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

This month in Scotland

1,260 people will lose their lives to CVD

...around 390 people will be younger than 75

700,000 people are living with the daily burden of CVD

2,100 hospital visits will be due to a heart attack

560 people will die from coronary heart disease

25 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.

- There are an estimated 700,000 people living with heart and circulatory diseases in Scotland. An ageing and growing population and improved survival rates from heart and circulatory events could see these numbers rise still further.

**Prevalence rates for heart and circulatory diseases in the most deprived areas of Scotland are twice as high as those in the least deprived.**

- Heart and circulatory diseases cause more than a quarter (26 per cent) of all deaths in Scotland, or more than 15,000 deaths each year - that’s more than 40 people per day or 1,250 per month.

- Nearly 4,700 people under the age of 75 in Scotland die from CVD each year.

- Since the BHF was established the annual number of heart and circulatory deaths in Scotland has fallen by more than half.

- In 1961, 34,547 deaths - over half of all deaths that year in Scotland - were attributed to heart and circulatory diseases.

**Linked conditions**

Around 80 percent of people with heart and circulatory diseases have at least one other health condition.

Around 700,000 people are living with heart and circulatory diseases in Scotland.

That’s more than 40 people each day.

26% Proportion of all Scottish deaths caused by heart and circulatory diseases.
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 estimate)</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>6,426</td>
<td>2,500</td>
<td>375,000</td>
</tr>
<tr>
<td>Northern Ireland</td>
<td>3,760</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

Death Rates

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 Scotland.

- Since 1961 the Scottish 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.
- The premature (under 75) death rate for Glasgow City (138.8 per 100,000) is more than twice as high as for East Dunbartonshire (63.9 per 100,000).
- Early death rates from heart and circulatory diseases (before the age of 75) are generally higher in Scotland than the rest of the UK.

Death rate from CVD, by gender, Scotland, 1969 to 2016

Figure 1
Scotland premature (under 75) CVD death rates 2014-16

<table>
<thead>
<tr>
<th>Local 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>Glasgow City</td>
<td>138.8</td>
<td>586</td>
</tr>
<tr>
<td>North Lanarkshire</td>
<td>121.6</td>
<td>350</td>
</tr>
<tr>
<td>East Ayrshire</td>
<td>121.1</td>
<td>139</td>
</tr>
<tr>
<td>West Dunbartonshire</td>
<td>120.6</td>
<td>96</td>
</tr>
<tr>
<td>Dundee City</td>
<td>119.2</td>
<td>139</td>
</tr>
</tbody>
</table>

The Cost of Heart and Circulatory Diseases
- Each year heart and circulatory diseases cost NHS Scotland around £800m.

Linked conditions
- There are an estimated 870,000 people living with either a heart and circulatory disease or diabetes in Scotland.
- There are an estimated 170,000 people living with a heart and circulatory disease and diabetes in Scotland.

For more info please visit:
- Regional and local statistics

Our vision is a world where people do not die prematurely from cardiovascular disease (CVD).

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 NRS (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).

Key Facts

- Coronary heart disease (CHD) is Scotland’s single biggest killer. It is also the leading cause of death worldwide.
- CHD is responsible for over 6,700 deaths in Scotland each year - that’s around 18 deaths per day.
- In Scotland, 1 in 7 men and nearly 1 in 10 women die from coronary heart disease.
- CHD kills nearly three times as many women as breast cancer in Scotland: it even kills more women prematurely.

Top 4 causes of death, Scotland 2017

- Coronary Heart Disease: 6,727
- Dementia and Alzheimer’s: 6,549
- Lung cancer: 4,069
- Stroke: 3,927
Key Facts

- Since the BHF was established the annual number of CHD deaths in Scotland has fallen by 65 per cent.
- CHD death rates are on average higher in Scotland than the rest of the UK.
- Over 2,500 people under the age of 75 in Scotland die from CHD each year.
- Coronary heart disease is the leading cause of heart attacks

Prevalence rates for coronary heart disease in the most deprived areas of Scotland are three times as high as those in the least deprived.

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 information please visit:
- Regional and local statistics
- Coronary Heart Disease

240,000
Estimated number of people living with coronary heart disease in Scotland
- ~140,000 men and 100,000 women
Heart Attack (Myocardial Infarction, MI)

- Most deaths from coronary heart disease are caused by a heart attack.
- There are over 25,000 hospital visits attributed to heart attacks in Scotland each year: that is 1 person going to hospital due to a heart attack every 20 minutes.
- Around 100,000 people alive in Scotland today have survived a heart attack.
- 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 96,000 people in Scotland 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 48,000 people in Scotland 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.

