

# CHRONIC DISEASES AND ASSOCIATED RISK FACTORS IN AUSTRALIA, 2006



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# CHRONIC DISEASES AND ASSOCIATED RISK FACTORS IN AUSTRALIA, 2006



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## ABBREVIATIONS

ANZDATA	Australia and New Zealand Dialysis and Transplant Registry
AusDiab	Australian Diabetes, Obesity and Lifestyle Study
CAPANS	Child and Adolescent Physical Activity and Nutrition Survey (WA)
CHD	coronary heart disease
CKD	chronic kidney disease
COPD	chronic obstructive pulmonary disease
ESKD	end-stage kidney disease
IOTF	International Obesity Task Force
NCDS	National Chronic Disease Strategy
NHS	National Health Survey





## This report

In 2002, the Australian Institute of Health and Welfare (AIHW) published *Chronic diseases and associated risk factors in Australia, 2001*. Building on this foundation, this new report presents updated statistics on chronic diseases and their associated risk factors in Australia. It focuses on patterns of disease across the age groups, the prevalence of risk factors and their trends, the impact of chronic diseases on health services in Australia, and differences in chronic diseases and their risk factors across geographical areas, socioeconomic status and Indigenous status.

## Main findings

- Chronic diseases are common: in 2004–05, 77% of Australians had at least one long-term condition; common were asthma (10.0% of the total population), osteoarthritis (7.9%), depression (5.3%) and diabetes (3.5%).
- Chronic diseases can be a problem at all ages: almost 10% of children 0–14 years had three or more long-term conditions; this figure increased to more than 80% for those aged 65 years and over.
- Many people are at risk of developing chronic diseases: for example, 54% of adult Australians are either overweight or obese.
- Some people are affected much more than others: for example, compared with other Australians, Aboriginal and Torres Strait Islander persons have higher mortality from diabetes (14 times higher), chronic kidney disease (8 times) and heart disease (5 times).
- Chronic diseases are a drain on the health system: in 2000–01 they accounted for nearly 70% of the total health expenditure that can be allocated to diseases.

## Other findings

- In 2004 the major chronic diseases featured in this report (excluding depression) accounted for almost 50% of all deaths in Australia; the leading single cause of death was coronary heart disease (25,000), followed by stroke (12,000).
- These same diseases were implicated in 21.6% (or 1.5 million) of all hospital episodes of care in 2003–04; chronic kidney disease alone accounted for nearly 0.8 million episodes.
- Chronic diseases (including cancers) were responsible for more than 80% of the burden of disease and injury; the conditions reported here accounted for 42% of the total burden.
- Older people carry a relatively large share of coronary heart disease, stroke, diabetes, osteoarthritis and osteoporosis.
- The middle ages are not exempt, with large shares of depression, chronic kidney disease and coronary heart disease.



- More than 85% of adults are not consuming enough vegetables.
- One in two adults are not getting sufficient physical activity.
- Almost 50% of adults are not consuming enough fruit.
- Around 21% of adults smoke tobacco.
- Compared with major cities, regional areas of Australia experience higher prevalence of many of the risk factors for chronic disease, such as smoking (11% higher) and excess weight (7% higher); have higher death rates for coronary heart disease, chronic obstructive pulmonary disease, and diabetes; but have lower prevalence of asthma.
- Compared with areas of high socioeconomic status, the least advantaged areas of Australia have higher levels of smoking, physical inactivity and obesity; experience higher prevalence of diabetes, behavioural problems, asthma, heart disease and arthritis; and have higher mortality across most chronic conditions.
- Compared with other Australians, Aboriginal and Torres Strait Islander persons have higher prevalence of smoking, risky alcohol use and excess weight, and have higher rates of asthma, arthritis and diabetes.

## Arthritis

**What is it?** Group of conditions in which there is inflammation of the joints, causing pain, stiffness, disability and deformity. The two most common forms are rheumatoid arthritis and osteoarthritis (see the Glossary for further information on these two forms).

