



Amputations evidence

There are more than 4,400 amputations every year in Australia as a result of diabetes.¹

This is the second highest rate in the developed world.²

In 2005, more than 1000 people with diabetes died as a direct result of foot ulcers and lower limb wounds – around 8% of all diabetes related deaths.³

Every year there are 10,000 hospital admissions in Australia for diabetes-related foot ulcers in Australia – many of these end with people having a limb, or part of a limb, amputated.⁴

Recent data suggests rates of diabetes-related amputations increased by over 30% between 1998 and 2011 – clearly this is unsustainable.⁵

Experts estimate diabetic foot disease costs Australia around \$875 million every single year.⁶

The average cost of a diabetes-related limb amputation is around \$23,555, and an additional annual spend of \$6,065 every year afterwards. Over five years a diabetes related amputation costs the health system almost \$50,000 and that doesn't include social costs.⁷

Recent new research suggests investing in evidence-based care for Australians with diabetic foot ulcers could save around \$2.7 billion over five years. That is around \$9,000 per person aged under 75 and \$12,000 per person aged over 75 (both over five years).⁸

Patients with diabetic foot ulcers have morbidity and mortality rates on par with aggressive forms of cancer.⁹

Diabetes complications – like diabetic foot ulcers – massively increases the cost of providing healthcare to people with diabetes. For instance, the cost of providing healthcare to someone who has had a diabetic foot ulcer is more than five times higher (5.4) than providing healthcare to someone who doesn't have a foot ulcer.¹⁰

¹ Australian Commission on Safety and Quality in Health Care, (2016). *Australian Atlas of Healthcare Variation*. [online] Australian Government. Available at: <http://www.safetyandquality.gov.au/atlas/> [Accessed 29 Jun. 2016].

² Bureau of Health Information: Healthcare in focus: how NSW compares internationally. Sydney: NSW Government; 2008.

³ Diabetes. (2008). Canberra: Australian Government, Australian Institute of Health and Welfare.

⁴ Davis, W., Norman, P., Bruce, D. and Davis, T. (2006). Predictors, consequences and costs of diabetes-related lower extremity amputation complicating type 2 diabetes: The Fremantle Diabetes Study. *Diabetologia*, 49(11), pp.2634-2641.

⁵ Lazzarini, P., Gurr, J., Rogers, J., Schox, A. and Bergin, S. (2012). Diabetes foot disease: the Cinderella of Australian diabetes management?. *Journal of Foot and Ankle Research*, 5(1), p.24.

⁶ Based on research from the Australian Diabetic Foot Network.

⁷ Lazzarini, P., Gurr, J., Rogers, J., Schox, A. and Bergin, S. (2012). Diabetes foot disease: the Cinderella of Australian diabetes management?. *Journal of Foot and Ankle Research*, 5(1), p.24.

⁸ Cheng, Q., Lazzarini, P., Gibb, M., Derhy, P., Kinnear, E., Burn, E., Graves, N. and Norman, R. (2016). A cost-effectiveness analysis of optimal care for diabetic foot ulcers in Australia. *International Wound Journal*.

⁹ Armstrong, D., Kanda, V., Lavery, L., Marston, W., Mills, J. and Boulton, A. (2013). Mind the Gap: Disparity Between Research Funding and Costs of Care for Diabetic Foot Ulcers. *Diabetes Care*, 36(7), pp.1815-1817.

¹⁰ Armstrong, D., Kanda, V., Lavery, L., Marston, W., Mills, J. and Boulton, A. (2013). Mind the Gap: Disparity Between Research Funding and Costs of Care for Diabetic Foot Ulcers. *Diabetes Care*, 36(7), pp.1815-1817.

Limb amputations are threatening to bankrupt our hospital system. People with diabetes hospitalised for lower limb amputation have longer stays in hospital than other diabetes-related conditions. The average length of stay is around 26 days.¹¹

Research shows it is possible to reduce preventable amputations and hospitalisation by as much between 24 to 90%.¹²

Around 85% of diabetes related amputations are preventable if wounds are detected early and managed appropriately.¹³

Amputations state-by-state

These figures are based on a percentage of total NDSS registrants in each state. They should not be used for state-by-state comparisons.

