British Heart Foundation

Scotland Factsheet

January 2025

Our vision is a world free from the fear of heart and circulatory diseases.

This month in Scotland

1,500
people will die from a heart or circulatory disease ...

... around **440** of them will be younger than **75**

730k
people are living with a heart or circulatory disease

850
hospital admissions will be due to a heart attack

580
people will die from coronary heart disease

30
babies will be diagnosed with a heart defect

Quick Links

Heart and Circulatory Diseases	Cost	Coronary Heart Disease	Heart Attack
Atrial Fibrillation	Heart Failure	Stroke	Out-of-Hospital Cardiac Arrest
Congenital Heart Disease	Inherited (Genetic) Conditions	Vascular Dementia	Risk Factors

Heart and Circulatory Diseases (Cardiovascular Disease; CVD)

Heart and circulatory diseases is an umbrella term for 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, stroke and vascular dementia.

- There are an estimated 730,000 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 significantly higher than those in the least.***

- It's forecast that the health burden of heart and circulatory diseases (CVD) will increase by 34% between 2019 and 2043 - the highest increase of all disease groups.
- Heart and circulatory diseases cause more than 1 in 4 (**28 per cent**) deaths in Scotland, or around 18,000 deaths each year - that's **50 people per day** or 1,500 per month.
- Around 5,300 people under the age of 75 in Scotland die from heart and circulatory diseases each year.
- Since the BHF was established the annual number of heart and circulatory deaths in Scotland has fallen by nearly half. In 1961, 34,547 deaths - over half of all deaths that year in Scotland - were attributed to heart and circulatory diseases.

Around
730,000
people are living with heart and circulatory diseases in Scotland

That's
50
people
each day

Linked conditions

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

Deaths from and numbers living with heart and circulatory diseases (CVD)

Nation	No. of People Dying from CVD (2023)	No. of People Under 75 Years Old Dying from CVD (2023)	Estimated Number of People Living with CVD (latest estimate)
SCOTLAND	17,787	5,313	730,000
England	142,460	38,996	6.4 million +
Wales	9,701	2,918	340,000
Northern Ireland	4,227	1,133	225,000
UK total	174,693	48,697	7.6 million +

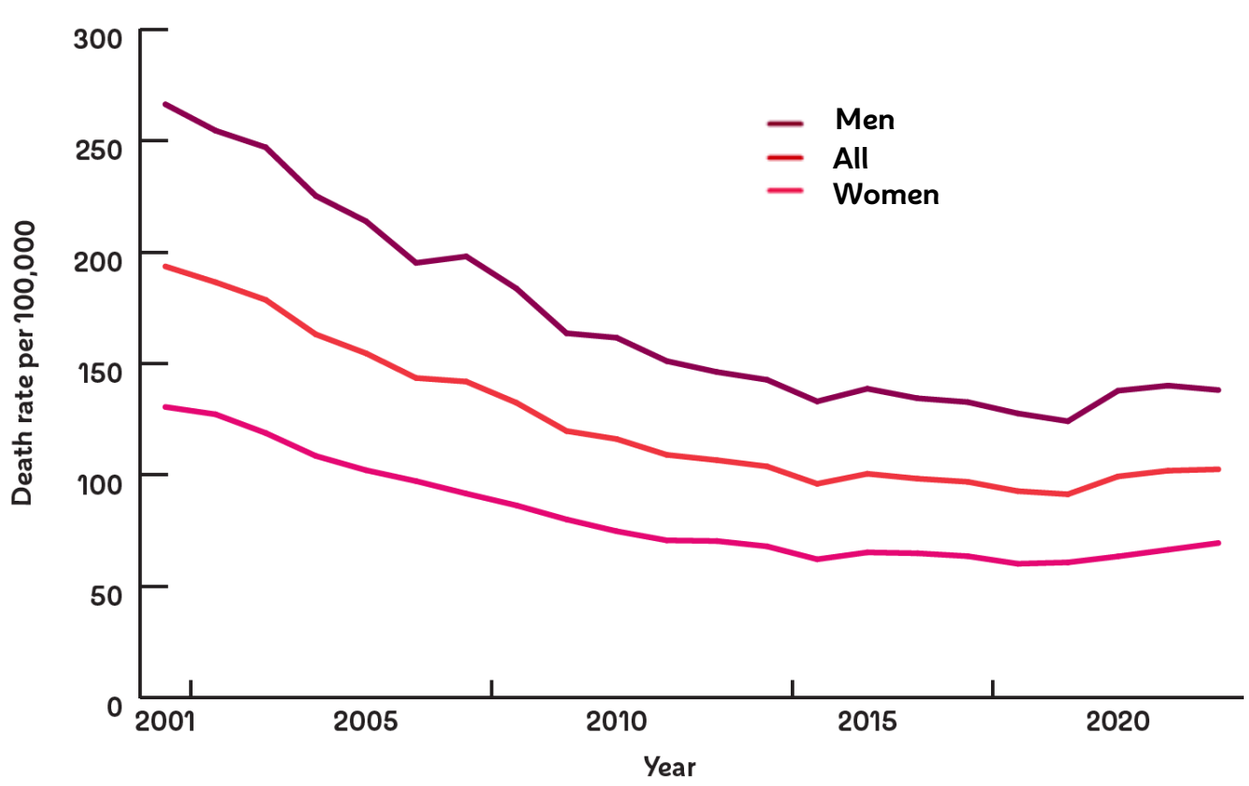
Deaths - BHF analysis of latest official statistics (ONS/NISRA/NRS); UK total includes non-residents (ONS data); ICD-10 codes I00-99, F01,Q20-8, C38.0, P29, G45
Living with CVD estimates based on latest health surveys with CVD fieldwork and GP patient data

Death Rates

Death rates take the age structure (demography) of local areas into account to reveal the real differences in statistics. This is 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 nearly **three quarters**. Death rates have fallen more quickly than the actual number of deaths because people in this country are now living longer.
- The latest (2020-22) premature (under 75) death rate for heart and circulatory diseases for Glasgow (139 per 100,000 people) is more than twice as high as for East Dunbartonshire (61 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.