10.4% of all Australians (around 2 million).

**Prevalence** More common among females than males.

Prevalence of osteoarthritis increases with age.

**Mortality** Minor cause of deaths (about 0.3% of all deaths).

Majority of deaths in persons aged 85 years and over.

**Morbidity** 71,000 hospital separations.

Average age at separation 65 years.

Majority of separations in persons aged 65 years and over.

**Health resource use** \$1.18 billion of health system expenditure, equivalent to 2.4% of total health expenditure.

Increase of 52% in per capita expenditure between 1993–94 and 2000–01.

Major component of expenditure is hospital care.

**Inequalities** Prevalence significantly greater in regional areas compared with major cities.

Prevalence significantly higher in disadvantaged areas.

Prevalence among Indigenous Australians more than double that of other Australians.

**Associated risk factors** Physical inactivity (34.0% of adults).

Excess weight (53.5% of adults overweight or obese).

## Asthma

**What is it?** Disease involving inflammation of the air passages, causing episodes of wheezing, chest tightness and shortness of breath. The inflammation can be triggered by exercise, infection, allergens, smoke, and some medications.

**Prevalence** 10.2% of all Australians (around 2 million).

Males slightly lower (9.0%) than females (11.5%).

Prevalence similar across age groups, but highest in 15–24 years age group (12.4%).

**Mortality** Minor cause of death (0.2% of all deaths), but rates high by international standards.

Male death rate lower than female except ages 5–34 years.

Death rate better than halved in past 15 years.

**Morbidity** 38,000 hospital separations.

Average age at separation 24 years.

Majority of separations in persons aged under 15 years.

**Health resource use** \$692 million of health system expenditure, equivalent to 1.4% of total health expenditure.

Increase of 21% in per capita expenditure between 1993–94 and 2000–01.

Major component of expenditure is medications.

**Inequalities** Prevalence not significantly different across regions.

Generally more common in disadvantaged areas.

Substantially more prevalent among Indigenous Australians compared with other Australians.

**Associated risk factors** Tobacco smoking (21.3% of adults current smokers).

Excess weight (53.5% of adults overweight or obese).

## Cardiovascular disease

**What is it?** Group of diseases of the heart and blood vessels—in this report limited to coronary heart disease, in which the blood vessels supplying the heart muscle itself become blocked, causing episodes of chest pain (angina) and possibly heart attack.

**Prevalence** 1.9% of all Australians (around 367,000). Angina makes up the majority of this.

Males (1.3%) higher than females (0.9%) for angina, rates for other conditions similar.

Rates generally increase with age.

**Mortality** Largest single cause of death: 19 out of every 100 deaths (totalling almost 25,000 in 2004).

Male rates about twice those of females.

Death rate declined by around 40% in past decade.

**Morbidity** 164,000 hospital separations.

Average age at separation 67 years.

Majority of separations in persons aged 65 years and over.

**Health resource use** \$1.47 billion of health system expenditure, equivalent to 2.9% of total health expenditure.

Increase of 2% in per capita expenditure between 1993–94 and 2000–01.

Major component of expenditure is hospital care.

**Inequalities** Mortality significantly higher in rural and remote areas compared with major cities.

Mortality significantly higher in disadvantaged areas.

Mortality in Indigenous Australians 5 times that of other Australians.

**Associated risk factors** Tobacco smoking (21.3% of adults current smokers).

High blood pressure (28.8% of adults have treated or untreated high blood pressure).

High cholesterol (51.2% of adults have elevated total cholesterol).

Physical inactivity (34.0% of adults).

Excess weight (53.5% of adults overweight or obese).

Poor diet (46.0% of adults have inadequate fruit consumption; 85.6% have inadequate vegetable consumption).

Excessive alcohol use (13.5% of adults).

