



Features:

- Key findings of the follow up study
- AusDiab 2005 hits the headlines
- Meet the experts
- Why are you so important?

Newsletter of the AusDiab Study: 2006

AusDiab:

what have we found?

Thankyou to all of you who participated in the AusDiab five year follow-up

On behalf of the principal investigators, collaborators and staff of the AusDiab survey, we would like to thank all of you who gave up your precious time to once again participate in this landmark study.

Almost nine thousand of the original 11,247 Australians participated in some way in the AusDiab follow-up study, giving us for the first time a picture of how diseases such as diabetes, obesity, kidney disease, stroke, cardiovascular disease and the metabolic syndrome develop over time. The AusDiab study is now unique in the developed world as a study following up a representative national population.

The results from the baseline study in 1999-2000 showed that one million people had diabetes, another two million had prediabetes and more than 60% of adults were either overweight or obese. The results have now been reported in the world's media and over 30 peer-reviewed scientific publications. Armed with this information, policy makers throughout Australia are able to make informed decisions about health priorities and requirements.

The results of the follow-up of this population have now given Australia more accurate information on diabetes and its consequences than is possessed by almost any other nation. From the preliminary results, released to the media by Health Minister, The Hon. Tony Abbott MP on May 15th, 2006, we are forming an understanding of the increased risk to all Australians of developing diabetes and its appalling complications if lifestyle changes are not implemented.

With the support of the National Health and Medical Research Council, as well as our collaborators and funding partners throughout Australia, we intend to continue this ground-breaking work by once again following the progress of the AusDiab participants to 2010 and beyond.

It is only through the generous time donated by yourselves, the participants, that we are able to continue with this crucial national study and be confident of the results. While the five year follow-up does not paint a positive picture of the health of Australians, the information gained is an important tool and will be instrumental in shaping health policies and preventive measures.

In closing, we once again thank you for your contribution to the study. We hope you will continue to support the study and hope you enjoy this newsletter outlining some of the highlights of the five year follow-up.

With thanks,

Professor Paul Z Zimmet AO,
AusDiab Principal Investigator

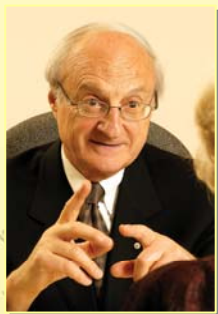
Assoc. Professor Jonathan Shaw
AusDiab Principal Investigator



The Report of the AusDiab five year follow-up is launched by Federal Health Minister, Tony Abbott MP

MEET THE EXPERTS

Professor Paul Zimmet AO MD PhD FRACP FRCP FTSE



Professor Zimmet has served as the International Diabetes Institute's Professor Director since founding the organisation in 1985. IDI is a World Health Organization Collaborating Centre for the Epidemiology of Diabetes. He is also Professor of Diabetes at Monash University and a Professor at Deakin University and the Graduate School of Public Health at the University of Pittsburgh in the United States. He is regarded as one of the world's leading diabetes researchers.

In 1993, he was made a Member in the Order of Australia (AM) for services to medicine and education, particularly in the field of diabetes. In 2001, he was further honoured as an Officer in the Order of Australia (AO) for distinguished services to medical research of national and international significance, particularly in the field of diabetes, as a leader of investigations into social, nutritional and lifestyle diseases, and to biotechnology development in Australia.

Professor Zimmet has served on the Australian Government's Strategic Taskforce on Diabetes, and has also been a member of numerous WHO, international and national committees addressing the issue of chronic diseases and nutrition. Earlier this year, he was admitted as a Fellow of the Australian Academy of Technological Sciences and Engineering for his achievements in science and biotechnology.

Associate Professor Jonathan Shaw MD, MRCP, FRACP

Associate Professor Jonathan Shaw is IDI's Deputy Director, Director of Research and a Consultant Physician at the Institute. He is also Honorary Associate Professor at Monash University's Department of Epidemiology and Preventive Medicine, and at Monash University's Department of Medicine.

