Our vision is a world without heart and circulatory diseases. We want to end the heartbreak that they cause.
# Key Statistics

## Today in England

- **340** people will lose their lives to CVD
- **90** more than people will be younger than 75
- **5.9m** people are living with CVD
- **430** hospital visits will be due to a heart attack
- **150** people will die from coronary heart disease
- **10** babies will be diagnosed with a heart defect

## Quick Links

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Heart and Circulatory Diseases (Cardiovascular Disease; CVD)

Heart and circulatory diseases is an umbrella term that describes all diseases of the heart and circulation. It includes everything from conditions that are inherited, or that a person is born with, to those that are develop later such as coronary heart disease, atrial fibrillation, heart failure, and stroke.

- Heart and circulatory diseases cause one quarter (**25 per cent**) of all deaths in England; that’s over 124,000 **deaths** each year – an average of 340 people each day or one death every four minutes.
- Around 34,000 people under the age of 75 in England die from CVD each year.
- Since the BHF was established the annual number of deaths from CVD in England has **fallen by more than half**.
- In 1961, more than half of all deaths in England were attributed to CVD (264,192 deaths).
- Since 1961 the English death rate from CVD has declined by more than **three quarters**. Death rates have fallen more quickly than the actual number of deaths because people in this country are now living longer.
- There are around 5.9 million people living with CVD in England - an ageing and growing population and improved survival rates from heart and circulatory events could see these numbers rise still further.

Deaths from and numbers living with Heart and Circulatory Diseases

<table>
<thead>
<tr>
<th>Nation</th>
<th>No. of People Dying from CVD (2017)</th>
<th>No. of People Under 75 Years Old Dying from CVD (2017)</th>
<th>Estimated Number of People Living with CVD (latest estimates)</th>
</tr>
</thead>
<tbody>
<tr>
<td>England</td>
<td>124,641</td>
<td>33,830</td>
<td>5.9 million</td>
</tr>
<tr>
<td>Scotland</td>
<td>15,114</td>
<td>4,676</td>
<td>700,000</td>
</tr>
<tr>
<td>Wales</td>
<td>8,426</td>
<td>2,500</td>
<td>375,000</td>
</tr>
<tr>
<td>Northern Ireland</td>
<td>3,780</td>
<td>1,102</td>
<td>225,000</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>152,405</td>
<td>42,364</td>
<td>7 million +</td>
</tr>
</tbody>
</table>

Deaths BHF/University of Birmingham analysis from latest official statistics (ONS/NISRA/NRS); UK total includes non-residents (ONS data)
Living with CVD estimates based on latest health surveys with CVD fieldwork and GP patient data
• Early deaths from CVD (before the age of 75) are most common in the North West, closely followed by the North East, and lowest in the South East of England.
• Death rates take the age structure (demography) of local areas into account to reveal the real differences in statistics. This is very important when there are big variations in the age profile of communities across England.
• The premature (under 75) death rate for Manchester (140.7 per 100,000) is nearly 4 times higher than that for Mid Suffolk in the East of England (37.0 per 100,000).
• Regional and local UK statistics and rankings for CVD deaths can be found on our website

**UK premature (under 75 years) death rates 2014-16**

<table>
<thead>
<tr>
<th>Local Authority</th>
<th>Location</th>
<th>Under 75 Death Rate per 100,000 Population</th>
<th>Under 75 Annual Number of CVD Deaths</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manchester</td>
<td>North West</td>
<td>140.7</td>
<td>376</td>
</tr>
<tr>
<td>Blackpool</td>
<td>North West</td>
<td>119.8</td>
<td>153</td>
</tr>
<tr>
<td>Blackburn with Darwen</td>
<td>North West</td>
<td>117.4</td>
<td>127</td>
</tr>
<tr>
<td>Middlesbrough</td>
<td>North East</td>
<td>114.9</td>
<td>123</td>
</tr>
<tr>
<td>Nottingham</td>
<td>East Midlands</td>
<td>112.5</td>
<td>210</td>
</tr>
</tbody>
</table>

The cost of Heart and Circulatory Diseases

• Healthcare costs relating to heart and circulatory diseases are estimated at £7.4 billion each year.
• CVD’s cost to the wider economy in England (including premature death, disability and informal costs) is estimated to be £15.8 billion each year.
Coronary Heart Disease (CHD; Ischaemic Heart Disease)

Coronary heart disease (CHD) is the most common type of heart and circulatory disease. It occurs when coronary arteries become narrowed by a build-up of atheroma, a fatty material within their walls. The pain or discomfort felt from such narrowing is called angina and if a blockage occurs it can cause a myocardial infarction (heart attack).

