



3.1 Burden of disease across the life stages

People experience different health problems at different times of their lives—from infancy and childhood through to old age. Hence, they have different health needs at different life stages. This snapshot presents the leading causes of total burden at each life stage. Life stages are broadly divided into infants, children and young people (aged 0–24), working-age adults (aged 25–74) and older people (aged 75 and over).

Burden of disease analysis is useful to measure the impact of different diseases or injuries on a population. It combines the burden of living with ill health (non-fatal burden) with the burden of dying prematurely (fatal burden). See Box 4.4.1 in Chapter 4.4 ‘Contribution of selected risk factors to burden of disease’ for an explanation of burden of disease analysis.

Disability-adjusted life years (DALYs) is a summary measure of disease burden. One DALY is 1 year of ‘healthy life’ lost due to illness and/or death—the more DALYs associated with a disease or injury, the greater the burden of that disease.

In 2011, 4.5 million DALYs were lost due to illness or premature death.

For all ages combined, the leading cause of total burden was coronary heart disease, at 7.7% of total burden, followed by lung cancer for males and other musculoskeletal conditions for females (Figure 3.1.1).

Figure 3.1.1: Leading causes of total burden, by sex, 2011

	1st	2nd	3rd	4th	5th
Males	Coronary heart disease (9.4%)	Lung cancer (3.9%)	Other musculoskeletal (3.6%)	Suicide and self-inflicted injuries (3.5%)	Back pain and problems (3.4%)
Females	Coronary heart disease (5.8%)	Other musculoskeletal (4.6%)	Dementia (4.6%)	Anxiety disorders (4.1%)	Back pain and problems (3.9%)
Persons	Coronary heart disease (7.7%)	Other musculoskeletal (4.1%)	Back pain and problems (3.6%)	COPD (3.6%)	Lung cancer (3.4%)

■ Cancer
 ■ Cardiovascular
 ■ Respiratory
 ■ Injuries
 ■ Neurological
 ■ Mental
 ■ Musculoskeletal

COPD = chronic obstructive pulmonary disease.

Source: Australian Burden of Disease Study 2011; Table S3.1.1.



Infants, children and young people (aged 0–24)

Infant and congenital conditions accounted for most of the burden in children aged under 5; the 5 leading causes of burden in this age group were all from this disease group (Figure 3.1.2). Nearly three-quarters (72%) of the total burden in this age group were experienced by infants. Among children aged 1–4, other mental disorders (for example, sleep disorders and separation anxiety), asthma and other gastrointestinal infections were the causes contributing the most burden.

Among children aged 5–14, asthma was the leading cause of burden, closely followed by anxiety disorders (Figure 3.1.2). The 5 leading causes of burden in this age group were either mental and substance abuse disorders or respiratory diseases. While asthma and anxiety disorders were the leading 2 causes of burden among boys aged 5–14, this order was reversed among girls in this age group (Supplementary Table S3.1.1). Dental caries also featured in the 10 leading causes of burden among children aged 5–14, reflecting the importance of oral and dental health.

Suicide and self-inflicted injuries and anxiety disorders were the leading causes of burden in young people aged 15–24 (Figure 3.1.2). Among young males, suicide and self-inflicted injuries was the leading cause of burden, followed by alcohol use disorders (Supplementary Table S3.1.1). Among young females, anxiety and depressive disorders were the leading 2 causes of burden.

Figure 3.1.2: Leading causes of total burden among people aged 0–24, by age, 2011

Age group	1st	2nd	3rd	4th	5th
Under 5	Preterm birth and low birthweight complications (16%)	Birth trauma and asphyxia (12%)	Other disorders of infancy (7.2%)	Sudden infant death syndrome (6.3%)	Other congenital conditions (5.5%)
5–14	Asthma (11%)	Anxiety disorders (10%)	Depressive disorders (7.0%)	Conduct disorder (5.8%)	Upper respiratory conditions (5.5%)
15–24	Suicide and self-inflicted injuries (8.4%)	Anxiety disorders (7.5%)	Depressive disorders (6.8%)	Alcohol use disorders (5.6%)	Asthma (5.4%)

■ Infant/congenital
 ■ Respiratory
 ■ Mental
 ■ Injuries

Source: Australian Burden of Disease Study 2011; Table S3.1.1.