Jonathan was born and educated in the UK and worked in various British hospitals after graduating from Leeds University. He worked as a Research Fellow in Diabetes at IDI between 1997 and 1999 before taking up his current post at IDI in 2001. His research interests are diabetes epidemiology, the metabolic syndrome, pre-diabetes and diabetic complications.

He is a member of several national and international Diabetes working groups, including the World Health Organization Expert Committee on the diagnosis of diabetes. With Professor Zimmet, Jonathan is also co-Chief Investigator in the AusDiab study.



The International Diabetes Institute coordinates the AusDiab field study, but who are they and where can they be found??



Established in 1985, the International Diabetes Institute is Australia's largest diabetes centre. IDI is a not for profit organisation whose vision is to find ways of curing or preventing diabetes and its complications, and provide care for those who have the disease.

During the last 20 years, IDI's internationally-acclaimed epidemiological, genetic, physical activity, basic and clinical research activities have been taking Australia and the world closer to understanding diabetes and its debilitating complications.

In addition to its medical research, IDI:

- treats more than 8,000 patients each year
- educates doctors, nurses, other health professionals and the pharmaceutical industry about diabetes
- advises Australian and foreign governments on the diabetes pandemic and its implications for health planners
- conducts diabetes awareness and education programs for the community and those with or at risk of diabetes
- conducts and licenses physical activity (strength training) programs for older Australians
- publicly endorses healthy food products which meet its evidence-based food selection criteria, and
- advises local and international food manufacturers on developing healthier products.

Where did we find you?

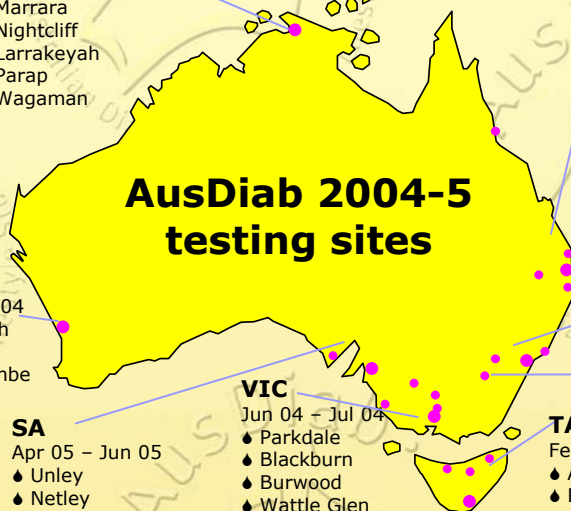


NT

- Jul 05 – Aug 05
- ◆ Driver
 - ◆ Marrara
 - ◆ Nightcliff
 - ◆ Larrakeyah
 - ◆ Parap
 - ◆ Wagaman

QLD

- Aug 05 – Oct 05
- ◆ Cairns
 - ◆ Stafford Heights
 - ◆ Chapel Hill
 - ◆ Nambour
 - ◆ Toowoomba
 - ◆ Currumbin



AusDiab 2004-5 testing sites

WA

- Sep 04 – Oct 04
- ◆ Scarborough
 - ◆ Kardinya
 - ◆ High Wycombe
 - ◆ Mt Helena
 - ◆ Oakford
 - ◆ Trigg

NSW

- Oct 04 – Dec 04
- ◆ West Pennant Hills
 - ◆ Hurstville
 - ◆ Auburn
 - ◆ Orange
 - ◆ Grays Point
 - ◆ Berkeley Vale

SA

- Apr 05 – Jun 05
- ◆ Unley
 - ◆ Netley
 - ◆ Millicent
 - ◆ Glenelg
 - ◆ Pt Lincoln
 - ◆ Parafield Gardens

VIC

- Jun 04 – Jul 04
- ◆ Parkdale
 - ◆ Blackburn
 - ◆ Burwood
 - ◆ Wattle Glen
 - ◆ Bendigo
 - ◆ Mildura

