1.10. Diabetes prevalence and incidence

Diabetes is a chronic disease, characterised by high levels of glucose in the blood. It occurs either because the pancreas stops producing the hormone insulin (Type 1 diabetes), or through a combination of the pancreas having reduced ability to produce insulin alongside the body being resistant to its action (Type 2 diabetes). People with diabetes are at a greater risk of developing cardiovascular diseases such as heart attack and stroke if the disease is left undiagnosed or poorly controlled. They also have elevated risks for sight loss, foot and leg amputation due to damage to nerves and blood vessels, and renal failure requiring dialysis or transplantation.

Diabetes was the principal cause of death of almost 300 000 persons in OECD countries in 2009, and is the fourth or fifth leading cause of death in most developed countries. Among people who died with diabetes, the main cause of death for approximately half was cardiovascular disease, and renal failure for an additional 10-20%.

Diabetes is increasing rapidly in every part of the world, to the extent that it has now assumed epidemic proportions. Estimates suggest that in OECD countries, 83 million people, or more than 6% of the population aged 20-79 years had diabetes in 2010. If left unchecked, the number of people with diabetes in OECD countries will reach almost 100 million in less than 20 years. This is emphasised by the young age of the diabetic population, with almost half of adults with diabetes aged less than 60 years (IDF, 2009).

Less than 5% of adults aged 20-79 years in Iceland, Norway and the United Kingdom had diabetes in 2010, according to the International Diabetes Federation. This contrasts with Mexico and the United States, where more than 10% of the population of the same age have the disease (Figure 1.10.1). In most OECD countries, between 5 and 10% of the adult population have diabetes.

Type 2 diabetes is largely preventable. A number of risk factors, such as overweight and physical inactivity are modifiable, and can also help reduce the complications that are associated with diabetes. But in most countries, the prevalence of overweight and obesity also continues to increase (see Indicator 2.3 "Overweight and obesity among adults").

Type 1 diabetes accounts for only 10-15% of all diabetes cases. It is the predominant form of the disease in younger age groups in most developed countries. In Nordic countries (Finland, Sweden and Norway) the rate of new cases in children is notably high. Based on disease registers and recent studies, the annual number of new cases in children aged under 15 years is 25 or more per 100 000 population (Figure 1.10.2). In Mexico and Japan the rate is less than five new cases per 100 000 population. Alarmingly, there is evidence that Type 1 diabetes is occurring at an earlier age among children (IDF, 2009).

The economic impact of diabetes is substantial. Health expenditure in OECD countries in 2010 to treat and prevent diabetes and its complications was estimated at USD 345 billion (IDF, 2009). In the United States alone, some USD 116 billion was spent on diabetes-related care in 2007 (ADA, 2008). In Australia, direct health care expenditure on diabetes in 2004-05 accounted for nearly 2% of the recurrent health expenditure (AIHW, 2008a).

Around one-quarter of medical expenditure is spent on controlling elevated blood glucose, another quarter on treating long-term complication of diabetes, and the remainder on additional general medical care (IDF, 2006). Increasing costs reinforce the need to provide effective care for the management of diabetes and its complications (see Indicator 5.2 "Avoidable admissions: Uncontrolled diabetes").

Definition and comparability

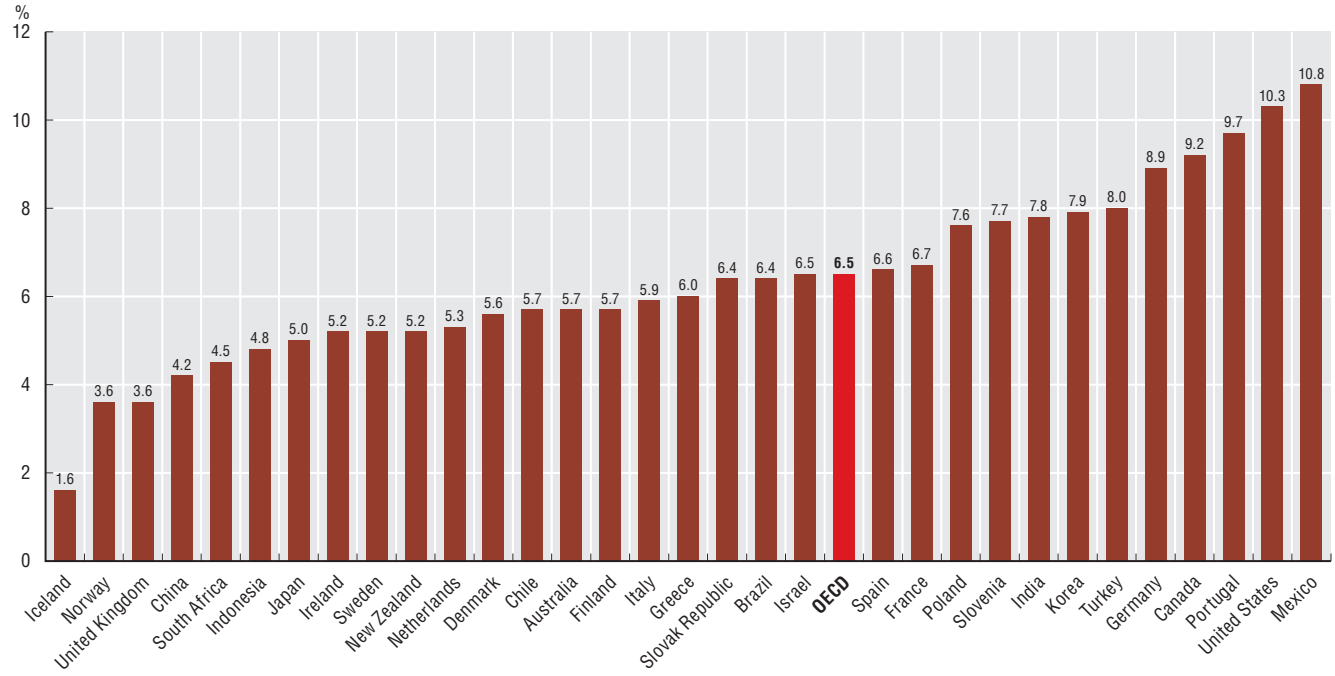
The sources and methods used by the International Diabetes Federation for publishing national prevalence and incidence estimates of diabetes are outlined in their *Diabetes Atlas*, 4th edition (IDF, 2009). Country data were derived from studies published between 1980 and February 2009, and were only included if they met several criteria for reliability.

