Diabetic foot ulceration doubles mortality risk

Diabetic foot ulceration was associated with a nearly two-fold increased risk for mortality, above diabetes alone, according to a meta-analysis.

The meta-analysis reviewed eight studies published between 1996 and 2011 with a total of 17,830 patients. The studies included both people living with type 1 and type 2 diabetes in the United States, Europe and Australasia.

It was found that people with diabetic foot ulceration have a higher risk of all-cause mortality when compared with people living with diabetes without a history of foot ulceration.

It is known that the risks for cardiovascular disease are approximately double for people living with diabetes than those people without diabetes.

However, the researchers suggest that the increased mortality risk among patients with diabetic foot ulcerations is not just the result of cardiovascular disease.

Research Jack Brownrigg, BSc, from St. George’s Vascular Institute London has said that he and his colleagues have provided the largest scale of evidence to date that patients with diabetic foot ulcerations have a higher risk of all-cause mortality compared with patients with diabetes who do not have a history of foot ulceration.

The study suggests in order to attenuate the excess mortality associated with diabetic foot ulceration, strategies are required to focus on both more aggressive modifications of cardiovascular risk factors and basic ulcer prevention.

Excess mortality rates in patients with diabetic foot ulceration may also relate to their more advanced stage of diabetes, with greater overall disease burden and non-cardiovascular complications.

- The results of the study found 3,095 patients with diabetic foot ulceration had a significantly longer duration of diabetes at 12.72 years, compared with the 14,735 patients without diabetic foot ulcerations (7.19 years: P < .005).

- The prevalence of coronary artery disease was significantly higher among those with diabetic foot ulceration (31.4% versus 14.7%), as was that of hypertension (57.6% versus 35.7%) and hypercholesterolemia (47.6% versus 11.1%), with all P values <00.1.

- During follow-up, there was a total of 3,619 deaths from any cause. The diabetic foot ulceration population had a 1.89 pooled relative risk (95% confidence interval [CI], 1.60 – 2.23) for all-cause mortality compared with the patients without diabetic foot ulceration. Unadjusted rates of all-cause mortality were 99.9 per 1,000 person-years for the diabetic foot ulceration population versus 41.6 per 1,000 in the diabetes-only group.

- Further analysis of a total of 3,138 patients in four studies for whom information on cardiovascular mortality was available shows rates of fatal myocardial infarction and fatal stroke were also higher among those with diabetic foot ulceration, with relative risks of 2.22 (95% CI, 1.09 – 4.53) and 1.41 (95% CI, 0.61 – 3.24) respectively.

- The overall proportion of deaths resulting from cardiovascular causes was almost the same in the diabetic foot ulceration and non-diabetic foot ulceration population; 43.6% of the 117 diabetic foot ulceration population and 44.2% of the 952 diabetes-only population. The findings imply the excess cardiovascular risk observed in people with diabetes foot ulceration only partly accounts for the increased mortality rate.

All health professionals have a role to play with diabetes foot care. Baker IDI Heart & Diabetes Institute have developed the National Evidence-Based Guideline: Prevention, Identification and Management of Foot Complications in Diabetes. This guideline is an update of the National Evidence Based Guidelines for the Management of Type 2 Diabetes Mellitus, Part 6 Detection and Prevention of Foot Problems in Type 2 Diabetes (2005).

For more information visit our website.
Insulin research reveals trends in use

Two studies were recently presented at the Annual Scientific Meeting of the Australian Diabetes Society and the Australian Diabetes Educators Association 2012 Conference at the Gold Coast.

1. A national picture of insulin pump use in Australia

This study sought to provide up-to-date national information about insulin pump use by Australians with type 1 diabetes.

Using National Diabetes Services Scheme (NDSS) data, the study found:

- As at June 2011, 10,500 Australians with type 1 diabetes were using insulin pumps.
- Pump users were more likely to be female.
- Male pump users were younger than female pump users.
- The average age of pump users is significantly younger than the average of people living with type 1 diabetes.
- About 70 per cent of pump users lived in major cities, 21 per cent in inner regional areas, 9 per cent in outer regional and 1 per cent in very remote areas.

The study found a shift in diabetes management; approximately 18 per cent of people diagnosed with type 1 diabetes in 2009 started using a pump within two years of their diagnosis, compared with less than 1 per cent among those diagnosed in 1997 or earlier.

