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- Who is the average AusDiab participant?
- The latest AusDiab research results
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- AusDiab attracts top international researchers

Newsletter of the AusDiab Study: 2007

AusDiab: wins Research Excellence award

Confirming that AusDiab is a high quality research study of great importance to improving the health of all Australians, the AusDiab study was awarded the 2006 Victorian Department of Human Services Public Health Research Award for Excellence.

Presented by the Minister for Health, The Hon. Bronwyn Pike, MP, the award was accepted by Professor Jonathan Shaw (who co-directs the AusDiab study with Professor Paul Zimmet AO), together with members of the AusDiab team.

"This award acknowledges not only our dedicated team of skilled researchers but also the thousands of volunteers who have participated in the study so far." - Professor Paul Zimmet

Currently, preparations have begun for the third stage of AusDiab. This will involve the researchers re-visiting all the study's participants, and recruiting another 20,000 people, so that we can again benchmark the nation's health and conduct comparisons with the first stage on the rate of diabetes and related conditions, such as obesity and kidney disease.



From Left: Liz Barr, Jonathan Shaw, The Hon. Bronwyn Pike MP, Shirley Murray, Adrian Cameron

A Global Sharing of Knowledge – Meet our Visiting Researchers

The AusDiab team is fortunate to have visiting researchers from all over the world who come to work on analysing data from the project, encouraging a constant exchange of information and knowledge, adding to our understanding of diabetes and increasing the international reputation of the AusDiab study.

Over the past 12 months, we have had four visiting researchers working with the AusDiab team:

Dr Beverely Balkau

Recently awarded the 2007 Kelly West Award for Outstanding Achievement in Epidemiology, Beverley has been based in Paris for the last 20 years, working for INSERM (the French Medical Research Council) as a Director of Research in the epidemiology department. Interested now in being based part-time in both France and Melbourne, Beverley is hoping to form collaborations with French and Australian researchers – ‘to encourage a flow of people, and the development of new skills, in both directions.’ Beverley greatly enjoys working with the AusDiab team, which she says has a lively research base and a strong collegial atmosphere.



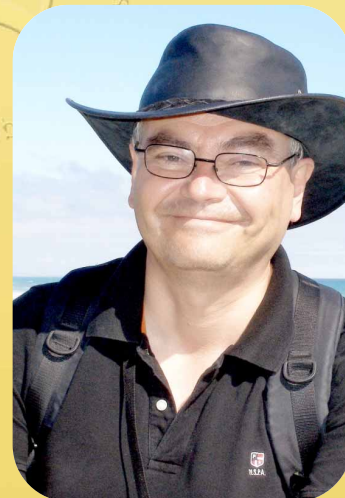
Assistant Professor Sung-Rae Kim

Sung-Rae Kim recently commenced a 12 month period working at the International Diabetes Institute where he hopes to learn as much as he can about the epidemiology of diabetes. He is the first diabetes physician from Korea to visit the Institute, and his ultimate aim is to return to Seoul, and establish a diabetes research institute like ours. While in Australia, Sung-Rae will work with the AusDiab team on analysing data with a specific focus on diabetes complications.

Associate Professor Stefan Söderberg

Based at Umea University, Sweden, Stefan is a cardiologist, and comes annually to work with our research team, concentrating specifically on the development of diabetes and cardiovascular disease in relation to obesity and adipokines (hormones produced by fat tissue). ‘I am so grateful for this opportunity to be part of two countries and cultures’ says Stefan, who works with both AusDiab data and data from a series of similar surveys conducted in Mauritius since 1987.

Stefan brings a wealth of experience to the team, and his research is making excellent progress, with Stefan presenting his work at numerous international conferences.



Professor Ed Boyko

One of the world’s leading epidemiologists in the diabetes field - Ed Boyko from the University of Washington is spending 12 months at the International Diabetes Institute. In conjunction with the AusDiab team, Ed is principally looking at the predictors of diabetes and hypertension. Ed won the University of Washington Medicine Award for Outstanding Mentorship in 2004, so this is also a valuable opportunity for our young researchers to receive his mentoring. ‘I enjoy collaborating with researchers who have particular issues and problems to work out, as I very much enjoy problem solving’. Ed spent his last sabbatical period working at the International Diabetes Institute in the late 1990s and consequently has seen how our research team has evolved over the last eight years. ‘Overall, the Institute has a more developed and assured research team now, with more investigators and a greater focus on Australian studies’.