### Cerebrovascular disease

**What is it?** Group of disorders of the blood vessels supplying the brain or its covering membranes. A major form is stroke, in which a vessel is either blocked or bleeds, causing part of the brain to be deprived of oxygen. This can result in paralysis or other loss of bodily functions.

**Prevalence** Around 44,000 stroke events every year, or 1.8% of Australians have ever had a stroke.

Males more likely to have stroke than females, but females affected more because they live longer.

Rates increase dramatically with age.

**Mortality** Leading cause of death: 9 out of every 100 deaths (totalling just over 12,000 in 2004). Most (83%) were for people aged 75 years and over.

Male rate slightly higher than female overall.

Death rate declined by almost one-third in past decade.

**Morbidity** 41,000 hospital separations for initial stroke and related incidents; a further 20,000 separations for management of stroke complications.

Average age at separation 72 years.

Majority of separations in persons aged 65 years and over.

**Health resource use** \$894 million of health system expenditure, equivalent to 1.8% of total health expenditure.

Increase of 13% in per capita expenditure between 1993–94 and 2000–01.

Major components of expenditure are hospital care and residential aged care.

**Inequalities** Mortality for males significantly higher in disadvantaged areas.

Mortality in Indigenous Australians 4 times that of other Australians.

**Associated risk factors** Tobacco smoking (21.3% of adults current smokers).

High blood pressure (28.8% of adults have treated or untreated high blood pressure).

High cholesterol (51.2% of adults have elevated total cholesterol).

Physical inactivity (34.0% of adults).

Excess weight (53.5% of adults overweight or obese).

Poor diet (46.0% of adults have inadequate fruit consumption; 85.6% have inadequate vegetable consumption).

Excessive alcohol use (13.5% of adults).

### Chronic kidney disease

**What is it?** Disease involving long-term loss of kidney function. In severe cases, kidney function may deteriorate to the extent that it is no longer sufficient to sustain life (end-stage kidney disease: ESKD), and the person requires dialysis or a kidney transplant.

**Prevalence** Figures available for treated ESKD: 0.7% of population.

Males more likely to have treated ESKD than females.

Rates increase with age.

**Mortality** Major cause of death: 1.8% (totalling almost 2,400 in 2004).

Male rate higher than female.

Minimal change over past decade.

**Morbidity** 780,000 hospital separations (mainly for dialysis).

Average age at separation 61 years.

Majority of separations in persons aged under 65 years.

**Health resource use** \$484 million of health system expenditure, equivalent to 1.0% of total health expenditure.

Nearly all expenditure is for hospital care.

**Inequalities** Mortality for females significantly higher in regional areas compared with major cities.

Mortality significantly higher in disadvantaged areas.

Mortality in Indigenous Australians 8 times that of other Australians.

**Associated risk factors** High blood pressure (28.8% of adults have treated or untreated high blood pressure).

Tobacco smoking (21.3% of adults current smokers).

Excess weight (53.5% of adults overweight or obese).

Poor diet (46.0% of adults have inadequate fruit consumption; 85.6% have inadequate vegetable consumption).

Diabetes is also a significant prior disease in people being treated for ESKD.

### Chronic obstructive pulmonary disease (COPD)

**What is it?** Progressive disease of the lungs and airways resulting in worsening shortness of breath on exertion. The main underlying disease process is emphysema, in which the lung cells are gradually destroyed and the lungs are less able to move air in and out. In COPD this is coupled with chronic bronchitis—the overproduction of mucus in the upper airways—resulting in excessive phlegm and persistent coughing.

**Prevalence** Around 3% of Australian population (590,000) based on self-report data.

Actual rates could be much higher (up to 21% of adults have irreversible airway obstruction).

Rates increase with age.

**Mortality** Leading cause of death: 4 out of every 100 (totalling almost 5,200 in 2004). More than 90% were people aged 65 years and over.

Male rate considerably higher than female.

Death rate about halved since 1980 for males, but increased for females.