ACT

TAS

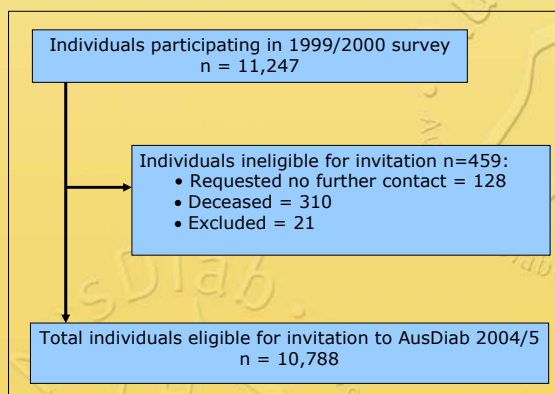
- Feb 05 – Apr 05
- ◆ Alanvale
 - ◆ Ravenswood
 - ◆ Georgetown
 - ◆ Ulverstone
 - ◆ Taroon
 - ◆ Blackmans Bay



The 5-year follow-up AusDiab study involved inviting all eligible participants from the baseline study to another survey and physical examination during 2004-05.

Testing sites for the 2004/2005 study were kept the same as for the 1999/2000 study, with one notable difference – due to the movement of the Australian population we found that 20 plus of our participants had relocated to the ACT, thus a decision was made for two of the field staff plus a phlebotomist to be sent to the ACT to include those participants now living in this area.

Who was Invited?



10,788 participants were eligible to participate and therefore received an invitation to attend. Individuals considered ineligible for invitation (n=459) to the follow-up study included - those who were known to be deceased (n=310); those who had requested to withdraw from the study (n=128); those who had moved overseas to live and those who had moved into a nursing facility or had chronic or terminal illness. (n = 21)

Did you know?

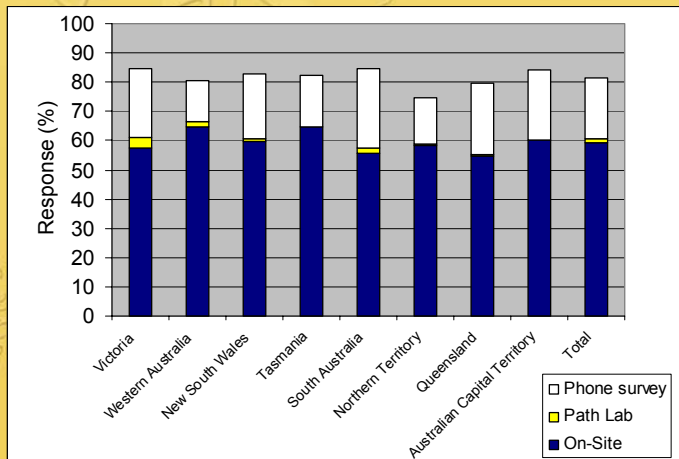
The 2004/5 AusDiab study showed that over 275 people develop diabetes daily in Australia

How many people came back?

State responses varied The response rate for attendance at the field survey between states, the NT and ACT varied little. However figures improved when participants had an opportunity to complete an existing health questionnaire via telephone.

Did you know?

Diabetes is a major cause of cardiovascular disease and one of the most common chronic diseases in children



Why couldn't some people come?

The reasons for non attendance varied considerably. There were many people whom we simply could not contact, despite sending several letters and making a number of telephone calls. Due to our busy working lives and the commitment required to attend the field survey for a second time, a number of people said they were not interested or were or were too busy to attend this time round. Living too far away from the testing site was another major reason for non-attendance.

Did you know?

Some participants travelled hundreds of kilometres, and even interstate to attend AusDiab testing.

If you do move house, please let us know so we can invite you again, by calling our toll free number 1800 220 228.



Why are you so important?

- ◆ By your participation, you are helping the researchers and policy makers of Australia increase their understanding of what causes diseases like diabetes, heart disease, kidney disease and obesity and what their outcomes are
- ◆ The results of AusDiab are unique because they represent the entire Australian population.
- ◆ To be confident that the results are valid for all of Australia, it is critical that the response rate is as high as possible
- ◆ In research studies like AusDiab, the results are only valuable if they are representative of all Australians

I've done it once, isn't it now someone else's turn?