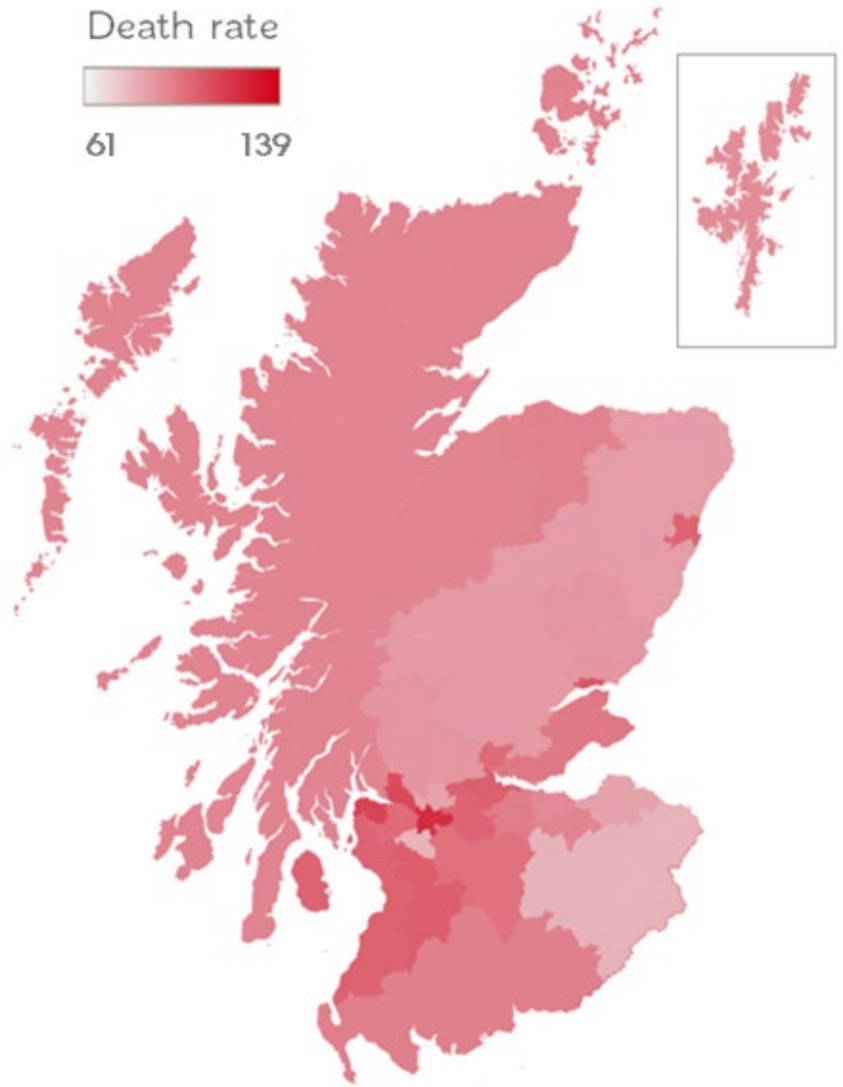
Premature death rates from heart & circulatory diseases (CVD) Scotland



Scotland premature (under 75) heart and circulatory diseases (CVD) death rates 2020-22

Local Authority – Top Five	Under 75 Death Rate per 100,000 Population	Under 75 Annual Number of CVD Deaths
Glasgow City	139.1	659
North Lanarkshire	125.2	397
East Ayrshire	123.6	152
North Ayrshire	122.1	180
West Dunbartonshire	120.4	107

Premature heart & circulatory disease (CVD) death rate by LA 2020-22



The Cost of Heart and Circulatory Diseases

- NHS annual expenditure on CVD in Scotland is estimated at £950 million.
- CVD's overall cost to the Scotland economy (including premature death, long-term care, disability and informal costs) is estimated to be £2.5 billion each year.

Linked conditions

- There are an estimated **910,000** people living with either a heart/circulatory disease **or** diabetes in Scotland.
- There are an estimated **180,000** people living with a heart/circulatory disease **and** diabetes in Scotland.