- 1.8 million people are living with CHD in England
- CHD is the one of England’s leading causes of death.
- It is also the leading cause of death worldwide.
- In England, one in seven men and one in twelve women die from coronary heart disease (1 in 9 overall).
- CHD is responsible for over 53,000 deaths in England each year, an average of 150 people each day, or one death around every ten minutes.
- More than 18,000 people under the age of 75 in England die from CHD each year.
- CHD twice as many women in England as breast cancer.
- Since the BHF was established the annual number of CHD deaths in England has fallen by more than half.
- Coronary heart disease is the leading cause of heart attacks

Linked conditions
- Individuals with coronary heart disease, or who have had a heart attack, are twice as likely to have a stroke as those who haven’t.

For more info please visit: Coronary Heart Disease
Heart Attack (Myocardial Infarction, MI)

- In England there are over 157,000 hospital visits each year due to heart attacks: that’s 1 every 3 minutes.
- In the 1960s more than 7 out of 10 heart attacks in the UK were fatal. Today at least 7 out of 10 people survive.
- An estimated 750,000 people alive in England today have survived a heart attack.

Atrial Fibrillation (AF)

Atrial fibrillation is one of the most common forms of abnormal heart rhythm (arrhythmia) and a major cause of stroke.

- More than 1.1 million people in England have been diagnosed with atrial fibrillation.
- It’s estimated that there are hundreds of thousands of people living with undiagnosed AF in England.

Heart Failure

Heart failure occurs when the heart is not pumping blood around the body as well as it should, most commonly when the heart muscle has been damaged – for example, after a heart attack.

- Nearly 500,000 people in England have been diagnosed with heart failure by their GP.
Stroke (Cerebrovascular Disease)

A stroke occurs when the blood supply to part of the brain is cut off, causing brain cells to become damaged. A transient ischaemic attack (TIA) is also known as a "mini-stroke" and is caused by a temporary disruption in the blood supply to part of the brain.

• Strokes cause around 30,000 deaths in England each year.
• In England over 200,000 hospital visits are attributed to stroke each year.
• Over 1 million people living in England have survived a stroke or transient ischaemic attack (TIA).
• Nearly half of stroke survivors in England are under the age of 75.

Regional and local UK statistics and rankings for stroke deaths can be found on our website

For more information on strokes visit our website

Out-of-Hospital Cardiac Arrest (OHCA)

Cardiac arrest is a critical medical emergency, where the heart stops pumping blood around the body. Unless treated immediately, it leads to death within minutes.

• There are around 30,000 out-of-hospital cardiac arrests (OHCAs) in England each year.
• The overall survival rate in England is 1 in 11.
• The Chain of Survival is a sequence of steps that together maximise the chance of survival following cardiac arrest.
• Every minute without cardiopulmonary resuscitation (CPR) and defibrillation reduces the chance of survival by up to 10 per cent.
• Performing CPR can more than double the chances of survival in some cases (ventricular fibrillation).

For more on cardiac arrest visit our website

Linked conditions

• People with heart failure are 2-3 times more likely to have a stroke.
• People with diabetes are twice as likely to have a stroke as people without diabetes.

There are around 30,000 out-of-hospital cardiac arrests in England each year.
Congenital Heart Disease

Congenital heart disease is a heart condition or defect that develops in the womb before a baby is born.

- Heart defects are diagnosed in at least 1 in 180 births - that’s an average of 10 babies each day in England - with more diagnoses later in life.
- Estimates suggest that as many as 1-2 per cent of the population may be affected.
- Before the BHF existed, the majority of babies born in the UK with a heart defect did not survive to their first birthday. Today, thanks to research, around 8 out of 10 survive to adulthood.

For more information, visit our website

Inherited (Genetic) Conditions

These are conditions which can be passed on through families, affect people of any age and may be life-threatening.

- They include hypertrophic cardiomyopathy (HCM; estimated 1 in 500 people) and familial hypercholesterolaemia (FH; 1 in 250).
- It’s estimated that around 525,000 people in England have a faulty gene which puts them at an unusually high risk of developing heart disease or dying suddenly at a young age.
- In the UK it is estimated that at least 12 young people (aged under 35) die every week from an undiagnosed heart condition.