Disseminating results from AusDiab to the world...

Peer-reviewed journal publications over the last 12 months

Hoy WE, Kondalsamy-Chennakesavan S, Wang S, Briganti E, Shaw J, Polkinghorne K, Chadban S and the AusDiab Study Group. Quantifying the excess risk for proteinuria, hypertension and diabetes in Australian Aborigines: comparison of profiles in three remote communities in the Northern Territory with those in the AusDiab study. *Australian/New Zealand Journal of Public Health* 2007.

Chen L, Peeters A, Magliano DJ, Shaw JE, Welborn TA, Wolfe R, Zimmet PZ, Tonkin AM. Relationship between anthropometric measures and absolute cardiovascular risk estimates in the Australian Diabetes, Obesity and Lifestyle (AusDiab) Study, 1999-2000. *European Journal of Cardiovascular and Preventive Rehabilitation*, 2007.

Cameron AJ, Magliano DJ, Zimmet PZ, Welborn T, Shaw J. The metabolic syndrome in Australia: prevalence using four definitions. *Diabetes Research and Clinical Practice* 2007.

Dunstan D, Salmon J, Healy G, Shaw J, Jolley D, Zimmet P, Owen N. Association of television viewing with fasting and 2-hr post-challenge plasma glucose levels in adults without diagnosed diabetes. *Diabetes Care* 2007;30:516-522.

Dwyer T, Hosmer DW, Hosmer T, Blizzard CL, Blair SN, Granger RH, Shaw JE, Zimmet PZ, Cochrane JA, Dunstan D. The inverse relationship between number of steps per day and obesity in a population-based sample — the AusDiab Study. *International Journal of Obesity* 2006 Oct 17.

Healy GN, Dunstan DW, Shaw JE, Zimmet PZ, Owen N. Beneficial associations of physical activity with two-hour, but not fasting blood glucose in Australian adults: the AusDiab Study. *Diabetes Care* 2006;29:2598-2604.

Tapp RJ, Dunstan DW, Phillips P, Tonkin A, Zimmet PZ, Shaw JE on behalf of the AusDiab study group. Association between impaired glucose metabolism and quality of life: results from the Australian Diabetes Obesity and Lifestyle Study. *Diabetes Research and Clinical Practice* 2006;74:154-161.

Since it began in 1999, almost fifty peer-reviewed scientific publications in International journals have been written using the results from AusDiab

During the first week of December 2006, in beautiful and hospitable Cape Town, more than 12,200 delegates gathered for the 19th International Diabetes Federation (IDF) World Congress. The Institute was represented by a number of staff who were there at the Congress presenting posters, chairing scientific sessions or as invited speakers on AusDiab data. Over the past 12 months, the latest research from AusDiab has also been presented at major conferences in Barcelona, Copenhagen, Florida and Washington. Below are the details of those presentations...

Conferences where AusDiab material has been presented

Rogers SL, Tikellis G, Harper CA, Shaw JE, Zimmet PZ, Mitchell P, Taylor HR, Wang JJ, Wong TY. Retinal vascular caliber and the 5-year cumulative prevalence of retinopathy lesions in an Australian population: The AusDiab Study. *Association for Research in Vision and Ophthalmology*. Florida May 2007.

Tikellis G, Shaw JE, Simpson R, Zimmet PZ, Rogers S, Wang JJ, Mitchell Paul, Taylor HR. Wong TY. The relationship of retinal vascular caliber to diabetes, glycemia and retinopathy. *The Australian Diabetes, Obesity and Lifestyle Study (AusDiab)*. *Association for Research in Vision and Ophthalmology*. Florida May 2007.

Cameron AJ, Shaw JE, Tonkin AM, Magliano D, Zimmet PZ. Is the Metabolic Syndrome a useful and necessary tool for the prediction of diabetes? *The AusDiab study*. *Prediabetes and the Metabolic Syndrome conference*, Barcelona, April 2007

Shaw JE, Magliano DJ, Barr ELM, Dunstan DW, Cameron A, Welborn TA Zimmet PZ. Incidence of diabetes in Australia: the AusDiab study. *IDF Cape Town*, December 2006.