ACT:	57
NSW:	1,450
NT:	52
QLD:	821
SA:	370
TAS:	101
VIC:	1,108
WA:	439

Aboriginal and Torres Strait Islander statistics

Aboriginal and Torres Strait Islander Australians with diabetes are 38 times more likely to undergo a major leg amputation compared to non-Indigenous Australians with diabetes. They are also 27 times more likely to undergo a minor leg amputation.¹⁴

Nearly all (98%) of amputations in Aboriginal and Torres Strait Islander people are related to diabetes.¹⁵

Caring for your feet - Individual

According to the Annual Cycle of Care for Diabetes Management people with diabetes should have their feet checked by a professional twice a year.¹⁶

People with diabetes should check their feet every day for signs of redness, ulcers, unusual swelling, blisters, ingrown nails, bruising or cuts.¹⁷

You should seek medical treatment within 7 days if you see broken skin between your toes, calluses, corns, changes in foot shape, cracked skin or changes in nail colours.¹⁸

All diabetes-related foot ulcers should be managed by a doctor and a podiatrist and/or wound care nurse.

Good foot healthcare requires removing dead, damaged or infected tissue, dressing wounds appropriately, ensuring pressure in feet is distributed evenly and managing blood glucose levels.

¹¹ Diabetes. (2008). Canberra: Australian Government, Australian Institute of Health and Welfare.

¹² Australasian Podiatry Council (APoC): *Diabetes amputation and hospitalisation reduction program (DAHRP): Budget submission from the Australasian Podiatry Council 2012*. Melbourne: Australasian Podiatry Council; 2012.

¹³ Bakker, K., Apelqvist, J. and Schaper, N. (2012). Practical guidelines on the management and prevention of the diabetic foot 2011. *Diabetes/Metabolism Research and Reviews*, 28, pp.225-231.

¹⁴ Norman PE, Schoen DE, Gurr JM, Kolybaba ML. High rates of amputation among Indigenous people in Western Australia [letter]. *Med J Aust* 2010; 192: 421.

¹⁵ Norman PE, Schoen DE, Gurr JM, Kolybaba ML. High rates of amputation among Indigenous people in Western Australia [letter]. *Med J Aust* 2010; 192: 421.

¹⁶ Aihw.gov.au. (2016). *Annual cycle of care (AIHW)*. [online] Available at: <http://www.aihw.gov.au/diabetes-indicators/annual-cycle-of-care/> [Accessed 31 May 2016].

¹⁷ Diabetesaustralia.com.au. (2016). *Foot care*. [online] Available at: <https://www.diabetesaustralia.com.au/foot-care> [Accessed 30 May 2016].

¹⁸ Diabetesaustralia.com.au. (2016). *Foot care*. [online] Available at: <https://www.diabetesaustralia.com.au/foot-care> [Accessed 30 May 2016].

Care for your feet – health sector reforms

Too many Australians are slipping through the cracks and missing out on vital foot checks because they don't understand what they need to look after their feet.

Better self management education helps people understand the risk of amputation and what they can do to check their own feet.

We need to increase access to services like diabetes educators, podiatrists, and other allied health services to ensure people can get the support they need.

We need to implement standard models of multi-disciplinary foot care teams across the nation. At the moment we have one team for every one million Australians, we need to lift that to about one team for every one hundred thousand Australian.

Success stories

In Western Australia the Fremantle Diabetes Study observed a 70% fall in rates of amputation over a 15 year period. This was achieved by ensuring better access to health services including coordinated multidisciplinary care and better education.¹⁹

Improved models of care have helped drive a 20% reduction in diabetes foot-related hospitalisations and amputations within five years.²⁰

General statistics

Diabetes is the single biggest challenge confronting Australia's health system in the 21st century.

Diabetes is estimated to cost the Australian economy around \$14.6 billion per annum.²¹

Nationwide prevalence:

Type 1 diabetes:	118,845
Type 2 diabetes:	1,092,040
Gestational :	37,348
Other :	7,837
Total :	1,256,070 ²²

Around 1.7 million Australians have diabetes. This includes all types of diagnosed diabetes (1.2 known and registered) as well as silent, undiagnosed type 2 diabetes (up to 500,000 estimated).