2. Psychological insulin resistance in Australians with type 2 diabetes already using insulin: Results from Diabetes MILES-Australia

For many people with type 2 diabetes, insulin therapy is inevitable for effective management of blood glucose. New research shows one-quarter of people with type 2 diabetes are unwilling to begin insulin therapy.

This negative appraisal is known as psychological insulin resistance (PIR) but little is known about whether negative attitudes persist once insulin use commences.

The aim of the study was to identify how insulin is perceived among people with type 2 diabetes already using insulin, and how this relates to clinical and psychosocial outcomes.

The 2011 MILES (Management and Impact for Long-term Empowerment and Success) collated clinical and psychosocial data including validated measures of insulin resistance, evidence of an inverse association between blood lipid levels and eating frequency during weight maintenance.

The study concluded overall, current evidence does not suggest manipulating eating frequency greatly benefits weight and health.

Professor Sandra Capra AM PhD FDAA has been President of the Dietitians Association, was awarded life membership for service in 2011 and was made a Fellow in 2005.

To snack or not to snack?

The recent 16th International Congress of Dietetics Conference in Sydney hosted the best and brightest of the international dietetic community.

‘To snack or not to snack?’ was the topic discussed by Professor Sandra Capra at the conference.

The aim of Capra’s study was to examine whether there is adequate scientific evidence available to support the manipulation of eating frequently for improving body weight and diabetes.

Although current weight management guidelines suggest eating regularly, speculation occurs widely whether snacking assists with managing weight.

Long-term evidence suggests eating frequency does not affect weight, blood glucose, insulin control, hunger or energy expenditure.

There is consistent short-term evidence of an inverse association between blood lipid levels and eating frequency during weight maintenance.

The study concluded overall, current evidence does not suggest manipulating eating frequency greatly benefits weight and health.

For more information visit our website.
After her warm reception at a recent Sunshine Coast education event run by Diabetes Queensland, we asked Sandra Peters to share the secrets of her multi-system approach to health care.

Tell us about your background?
I studied in the United Kingdom graduating in 1985 and completed my general practice training in 1990. In 1991, I made the permanent move to Australia and have been working in general practice ever since.

My area of interest is chronic disease management, particularly focusing on education.

My recent work has been in far north-western Queensland in the Doomadgee community, as part of the chronic disease management team. I really enjoy this role because I get to work as part of a team to achieve the best outcome for patients.

Is diabetes a large part of your work?
In Doomadgee, a significant number of the patients I see have diabetes.

I feel passionate about working to achieve better outcomes for Indigenous people living with diabetes and other chronic diseases.

Education is vital – we spend a lot of time discussing food choices and lifestyle modification with patients, and their families. This enables patients to look at the bigger lifestyle picture.

What do you do differently that makes your work special?
Like any GP, I am just doing the best I can in sometimes challenging conditions.

I am passionate about good communication.

I believe educating patients about their condition helps them to make informed decisions and set realistic management goals.

My aim is to give patients as much information as possible so they feel comfortable to ask questions.

I can talk underwater with a mouthful of marbles, so my patients get a lot of information!

When conducting an examination, I try to ensure all patients with diabetes have a multi-system examination; checking their blood pressure, weight, waist measurement, feet, injection sites, heart and eyes (once a year) and pathology tests every three months.

Is diabetes a big challenge for GPs in general?
The population is ageing, and growing less active – this means increasing weight and waist measurements.

If diabetes is not a big challenge in an individual practice yet – you can rest assured it will be, just give it time.

What is the most important message you give to a diabetes patient?
Small changes have big impacts – small gains in control can have big impacts on reducing the risk of complications.

What would you like to see for people with diabetes in Australia?
I would like to think that over the next few years we can improve access to specialist allied health care for all people with diabetes to reduce adverse outcomes from complications.
One of Australia’s top public health experts Professor Mike Daube from Curtin University helped lead the charge for plain packaging in tobacco and recently made a passionate defense of public health at the Health Media Club in Brisbane.

“Health departments around Australia are suffering from reorganisation fatigue. Our system is as good as any around the world – yet governments seem to think it will benefit from a diet of constant reorganisation.