For more information consult the compendium on our website:

➤ Regional and local statistics

Coronary Heart Disease (CHD; Ischaemic Heart Disease)

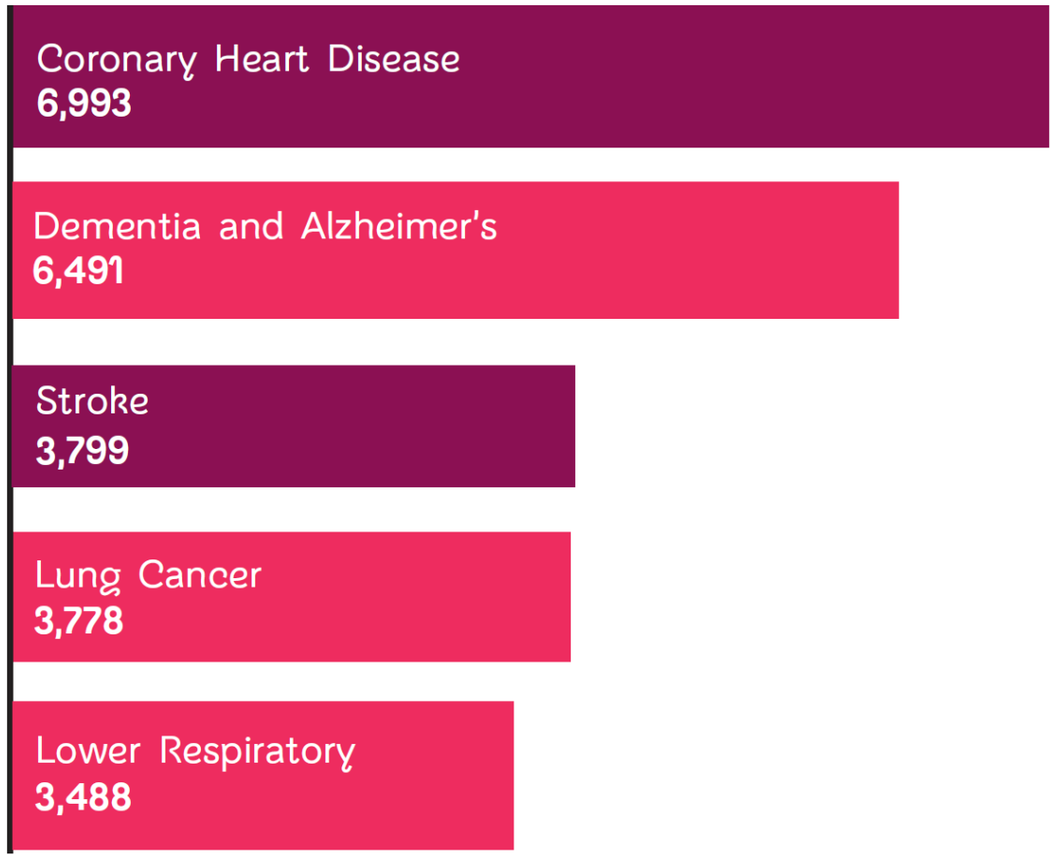
Coronary heart disease (CHD) is the most commonly diagnosed type of heart disease. It occurs when coronary arteries become narrowed by a build-up of atheroma, a fatty material within their walls. The pain or discomfort felt from such narrowing is called angina and if a blockage occurs it can cause a 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 around **7,000 deaths** in Scotland each year - that's around 19 deaths per day.
- In Scotland, one **in seven** men and **1 in 12** women die from coronary heart disease (one in nine overall).
- CHD kills more than twice **as many women** as breast cancer in Scotland: it even kills more women prematurely (before the age of 75).

Coronary heart disease is Scotland's single biggest killer

Top Five Causes of Death, Scotland 2023



Key Facts

- Since the BHF was established the annual number of CHD deaths in Scotland has fallen by more than half.
- CHD death rates are on average higher in Scotland than the rest of the UK
- Around **2,800 people** under the age of 75 in Scotland die from CHD each year
- There are around **210,000 people** in Scotland living with coronary heart disease – 120,000 men and 90,000 women
- Coronary heart disease is the leading cause of heart attacks

> ***Prevalence rates for coronary heart disease in the most deprived areas of Scotland are over twice as high as those in the least deprived.***