For more information, visit our website:
Inherited heart conditions
Familial hypercholesterolemia

10 babies a day are diagnosed with a congenital heart defect in England

Around 525,000 people in England have a faulty gene that can cause an inherited heart-related condition
Vascular Dementia

Vascular dementia happens when there's a problem with the blood supply to an area of your brain. The cells in the affected area of your brain don't get enough oxygen or nutrients and start to die. This leads to symptoms such as concentration problems and personality changes.

- Vascular Dementia is estimated to affect around 150,000 people in the UK.

For more information on vascular dementia, visit our website

Medical Risk Factors

Many different risk factors increase your likelihood of developing heart and circulatory diseases.

High Blood Pressure

- An estimated 28% of adults in England have high blood pressure
- People with high blood pressure are up to three times more likely to develop heart disease or have a stroke.

High Blood Cholesterol

- High blood cholesterol is a significant risk factor for developing heart and circulatory diseases.

Linked conditions

- People with a history of heart diseases are at least twice as likely to develop vascular dementia
- People with diabetes are 2-3 times more likely to develop vascular dementia

- Around 50% of heart attacks and strokes are associated with high blood pressure

Around 50% of heart attacks and strokes are associated with high blood pressure
Diabetes

Diabetes is a condition in which blood sugar levels are elevated over a prolonged period of time. This results in damage to the inner lining of blood vessels. Consequently, diabetes is an important risk factor for CVD.

- Around 3.2 million adults in England have been diagnosed with diabetes.
- Around 10 per cent of those diagnosed are living with Type 1 diabetes and 90 per cent have Type 2.
- It’s estimated that hundreds of thousands of people in England are living with undiagnosed Type 2 diabetes.

Other Risk Factors

- Poor air quality is responsible for up to 36,000 deaths per year in the UK, with a significant impact on heart and circulatory health.
  
  The majority of UK deaths attributable to outdoor air pollution are from heart and circulatory diseases.
- Other risk factors can significantly increase your risk of developing heart and circulatory diseases, including age, gender, family history and ethnicity.

Linked conditions

- Adults with diabetes are 2-3 times more likely to develop CVD, and are nearly twice as likely to die from heart disease or stroke as those without diabetes
- In the UK, one third of adults with diabetes die from a heart or circulatory disease

For more information, visit our website:

- High Blood Pressure (Hypertension)
- High Cholesterol
- Vascular Dementia
- Diabetes
Lifestyle Risk Factors

Modifiable risk factors (e.g. cigarette smoking, physical inactivity and poor diet) contribute significantly to the risk of CVD.

Smoking
- More than one in seven adults smoke cigarettes in England— that's around 6.5 million adults.
- Around 78,000 smokers in England die from smoking-related causes each year.
- It’s estimated that nearly 16,000 deaths in England each year from heart and circulatory diseases can be attributed to smoking.

Overweight/Obesity
- An estimated 26 per cent of adults in England are obese and in addition more than a third are overweight (by BMI).
- It’s estimated that around 28 per cent of children in England are overweight or obese.

Diet and Exercise
- An estimated 40 per cent of adults in England do not meet current physical activity recommendations.
- Only one in four adults and one in six children in England consume the recommended five portions of fruit and veg per day.
About the British Heart Foundation (BHF)

For over 50 years we’ve pioneered research that has transformed the lives of millions of people living with heart disease. Our work has been central to the discoveries of vital treatments that are leading the fight against heart disease.

But heart and circulatory disease still kills more than one in four people in England, stealing them away from their families and loved ones. From babies born with life-threatening heart problems, to the many mums, dads and grandparents who survive a heart attack or endure their daily battles with heart failure.

Join our fight for every heartbeat in the UK. Every pound raised, minute of your time and donation to our shops will help make a difference to people’s lives.

bhf.org.uk/donate

More BHF CVD Statistics

Including exclusive content, local statistics and maps
Visit our website

This factsheet is compiled by the British Heart Foundation.

Last reviewed and updated November 2018.

Statistics are the latest available from the UK’s health and statistical agencies. For any queries, please contact us and we will do our best to help.