The phrase ‘frontline services’ seems to have been used a lot. The definition of ‘frontline’ offered by the Queensland Premier appears to be those who spend 75 per cent of their time interacting with the public.

There are innumerable key health professionals – from pathology to pharmacy – who barely interact with the public, if they do at all.

My concern about the ‘frontline’ term is in relation to public health. As in the rest of Australia, Queenslanders enjoy a good life expectancy.

At the start of the last century, you could have expected to live to 50 or 55 if you were lucky, you can now expect to live to around 80 for males, 84 for females – and that is still rising.

Much of this amazing progress has come from public health – the sanitary revolution, safe water, safe food, a safe environment, followed by community-focused measures and programs in areas from immunization to road safety, with more recently a decline in smoking.

All of these – all of them – have been hard won against opposition for philosophical reasons, for commercial reasons, because people did not understand the evidence, and simply because of resistance to change.

We have since seen opposition to measures to protect our food and our environment, opposition to immunisation and road safety and tobacco control measures.

Almost all action and legislation in these areas eventuated because governments were pressed by public health organisations – unthinkable if they had been gagged.

As well as traditional public health, recent decades have seen enormous advances in knowledge and action to address issues such as smoking, alcohol and the rising tide of obesity.

When around two-thirds of adults and one-quarter of our kids are overweight or obese, we have in every sense a colossal problem.”

This is an extract from Professor Daube’s speech, which is available in full at www.healthmediaclub.com.au.

The Queensland Government’s response to these sentiments in media and parliamentary statements has been to remain committed to devolving tertiary service provision to local areas.

Minister for Health Lawrence Springborg said in a recent media release, “Like other states, Queensland has changed to meet the reform agenda and that includes a greater Commonwealth contribution to prevention measures and to allied health.”

The Government points to tough decisions needing to be made in light of the state’s budgetary position.

The Minister said, “Under national health reform, Queensland Health would continue to provide supplementary functions such as health and medical research co-ordination, public health epidemiology and public health data management led by the Chief Health Officer.”

“A reduced number of preventive health programs provided by the State would retain a significant impact as Medicare Locals began to fulfill their prescribed function.”

The Government has confirmed Queensland Health grant contracts now include clauses preventing non-government organisations advocating for state and federal legislative change stating, “We’re making it clear that we want to fund outcomes but not advocacy”.

In his speech at the inaugural Health Media Club lunch, the Minister recognised that “a stitch in time saves nine,” but also called for greater demarcation around issues of chronic disease and preventable disease flagging a “dramatic investment” in sub-acute care.

He reiterated the Government’s commitment to health prevention campaigns and preventing chronic disease, but thought that while there had been success in some areas such as skin cancer and smoking, there had been less success regarding obesity.

Health team journal club

Each fortnight the Diabetes Queensland Health Team review the latest public health and diabetes-related journal articles, guidelines and conference presentations. Network News presents one of the most interesting articles.

ADIPS Consensus Guidelines for the Testing and Diagnosis of Gestational Diabetes Mellitus (GDM) in Australia.

The new Consensus Guidelines released by the Australasian Diabetes in Pregnancy Society (ADIPS) this year, mark a significant shift from the previous recommendations formulated in 1991.

They are the consequence of examination by the International Association of Diabetes and Pregnancy Study Groups (IADPSG) of the data resulting from the Hyperglycemia and Adverse Pregnancy Outcome study (HAPO) published in 2008.

The HAPO study provided evidence of a strong link between increasing maternal glucose levels at 24–32 weeks gestation and adverse outcomes for both mother and child.

The most significant change to the 1991 guidelines is the removal of the 50 gram or 75 gram one hour glucose challenge test. Instead, all women not known to have GDM are recommended to undergo a 75g Oral Glucose Tolerance Test (OGTT) at 24–28 weeks gestation.

A diagnosis of GDM is then made if one or more of the following glucose levels are elevated;

Fasting ≥ 5.1mmol/L
1-hr glucose ≥10.0mmol/L
2-hr glucose ≥8.5mmol/L

There is also no need for a 3 day high carbohydrate diet before the OGTT.

The Consensus Guidelines describe, but not do currently recommend, the use of a new category - ‘overt diabetes in pregnancy’.