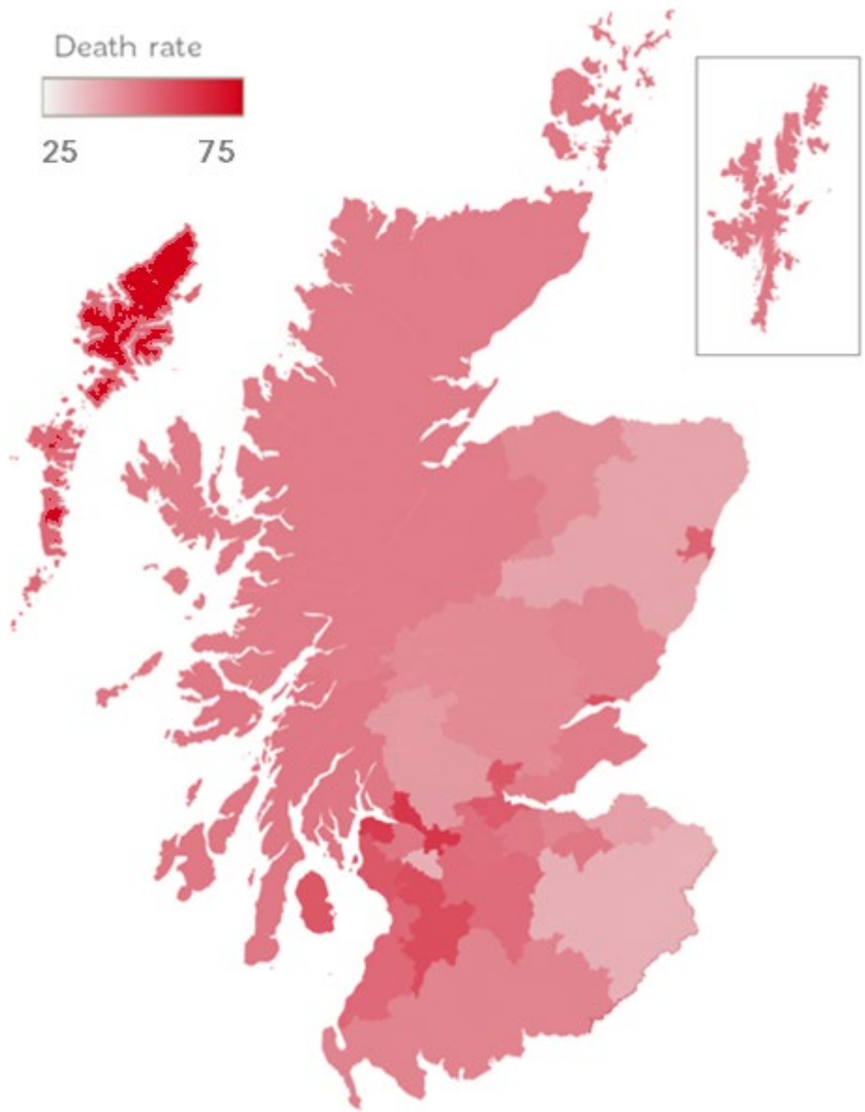
Linked conditions

- Individuals with coronary heart disease, or who have had a heart attack, are **twice as likely** to have a **stroke**.

For more information please visit:

- Regional and local statistics
- Coronary Heart Disease

Premature CHD death rate by local authority 2020-22



Heart Attack (Myocardial Infarction, MI)

- There are around **10,000 hospital admissions** for heart attacks in Scotland each year: that's 28 admissions each day or 1 every 50 minutes.
- Around **150,000 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 more than **7 out of 10 people survive.**

Every
50 minutes
in Scotland someone is admitted to hospital due to 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.

- Around **110,000 people** in Scotland have been diagnosed with atrial fibrillation.
- Atrial fibrillation is often asymptomatic, frequently undetected and undiagnosed, meaning that there are likely to be thousands more affected by the condition across Scotland.

Linked conditions

- People with AF are five times more likely to have a stroke
- AF is a contributing factor to one in five strokes

For more info please visit:

- *Heart Attacks*
- *Atrial Fibrillation*

Heart Failure (HF)

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
- Estimates which include diagnoses at hospital show there are thousands more people living with the condition across the country

Around 48,000 people in Scotland have been diagnosed with heart failure by their GP

Stroke (Cerebrovascular Disease; CBVD)

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 **3,800 deaths** in Scotland each year.
- In Scotland there are around **12,000 hospital admissions** for stroke each year – that's an average of 33 per day or 1 every 44 minutes.
- Up to **150,000 people** living in Scotland have survived a stroke or transient ischaemic attack (TIA).
- **More than half** of stroke survivors in Scotland are under 75 years old.

> ***Prevalence rates for stroke in the most deprived areas of Scotland are more than twice those in the least deprived.***

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

For more info, visit our website:

- *Heart Failure*
- *Stroke*

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 causes around 1,800 deaths each year in Scotland – numbers could be higher as it can be difficult to diagnose the different types of dementia.
- Vascular dementia is the second most common type of dementia, seen in up to 1 in 5 cases.
- Vascular dementia is estimated to affect at least **180,000** people in the UK.

Linked conditions

- People with a family history of coronary heart disease are significantly more likely to develop vascular dementia
- Vascular dementia accounts for **three quarters** of dementia cases in stroke survivors
- People with diabetes are **2-3 times** more likely to develop vascular dementia

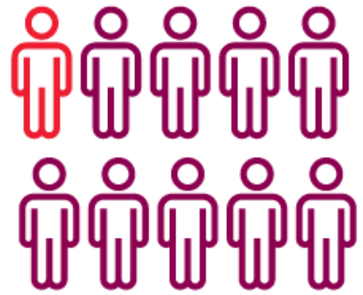
For more info please visit:

➤ *Vascular dementia*

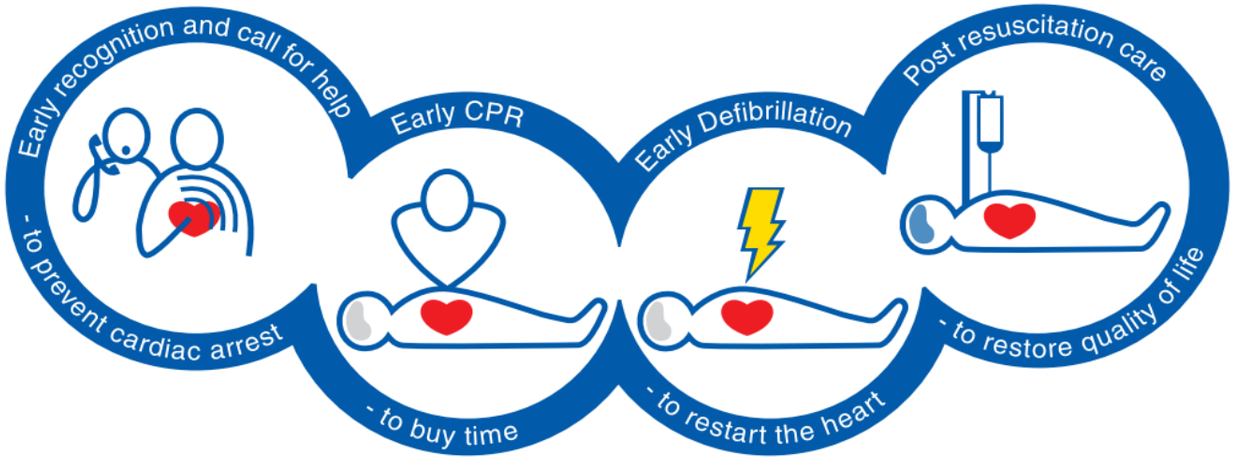
Out-of-Hospital Cardiac Arrest (OHCA)

