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

### Today

<table>
<thead>
<tr>
<th>Statistic</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>People losing their lives to CVD</td>
<td>420</td>
</tr>
<tr>
<td>More than 115 people younger than 75 will be diagnosed with CVD</td>
<td>115</td>
</tr>
<tr>
<td>People living with CVD</td>
<td>7m</td>
</tr>
<tr>
<td>Hospital visits due to coronary heart disease</td>
<td>545</td>
</tr>
<tr>
<td>People will die from coronary heart disease</td>
<td>180</td>
</tr>
<tr>
<td>Babies will be diagnosed with a heart defect</td>
<td>12</td>
</tr>
</tbody>
</table>

### Quick Links

<table>
<thead>
<tr>
<th>Category</th>
<th>Link</th>
</tr>
</thead>
<tbody>
<tr>
<td>Key Statistics</td>
<td>Heart and Circulatory Diseases</td>
</tr>
<tr>
<td>Heart Attack</td>
<td>Atrial Fibrillation</td>
</tr>
<tr>
<td>Out-of-Hospital Cardiac Arrest</td>
<td>Congenital Heart Disease</td>
</tr>
</tbody>
</table>
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 more than a quarter (26 per cent) of all deaths in the UK; that's over 150,000 deaths each year - an average of 420 people each day or one death every three minutes.
- Around 42,000 people under the age of 75 in the UK die from CVD each year.
- Since the BHF was established the annual number of deaths from heart and circulatory diseases in the UK has fallen by more than half.
- In 1961, more than half of all deaths in the UK were attributed to CVD (320,000 deaths).
- Since 1961 the UK death rate from heart and circulatory diseases 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 7 million people living with heart and circulatory diseases in the UK - 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 (2016)</th>
<th>No. of People Under 75 Years Old Dying from CVD (2016)</th>
<th>Estimated Number of People Living with CVD</th>
</tr>
</thead>
<tbody>
<tr>
<td>England (2016/17)</td>
<td>124,615</td>
<td>33,812</td>
<td>5.9 million</td>
</tr>
<tr>
<td>Scotland (2015/16)</td>
<td>15,131</td>
<td>4,644</td>
<td>685,000</td>
</tr>
<tr>
<td>Wales (2016/17)</td>
<td>8,655</td>
<td>2,495</td>
<td>375,000</td>
</tr>
<tr>
<td>Northern Ireland (2016/17)</td>
<td>3,629</td>
<td>1,070</td>
<td>225,000</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>152,465</td>
<td>42,311</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 of England, central Scotland and the south of Wales, and lowest in the south 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 the UK.

• 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 heart and circulatory 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>Glasgow City</td>
<td>Scotland</td>
<td>138.8</td>
<td>586</td>
</tr>
<tr>
<td>North Lanarkshire</td>
<td>Scotland</td>
<td>121.6</td>
<td>350</td>
</tr>
<tr>
<td>East Ayrshire</td>
<td>Scotland</td>
<td>121.1</td>
<td>139</td>
</tr>
<tr>
<td>West Dunbartonshire</td>
<td>Scotland</td>
<td>120.6</td>
<td>96</td>
</tr>
</tbody>
</table>

The Cost of Heart and Circulatory Diseases

• Healthcare costs relating to heart and circulatory diseases are estimated at £9 billion each year.

• CVD’s cost to the UK economy (including premature death, disability and informal costs) is estimated to be £19 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).

- CHD is the one of the UK’s leading causes of death.
- It is also the leading cause of death worldwide.
- In the UK, nearly one in seven men and one in twelve women die from coronary heart disease.
- CHD is responsible for over 66,000 deaths in the UK each year, an average of 180 people each day, or one death around every eight minutes.
- Nearly 22,000 people under the age of 75 in the UK die from CHD each year.
- CHD kills more than twice as many women in the UK as breast cancer.
- CHD death rates are highest in Scotland and the north of England and lowest in the south of England.
- Since the BHF was established the annual number of CHD deaths in the UK has fallen by more than half.
- Coronary heart disease is the leading cause of heart attacks.

For more information please visit our website:
Regional and local UK statistics for CHD deaths
Coronary Heart Disease
Heart Attack (Myocardial Infarction, MI)

- In the UK there are over 200,000 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 915,000 people alive in the UK today (640,000 men and 275,000 women) have survived a heart attack.

For more information on heart attacks, visit our website.

Atrial Fibrillation (AF)

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

- Around 1.3 million people in the UK have been diagnosed with atrial fibrillation.
- It is estimated that there are over 500,000 people living with undiagnosed AF in the UK.

For more on atrial fibrillation, visit our website.

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.

- Over 920,000 people in the UK are living with heart failure.

For more information on heart failure, visit our website.
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 over 38,000 deaths in the UK each year.
- In the UK over 245,000 hospital visits are attributed to stroke each year.
- Over 1.2 million people living in the UK have survived a stroke or transient ischaemic attack (TIA).

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 more than 30,000 out-of-hospital cardiac arrests (OHucas) in the UK each year.
- The overall survival rate in the UK is less than 1 in 10.
- 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 double the chances of survival in some cases (ventricular fibrillation).