- Strokes cause over **3,900 deaths** in Scotland each year.
- In Scotland over **26,000 hospital visits** are attributed to stroke each year.
- Around **140,000 people** living in Scotland have survived a stroke or transient ischaemic attack (TIA).

**Prevalence rates for strokes in the most deprived areas of Scotland are three times as high as those in the least deprived.**

**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 **3,000** out-of-hospital cardiac arrests (OHCAs) in Scotland each year.
- The survival rate in Scotland is just **1 in 12**.
- 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).
- Rates of survival and bystander CPR are much lower in areas of greatest deprivation.
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 25 babies each month in Scotland - 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 50,000 people in Scotland 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.

**Medical Risk Factors**

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

**High Blood Pressure**

- **30% of adults** in Scotland 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 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

For more info, visit our website:

- Vascular dementia
- High BP
- High Cholesterol

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.

- 290,000 adults in Scotland 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 in Scotland are living with undiagnosed Type 2 diabetes.

Prevalence rates for diabetes in the most deprived areas of Scotland are nearly three times as high as those in the least deprived.

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 info, visit our website: Diabetes
Lifestyle Risk Factors

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

Smoking
- One in six adults smoke cigarettes in Scotland— that’s around 800,000 adults.
- There are over 13,000 smoking-related deaths each year in Scotland.
- Each year an estimated 2,200 Scottish deaths from cardiovascular disease can be attributed to smoking.
- There are around 128,000 smoking-related hospital admissions each year in Scotland.

Overweight/Obesity
- An estimated 29 per cent of adults in Scotland are obese and in addition more than a third are overweight (by BMI).
- More than 3 out of 10 children in Scotland are overweight or obese.

Diet and Exercise
- Over a third of adults in Scotland and a quarter of children do not achieve recommended levels of physical activity.
- Only 1 in 5 adults and 1 in 8 children in Scotland eat the recommended five portions of fruit and veg per day.
- 1 in 4 adults in Scotland regularly exceed guidelines for daily 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 Scotland, 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, England, Wales and Northern Ireland.
HEART AND CIRCULATORY DISEASES (CARDIOVASCULAR DISEASE; CVD)

700k living with CVD, x2 deprived areas
BHF estimate based on Scottish Health Survey 2017 data and ONS mid-2017 population estimates

CVD deaths/year
Scotland, National Records of Scotland (2017) Deaths, by gender, age and cause

CVD death rates; local death rates
BHF/University of Birmingham in collaboration with the General Register Office for Scotland (2014-16 data)

£800m CVD cost
NHS Expenditure, Population Health Analytical Services, Scottish Government 2011/12

Linked conditions: 81% people with CVD have one other condition

Linked conditions: Numbers living with heart and circulatory diseases and/or diabetes
BHF analysis of Scottish Health Survey 2017 data.

CORONARY HEART DISEASE (CHD; ISCHAEMIC HEART DISEASE)

CHD biggest killer Scotland, vs breast cancer ~ worldwide
BHF analysis of National Records of Scotland (2017) Deaths, by gender, age and cause
~ World Health Organization, The Top 10 Causes of Death

CHD death rates
BHF/University of Birmingham in collaboration with the General Register Office for Scotland (2014-16 data)

240k living with CHD; gender split
BHF estimate based on Scottish Health Survey 2017 data and ONS mid-2017 population estimates

Prevalence rates three times as high in deprived areas
BHF analysis of Scottish Health Survey 2017 data.

Linked conditions: CHD or heart attack more than twice as likely to have a stroke
stroke.ahajournals.org/content/22/8/983

HEART ATTACK (MYOCARDIAL INFARCTION, MI)

25k+ heart attack hospital visits
www.isdscotland.org

7/10 people survive heart attack ~ 1960s estimate
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)

100k surviving MI
BHF analysis of 2013 Clinical Practice Research Datalink prevalence data and ONS population estimates

ATRIAL FIBRILLATION (AF)

96k diagnosed with AF
ISD Scotland Quality & Outcomes Framework 2015/16
http://www.isdscotland.org/Health-Topics/General-Practice/Quality-And-Outcomes-Framework/

5 times more likely to have a stroke
Marini C, De Santis F, Sacco S, Contribution atrial fibrillation to incidence and outcome of ischemic stroke: results from a population-based study.
www.ncbi.nlm.nih.gov/pubmed/15879330