Factsheets are also available for the UK, Scotland, Wales and Northern Ireland.
HEART & CIRCULATORY DISEASES (CARDIOVASCULAR DISEASE)

<table>
<thead>
<tr>
<th>STATISTIC</th>
<th>REFERENCE</th>
</tr>
</thead>
</table>
| CVD deaths, men/women               | NOMIS - Office for National Statistics - Deaths registered by cause, gender and age,  
                                           https://www.nomisweb.co.uk/query/construct/summary.asp?mode=construct&version=0&dataset=161 |
| CVD ASDRs (death rates); England CVD map | BHF/University of Birmingham calculated rates in collaboration with the Office for National Statistics (2014-16 data) |
| Numbers living with CVD            | BHF estimate based on Quality & Outcomes Framework prevalence data and latest UK health surveys with CVD fieldwork 2017/18; NHS Digital |
| £15.8bn CVD economic cost ~ £7.4bn healthcare costs for CVD | BHF analysis of European Cardiovascular Disease Statistics 2017, EHN  
                                           https://doi.org/10.1371/journal.pmed.1002513 PMID: 29509757 |

CORONARY HEART DISEASE (CHD; ISCHAEMIC HEART DISEASE)

<table>
<thead>
<tr>
<th>STATISTIC</th>
<th>REFERENCE</th>
</tr>
</thead>
</table>
| CHD deaths, vs breast cancer, biggest killer worldwide | NOMIS - Office for National Statistics - Deaths registered by cause, gender and age,  
                                           https://www.nomisweb.co.uk/query/construct/summary.asp?mode=construct&version=0&dataset=161 |
| CHD ASDRs (death rates)             | BHF/University of Birmingham calculated rates in collaboration with the Office for National Statistics (2014-16 data) |
| 1.8m living with CHD               | Quality & Outcomes Framework prevalence data 2017/18; NHS Digital  

HEART ATTACK (MYOCARDIAL INFARCTION, MI)

<table>
<thead>
<tr>
<th>STATISTIC</th>
<th>REFERENCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>157k heart attack hospital visits</td>
<td>Hospital Episode Statistics, 2016/17; NHS Digital</td>
</tr>
</tbody>
</table>
| 7/10 people survive heart attack    | Case fatality rates in Smolina’s 2012 BMJ paper on acute MI mortality (www.bmj.com/content/344/bmj.d8059)  
                                           ~ Goldacre’s 2003 paper on myocardial infarction (Oxon) |
| 750k survived MI                    | BHF analysis of 2013 Clinical Practice Research Datalink prevalence data and ONS population estimates |

ATRIAL FIBRILLATION (AF)

<table>
<thead>
<tr>
<th>STATISTIC</th>
<th>REFERENCE</th>
</tr>
</thead>
</table>
| 1.1m diagnosed with AF              | Quality & Outcomes Framework prevalence data 2017/18; NHS Digital (undiagnosed PHE/NCVIN data and AF Association)  
| 5 times more likely to have a stroke | Marinic C, De Santis F, Sacco S, Contribution atrial fibrillation to incidence and outcome of ischemic stroke: results from a population-based study.  

HEART FAILURE (HF)