Magliano DJ, Barr ELM, Polkinghorne K, Atkins RC, Tapp R, Chadban S, Zimmet PZ, Shaw JE. Microalbuminuria and risk of mortality. *IDF Cape Town*, December 2006.

Dunstan DW, Barr ELM, Magliano DJ, Salmon J, Owen N, Jolley D, Shaw JE, Zimmet PZ. Physical inactivity and all-cause mortality in Australians with 'undiagnosed' impaired glucose metabolism. *The AusDiab Study*. *European Association for the Study of Diabetes conference*, Copenhagen-Malmoe, September 2006.

Barr ELM, Zimmet PZ, Welborn TA, Shaw JE. Two-hour post-load glucose: an independent predictor of 5-year all-cause mortality. *European Association for the Study of Diabetes conference*, Copenhagen-Malmoe, September 2006.

Tapp R, Shaw J, Tonkin A, Taylor H, Dunstan D, Barr E, Harper CA, Welborn T, Zimmet P. Retinopathy, neuropathy and peripheral arterial disease as independent predictors of all-cause mortality: results from the Australian Diabetes, Obesity and Lifestyle Study (AusDiab). *American Diabetes Association conference*, Washington June 2006.



Who is the 'average' AusDiab participant?

AusDiab participants come from across Australia and each person is a unique individual. However, thanks to modern computer power, using all the participants' information we are able to provide statistics on the 'average' AusDiab man and woman.

How do you compare with the average AusDiab person below?

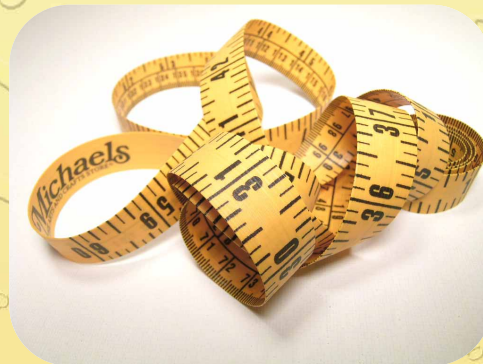
The average AusDiab man:

- Is 47.6 years old
- Is 175.8cm tall
- Weighs 83kg
- Has a pulse of 68
- Has a blood pressure of 130/74mmHg
- Has a waist circumference of 96cm
- Has a hip circumference of 104cm
- Has a BMI of 27kg/m²



The average AusDiab woman:

- Is 48.9 years old
- Is 162.1cm tall
- Weighs 69kg
- Has a pulse of 72
- Has a blood pressure of 125/67mmHg
- Has a waist circumference of 84cm
- Has a hip circumference of 105cm
- Has a BMI of 26kg/m²



More interesting facts from AusDiab:

Family history of diabetes

- 17.1% reported that either their father or mother had been diagnosed with diabetes.

Diet and food

- 2.2% were vegetarian.
- 74% of participants ate 3 or more vegetables per day.
- The four most commonly eaten vegetables were potatoes, lettuce or salad greens, carrots and onions.
- The four most commonly eaten fruits were bananas, apples, oranges and pears.
- 44.7% reported eating 2 or more pieces of fruit per day and almost one quarter reported eating less than one piece of fruit per day.
- 46% of people ate less than one egg per week.
- 15% drank no alcohol within the last 12 months.
- 30% reported drinking beer (light or full strength) at least once per week.
- 34% reported drinking either red or white wine at least once per week.
- 16% reported drinking fortified wines or spirits at least once per week.