This category was proposed by the IADPSG based on the increasing number of women with significant hyperglycaemia early in pregnancy, potentially flagging the existence of diabetes prior to the pregnancy.

To avoid confusion the new guidelines still recommend that a definitive diagnosis of non gestational diabetes should only be made post partum.

Also discussed in the paper are the real and potential impacts the new guidelines will have on the provision of health care and on the rate of GDM diagnosis.

The ADIPS Consensus Guidelines, endorsed by various national organisations, dramatically change the landscape in terms of GDM diagnosis.

For more information visit our website.

Gestational Diabetes Mellitus Project - Statewide Diabetes Clinical Network

The aim of this Queensland Health project is to develop a statewide standardised best practice approach to the diagnosis and management of GDM and the development of accompanying educational and associated resources.

The project will be conducted over a two year period with a completion date of May, 2014.

For more information, please contact Alison Barry on alison.barry2@mater.org.au or phone (07) 3163 6342.

Youth Transition Survey

Diabetes Australia conducted the Youth Transition Survey and found a significant number of young people living with type 1 diabetes are being overlooked by the Australian healthcare system when they transition into adult diabetes clinics.

Many young people become independent when they turn 18.

While this is an exciting time it can also be challenging as they begin to book appointments themselves, see the doctor unaccompanied, and purchase their own medication as they begin to self-manage their diabetes.

One of the key findings in the survey indicated almost half of the 18 to 24 year olds (49 per cent) and 71 per cent of the 14 to 17 year olds had never discussed transitioning to an adult service with a health care professional.

This is surprising given the fact almost every young person surveyed indicated services were being provided at their clinic by a diabetes nurse educator.

The survey also found young people feel nervous, lost and unsupported when it comes time to transition into adult diabetes clinics.

Diabetes Australia is now considering introducing a Transition Liaison Coordinator program to assist young people with their transition and to be the person they call for support.

Of the 1,436 participants surveyed, 91 per cent indicated they were positive about this idea.

The report was funded by the National Diabetes Services Scheme (NDSS).

For a full copy of the report, visit our website.
Sleep Disorders and Type 2 Diabetes | Uncovering the link

A common sleeping disorder called Obstructive Sleep Apnoea (OSA) not only robs people of beneficial sleep and rest but has a direct relationship with diabetes.

OSA is a disorder in which the person affected stops breathing during the night, often hundreds of times. The links between sleep apnoea and type 2 diabetes have led the International Diabetes Federation to recommend that all people with diabetes should be screened for sleep apnoea.

Sleep physician at SNORE Australia, Dr John Corbett, said it had long been suspected that sleep apnoea was associated with type 2 diabetes and research has now confirmed the link beyond doubt.

OSA results in disrupted sleep, altered cardiovascular function and serious metabolic changes – so much so that untreated, moderate-to-severe OSA results on average in a 17-year reduction in life expectancy. This is partly because patients with OSA are at greater risk of having high blood pressure, coronary heart disease and strokes.

“These often go hand-in-hand with type 2 diabetes, which is why diabetes is more common in patients with sleep apnoea,” Dr Corbett said.

“There are direct links between type 2 diabetes and sleep apnoea. Research has shown that sleep apnoea is an independent risk factor for diabetes and metabolic syndrome and the more severe the sleep apnoea, the worse the risk.

“There is strong evidence that everyone with diabetes should undergo a sleep study - a specialised medical test for sleep disorders such as OSA. Once OSA is diagnosed, the gold standard therapy is CPAP (Continuous Positive Airway Pressure) therapy.”

“Patients with the disorder usually snore, wake unrefreshed and are tired during the day. Some people are aware or have been told by others that they have the problem but many people with OSA do not recognise their symptoms and it is estimated that up to 80% go undiagnosed.”

SNORE Australia is the largest provider of sleep studies in Australia. Together with Air LIQUIDE Healthcare, SNORE’s preferred provider of CPAP therapy, a partnership has been formed with Diabetes Queensland to address the importance of the link between diabetes and obstructive sleep apnoea.

Dr Corbett said SNORE wants to help people with diabetes obtain improved access to high-quality sleep study services and sleep apnoea treatments through their Queensland wide facilities.