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 **3,200** out-of-hospital cardiac arrests (OHCAs) in Scotland each year.
- The survival rate in Scotland is less than 1 in 10.
- Every minute without cardiopulmonary resuscitation (CPR) and defibrillation reduces the chance of survival by up to 10 per cent.
- Early CPR and defibrillation can **more than double** the chances of survival.
- It's estimated that public-access defibrillators (PADs) are only used in one in ten OHCAs.
- Rates of survival and bystander CPR are much lower in areas of greatest deprivation, but people in the most deprived areas are twice as likely to have one.
- The Chain of Survival (below) is a sequence of steps that together maximise the chance of survival following cardiac arrest.



Less than 1 in 10 people survive an out-of-hospital cardiac arrest in Scotland



For more info please visit:

➤ *Cardiac arrest*

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 150 births** - that's around 30 babies each month in Scotland - with more diagnoses later in life.
- Estimates suggest that in total as many as 1-2 per cent of the population may be affected.
- Before the BHF existed, the majority of babies diagnosed with a severe heart defect in the UK did not survive to their first birthday. Today, thanks to research, more than **8 out of 10 survive to adulthood**.

30 babies a month are diagnosed with a a congenital heart defect in Scotland

Inherited (Genetic) Conditions

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

- An estimated 27,000 people in Scotland have an inherited heart condition - these include hypertrophic cardiomyopathy (HCM; 1 in 500 people), dilated cardiomyopathy (DCM) and arrhythmogenic right ventricular dysplasia/cardiomyopathy (ARVD/ARVC).
- There are other conditions which can affect the heart and circulatory system, with an unusually high risk of developing heart disease or dying suddenly at a young age, including familial hypercholesterolaemia (FH; 1 in 250, or 22,000 people).
- Each week in the UK at least 12 young people (aged under 35) die from an undiagnosed heart condition.
- Using high-intensity statins can reduce cholesterol levels by half. For many people with FH this will be reduced to a safe level, lowering their risk of death from heart disease.

Around 50,000 people in Scotland have a gene variant that can cause an inherited heart-related condition

Risk Factors

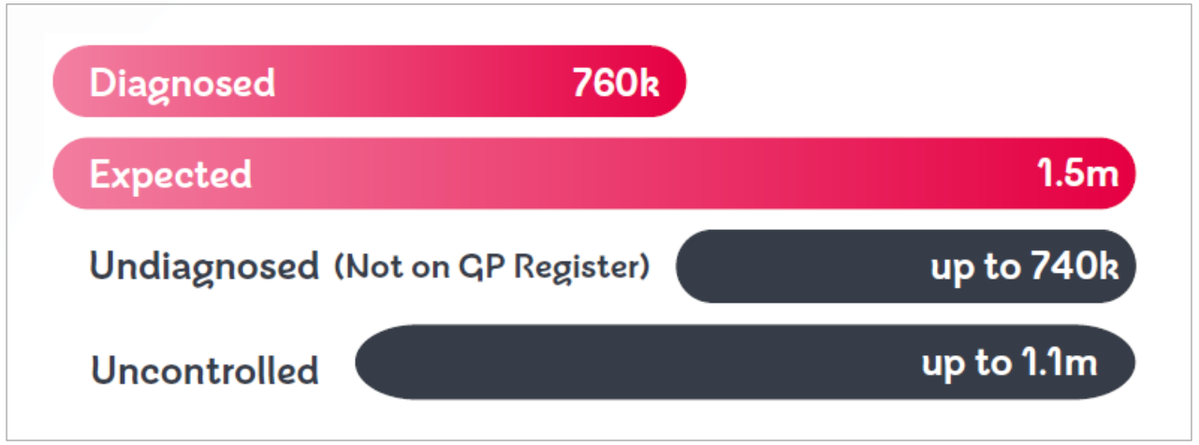
Many different risk factors increase your likelihood of developing heart and circulatory diseases.

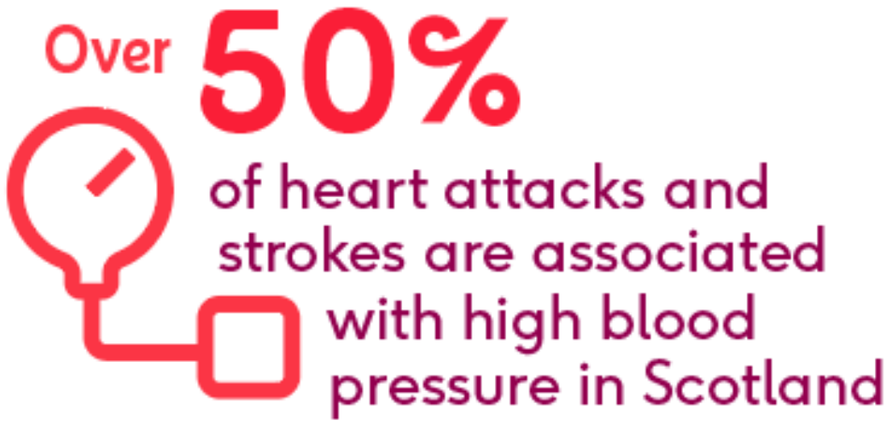
High Blood Pressure (Hypertension)

- High blood pressure is the leading modifiable risk factor for heart and circulatory disease in Scotland.
- An estimated **31 per cent of adults** in Scotland have high blood pressure (that's 1.5 million adults)
- Around 760,000 people are on their GP's hypertension register, but many of them are not receiving effective treatment.
- As many as 740,000 adults with high blood pressure are undiagnosed.