**Morbidity** 54,000 hospital separations.

Average age at separation 72 years.

Majority of separations in persons aged 65 years and over.

**Health resource use** \$432 million of health system expenditure, equivalent to 0.9% of total health expenditure.

Increase of 15% in per capita expenditure between 1993–94 and 2000–01.

Major component of expenditure is hospital care.

**Inequalities** Prevalence higher in major cities, but mortality significantly higher in regional areas.

Mortality significantly higher in disadvantaged areas.

Mortality in Indigenous Australians 6 times that of other Australians

**Associated risk factors** Almost exclusively tobacco smoking (21.3% of adults current smokers).

## Colorectal cancer

**What is it?** Malignant tumour of the large intestine or rectum. It develops from abnormal growths, known as polyps, on the internal linings of the colon and the rectum.

**Prevalence** 12,800 new cases in 2001 (projected to 14,600 in 2006).

Male incidence slightly higher than females.

Incidence rises sharply with age.

**Mortality** Major cause of death: 3.1% (4,100 deaths in 2004).

Majority of deaths in people aged 65 years or over.

Males have substantially higher mortality than females.

Death rate declined by 29% over past decade.

**Morbidity** 27,600 hospital separations.

Average age at separation 68 years.

Majority of separations in persons aged 65 years and over.

**Health resource use** \$235 million of health system expenditure, equivalent to 0.5% of total health expenditure.

Increase of 39% in per capita expenditure between 1993–94 and 2000–01.

Major component of expenditure is hospital care.

**Inequalities** No obvious gradient in mortality by region or socioeconomic disadvantage.

Mortality in Indigenous Australians 1.7 times that of other Australians.

**Associated risk factors** Poor diet (46.0% of adults have inadequate fruit consumption; 85.6% have inadequate vegetable consumption).

Physical inactivity (34.0% of adults).

Excessive alcohol use (13.5% of adults).

Excess weight (53.5% of adults overweight or obese).

## Depression

**What is it?** A mood disorder characterised by prolonged feelings of sadness, loss of interest or pleasure in nearly all activities, feelings of hopelessness, suicidal thoughts or self-blame.

**Prevalence** 5.8% of adults.

Similar across age groups, but reduced in persons aged 65 years and over.

**Mortality** Deaths not usually coded for depression, although a portion of suicides will have depression as a factor (suicides often reported as a proxy for depression deaths).

**Morbidity** 80,100 hospital separations.

Average age at separation 48 years.

Majority of separations in persons aged under 25–64 years.

**Health resource use** \$1.00 billion of health system expenditure, equivalent to 2.0% of total health expenditure.

Increase of 41% in per capita expenditure between 1993–94 and 2000–01.

Major components of expenditure are hospital care, medical services and pharmaceuticals.

**Inequalities** Comparative analysis for depression not appropriate.

Mental and behavioural conditions (of which depression is a subset) are significantly more common in disadvantaged areas.

**Associated risk factors** Excessive alcohol use (13.5% of adults).

Excess weight (53.5% of adults overweight or obese).

## Diabetes

**What is it?** A metabolic disease in which high blood glucose levels result from defective insulin secretion or insulin production, or both. The most common form is Type 2, in which there are reduced levels of insulin or the inability of the body cells to properly use insulin.

**Prevalence** Up to 7.5% of adults (around 950,000 Australians), of which a portion are unaware that they have it.

Prevalence greater in males than in females.

Prevalence generally increases with age.

**Mortality** Major cause of death: 2.7% of all deaths (3,600 deaths), and an associated cause for another 8,100 deaths.

Majority of deaths in people aged 65 years and over.

Males have substantially higher mortality than females.

Death rate increased slightly over past decade.

**Morbidity** 66,700 hospital separations.

Average age at separation 62 years.

Majority of separations in persons aged 65 years and over.