An estimated 2 million Australians have pre-diabetes and are at high risk of developing type 2 diabetes in coming years.

Evidence shows type 2 diabetes can be prevented in up to 58% of high risk cases.

280 Australians develop diabetes every day. That's one person every five minutes.

¹⁹ Baba, M., Davis, W., Norman, P. and Davis, T. (2015). Temporal changes in the prevalence and associates of diabetes-related lower extremity amputations in patients with type 2 diabetes: the Fremantle Diabetes Study. *Cardiovasc Diabetol*, 14(1).

²⁰ Lazzarini, P., O'Rourke, S., Russell, A., Derhy, P. and Kamp, M. (2013). Reduction in the incidence of diabetes lower extremity amputations in Queensland: 2005-2010. *Journal of Foot and Ankle Research*, 6(Suppl 1), p.020.

²¹ Lee, C., Colagiuri, R., Magliano, D., Cameron, A., Shaw, J., Zimmet, P. and Colagiuri, S. (2013). The cost of diabetes in adults in Australia. *Diabetes Research and Clinical Practice*, 99(3), pp.385-390.

²² National Diabetes Services Scheme figures. - June 2017

Internationally

Globally, there are more than 415 million people living with all types of diabetes. That is around one in 11 adults.²³

Globally around \$673 billion is spent on diabetes - around 12 per cent of global health expenditure.²⁴

There are around 5 million deaths per annum for diabetes and related conditions – that is one person every six seconds.²⁵

By 2040, the International Diabetes Federation estimates diabetes-related health spending will top \$800 billion.²⁶

By 2040, more than 642 million people will be living with diabetes, around 10 per cent of all adults.²⁷

The seriousness of diabetes

There is no such thing as ‘mild’ diabetes.

All types of diabetes are serious, progressive and complex diseases which can have a major impact on quality of life and life-expectancy.

Early diagnosis, optimal treatment and effective ongoing support and management reduce the risk of diabetes-related complications.

Diabetes:

- is the leading cause of blindness in adults²⁸
- is a leading cause of kidney failure and dialysis²⁹
- is the leading cause of preventable limb amputations³⁰
- increases the risk of heart attacks and stroke by up to four times.³¹

Types of diabetes

Type 1 diabetes is a serious, autoimmune condition in which the cells in the pancreas that produce insulin are destroyed. Type 1 diabetes can occur at any age but it generally occurs in children and young adults. Type 1 diabetes is not linked to lifestyle factors, it cannot be cured and it cannot be prevented.

Type 2 diabetes is a serious, progressive and complex condition in which the body becomes resistant to the normal effects of insulin and/or gradually loses the capacity to produce enough insulin. We don't know what causes type 2 diabetes, however it is associated with both genetic and modifiable lifestyle risk factors.

Gestational diabetes is a form of diabetes that occurs in about 5-10 per cent of pregnancies and usually disappears after birth. It significantly increases a woman's risk of developing type 2 diabetes in the future.

²³ IDF Diabetes Atlas. (2015). Brussels: International Diabetes Federation.

²⁴ Ibid.

²⁵ Ibid.

²⁶ Ibid.

²⁷ Ibid.

²⁸ Shaw, J., Tanamas, S., eds. (2012). *Diabetes: the silent pandemic and its impact on Australia*. Melbourne: Baker IDI Heart and Diabetes Institute.

²⁹ Tanamas, S.K., Magliano, D.J., Lynch, B., Sethi, P., Willenberg, L., Polkinghorne, K.R., Chadban, S., Dunstan, D., Shaw, J.E. (2013). *AusDiab 2012. The Australia Diabetes, Obesity and Lifestyle Study*. Melbourne: Baker IDI Heart and Diabetes Institute.

³⁰ Shaw, J., Tanamas, S., eds. (2012). *Diabetes: the silent pandemic and its impact on Australia*. Melbourne: Baker IDI Heart and Diabetes Institute.

³¹ Shaw, J., Tanamas, S., eds. (2012). *Diabetes: the silent pandemic and its impact on Australia*. Melbourne: Baker IDI Heart and Diabetes Institute.