The commitment that you have made to this study has been greatly appreciated. You may have thought that now that you have done your bit, it can be left up to others to help out. With a study such as AusDiab, however, the results rely on tracking the same people over time so that we can compare changes to health status over time. In this way, we can work out what the causes of illness are, as well as what lifestyles make people healthier in the long term.

As you participated in the original AusDiab in 1999/2000, you cannot be replaced!

We have relied on all of the people who turned up five years ago to turn up again. For each person who was unable to attend, the value of the results is diminished. In 2009/10 when the participants will be followed up for a third time, we will therefore need your particular help once again.

Did you know?

That the results of the 1999/2000 survey have been reported in over 35 peer-reviewed international scientific journals

And the key findings of the 2004/5 AusDiab study are...

- ◆ Every day in Australia approximately 275 adults develop diabetes
- ◆ The average increase in waist circumference in Australians over 5 years was 2.1cm
- ◆ 4% of those in the overweight category in the 1999/2000 survey moved up into the obese category in the 2004/5 survey
- ◆ Those aged less than 65 years showed an average weight increase of 1.8kg over 5 years
- ◆ Every year, 3% of adults developed high blood pressure
- ◆ Every year, almost 1% of adults developed kidney disease, with the risk being higher in females and older people
- ◆ The percentage of people developing diabetes over the five years between the studies was twice as high for those who did no physical activity compared to those who did more than 150 minutes per week of physical activity
- ◆ People with pre-diabetes (elevated blood sugar levels but not as high as for diabetes) were 15 times more likely to develop diabetes than were those with normal blood glucose levels
- ◆ Obese people were 4 times more likely to develop diabetes than were those with normal weight

Alarm sounds on living too much of the good life



Australia's epidemic of obesity is a huge and complex threat to our wellbeing. The response, both public and private, must be equally comprehensive.

THE life of ease and plenty that most Australians enjoy has made this country one of the most enviable places to live in. We are free of the physical drudgery that is a fact of daily life in many other countries. We are offered an endless supply of food and drink. The challenge is not one of survival. It is a more subtly difficult one of making healthy choices. Australians' choices about exercise and what they eat and drink are ultimately much more a matter of life and death than they appear to realise. Doing too little exercise and consuming too much of the wrong food and drink is harming the health of Australians to the point that the long trend of increasing life expectancies is likely to be reversed.

Medical professionals have long warned of an epidemic of obesity having disastrous consequences. Television programs such as *The Biggest Loser* reflect a social phenomenon of expanding girths that we can see with our own eyes — although many of us unconsciously adjust our perceptions of what is a healthy weight. Studies have found that many parents do not realise their children are overweight because that is now the norm. There is, however, no ignoring the alarm bells rung by the first long-term national survey on obesity and diabetes, released yesterday by federal Health Minister Tony Abbott.

The findings of a study of more than 6000

people startled even the researchers. One of the report's authors, Paul Zimmet from the Melbourne-based International Diabetes Institute, said the impact of the obesity epidemic was a shock. Each year 100,000 people develop diabetes, which doubles their chances of dying within five years. As well as the 7.4 per cent with diabetes, 16.3 per cent had "pre-diabetes", blood-sugar abnormalities that make them 15 times more likely than normal to develop full-blown diabetes within five

years. Most cases involve type 2 diabetes, which is linked to obesity, physical inactivity and smoking. More than 200,000 people went from being overweight to obese last year.

Such trends mean hundreds of thousands of people are developing high blood pressure, kidney and heart disease, strokes, cancers and other dangerous illnesses. Since the first stage of the study in 1999-2000, people's waistlines had increased on average by 2.1 centimetres and their weight by 1.4 kilograms. Men gained

an average of 13 kilograms between the ages of 25 and 50 and women an average of 14 kilograms between those ages.

