What is Type 2 diabetes?

Type 2 diabetes is a chronic condition marked by high levels of sugar in the blood. It occurs when the body does not produce enough insulin (a hormone released by the pancreas). As reported by the Australian Institute for Health and Welfare (AIHW), 88 per cent of those with diabetes have type 2 diabetes, which is estimated to have accounted for 94 per cent of the total burden of diabetes in Australia in 2010.

There are multiple risk factors for type 2 diabetes including age, family history and ethnicity. Others, such as lack of physical activity, poor nutrition, smoking, and poor weight management which leads to being overweight and obesity, mean that type 2 diabetes can be prevented or at least delayed through lifestyle modifications.

People with type 2 diabetes have a higher risk of developing high blood pressure, heart disease, stroke, kidney failure, as well as circulation problems, nerve damage lower limb amputations and impaired vision. Diabetes management involves the prevention of these complications through lifestyle modification as well as the early detection and treatment of complications when they do occur.

The burden of diabetes in Australia

The AIHW has projected diabetes to be the sixth leading cause of burden of disease in Australia, contributing 6.6 per cent of the total disease burden in 2010. According to the National Health Survey 2007-08, about 4 per cent of the Australian population (or 818,200 persons) had type 1 or type 2 diabetes. Since those with type 2 may not have any obvious symptoms and research has shown that for every known case of diabetes there is one undiagnosed, the true prevalence of diabetes is significantly higher. Additionally, around 10 per cent of the population has pre-diabetes, a condition where blood sugar levels are above normal but not high enough to be classified as diabetes. One in three of those with pre-diabetes go on to develop the condition.

According to the National Aboriginal and Torres Strait Islander Health Survey 2004-05, the prevalence of diabetes among Aboriginal and Torres Strait Islander people is 6 per cent, with those living in remote areas having higher rates of diabetes (9 per cent) than their city counterparts (5 per cent). After adjusting for age differences, Aboriginal and Torres Strait Islander people were three times more likely to have diabetes compared to non-Indigenous people (ABS 2006).

A range of health services are involved in the management of diabetes. It is the third most common chronic condition managed by general practitioners and accounted for 8.5 per cent of all hospitalisations in 2007-08. Accordingly, as reported by the AIHW in 2008, diabetes and its related complications accounted for $907 million of direct spending on healthcare in 2004-05. Some years ago it was estimated that the average annual total (direct plus indirect) health cost for an individual with type 2 diabetes was $5,360.

Disproportionate burden of diabetes in rural Australia

Females living in rural and remote Australia are 1.3 times more likely to report diabetes than those living in major cities, whereas rural males are slightly less likely to report the condition. Hospitalisation rates for diabetes were two and three times higher in remote and very remote areas, respectively, than rates in major cities. Similarly, mortality due to diabetes was two and four times higher in remote and very remote areas, respectively, than rates in major cities (AIHW 2008).

The greater burden of illness in rural Australia can be attributed in significant part to the ‘social determinants of health’ – the conditions in which people live, work and play – as described by Michael Marmot in 1999. As reported by the AIHW in 2006 and in the Australian Journal of Rural Health (AJRH) in 2009, people
living in rural and remote Australia have lower socioeconomic status, which is strongly associated with greater health risk factors and poorer health outcomes. Additionally, in 2009 the Australian Bureau of Statistics confirmed that rural residents have higher levels of specific lifestyle-related risk factors for diabetes than those living in major cities: they are more likely to smoke, be physically inactive, eat insufficient fruits and be overweight and obese.

AIHW reports show that rural residents also experience poorer access to preventive and acute health services due to shortages of the health professionals required for early detection and treatment of complications and for management of the condition, including dietitians, optometrists, podiatrists, GPs and diabetes specialists. They also have less access to community infrastructure and to environmental health and safety measures, affordable fresh foods, workplaces large enough to accommodate proactive health measures, a range of sporting clubs, and health-promoting elements of the built environment such as walking and cycling paths.

Prevention and management of diabetes in rural Australia

Currently, the main program in Australia targeted at diabetes prevention is the National Prevention of Type 2 Diabetes Program funded by the Federal Government. The program is implemented by the Australian General Practice Network under the name of Reset Your Life or, in Victoria, Go for Your Life. The program targets people referred by their GP who are at high risk of developing type 2 diabetes. It aims to reduce the participants’ risk of developing type 2 diabetes through lifestyle modification programs rolled out over a 6-month period. It covers nutrition, exercise, goal setting, motivation, stress management, as well as smoking and alcohol cessation. Importantly, such lifestyle modification programs have been found to be effective in primary healthcare settings in rural Australia (Laatikainen et al 2007).

Other national programs include the Healthy Communities Initiative and Healthy Workers Initiative to promote physical activity, healthy eating, smoking cessation and the safe consumption of alcohol in the community setting and workplace respectively. A social marketing campaign to reduce obesity is to be undertaken by the newly established National Preventive Health Agency.

Despite the programs already in place, Australia spent just $2.2 billion, a mere 2.3 percent of its total health expenditure, on health promotion measures in the financial year 2007-08. This national proportion must be increased and, in particular, sufficient resources should be allocated to meet the health needs of rural Australians, who face disproportionately high rates of a number of chronic conditions and associated health risk factors. This may well entail positive discrimination for country areas - meaning a disproportionate amount of health promotion expenditure being for rural and remote areas.

Interventions targeted at diabetes prevention and management need to be supported by efforts to reduce poverty and unemployment and to improve employment and educational opportunities, working conditions, housing and public transport in rural communities. Such strategies should include both upstream and downstream measures, and a ‘whole-of-society’ approach involving non-health sectors such as education, employment, transport, housing, welfare, taxation and private and community agencies.

Rural communities are extremely diverse in terms of geographic, economic, environmental and socio-demographic characteristics. This means that interventions to prevent and manage diabetes in rural communities need to be localised and developed through community consultation. Programs targeted at Indigenous people will need to be culturally appropriate and adopt a holistic approach to health and wellbeing.

Interventions for the management of diabetes must address the specific barriers to self-management that have been identified in rural Australia and were reported in the AJRH in 2007. These include the sometimes asymptomatic nature of diabetes, lack of awareness of what services are available, and low levels of knowledge about diabetes. Self-management is also hindered by the impacts of life stresses and circumstances that make it difficult for individuals to make appropriate lifestyle changes.

Further resources

- Diabetes Australia  
  www.diabetesaustralia.com.au
- Australian Diabetes Council  
  www.australiadiabetescouncil.com
- Australian Indigenous HealthInfoNet  
  www.healthinfonet.ecu.edu.au/chronic-conditions/diabetes