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

This month in Wales

- 700 people will lose their lives to CVD
- ...more than 200 people will be younger than 75
- 375,000 people are living with the daily burden of CVD
- 810 hospital visits will be due to a heart attack
- 320 people will die from coronary heart disease
- 15 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 causes one in four (25 per cent) of all deaths in Wales, or over 8,400 deaths each year - that’s an average of 24 people each day.
- Heart and circulatory diseases kill 4,500 men and 3,900 women in Wales each year.
- Since the BHF was established the annual number of heart and circulatory deaths in Wales has fallen by more than half.
- In 1961, 17,649 deaths - over half of all deaths that year in Wales - were attributed to CVD.
- Since 1961 the Welsh 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 Wales are now living longer.
- 2,500 people under the age of 75 in Wales die from CVD each year.
- There are around 375,000 people living with heart and circulatory diseases in Wales - 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</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>42,384</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
Premature death rates from heart and circulatory diseases (before the age of 75) are higher than in 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 country.

The highest premature heart and circulatory death rates by Welsh authority (2014-16) were for Blaenau Gwent and Merthyr Tydfil.

The premature (under 75) death rate for Blaenau Gwent (107.4 per 100,000) is almost twice as high as for The Vale of Glamorgan / Bro Morgannwg (53.8 per 100,000).

Regional and local statistics and rankings for heart and circulatory deaths can be found on our website.

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

<table>
<thead>
<tr>
<th>Unitary Authority</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>Blaenau Gwent</td>
<td>107.4</td>
<td>69</td>
</tr>
<tr>
<td>Merthyr Tydfil/Merthyr Tudful</td>
<td>105.0</td>
<td>55</td>
</tr>
<tr>
<td>Caerphilly/Caerffili</td>
<td>103.4</td>
<td>167</td>
</tr>
<tr>
<td>Rhondda Cynon Taf</td>
<td>100.2</td>
<td>211</td>
</tr>
<tr>
<td>Neath Port Talbot/Caernedd Port Talbot</td>
<td>97.2</td>
<td>129</td>
</tr>
</tbody>
</table>

### The Cost of Heart and Circulatory Diseases

- Total NHS expenditure on CVD in Wales in 2014/15 was £446 million.

Our vision is a world where people do not die prematurely from heart and circulatory diseases.

People living in the poorest areas of the country are, on average, more likely to die early from CVD than those living in the richest.

BHF/University of Birmingham in collaboration with ONS (2014-16 data)
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).

- Around 118,000 people are living with CHD in Wales
- Coronary heart disease (CHD) is a leading cause of death in Wales. It is also the leading cause of death worldwide.
- In Wales, more than 1 in 7 men and nearly 1 in 11 women die from coronary heart disease.
- CHD is responsible for around 3,800 deaths in Wales each year; that’s an average of 10 deaths each day.
- CHD kills 2,400 men and 1,400 women in Wales each year.
- Since the BHF was established the annual number of CHD deaths in Wales has fallen by more than half.
- In 1961, 9,082 deaths in Wales were attributed to CHD – over a quarter of all deaths that year.
- Since 1961 the age-standardised death rate from CHD has declined by more than three quarters.
- CHD kills more than twice as many women as breast cancer in Wales; it even kills more women prematurely.
- Nearly 1,400 people under the age of 75 in Wales die from CHD each year.
- 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

118,000 people are living with coronary heart disease in Wales
Heart Attack (Myocardial Infarction, MI)

- Most deaths from coronary heart disease are caused by a heart attack.
- In Wales nearly 9,800 hospital visits each year are attributed to heart attack: that's 1 every 54 minutes.
- Around 50,000 people alive in Wales today have survived an MI.
- 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.

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 72,000 people in Wales have been diagnosed with atrial fibrillation.
- It is estimated that there are thousands more living with undiagnosed AF.

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.

- Around 33,000 people in Wales have been diagnosed with heart failure by their GP.

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.

- Stroke causes over 1,900 deaths in Wales each year.
- In Wales over 11,500 hospital visits are attributed to stroke each year.
- Over 67,000 people living in Wales have survived a stroke or transient ischaemic attack (TIA).
- Nearly half of stroke survivors in Wales 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.

- The overall UK OHCA survival rate to hospital discharge is less than 1 in 10.
- Each year Welsh emergency services deal with thousands of out-of-hospital cardiac arrests.
- Survival rates for Wales are not published.
- 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
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 16 babies each month in Wales - 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 30,000 people in Wales 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

- One in five adults in Wales report being treated for 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 195,000 adults in Wales 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 thousands more people across Wales are living with undiagnosed Type 2 diabetes.

Other Risk Factors

- Poor air quality is responsible for an estimated 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

- **Nearly one in five** adults (19%) smoke cigarettes in Wales - that's close to half a million adults.
- Around 5,500 smokers in Wales die from smoking-related causes each year.
- Each year an **estimated 1,000 Welsh** deaths from heart and circulatory diseases can be attributed to smoking.
- Over **26,000 hospital admissions** for adults over 35 are attributable to smoking each year.