For more on cardiac arrest visit our website

Linked conditions

- Individuals with coronary heart disease, or who have had a heart attack, are more than twice as likely to have a stroke as those who haven’t.
- 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.
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 12 babies each day in the UK - 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 congenital heart disease, 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 620,000 people in the UK 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
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

- Nearly 30% of adults in the UK have high blood pressure and half of them are not receiving treatment
- 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 disease 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
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.

- Nearly 3.7 million adults in the UK 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 over 1 million people in the UK are living with undiagnosed Type 2 diabetes.

Other Risk Factors

- Poor air quality contributes to up to 36,000 deaths per year in the UK, with a significant impact on heart and circulatory health.
- 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.
- At least 65% of people with diabetes actually die of heart disease or stroke.

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 six adults smoke cigarettes in the UK— that’s over 8 million adults.
- Nearly 100,000 smokers in the UK die from smoking-related causes each year.
- It’s estimated that about 20,000 deaths in the UK each year from heart and circulatory diseases can be attributed to smoking.

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

Diet and Exercise
- Two out of five adults in the UK do not achieve recommended levels of physical activity.
- Only around a quarter of UK adults and one in six children in England and Scotland consume the recommended minimum five portions of fruit and vegetables per day.
- Around a quarter of adults in the UK exceed national guidelines for weekly alcohol intake; no level of use is without risk.
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 the UK, 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 August 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.
# References

<table>
<thead>
<tr>
<th>STATISTIC</th>
<th>REFERENCE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>HEART AND CIRCULATORY DISEASES (CARDIOVASCULAR DISEASE; CVD)</strong></td>
<td></td>
</tr>
<tr>
<td>CVD deaths, men/women</td>
<td>BHF analysis of latest UK mortality statistics: ONS/NRS/NISRA (2016 data)</td>
</tr>
<tr>
<td>CVD ASDRs (death rates); UK CVD map</td>
<td>BHF/University of Birmingham calculated rates in partnership with UK statistical agencies: ONS/NRS/NISRA (2014-16 data)</td>
</tr>
<tr>
<td>Numbers living with CVD</td>
<td>BHF estimate based on Quality &amp; Outcomes Framework prevalence data: 2015/16/17; NHS Digital/ISD Scotland/StatsWales/DH Northern Ireland and latest UK health surveys with CVD fieldwork: 2015/16/17; NHS Digital/Scottish Government/StatsWales/DH Northern Ireland</td>
</tr>
<tr>
<td><strong>CORONARY HEART DISEASE (CHD; ISCHAEMIC HEART DISEASE)</strong></td>
<td></td>
</tr>
<tr>
<td>CHD ASDRs (death rates)</td>
<td>BHF/University of Birmingham calculated rates in partnership with UK statistical agencies: ONS/NRS/NISRA (2014-16 data)</td>
</tr>
<tr>
<td>2.3m living with CHD</td>
<td>Quality &amp; Outcomes Framework prevalence data 2015/16/17; NHS Digital/ISD Scotland/StatsWales/DH Northern Ireland</td>
</tr>
<tr>
<td>Living with CHD gender split</td>
<td>BHF analysis of 2013 Clinical Practice Research Datalink prevalence data and ONS population estimates</td>
</tr>
<tr>
<td><strong>HEART ATTACK (MYOCARDIAL INFARCTION, MI)</strong></td>
<td></td>
</tr>
<tr>
<td>198k heart attack hospital visits</td>
<td>UK hospital episode statistics, 2015/16/17; NHS Digital/ISD Scotland/NHS Wales/DH Northern Ireland</td>
</tr>
<tr>
<td>7/10 people survive heart attack ~ 1960s estimate</td>
<td>Case fatality rates in Smolina’s 2012 BMJ paper on acute MI mortality (<a href="http://www.bmj.com/content/344/bmj.d8059">www.bmj.com/content/344/bmj.d8059</a>) ~ Goldacre’s 2003 paper on myocardial infarction (Oxon)</td>
</tr>
<tr>
<td>915k survived MI</td>
<td>BHF analysis of 2013 Clinical Practice Research Datalink prevalence data and ONS population estimates</td>
</tr>
<tr>
<td><strong>ATRIAL FIBRILLATION (AF)</strong></td>
<td></td>
</tr>
<tr>
<td>1.3m UK diagnosed with AF ~ undiagnosed</td>
<td>Quality &amp; Outcomes Framework prevalence data 2016/17; NHS Digital/ISD Scotland/StatsWales/DH Northern Ireland ~ Atrial Fibrillation Association/NCVIN (Public Health England)</td>
</tr>
<tr>
<td><strong>HEART FAILURE (HF)</strong></td>
<td></td>
</tr>
<tr>
<td>500k+ living with heart failure</td>
<td>Quality &amp; Outcomes Framework prevalence data 2015/16/17; NHS Digital/ISD Scotland/StatsWales/DH Northern Ireland</td>
</tr>
</tbody>
</table>
### STATISTIC