<table>
<thead>
<tr>
<th>STATISTIC</th>
<th>REFERENCE</th>
</tr>
</thead>
</table>
| 486k diagnosed with heart failure by GP | Quality & Outcomes Framework prevalence data 2017/18; NHS Digital  
<table>
<thead>
<tr>
<th>STATISTIC</th>
<th>REFERENCE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>STROKE (CEREBROVASCULAR DISEASE)</strong></td>
<td></td>
</tr>
<tr>
<td>U75 stroke survivors</td>
<td>BHF analysis of 2013 Clinical Practice Research Datalink prevalence data and ONS population estimates</td>
</tr>
<tr>
<td><strong>Linked conditions:</strong> CHD or heart attack more than twice as likely to have a stroke</td>
<td><a href="http://stroke.ahajournals.org/content/22/8/963">http://stroke.ahajournals.org/content/22/8/963</a></td>
</tr>
<tr>
<td><strong>Linked conditions:</strong> People with heart failure are 2-3 times more likely to have a stroke.</td>
<td><a href="http://stroke.ahajournals.org/content/42/10/2977">http://stroke.ahajournals.org/content/42/10/2977</a></td>
</tr>
<tr>
<td><strong>Linked conditions:</strong> People with diabetes are twice as likely to have a stroke as people without diabetes</td>
<td><a href="https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5298897/">https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5298897/</a></td>
</tr>
<tr>
<td><strong>CONGENITAL HEART DISEASE</strong></td>
<td></td>
</tr>
<tr>
<td>1:180 babies diagnosed</td>
<td>BHF/Oxford University analysis of EUROCAT congenital anomaly registers 2010-14 (NB cases exclude BAV - bicuspid aortic valve)</td>
</tr>
<tr>
<td>Survival comparison (pre-BHF/today)</td>
<td>MacMahon BMJ (<a href="http://heart.bmj.com/content/heartjnl/15/2/121.full.pdf">http://heart.bmj.com/content/heartjnl/15/2/121.full.pdf</a>) and Wren &amp; O’Sullivan, BMJ (<a href="http://heart.bmj.com/content/85/4/438.long">http://heart.bmj.com/content/85/4/438.long</a>)</td>
</tr>
<tr>
<td>1-2% prevalence</td>
<td>Various estimates including Hoffman &amp; Kaplan, JACC –19 per 1,000 includes BAVs which will eventually need cardiologic care (&lt;www.sciencedirect.com/science/article/pii/S0735109702018867&gt;)</td>
</tr>
<tr>
<td><strong>INHERITED (GENETIC) CONDITIONS</strong></td>
<td></td>
</tr>
<tr>
<td>525K with faulty gene</td>
<td>PHG Foundation, Heart to Heart: inherited cardiovascular conditions services (2009); with revised FH prevalence estimates (see below) and DCM from Herschberger et al 2013 (&lt;www.nature.com/nrcardio/journal/v10/n9/full/nrcardio.2013.105.html&gt;)</td>
</tr>
<tr>
<td>1:500 with hypertrophic cardiomyopathy (HCM)</td>
<td>Priori et al, Task Force on Sudden Cardiac Death ESC (eurheartj.oxfordjournals.org/content/ehj/22/16/1374.full.pdf)</td>
</tr>
<tr>
<td>Sudden cardiac deaths under-35s</td>
<td>Cardiac Risk in the Young (&lt;www.c-r-y.org.uk/statistics&gt;)</td>
</tr>
<tr>
<td><strong>OUT-OF-HOSPITAL CARDIAC ARREST (OHCA)</strong></td>
<td></td>
</tr>
<tr>
<td>Every min &amp; CPR quadruples survival</td>
<td>European Resuscitation Council, Guidelines for Resuscitation 2015 (<a href="http://www.cprguidelines.eu/">http://www.cprguidelines.eu/</a>)</td>
</tr>
<tr>
<td>STATISTIC</td>
<td>REFERENCE</td>
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<tr>
<td><strong>RISK FACTORS</strong></td>
<td></td>
</tr>
<tr>
<td>High blood pressure (hypertension)</td>
<td>BHF analysis of Health Survey for England 2016; NHS Digital and ONS population estimates</td>
</tr>
<tr>
<td>Smoking; number of smokers 78k/16k smoking/CVD deaths</td>
<td>Vasan et al NEJM 2001 (<a href="http://www.ncbi.nlm.nih.gov/pubmed/11794147">Link</a>)</td>
</tr>
<tr>
<td>Obesity, physical activity, 5-a-day, alcohol</td>
<td>BHF analysis of Health Survey for England 2016 (NHS Digital) and ONS population estimates</td>
</tr>
<tr>
<td>Air pollution deaths - up to 36,000 deaths per year CVD deaths</td>
<td>COMEAP 2018 – contributes to all mortality with equivalent impact of 28-36k deaths. <a href="http://www.gov.uk/government/collections/comeap-reports">Link</a></td>
</tr>
<tr>
<td><strong>Linked Conditions</strong></td>
<td></td>
</tr>
<tr>
<td>Diabetes: Adults with diabetes are 2-3 times more likely to develop CVD, and are nearly twice as likely to die from heart disease or stroke as those without diabetes</td>
<td><a href="http://circ.ahajournals.org/content/59/1/8.short">Link</a> <a href="https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2809299/">Link</a></td>
</tr>
<tr>
<td>Vascular dementia: People with a history of heart disease are at least twice as likely to develop vascular dementia</td>
<td><a href="https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2924456/">Link</a></td>
</tr>
<tr>
<td>Vascular dementia: People with diabetes are 2-3 times more likely to develop vascular dementia</td>
<td><a href="https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2174783/">Link</a></td>
</tr>
</tbody>
</table>