

## 4.10 Diabetes

Diabetes is a chronic condition marked by high levels of glucose in the blood. It is caused either by the inability to produce insulin (a hormone produced by the pancreas to control blood glucose levels), or by the body not being able to use insulin effectively, or both.

The main types of diabetes are: **type 1 diabetes**—a lifelong autoimmune disease that usually has onset in childhood but can be diagnosed at any age; **type 2 diabetes**—usually associated with lifestyle factors and largely preventable; and **gestational diabetes**—when higher-than-normal blood glucose is diagnosed in pregnancy (see Glossary).

Diabetes may progress to a range of health complications, including heart disease, kidney disease, blindness and lower limb amputation. For example, diabetes was the leading cause and accounted for 1 in 3 new cases of end-stage kidney disease requiring dialysis or transplantation, in 2011 (see Chapter 4 'Chronic kidney disease').

While type 1 diabetes is believed to be caused by an interaction of genetic predisposition and environmental factors, type 2 diabetes is largely preventable by maintaining a healthy lifestyle. Modifiable risk factors for type 2 diabetes include physical inactivity, unhealthy diet, obesity, tobacco smoking, high blood pressure and high blood lipids (see Chapter 5 'Biomedical risk factors' and 'Behavioural risk factors').

### How common is diabetes?

- There are an estimated 1 million people aged 2 or over with diagnosed diabetes in Australia. However, this is likely to be an underestimate—for every 4 adults with diagnosed diabetes, there is estimated to be 1 with undiagnosed diabetes (ABS 2013a).
- Of all people with diabetes, around 85% have type 2 diabetes and 12% have type 1 diabetes (ABS 2013a). In addition, gestational diabetes affects about 1 in 20 pregnancies each year.
- Diabetes is becoming more common—the rate of self-reported diabetes more than doubled, from 1.5% to 4.2% of Australians, between 1989–90 and 2011–12.
- In 2011–12, diabetes was more common in men (6%) than women (4%) and was more common in older age groups—affecting 15% of those aged 65–74 compared with 5% for those aged 45–54 (ABS 2013a).
- In 2011, there were around 2,400 new cases of type 1 diabetes, with half of these being among people aged 18 or under. Rates of type 1 diabetes remained stable over 2000–2011, with age-standardised rates of around 10 to 12 new cases per 100,000 population per year.
- In 2011–12, there were around 49,800 new cases of diagnosed type 2 diabetes among people 10 and over, based on preliminary findings. Despite nearly all cases (92%) occurring in those aged 40 and over, there were around 430 new cases among children and young people aged 10–24—even though type 2 diabetes is generally regarded as a disease of adulthood.



## Deaths

- Diabetes was the sixth leading cause of death in Australia in 2011, contributing to 10% of all deaths. In around 4,200 deaths diabetes was the underlying cause and in a further 10,900 it was an associated cause of death (see Glossary for 'cause of death' definitions and Chapter 3 'Multiple causes of death in Australia').

## Health care

- Diabetes was the principal diagnosis for around 40,000 hospitalisations in 2010–11, and was an additional diagnosis for a further 180,000 hospitalisations. Together, these represented 2.5% of all hospitalisations in 2010–11.
- In 2012, almost 8.2 million prescriptions were dispensed for diabetes medicines: 11% for insulin and 89% for other blood glucose-lowering medications, with about half of these being for metformin.
- Between 1992 and 2012, the annual number of prescriptions filled for metformin rose by an average of 8% a year; for other blood glucose-lowering medications the annual rise was 7%, and for insulin it was 5% (Figure 4.13).
- In 2011, about 53,500 people began using insulin to treat their diabetes.
- In 2011, there were 10,510 insulin pump users in Australia—representing 10% of people with type 1 diabetes. Almost half of all insulin pump users were aged under 25.