The IDF noted that studies from several OECD countries – Canada, France, Italy, the Netherlands, Norway, Slovenia and the United Kingdom – only provided self-reported data on diabetes. To account for undiagnosed diabetes, the prevalences of diabetes for the United Kingdom and Canada were multiplied by a factor of 1.5, in accordance with local recommendations (the United Kingdom) and findings from the United States (Canada), and doubled for other countries, based on data from other regional studies.

Prevalence rates were adjusted to the World Standard Population to facilitate cross-national comparisons.

Information on data for Israel: *http://dx.doi.org/10.1787/888932315602*.

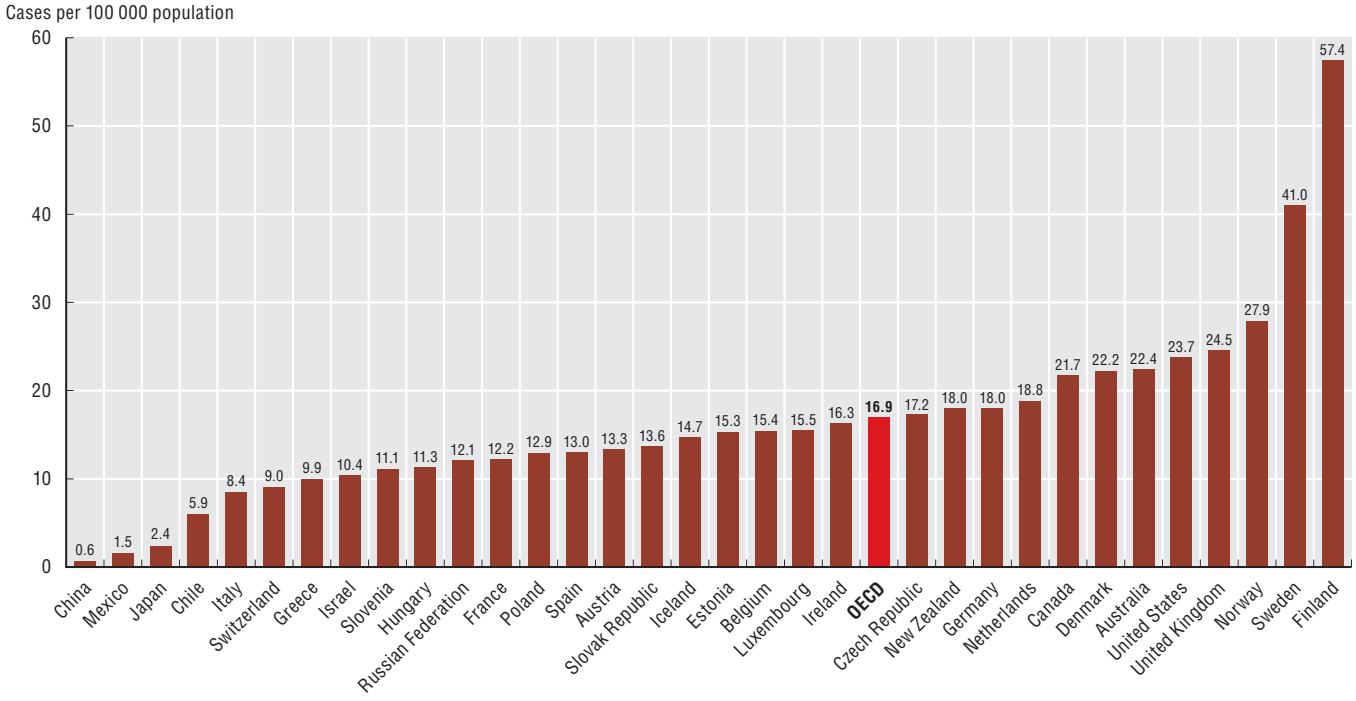
1.10.1 Prevalence estimates of diabetes, adults aged 20-79 years, 2010



Note: The data cover both Type 1 and Type 2 diabetes. Data are age-standardised to the World Standard Population.
Source: IDF (2009).

StatLink http://dx.doi.org/10.1787/888932523747

1.10.2 Incidence estimates of Type 1 diabetes, children aged 0-14 years, 2010



Source: IDF (2009).

StatLink http://dx.doi.org/10.1787/888932523766