**Health resource use** \$812 million of health system expenditure, equivalent to 1.6% of total health expenditure.

Major components of expenditure are hospital care, medical services and pharmaceuticals.

**Inequalities** Generally lower prevalence in regional areas, but significantly higher in disadvantaged areas.

Significantly higher mortality in regional areas and disadvantaged areas.

Mortality for Indigenous Australians 14 times that of other Australians.

**Associated risk factors** Excess weight (53.5% of adults overweight or obese).

Physical inactivity (34.0% of adults).

Poor diet (46.0% of adults have inadequate fruit consumption; 85.6% have inadequate vegetable consumption).

## Lung cancer

**What is it?** A malignant tumour of the lungs. It begins in cells that line the airways and often invades adjacent tissues or spreads elsewhere in the body before symptoms are noticed.

**Prevalence** 8,300 new cases in 2001 (projected to 9,200 in 2006).

Male incidence almost double that of females.

Incidence rises sharply with age, peaking in 70–79 years age group.

**Mortality** Leading cause of death: 5.5% (totalling almost 7,300 in 2004). Nearly three-quarters were for people aged 65 years and over.

Male rate more than double female.

Death rate falling rapidly for males, but slightly increasing for females.

**Morbidity** 17,700 hospital separations.

Average age at separation 69 years.

Majority of separations in persons aged 65 years and over.

**Health resource use** \$136 million of health system expenditure, equivalent to 0.3% of total health expenditure.

Increase of 19% in per capita expenditure between 1993–94 and 2000–01.

Major component of expenditure is hospital care.

**Inequalities** Higher mortality in regional areas, and significantly higher in disadvantaged areas.

Mortality in Indigenous Australians 4 times that of other Australians.

**Associated risk factors** Almost exclusively tobacco smoking (21.3% of adults current smokers).

## Oral disease

**What is it?** Any disease of the mouth, teeth and gums. The two main forms are dental caries (tooth decay) and periodontal (gum) disease.

**Prevalence** 16% of adult population had fewer than 20 natural teeth (a measure of oral disease), and 17% experienced impaired quality of life because of oral disease.

**Mortality** Deaths not usually coded for oral disease as defined above (although there are about 600 deaths per year from cancers of the oral cavity).

**Morbidity** 128,000 hospital separations.

Average age at separation 28 years.

Majority of separations in persons aged under 25 years.

**Health resource use** \$3.3 billion of health system expenditure, equivalent to 6.7% of total health expenditure.

Increase of 39% in per capita expenditure between 1993–94 and 2000–01.

Major component of expenditure is out of hospital medical (dental) services.

**Inequalities** Comparative analysis not reliable.

**Associated risk factors** Poor diet (46.0% of adults have inadequate fruit consumption; 85.6% have inadequate vegetable consumption).

Tobacco smoking (21.3% of adults current smokers).

Excessive alcohol use (13.5% of adults).

## Osteoporosis

**What is it?** A progressive loss of bone density which occurs when calcium dissolves from the bones, leaving them weak and more likely to break.

**Prevalence** 3% of population (based on self-report), or 590,000 Australians.

Self-reported prevalence four times higher for females than for males.

Prevalence rises sharply with age.

**Mortality** Minor cause of death: 0.1% (totalling 180 in 2004).

Male death rate about one-quarter that of females.

Death rate increased slightly over past decade.

**Morbidity** 8,000 hospital separations.

Average age at separation 71 years.

Majority of separations in persons aged 65 years and over.

**Health resource use** \$221 million of health system expenditure, equivalent to 0.4% of total health expenditure.

Major components of expenditure are allied health services and aged care homes.

**Inequalities** Comparative analysis not reliable.

**Associated risk factors** Poor diet (46.0% of adults have inadequate fruit consumption; 85.6% have inadequate vegetable consumption).

Physical inactivity (34.0% of adults).

Tobacco smoking (21.3% of adults current smokers).

Excessive alcohol use (13.5% of adults).