<table>
<thead>
<tr>
<th>STROKE (CEREBROVASCULAR DISEASE)</th>
<th>REFERENCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>38k UK stroke deaths</td>
<td>BHF analysis of latest UK mortality statistics: ONS/NRS/NISRA (2016 data)</td>
</tr>
<tr>
<td>245k+ stroke hospital visits</td>
<td>UK hospital episode statistics, 2016/17: NHS Digital/ISD Scotland/NHS Wales/DH Northern Ireland</td>
</tr>
<tr>
<td>1.2m UK stroke/TIA survivors</td>
<td>Quality &amp; Outcomes Framework prevalence data 2016/17: NHS Digital/ISD Scotland/StatsWales/DH Northern Ireland</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>
</tbody>
</table>

**Linked conditions:**
- CHD or heart attack more than twice as likely to have a stroke
  - [http://stroke.ahajournals.org/content/22/8/983](http://stroke.ahajournals.org/content/22/8/983)
- People with heart failure are 2-3 times more likely to have a stroke.
  - [http://stroke.ahajournals.org/content/42/10/2977](http://stroke.ahajournals.org/content/42/10/2977)
- People with diabetes are twice as likely to have a stroke as people without diabetes
  - [https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5298897/](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5298897/)

### CONGENITAL HEART DISEASE

1:180 babies diagnosed

BHF/Oxford University analysis of EUROCAT congenital anomaly registers 2010-14 (NB cases exclude BAV - bicuspid aortic valve)

**survival comparison (pre-BHF/today)**

- MacMahon BMJ ([http://heart.bmj.com/content/heartjnl/15/2/121.full.pdf](http://heart.bmj.com/content/heartjnl/15/2/121.full.pdf)) and Wren & O’Sullivan, BMJ ([http://heart.bmj.com/content/85/4/438.long](http://heart.bmj.com/content/85/4/438.long))

1-2% prevalence

Various estimates including Hoffman & Kaplan, JACC –19 per 1,000 includes BAVs which will eventually need cardiologic care ([www.sciencedirect.com/science/article/pii/S0735109702018867](www.sciencedirect.com/science/article/pii/S0735109702018867))

### INHERITED (GENETIC) CONDITIONS

600k+ UK with faulty gene

PHG Foundation, Heart to Heart: inherited cardiovascular conditions services (2009); with revised FH prevalence estimates (see below) and DCM from Hershberger et al. 2013 ([www.nature.com/ncardio/journal/v10/n9/full/ncardio.2013.105.html](www.nature.com/ncardio/journal/v10/n9/full/ncardio.2013.105.html))

1:250 with familial hypercholesterolaemia (FH)


1:500 with hypertrophic cardiomyopathy (HCM)

Priori et al, Task Force on Sudden Cardiac Death ESC ([eurheartj.oxfordjournals.org/content/ehj/22/16/1374.full.pdf](eurheartj.oxfordjournals.org/content/ehj/22/16/1374.full.pdf))

### OUT-OF-HOSPITAL CARDIAC ARREST (OHCA)

30k+ UK OHCAs/year, less than 10% survival

BHF UK estimate – volumes and survival rates are only routinely published for England:

No data available for Wales

Every min & CPR doubles survival

European Resuscitation Council, Guidelines for Resuscitation 2015 ([www.cprguidelines.eu](www.cprguidelines.eu))
<table>
<thead>
<tr>
<th>STATISTIC</th>
<th>REFERENCE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>RISK FACTORS</strong></td>
<td><strong>REFERENCE</strong></td>
</tr>
<tr>
<td>Smoking; number of smokers</td>
<td>BHF analysis of UK surveys (NHS Digital/ Scottish Government/StatsWales/DH Northern Ireland) and ONS population estimates</td>
</tr>
<tr>
<td>100k/20k smoking attributable CVD deaths</td>
<td>Adult smoking habits in the UK: 2016 ONS. <a href="https://www.ons.gov.uk/releases/adultsmokinghabitsingreatbritain2016">https://www.ons.gov.uk/releases/adultsmokinghabitsingreatbritain2016</a></td>
</tr>
<tr>
<td>Obesity, physical activity, 5-a-day, alcohol</td>
<td>BHF analysis of UK health surveys (NHS Digital/Scottish Government/StatsWales/DH Northern Ireland)</td>
</tr>
</tbody>
</table>

**Linked Conditions**

| 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 | [http://circ.ahajournals.org/content/59/1/8.short](http://circ.ahajournals.org/content/59/1/8.short) [https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2809299/](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2809299/) |
| Diabetes: At least 65% of people with diabetes actually die of heart disease or stroke | [https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3026955/](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3026955/)                                                                                                       |
| Diabetes: People with diabetes are 65% more likely to have heart failure than the rest of the population | [https://digital.nhs.uk/catalogue/PUB06325](https://digital.nhs.uk/catalogue/PUB06325)                                                                                                               |
| Vascular dementia: People with a history of heart disease are at least twice as likely to develop vascular dementia | [https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2924456/](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2924456/)                                                                                           |
| Vascular dementia: People with diabetes are 2-3 times more likely to develop vascular dementia | [https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2174783/](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2174783/)                                                                                           |