Linked conditions

- More than **half** of heart attacks and strokes in Scotland 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 heart and circulatory diseases (CVD).

- **Around 310,000 adults** in Scotland have been diagnosed with diabetes.
- It's estimated that there may be **thousands more** in Scotland with undiagnosed type 2 diabetes.
- Around 90 per cent of those diagnosed are living with type 2 diabetes and 10 per cent have either type 1 or rarer types.

> ***Prevalence rates for diabetes in the most deprived areas of Scotland are nearly twice as high as those in the least deprived.***

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
- In the UK, **one third** of adults with diabetes die from a heart or circulatory disease

Around 310,000
adults have been diagnosed
with diabetes in Scotland

High Blood Cholesterol

- High blood cholesterol is a significant risk factor for developing heart and circulatory disease.
- Around 1 in 5 deaths from heart and circulatory diseases in Scotland are associated with high LDL (low-density lipoprotein) cholesterol.

For more information about these risk factors, visit our website:

- *High Blood Pressure (Hypertension)*
- *High Cholesterol*
- *Diabetes*

Smoking

- Up to **15 per cent** of adults smoke cigarettes in Scotland – that's **670,000 adults**.
- There are nearly **90,000** smoking-related hospital admissions each year in Scotland
- There are up to **9,000** smoking-related deaths each year in Scotland
- Each year up to **2,000** deaths from heart and circulatory diseases in Scotland are attributable to smoking

up to
15%
of adults smoke in Scotland

Overweight/Obesity

- An estimated **32 per cent** of adults in Scotland have obesity and in addition over a third (34 per cent) have a body-mass index (BMI) defined as overweight
- **Nearly 1 in 3** (30 per cent) children in Scotland have a BMI defined as overweight or obese.
- In Scotland around **1 in 8** heart and circulatory disease deaths are associated with a high body-mass index.

Around
32%
of adults in Scotland have obesity

Diet and Exercise

- More than **a third** of adults in Scotland (37 per cent) do not achieve recommended levels of physical activity.
- Less than **1 in 4** adults in Scotland (22 per cent) eat the recommended five portions of fruit and veg per day.
- Around **1 in 5** adults in Scotland (20 per cent) regularly exceed guidelines for daily alcohol intake; no level of use is without risk.

Around
37%

of adults in Scotland do not meet physical activity recommendations

Other Risk Factors

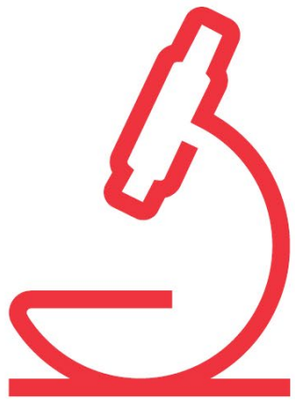
- Poor air quality has a significant impact on cardiovascular health. Each year up to **1,000 deaths** from heart and circulatory disease in Scotland are attributable to particulate matter pollution.
- Other risk factors can significantly increase your risk of developing heart and circulatory diseases, including impaired kidney function (renal failure), age, gender, family history and ethnicity.

About the British Heart Foundation (BHF)

More than a quarter of us in Scotland and nearly one in three globally die from heart and circulatory diseases. That's why the British Heart Foundation funds world-leading research into their causes, prevention and treatment. Advances from our research have saved and improved millions of lives, but heart diseases, stroke, vascular dementia and their risk factors such as diabetes still cause heartbreak on every street. With the public's support, our funding will drive the new discoveries to end that heartbreak.

We are **the biggest independent funder** of cardiovascular research in Scotland.
Find out more at bhf.org.uk

bhf.org.uk/donate



BIGGEST
independent funder of heart and circulatory disease research in Scotland

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Including exclusive content and local statistics
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This factsheet is compiled by the British Heart Foundation.

Last reviewed and updated January 2025.

Statistics are the latest available from Scottish and UK health and statistical agencies
Other factsheets: Global, UK, England, Wales, Northern Ireland.

For any queries please contact healthinsights@bhf.org.uk and we will do our best to help

