



## 3.6 Coronary heart disease

Coronary heart disease (CHD) is the leading single cause of disease burden and death in Australia. It occurs when there is a blockage in the blood vessels that supply blood to the heart muscle. There are two major clinical forms—heart attack and angina (see Glossary). CHD is largely preventable, as many of its risk factors are modifiable. These include tobacco smoking, high blood pressure, high blood cholesterol, physical inactivity, poor nutrition, and overweight and obesity (see Chapter 4 for more information on determinants of health).

### How common is coronary heart disease?

In 2014–15, an estimated 645,000 Australians aged 18 and over (3.3% of the adult population) had CHD, based on self-reported estimates from the Australian Bureau of Statistics 2014–15 National Health Survey. The prevalence of CHD increases rapidly with age, affecting around 1 in 6 adults aged 75 and over.

In 2015, based on hospital and mortality data, an estimated 61,600 people aged 25 and over had an acute coronary event in the form of a heart attack or unstable angina—around 170 events every day.

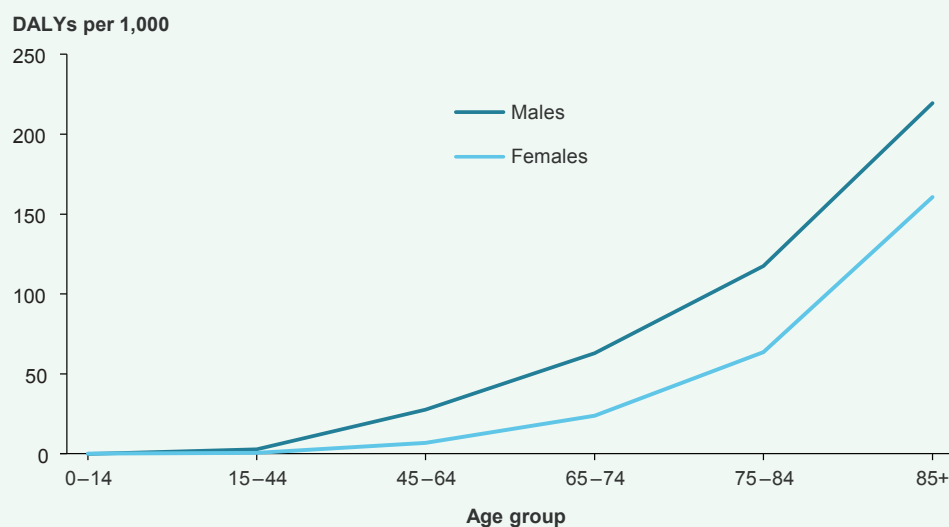
### Impact

#### Burden of disease

In 2011, CHD accounted for 7.7% of the total burden of disease in Australia. It accounted for 12% of the overall fatal burden of disease and 3.2% of the non-fatal burden.

The burden was more than twice as high in males than females and increased rapidly from age 45 onwards—to 17% among people aged 85 and over (Figure 3.6.1).

Figure 3.6.1: Rate of total burden due to CHD, by age and sex, 2011



Source: AIHW 2016; Table S3.6.1.

