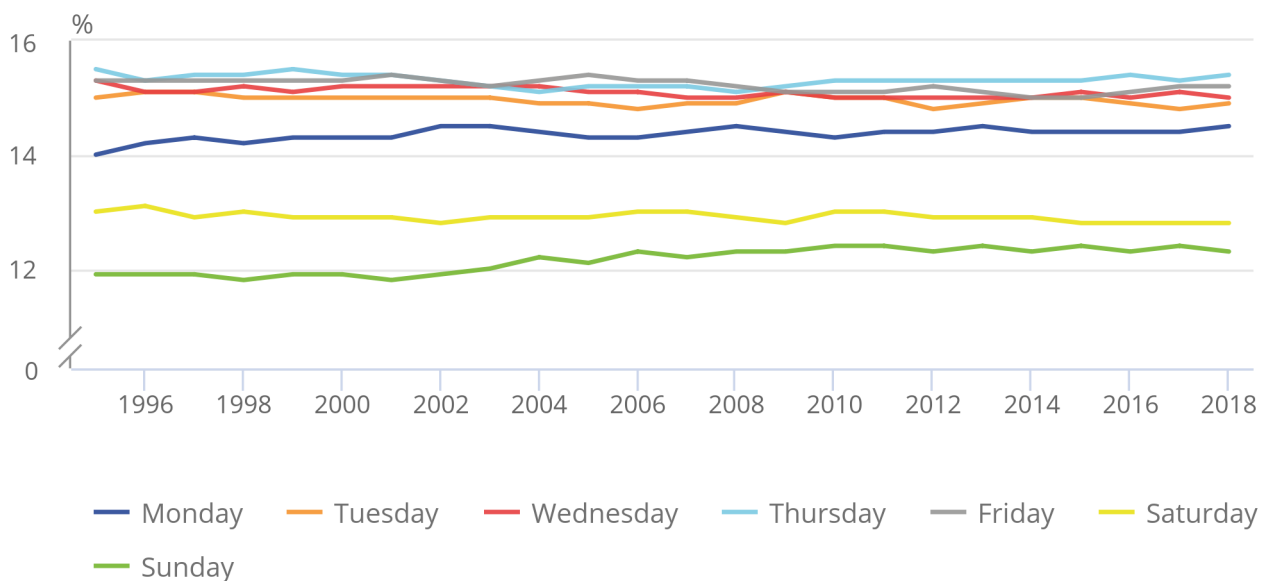
Since the turn of the century, the percentage of births on Sundays has increased slightly, rising from 11.9% in 2000 to 12.3% in 2018. The highest percentage of births was on Thursdays, at 15.4% in 2018.

**Figure 6: The percentage of births on Sundays has been increasing since the start of the century**

Percentage of births per day of the week, in an average week, England and Wales, 1995 to 2018

### Figure 6: The percentage of births on Sundays has been increasing since the start of the century

Percentage of births per day of the week, in an average week, England and Wales, 1995 to 2018



Source: Office for National Statistics – Births in England and Wales

Notes:

1. The percentages in this chart show the number of births per day of an average week each year, as a proportion of the total number of births in an average week in that year. This controls for the fact that in some years certain days of the week occur more often than in other years.

## 8 . Links to related statistics

More data on births in England and Wales by [birth characteristics](#) (stillbirths, home births, hospital births, multiple births, birthweight, gestational age and ethnicity) and [parents' characteristics](#) (age of mother and father, type of birth registration, previous live-born children, and [National Statistics Socio-economic Classification \(NS-SEC\)](#)) are available.

Five [explorable datasets](#) providing more detailed birth statistics were published on 1 August 2019 alongside our [first release of annual birth statistics for 2018](#). These explorable datasets include statistics based on characteristics of mother and father, as well as live birth figures for small geographical areas such as Lower layer Super Output Areas and wards. These explorable datasets have been specially designed to protect the confidentiality of individuals.

More detailed statistics on family size can be found in our [Childbearing for women born in different years release](#), which includes data tables on:

- average number of live-born children by age and year of birth of woman
- proportion of women who have had at least one live birth, by age and year of birth of woman; the proportion of women who have not had children is also available
- percentage distribution of women of childbearing age by number of live-born children, by age and year of birth of woman

Our datasets contain information on the other birth statistics packages released throughout the year and provides links to these; see the [GOV.UK release calendar](#) for information on planned publication dates.

The number of births, birth rates and mean age of mother for the UK and constituent countries can be found in the [Vital statistics in the UK: births, deaths and marriages](#), international comparisons of live birth rates are also available.

[An overview of stillbirth numbers and rates in England and Wales since 1927 and a European comparison](#) was published in September 2015. Further statistics on stillbirths, including figures by cause group, birthweight and pregnancy, and ethnic factors can be found in [Child mortality statistics](#).

Special extracts and tabulations of birth data for England and Wales are available to order (subject to legal frameworks, disclosure control, resources and our [charging policy](#), where appropriate). Enquiries should be made to Vital Statistics Outputs Branch by email to [vsob@ons.gov.uk](mailto:vsob@ons.gov.uk). [User requested data](#) will be published.

## 9 . Quality and methodology

The datasets published as part of this release provides birth statistics for England and Wales by [birth characteristics](#) (stillbirths, home births, hospital births, multiple births, birthweight, gestational age and ethnicity) and [parents' characteristics](#) (age of mother and father, type of birth registration, previous live-born children, and [National Statistics Socio-economic Classification \(NS-SEC\)](#)).

Some of the main summary figures have been published previously; detailed data on live births in 2018 have also been available since 1 August 2019 via our [explorable datasets](#). This is however, the first time that birth statistics for 2018 have been published on:

- mean age of mother by birth order
- median interval between births
- number of previous live-born children
- National Statistics Socio-economic Classification (NS-SEC) of household as defined by occupation
- birthweight and low birthweight by mother's area of usual residence
- gestational age and ethnicity
- age of parents and quarter of occurrence for stillbirths
- day and month of occurrence for live births
- place of birth
- multiple maternities

Birth statistics are used for planning maternity services, to inform policy decisions and resource allocation, for example, deciding numbers of school places required. They also enable the analysis of social and demographic trends.

The [Births quality and methodology information](#) report contains important information on:

- the strengths and limitations of the data and how it compares with related data
- uses and users
- how the output was created
- the quality of the output: including the accuracy of the data

Our [User guide to birth statistics](#) provides further information on data quality, legislation and procedures relating to births and includes a glossary of terms.

There is a large degree of comparability in birth statistics between UK countries. However, there are some differences, although these are believed to have a negligible impact on the comparability of the statistics. These differences are outlined in our [Quality and methodology information](#) for births.

The [Revisions policy for population statistics \(including birth statistics\)](#) is available.

A stillbirth is a baby born after 24 or more weeks completed gestation and which did not, at any time, breathe or show signs of life.

The standardised average (mean) age of father and mother has been used to eliminate the impact of any changes in the distribution of the population by age; this enables trends over time to be analysed. Standardised means are calculated using rates per 1,000 male or female population by single year of age.