References

STATISTIC	REFERENCE
HEART AND CIRCULATORY DISEASES (CARDIOVASCULAR DISEASE; CVD)	
730k living with CVD, deprived areas, with diabetes ~ deprived areas	BHF estimate based on Scottish Health Survey 2023 data using NRS population estimates; includes congenital heart disease in children ~ deprivation and comorbidities 2022 data
Forecast of CVD burden	ScotPHO (2022) The Scottish Burden of Disease (SBoD) study www.scotpho.org.uk/comparative-health/burden-of-disease/overview
CVD deaths/year (Scotland) [ICD-10 codes I00-I99, F01, G45, P29, Q20-Q28]	National Records of Scotland (NRS; 2024) Deaths, by gender, age and cause, 2023 www.nrscotland.gov.uk/statistics-and-data/statistics/statistics-by-theme/vital-events/general-publications/vital-events-reference-tables/2023
CVD deaths/year (UK)	BHF analysis of latest UK mortality statistics: ONS/NRS/NISRA (2023 data)
CVD prevalence (UK)	BHF estimate and health surveys with CVD fieldwork; NHS England/Scottish Government/ StatsWales/ DH Northern Ireland
CVD death rates; local death rates (Scotland)	BHF analysis of NRS (2020-22) mortality data for Scottish local authorities; map created in Tableau (NB local data ICD-10 I00-99 only)
CVD healthcare cost; economic (overall) cost	Shah (2024) Economic Burden of Cardiovascular Disease in the UK 2021/22 estimates (LSE dissertation; BHF placement)
Linked conditions: 81% people with CVD have one other condition	Tran et al. Patterns and temporal trends of comorbidity among adult patients with incident cardiovascular disease in the UK between 2000 and 2014: A population-based cohort study. PLoS Med. 2018; 15(3):e1002513. https://doi.org/10.1371/journal.pmed.1002513
CORONARY HEART DISEASE (CHD; ISCHAEMIC HEART DISEASE)	
CHD biggest killer Scotland; vs breast cancer ~ worldwide	National Records of Scotland (2024) Deaths, by gender, age and cause, 2023 www.nrscotland.gov.uk/statistics-and-data/statistics/statistics-by-theme/vital-events/general-publications/vital-events-reference-tables/2023 ~ Global Burden of Disease and World Health Organization, 2021 estimates
CHD death rates	BHF analysis of NRS (2020-22) mortality data for Scottish local authorities; map created in Tableau
living with CHD; sex split	BHF analysis of Public Health Scotland GP SPIRE patient prevalence data 2023 ~ NB estimate based on Scottish Health Survey 2023 is also 210k
Prevalence rates higher in deprived areas	BHF analysis of Scottish Government (2023) Scottish Health Survey 2022 data
Linked conditions: twice as likely to have a stroke	stroke.ahajournals.org/content/22/8/983
HEART ATTACK (MYOCARDIAL INFARCTION, MI)	
10k heart attack hospital admissions / year	Public Health Scotland (to 2023) hospital data three-year average (via correspondence)
More than 7/10 people survive heart attack ~ 1960s estimate	Myocardial infarction total case fatality rates - spatial analysis of linked hospitalisation and mortality data (England analysis) www.thelancet.com/journals/lanpub/article/PIIS2468-2667(22)00108-6/fulltext ~ Goldacre's 2003 paper on myocardial infarction (Oxon) *NB Scottish MI hospital survival data is in PHS Scottish heart disease statistics series; older total Scottish case fatality rates in our 2012 compendium*
150k surviving MI	BHF estimate based on Scottish Health Survey 2021 data using NRS population estimates
ATRIAL FIBRILLATION (AF)	
110k diagnosed with AF	BHF analysis of Public Health Scotland GP patient prevalence data from SPIRE 2023
5 times more likely to have a stroke	Marini C, De Santis F, Sacco S, Contribution atrial fibrillation to.... www.ncbi.nlm.nih.gov/pubmed/15879330
Contributor to 1 in 5 strokes	Royal College of Physicians Sentinel Stroke National Audit Programme (SSNAP) [NB this audit does not include Scotland]

STATISTIC	REFERENCE
HEART FAILURE (HF)	
diagnosed prevalence - by GP	BHF analysis of Public Health Scotland GP patient prevalence data from SPIRE 2023
Further diagnoses in secondary care - UK estimate including secondary care diagnoses over 50% higher	Conrad, N; Judge, A, Tran, J et al. Temporal trends and patterns in heart failure incidence: a population-based study of 4 million individuals, The Lancet, 2018; 391, 10120 www.thelancet.com/journals/lancet/article/PIIS0140-6736(17)32520-5/fulltext?elsca1=tlpr
STROKE (CEREBROVASCULAR DISEASE)	
stroke deaths	National Records of Scotland (2024) Deaths, by gender, age and cause, 2023 www.nrscotland.gov.uk/statistics-and-data/statistics/statistics-by-theme/vital-events/general-publications/vital-events-reference-tables/2023
stroke hospital admissions	Public Health Scotland (to 2023) hospital data – recent three-year average (via correspondence)
stroke/TIA survivors (prevalence)	BHF estimate from Scottish Health Survey 2023 data; NB estimate from Public Health Scotland GP patient prevalence data from SPIRE 2023 is 130k
u75 stroke survivors	BHF analysis of The Health Intelligence Network (THIN) prevalence data, IQVIA/IMRD 2018
prevalence rates higher in deprived areas	BHF analysis of Scottish Government (2023) Scottish Health Survey 2022 data
Linked conditions: People with heart failure are 2-3 times more likely to have a stroke.	stroke.ahajournals.org/content/42/10/2977
Linked conditions: Diabetes and stroke (x2)	www.ncbi.nlm.nih.gov/pmc/articles/PMC5298897/
VASCULAR DEMENTIA	
deaths; underestimate/diagnoses	National Records of Scotland (2024) Deaths, by gender, age and cause, 2023 www.nrscotland.gov.uk/statistics-and-data/statistics/statistics-by-theme/vital-events/general-publications/vital-events-reference-tables/2023 Alzheimer's Society www.alzheimers.org.uk/about-dementia/types-dementia/diagnosis-vascular-dementia
dementia types; up to 1 in 5 cases are vascular	Alzheimer's Society www.alzheimers.org.uk/about-us/policy-and-influencing/what-we-think/demography
UK prevalence	NHS England website www.nhs.uk/conditions/vascular-dementia
Linked conditions: People with a history of heart disease	[for heart attacks] www.ahajournals.org/doi/full/10.1161/circulationaha.117.029127 [for atherosclerosis] www.ncbi.nlm.nih.gov/pmc/articles/PMC2924456/
Linked conditions: ¾ cases in stroke survivors	www.ncbi.nlm.nih.gov/pmc/articles/PMC3235558/
Linked conditions: People with diabetes are 2-3 times more likely to develop vascular dementia	www.ncbi.nlm.nih.gov/pmc/articles/PMC2174783/
OUT-OF-HOSPITAL CARDIAC ARREST (OHCA)	
OHCA volume/year; survival rate Deprivation/survival + bystander CPR; PAD use	Scottish Ambulance Service (2024) Scottish Out-of-Hospital Cardiac Arrest Report 2022-23 www.scottishambulance.com/publications/Out-of-Hospital-Cardiac-Arrest-Annual-Report
Every min & CPR doubles chances of survival	Resuscitation Council (2021) Resuscitation Guidelines 2021 www.resus.org.uk/library/2021-resuscitation-guidelines
CONGENITAL HEART DISEASE	
1:150 babies diagnosed	BHF estimate for Scotland based on NHS England (2024) NCARDRS congenital anomaly statistics: 2021 data https://digital.nhs.uk/data-and-information/publications/statistical/ncardrs-congenital-anomaly-statistics-annual-data/
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
Survival comparison (pre-BHF/today)	MacMahon BMJ https://heart.bmj.com/content/heartjnl/15/2/121.full.pdf and British Cardiac Society https://heart.bmj.com/content/88/suppl_1/i1