Blood pressure and cholesterol

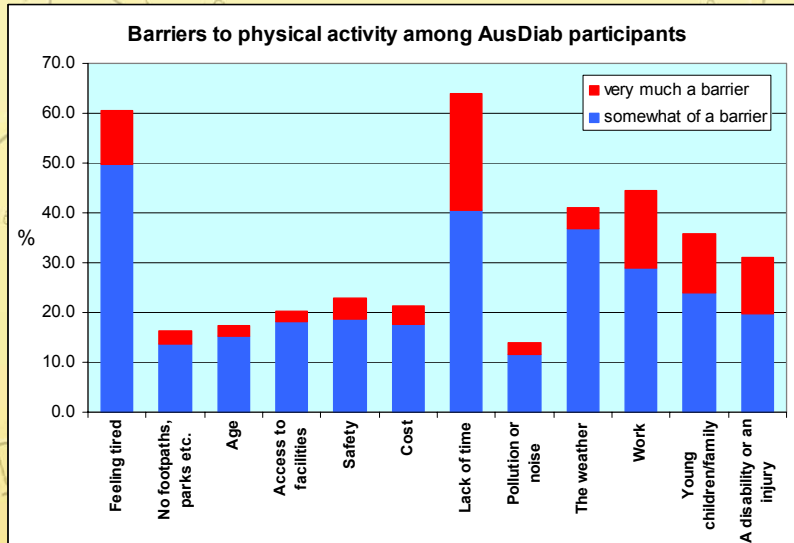
- 63% had their blood pressure measured within the last six months, and 79% within the last year.
- 13.5% were taking tablets for high blood pressure, and 7.5% were taking tablets to lower cholesterol.

TV viewing, physical activity and weight

- The average number of hours of TV watched per week was 12.5 and the average number of hours spent doing physical activity was 4.5.
- 23% were trying to lose weight, 21% were trying to avoid gaining weight and 54% were not doing anything in particular for their weight.

Barriers to physical activity

The lack of physical activity is an important risk factor for the development of type 2 diabetes. Why Australians are reducing their physical activity levels is a significant question for diabetes researchers. One of the questions asked to all AusDiab participants related to what prevented them from participating in physical activity, (i.e. what barriers did they encounter?) The graph below shows that lack of time and feeling tired are the most common barriers.



The AusDiab heart disease and stroke sub-study

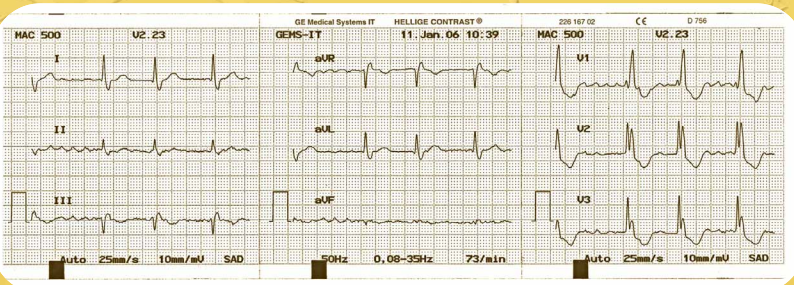
Despite the fact that in Australia less people have been dying from cardiovascular disease (e.g. heart attacks and stroke) since the 1960s, it continues to represent the most significant public health and economic burden for Australians. In 2001, over 1.1 million people reported having a cardiovascular disease related disability in Australia and it accounts for the largest number of hospital admissions. Consequently there is a clear need to continue to investigate strategies that will lead to the early detection and improved management of this condition.




Because of this, at the 2004-05 AusDiab survey, participants were asked whether they had ever experienced a heart attack, stroke, coronary artery angioplasty, or coronary artery bypass surgery. For those who reported having any of these events, more details about the approximate date of the event and the hospital where they were admitted were also obtained.

'In 2001, over 1.1 million people reported having a cardiovascular disease related disability in Australia and it accounts for the largest number of hospital admissions'

With funding from the National Heart Foundation and the consent of those participants who reported a cardiovascular disease event, two AusDiab researchers, Liz Barr and Shirley Murray, are currently collecting medical record information on some 600 events (strokes and heart problems) from over 140 hospitals and doctor's surgeries around Australia. Data collection began in Victoria in December 2006 and is expected to be finalised by June 2007. A team of clinicians will then adjudicate the events, providing excellent data for heart disease and stroke in AusDiab. This will then allow for a full investigation of the risk factors for this serious and often debilitating condition.





DEATH DEFYING FEAT

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For more details on AusDiab and LIFT FOR LIFE, visit the website at: www.diabetes.com.au