Overweight/Obesity

- An estimated **22 per cent of adults** in Wales are obese and in addition more than a third are overweight.
- **One third** of children in Wales are overweight or obese.

Diet and Exercise

- An estimated **47 per cent** of adults in Wales do not meet current physical activity recommendations.
- **Less than a quarter** of adults in Wales consume the recommended five portions of fruit and veg per day.
- Nearly **one in five** adults (18%) drink more than the weekly guideline amount of alcohol.
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 Wales, 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  bhf.org.uk/statistics

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, England and Northern Ireland.
## References

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<th>STATISTIC</th>
<th>REFERENCE</th>
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<td><strong>HEART AND CIRCULATORY DISEASES (CARDIOVASCULAR DISEASE; CVD)</strong></td>
<td></td>
</tr>
<tr>
<td>CVD death rates</td>
<td>BHF/University of Birmingham calculated rates in partnership with the Office for National Statistics (2014-16 data)</td>
</tr>
<tr>
<td>£446m CVD cost</td>
<td>NHS expenditure, Public Health Wales 2014/15</td>
</tr>
<tr>
<td><strong>CORONARY HEART DISEASE (CHD; ISCHAEMIC HEART DISEASE)</strong></td>
<td></td>
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<tr>
<td>CHD death rates</td>
<td>BHF/University of Birmingham calculated rates in partnership with the Office for National Statistics (2014-16 data)</td>
</tr>
<tr>
<td><strong>HEART ATTACK (MYOCARDIAL INFARCTION, MI)</strong></td>
<td></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="https://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>50K 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>5 times more likely to have a stroke</td>
<td>Marinic C, De Santis F, Sacco S. Contribution atrial fibrillation to incidence and outcome of ischemic stroke: results from a population-based study. <a href="https://www.ncbi.nlm.nih.gov/pubmed/15879330">www.ncbi.nlm.nih.gov/pubmed/15879330</a></td>
</tr>
<tr>
<td>STATISTIC</td>
<td>REFERENCE</td>
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<td>----------------------------------</td>
<td>---------------------------------------------------------------------------</td>
</tr>
<tr>
<td><strong>HEART FAILURE (HF)</strong></td>
<td></td>
</tr>
</tbody>
</table>
| 33k diagnosed with heart failure by GP | Welsh Government Quality & Outcomes Framework data 2017/18  
| **STROKE (CEREBROVASCULAR DISEASE)** |                                                                            |
http://www.infoandstats.wales.nhs.uk/page.cfm?orgid=869&pid=40977 |
| 68k stroke/TIA survivors         | Welsh Government Quality & Outcomes Framework data 2017/18  
| U75 stroke survivors             | BHF analysis of 2013 Clinical Practice Research Datalink prevalence data and ONS population estimates |
| Linked conditions: CHD or heart attack more than twice as likely to have a stroke | http://stroke.ahajournals.org/content/22/8/983 |
| Linked conditions: People with heart failure are 2-3 times more likely to have a stroke. | http://stroke.ahajournals.org/content/42/10/2977 |
| Linked conditions: People with diabetes are twice as likely to have a stroke as people without diabetes | www.ncbi.nlm.nih.gov/pmc/articles/PMC5298697/ |
| **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) |
| 1-2% prevalence                  | various estimates including Hoffman & Kaplan, JACC –19 per 1,000 includes “BAVs which will eventually need cardiology care”  
(www.sciencedirect.com/science/article/pii/S0735109702018667) |
| Survival comparison (pre-BHF/today) | MacMahon BMJ (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) |
| **INHERITED (GENETIC) CONDITIONS** |                                                                            |
| 30k with faulty gene              | BHF estimate based on prevalence rates in PHG Foundation’s Heart to Heart: inherited cardiovascular conditions services (2009); and revised FH prevalence estimates (see below) and DCM from Hershberger et al 2013  
(www.nature.com/nrcardio/journal/v10/n9/full/nrcardio.2013.105.html) |
<p>| 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) |
| UK 12 cardiac deaths/week under-35s | Cardiac Risk in the Young (<a href="http://www.c-r-y.org.uk/statistics">www.c-r-y.org.uk/statistics</a>) |</p>
<table>
<thead>
<tr>
<th>STATISTIC</th>
<th>REFERENCE</th>
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</thead>
<tbody>
<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="https://cprguidelines.eu/">https://cprguidelines.eu/</a></td>
</tr>
<tr>
<td><strong>RISK FACTORS</strong></td>
<td></td>
</tr>
<tr>
<td>Adults treated for HBP</td>
<td>Welsh Health Survey 2015 Results</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/59/1/6.short www.ncbi.nlm.nih.gov/pmc/articles/PMC2809299/


**Vascular dementia:** People with a history of heart disease are at least twice as likely to develop vascular dementia www.ncbi.nlm.nih.gov/pmc/articles/PMC2924456/

**Vascular dementia:** People with diabetes are 2-3 times more likely to develop vascular dementia www.ncbi.nlm.nih.gov/pmc/articles/PMC2174783/