## Variations among population groups

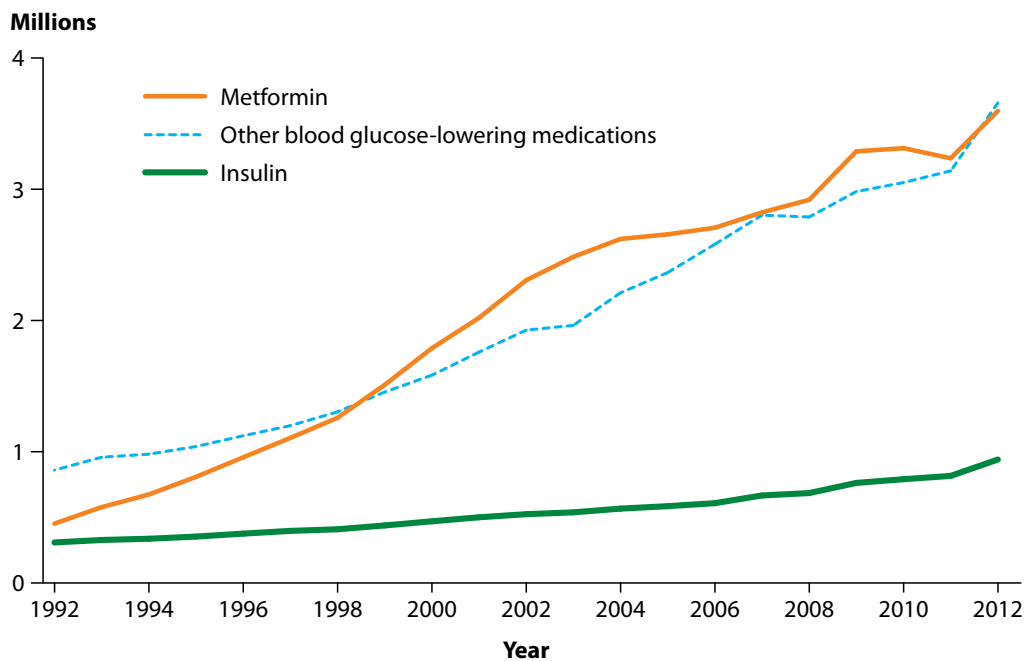
- Aboriginal and Torres Strait Islander people were over three times as likely as non-Indigenous Australians to have diabetes, in particular type 2 diabetes (ABS 2013b).
- People in the lowest socioeconomic status (SES) groups were more likely to have diabetes compared with people in the highest SES groups.
- People living outside *Major cities* were more likely to have diabetes compared with people living in *Major cities* (ABS 2013c).

## What is missing from the picture?

Currently, there is no national data collection on new cases of diagnosed type 2 diabetes each year. Symptoms are often absent in the early stages of diabetes, so people can go undiagnosed for a long time. In addition, there can be problems with misdiagnosis and misreporting of diabetes type.

There is a lack of good information on diabetes in Aboriginal and Torres Strait Islander people and people from different ethnic backgrounds. Further monitoring and surveillance of diabetes is crucial for guiding preventive measures, determining clinical care and informing health policy and service planning.

Figure 4.13



Source: Data extracted by AIHW (January 2013) from the Department of Human Services website.

#### Prescriptions claimed for diabetes medicines, 1992–2012

#### Where do I go for more information?

The following reports are available for free download on the AIHW website:

[Insulin pump use in Australia](#) and [Type 2 diabetes in Australia's children and young people: a working paper](#).

More information will also be available in 2 forthcoming AIHW reports, *Incidence of insulin-treated diabetes in Australia, 2000–2011* and *Cardiovascular, diabetes and kidney disease: Australian facts 2014*.

#### References

ABS (Australian Bureau of Statistics) 2013a. Australian Health Survey 2011–12. Canberra: ABS. Viewed 10 December 2013, <<http://www.abs.gov.au/australianhealthsurvey>>.

ABS 2013b. Australian Aboriginal and Torres Strait Islander Health Survey: first results, 2012–13. ABS cat. no. 4727.0.55.001 Canberra: ABS.

ABS 2013c. Australian Health Survey: updated results, 2011–2012. ABS cat. no. 4364.0.55.003 Canberra: ABS.