There is strong evidence that everyone with diabetes should undergo a sleep study – a specialised medical test for sleep disorders such as OSA.
The best bits to keep you in the loop

‘Global Guidelines for Type 2 Diabetes 2012’

The International Diabetes Federation (IDF) has revised the 2005 guidelines.

In 2005 the first IDF ‘Global Guidelines for Type 2 Diabetes’ were developed.

IDF found that the ‘Levels of Care’ approach has been partially successful.

The ‘Global Guidelines for Type 2 Diabetes’ represents an update of the first guidelines and extends the evidence base by including new studies and treatments that have emerged since the original guidelines were produced in 2005.

For a full copy of the guidelines, visit our website.

Advice on new Austroads ‘Assessing Fitness to Drive 2012’

New medical standards came into effect for drivers of both private and commercial vehicles, in March 2012.

The new standards are contained in the Austroads document ‘Assessing Fitness to Drive 2012’, which replaced the previous standards (‘Assessing Fitness to Drive 2003’).

The new medical standards have created some concerns and confusion for some people living with diabetes.


For more information visit www.austroads.com.au/assessing-fitness-to-drive

The Federal Government has announced the Medicare Chronic Disease Dental Scheme will close on 1 December 2012

This means dental services previously covered by the scheme will cease and patients will instead have to cover the full cost of these services themselves.

Patients who have a GP Management Plan, Team Care Arrangements or a Multidisciplinary Care Plan in place before 8 September 2012, and have a referral for dental services, will be able to use the unspent dental benefits.

The unspent amount must be used before 1 December 2012 – services that commence after this date will not be covered.

Dental practitioners and GPs have been advised of the closure of the scheme. No alternative to comprehensively replace the scheme has yet been announced.

Child Dental Benefits Schedule to commence 1 January 2014

The Child Dental Benefits Scheme will provide a capped benefit entitlement for basic dental services for children aged between 2 -17 years.

The family means-test will apply. Services for basic essential dental treatment including check-ups, Xrays, fillings and extractions will be covered.

Further information about these changes is available on the Department of Health and Ageing’s Website at www.health.gov.au/dental.

Specific questions about eligibility for the closing dental scheme, or entitlements, should be directed to the Department of Human Services on 132 011.

More than 50% of people with type 2 diabetes have Obstructive Sleep Apnoea (OSA)

There are many potential indicators of OSA:

- Excessive daytime tiredness
- Snoring during sleep
- Waking with a dry mouth
- Cessation of breathing during sleep
- Being overweight
- Waking unrefreshed
- Having high blood pressure
- Having type 2 diabetes

The International Diabetes Federation recommends that all people with diabetes should investigate whether they have Obstructive Sleep Apnoea (OSA). A sleep study is the best way of determining whether someone is affected by OSA.

SNORE Australia is the largest provider of ‘Level One’ sleep studies in Australia, operating over 15 sleep clinics across Queensland. SNORE specialises in the investigation and management of all sleep-disorders, providing the highest standard of bulk-billed and private in-patient sleep studies.

For more information phone 1800 076 673 or visit www.snoreaualtralia.com.au

Proud Partners of Diabetes Queensland
Ongoing management for people living with diabetes

**Diabetes – What Now?** This diabetes self-management program is for people living with type 2 diabetes who are newly diagnosed or who have not had any diabetes education. Diabetes – What Now? is typically run over two weeks with a two-hour session each week. It is currently run in North and South Brisbane and in the Cairns, Warwick, Roma and Hervey Bay Regions.

**EXPOsing diabetes:** The educational program for people with type 1 and 2 diabetes is delivered as a consumer expo throughout metropolitan and regional Queensland. The expo provides the opportunity for people with diabetes to hear from experts and get practical tips to help in self-management.

**Virtual Shopping Tour:** The two-hour classroom based session provides practical information on how to make healthier choices at the supermarket. Delivered by a dietitian, it covers topics such as healthy eating for diabetes, interpreting ingredients lists, nutrition claims and reading food labels.

Find out more

**Programs**
Diabetes Queensland delivers these programs along with other health professionals around the state.

For programs administered by other health professionals, please note dates and locations will be updated by the local facilitators.

Check the website for programs in your local area, as well as contact details. To find out more visit [www.diabetesqld.org.au](http://www.diabetesqld.org.au) and click on Get Involved.

**Resources**