Contributor to 1 in 5 strokes
<table>
<thead>
<tr>
<th>STATISTIC</th>
<th>REFERENCE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>HEART FAILURE (HF)</strong></td>
<td></td>
</tr>
<tr>
<td><strong>STROKE (CEREBROVASCULAR DISEASE)</strong></td>
<td></td>
</tr>
<tr>
<td>140k stroke survivors</td>
<td>BHF estimate based on Scottish Health Survey 2017 data and ONS mid-2017 population estimates</td>
</tr>
<tr>
<td>Prevalence rates three times as high in deprived areas</td>
<td>BHF analysis of Scottish Health Survey 2017 data</td>
</tr>
<tr>
<td>Linked conditions: People with heart failure are 2-3 times more likely to have a stroke.</td>
<td>stroke.ahajournals.org/content/42/10/2977</td>
</tr>
<tr>
<td>Linked conditions: People with diabetes are twice as likely to have a stroke as people without diabetes</td>
<td><a href="http://www.ncbi.nlm.nih.gov/pmc/articles/PMC5298897/">www.ncbi.nlm.nih.gov/pmc/articles/PMC5298897/</a></td>
</tr>
<tr>
<td><strong>CONGENITAL HEART DISEASE</strong></td>
<td></td>
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<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>1-2% prevalence</td>
<td>various estimates including Hoffman &amp; Kaplan, JACC –19 per 1,000 includes “BAVs which will eventually need cardiologic care “ <a href="http://www.sciencedirect.com/science/article/pii/S0735109702018667">www.sciencedirect.com/science/article/pii/S0735109702018667</a></td>
</tr>
<tr>
<td>Survival comparison (pre-BHF/today)</td>
<td>MacMahon BMJ <a href="https://heart.bmj.com/content/heartjnl/15/2/121.full.pdf">https://heart.bmj.com/content/heartjnl/15/2/121.full.pdf</a> Wren &amp; O’Sullivan. BMJ <a href="https://heart.bmj.com/content/85/4/438.long">https://heart.bmj.com/content/85/4/438.long</a></td>
</tr>
<tr>
<td><strong>INHERITED (GENETIC) CONDITIONS</strong></td>
<td></td>
</tr>
<tr>
<td>50k with faulty gene</td>
<td>BHF Scotland estimate from PHG Foundation, <em>Heart to Heart: inherited cardiovascular conditions services</em> (2009); revised FH prevalence estimates (see below) and DCM from Hershberger et al 2013 (<a href="http://www.nature.com/nrcardio/journal/v10/n9/full/nrcardio.2013.105.html">www.nature.com/nrcardio/journal/v10/n9/full/nrcardio.2013.105.html</a>)</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>UK 12 cardiac deaths/week under-35s</td>
<td>Cardiac Risk in the Young <a href="http://www.c-r-y.org.uk/statistics">www.c-r-y.org.uk/statistics</a></td>
</tr>
<tr>
<td>STATISTIC</td>
<td>REFERENCE</td>
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<tr>
<td><strong>OUT-OF-HOSPITAL CARDIAC ARREST (OHCA)</strong></td>
<td></td>
</tr>
<tr>
<td>3k OHCA/year; 6% survival</td>
<td>Out-of-Hospital Cardiac Arrest: A Strategy for Scotland, 2015 <a href="https://www2.gov.scot/Publications/2015/03/7484">https://www2.gov.scot/Publications/2015/03/7484</a></td>
</tr>
<tr>
<td>Every min &amp; CPR more than doubles 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>
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<tr>
<td><strong>Diabetes</strong></td>
<td></td>
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<tr>
<td><strong>High Blood Pressure</strong></td>
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<td><strong>Air Pollution</strong></td>
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<td><strong>Smoking</strong></td>
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<tr>
<td>18% of adults smoke ~ 800k+ smokers</td>
<td>BHF analysis of Scottish Health Survey 2017, Scottish Government and ONS population estimates</td>
</tr>
<tr>
<td><strong>Obesity, Physical Activity</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Linked Conditions</strong></td>
<td></td>
</tr>
<tr>
<td>Diabetes: 2-3 times more likely to develop CVD, twice as likely to die from heart disease or stroke</td>
<td>circ.ahajournals.org/content/59/1/8.short <a href="www.ncbi.nlm.nih.gov/pmc/articles/PMC2809299/">www.ncbi.nlm.nih.gov/pmc/articles/PMC2809299/</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="www.ncbi.nlm.nih.gov/pmc/articles/PMC2924456/">www.ncbi.nlm.nih.gov/pmc/articles/PMC2924456/</a></td>
</tr>
<tr>
<td>Vascular dementia: People with diabetes are 2-3 times more likely to develop vascular dementia</td>
<td><a href="www.ncbi.nlm.nih.gov/pmc/articles/PMC2174783/">www.ncbi.nlm.nih.gov/pmc/articles/PMC2174783/</a></td>
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