STATISTIC	REFERENCE
INHERITED (GENETIC) CONDITIONS	
27k with inherited heart condition; 50k with gene variant	BHF estimate for Scotland derived from PHG Foundation, *Heart to Heart: inherited cardiovascular conditions services* (2009); updated to reflect revised FH/DCM prevalence estimates NB only one third of the burden of dilated cardiomyopathy (DCM) is thought to be inherited – that proportion is included here
1:250 with familial hypercholesterolaemia (FH)	NB average recent prevalence is 1:250 but our preferred reference reports 1:273 Wald et al, NEJM 2016 www.nejm.org/doi/full/10.1056/NEJMoa1602777
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
sudden cardiac deaths under-35s	Cardiac Risk in the Young (www.c-r-y.org.uk/statistics) based on Papadakis et al (2009) Magnitude of sudden cardiac death in young, EP Europace NB see also Bhatia et al (2024) Understanding Cardiac & Sudden Death in Young Individuals, BMJ
RISK FACTORS	
Hypertension - High Blood Pressure	
Adults living with hypertension, control rates	BHF analysis of Scottish Government (to 2024) Scottish Health Survey 2023
Diagnosed numbers (at GP)	BHF analysis of Public Health Scotland GP SPIRE patient prevalence data 2023
Undiagnosed estimates	BHF estimate based on Scottish Health Survey findings and SPIRE data from primary care registers
#1 modifiable risk factor in Scotland	Global Burden of Disease (GBD) Scotland estimates 2021
Linked conditions: Nearly 50% of heart attacks and strokes are associated with high blood pressure	Global Burden of Disease (GBD) Scotland risk burden estimate 2021
Diabetes	
Adults 310k with diagnosed diabetes ~ undiagnosed	BHF analysis of Public Health Scotland GP SPIRE patient prevalence data 2023 ~ NB estimate based on Scottish Health Survey 2023 is also 310k Diabetes UK www.diabetes.org.uk/professionals/position-statements-reports/statistics
Prevalence rates higher in deprived communities	BHF analysis of Scottish Health Survey 2022 data
Diabetes: 2-3 times more likely to develop CVD, twice as likely to die from heart disease or stroke	circ.ahajournals.org/content/59/1/8.short www.ncbi.nlm.nih.gov/pmc/articles/PMC2809299/
Diabetes: In the UK, one third of adults with diabetes die from a heart or circulatory disease	NHS England (2019) National Diabetes Audit, Complications and Mortality, Report 2a, 2017-18, NB data are for England & Wales https://digital.nhs.uk/data-and-information/publications/statistical/national-diabetes-audit/report-2--complications-and-mortality-2017-18
Smoking	
15% of adults smoke ~ up to 670k smokers	Scottish Government (2024) Scottish Health Survey 2023 www.gov.scot/collections/scottish-health-survey/ BHF analysis using NRS population estimates; also ONS Annual Population Survey (APS) 2023 (13.5%)
9k deaths ~ 2k heart and circulatory disease deaths	ASH Scotland ~ Global Burden of Disease (GBD) Scotland mortality estimates
90k admissions	ASH Scotland https://ashscotland.org.uk/learn/facts-statistics/
Other risk factors	
Obesity, physical activity, 5-a-day, alcohol	Scottish Government (2024) Scottish Health Survey 2023 www.gov.scot/collections/scottish-health-survey/ NB latest survey uses revised methodology – results should not be compared directly with pre-pandemic data – adult five-a-day from 2021 survey
Air pollution, high cholesterol, high BMI mortality	Global Burden of Disease (GBD) (2024) Scotland mortality estimates 2021