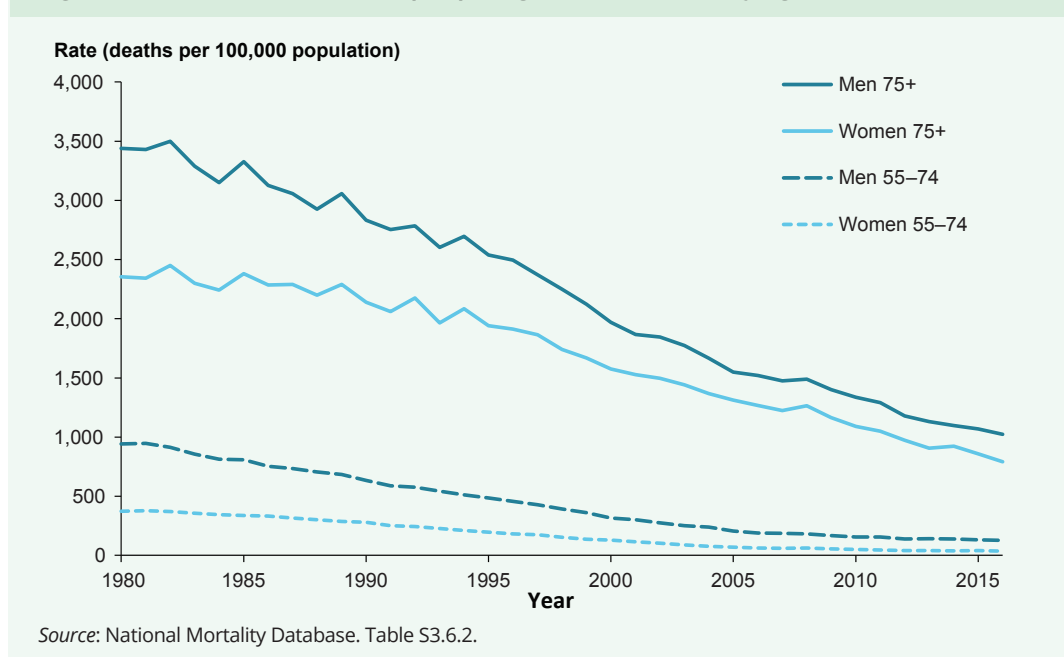


CHD burden can be attributed to several risk factors. In 2011, high blood pressure was responsible for the most CHD burden, estimated at 33%, followed by high cholesterol (28%), overweight and obesity (25%), tobacco use (14%) and physical inactivity (11%). Between 2003 and 2011, the overall burden from CHD reduced by 32%. This was driven largely by a 35% drop in the fatal burden of CHD. The non-fatal burden also fell by 21%.

## Deaths

In 2016, CHD was the leading single cause of death in Australia, accounting for 19,100 deaths as the underlying cause of death. This represents 12% of all deaths, and 43% of cardiovascular deaths. More than 40% (8,000) of CHD deaths resulted from a heart attack. Overall, the CHD death rate has fallen by 79% since 1980, or 4.3% per year. While CHD death rates fell substantially in each age group, the rate of decline was more rapid for those aged 75 and over than for younger age groups (Figure 3.6.2).

Figure 3.6.2: CHD death rates, people aged 55 and over, by age and sex, 1980–2016



## Treatment and management

### Cardiovascular medicines

In 2015, more than 100 million Pharmaceutical Benefits Scheme prescriptions for cardiovascular medicines were dispensed to the Australian community—34% of the total prescription medicines dispensed.

The prescription medicines most commonly dispensed were those to lower blood pressure and to lower blood cholesterol. Dispensing of prescription lipid-modifying agents rose by 66% between 2005 and 2015, while dispensing of calcium channel blockers and renin-angiotensin system agents—both agents to lower blood pressure—increased by 41% and 38%, respectively.





## Hospitalisations

In 2015–16, there were 157,000 hospitalisations where CHD was the principal diagnosis (1.5% of all hospitalisations). Of these, 36% were for heart attack (56,000) and 28% for angina (44,500). Most admissions for heart attack (78%) and angina (63%) were emergency admissions.




Between 2003–04 and 2015–16, the age-standardised rate of hospitalisations declined by 29%, from 804 to 569 hospitalisations per 100,000 population.

CHD was the leading cause of hospitalisation for cardiovascular disease in 2015–16 (28% of all hospitalisations with a principal diagnosis of cardiovascular disease). However, for people aged 85 and over, hospitalisation rates for heart failure and cardiomyopathy were 50% higher than for CHD (5,000 and 3,200 hospitalisations per 100,000 population, respectively), reflecting the increasing need for hospital care for heart failure and cardiomyopathy among the elderly.

Of all CHD hospitalisations, 45% had a coronary angiography (a diagnostic procedure) and 24% underwent revascularisation (surgical procedures to restore blood supply to the heart).

## Variations among population groups

The impact of CHD varies among population groups, with rates being 2.0–3.1 times as high among Aboriginal and Torres Strait Islander people as among non-Indigenous Australians. Generally, the impact of CHD increases with increasing remoteness and socioeconomic disadvantage. Rates were 1.4–2.4 times as high in *Remote/Very remote* areas as in *Major cities*, and 1.3–2.2 times as high in the lowest socioeconomic areas compared with the highest.

Comparing rates for:	 Indigenous / non-Indigenous	 Remote and Very remote / Major cities	 Lowest / highest socioeconomic areas
Having CHD	2.0x	n.a.	2.2x
Hospitalised for CHD	2.4x	1.5x	1.3x
Dying from CHD	2.1x	1.4x	1.6x
Having an acute coronary event	2.7x	n.a.	n.a.
Burden of disease (DALYs)	3.1x	1.7x (Remote) / 2.4x (Very remote)	1.8x

n.a. not available



## What is missing from the picture?

There are no reliable national and jurisdictional data on the number of new cases of CHD or heart failure each year. Proxy measures that combine hospital and mortality data are used to estimate new cases of CHD; however, these methods do not count the less severe cases of CHD that do not result in hospitalisation.

Further information is needed on primary health care and on the long-term outcomes of people treated for CHD. Data linkage can improve the understanding of patient outcomes and pathways through the health system.

## Where do I go for more information?

More information on coronary heart disease is available at <[www.aihw.gov.au/reports-statistics/health-conditions-disability-deaths/heart-stroke-vascular-diseases/overview](http://www.aihw.gov.au/reports-statistics/health-conditions-disability-deaths/heart-stroke-vascular-diseases/overview)>.

The following reports are available for free download on the AIHW website: *Cardiovascular health compendium*, *Trends in cardiovascular deaths*, and *Medicines for cardiovascular disease*.