Working-age adults (aged 25–74)

Young working-age adults (25–44) experience anxiety disorders as the leading cause of burden, with back pain and problems a close second (Figure 3.1.3). While suicide and self-inflicted injuries is ranked third among leading causes of burden in this age group, it continues to be the leading cause among men aged 25–44 (Supplementary Table S3.1.1).

Coronary heart disease is the leading cause of burden in adults aged 45–64 and persists as the leading cause for all but the oldest age group (figures 3.1.3, 3.1.4). Other musculoskeletal conditions and back pain and problems round out the top 3 causes of burden in this age group. Coronary heart disease is a far greater health problem for men in this age group than for women: men experienced nearly 4 times the burden due to this disease (76,900 DALYs for men compared with 19,500 DALYs for women). The leading cause of disease burden for women aged 45–64 was other musculoskeletal conditions, followed by breast cancer (Supplementary Table S3.1.1).

The older working-age population (aged 65–74) experienced an increasing burden from coronary heart disease (Figure 3.1.3). Chronic conditions such as lung cancer, chronic obstructive pulmonary disease (COPD) and other musculoskeletal conditions made up the top 5.

Figure 3.1.3: Leading causes of total burden among people aged 25–74, by age, 2011

Age group	1st	2nd	3rd	4th	5th
25–44	Anxiety disorders (6.7%)	Back pain and problems (6.5%)	Suicide and self-inflicted injuries (6.4%)	Depressive disorders (6.3%)	Other musculoskeletal (4.7%)
45–64	Coronary heart disease (7.5%)	Other musculoskeletal (5.7%)	Back pain and problems (5.0%)	Lung cancer (4.8%)	Anxiety disorders (3.4%)
65–74	Coronary heart disease (10%)	Lung cancer (6.9%)	COPD (6.4%)	Other musculoskeletal (4.5%)	Diabetes (3.6%)

■ Cancer
 ■ Cardiovascular
 ■ Respiratory
 ■ Mental
 ■ Endocrine
 ■ Musculoskeletal
 ■ Injuries

COPD = chronic obstructive pulmonary disease.

Source: Australian Burden of Disease Study 2011; Table S3.1.1.





Older people (aged 75 and over)

The burden from coronary heart disease was highest among older people aged 75–84 (88,050 DALYs; Figure 3.1.4). Dementia was the second leading cause of burden, followed by COPD, stroke and lung cancer. These diseases are also the 5 leading causes of death in Australia (see Chapter 3.2 'Leading causes of death').

Dementia is more prominent among older people aged 85–94 (Figure 3.1.4). While coronary heart disease is the leading cause of burden in this age group, dementia is a close second, and is the leading cause among women aged 85–94 (Supplementary Table S3.1.1). Stroke is the third leading cause of burden in this age group, among both men and women. The leading causes of burden among very old people (aged 95 and over) includes chronic conditions (dementia, coronary heart disease and stroke; Figure 3.1.4). The top 5 also include infections and injuries, which can be more hazardous to a person's health in older age.

Figure 3.1.4: Leading causes of total burden among people aged 75 and over, by age, 2011

Age group	1st	2nd	3rd	4th	5th
75–84	Coronary heart disease (13%)	Dementia (7.7%)	COPD (6.8%)	Stroke (6.1%)	Lung cancer (4.5%)
85–94	Coronary heart disease (17%)	Dementia (15%)	Stroke (8.6%)	COPD (4.9%)	Diabetes (2.7%)
95+	Dementia (21%)	Coronary heart disease (19%)	Stroke (9.2%)	Lower respiratory infections (3.1%)	Falls (2.8%)

■ Infections
 ■ Cancer
 ■ Cardiovascular
 ■ Respiratory
 ■ Neurological
 ■ Endocrine
 ■ Injuries

COPD = chronic obstructive pulmonary disease.

Source: Australian Burden of Disease Study 2011; Table S3.1.1.

What is missing from the picture?

The Australian Burden of Disease Study 2011 is based on the best available data, and applies methods suited to the Australian context. Yet, there are some limitations to burden of disease analysis, including methods and available data. See *Australian Burden of Disease Study: impact and causes of illness and death in Australia 2011* for a more detailed discussion of these limitations.

Where do I go for more information?

More information on the Australian Burden of Disease Study is available at <www.aihw.gov.au/reports-statistics/health-conditions-disability-deaths/burden-of-disease/overview>.

The report *Australian Burden of Disease Study: impact and causes of illness and death in Australia 2011* and other recent releases are available for free download.