The \$3 billion-a-year cost to taxpayers of the obesity-driven diabetes epidemic would rise dramatically, Professor Zimmet said. He acknowledged the personal element of responsibility for eating healthily and exercising regularly, "but there has to be an environment in the community that's conducive to doing that". The threat to Australians' wellbeing —

which includes obesity's impact on lives, economic productivity and public health budgets — is the reason *The Age* has campaigned for a change in public behaviour and attitudes.

Those who rail against a "nanny state" and insist that parents alone are responsible for their children's diet and exercise must accept that those children will pay a high price if we leave it at that. This generation could even be the first to have a lower life expectancy than their parents. The \$500 million set aside in last week's federal budget for preventive health was welcome. As with campaigns on the dangers of tobacco and alcohol abuse, government intervention is justified by the public interest in reducing the huge health risks and costs.

Public education is needed because there is still ignorance about obesity. We should no longer be under any illusions about the dangers of diets that include so much food and drink loaded with fat and sugar. Governments need to impose checks on the power of advertisers to persuade children to consume junk food. *The Age* has also urged others to set a better example; the AFL, for instance, should offer healthier, affordable fare at matches, as should all school canteens. Many of the solutions to this national crisis will not be easy for governments or individuals to implement, but all Australians must take responsibility for changing attitudes and behaviour. No one can say they haven't been warned.



Did you know?

The AusDiab reports from the 1999/2000 and 2004/5 are available from the International Diabetes Institute website www.diabetes.com.au

THE AGE

The price of our sweet tooth: a diabetes epidemic

By JULIE ROBOTHAM

AUSTRALIA is sitting on a time bomb of disease and early death, according to the first national survey to examine how quickly diabetes and other health threats linked to obesity and poor lifestyle are taking hold.

New figures reveal 100,000 people each year develop diabetes, which in turn doubles their chances of dying during the next five years, according to the study of more than 6000 men and women, to be released today by federal Health Minister Tony Abbott.

Although Australia's diabetes rate was known to be high, the pace of the crisis and the number of people newly affected were a shock, said one of the report's authors, Paul Zimmet, director of the Melbourne-based International Diabetes Institute. "It is surprising. One hundred thousand new cases annually is the population of a small city... this is the epidemic they didn't see coming," he said.

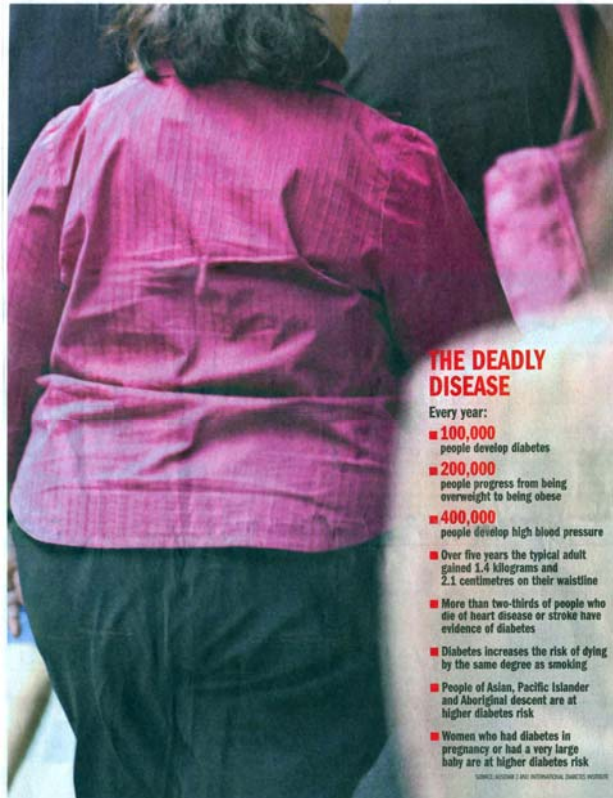
The results of the study put pressure on the Government to spend more on diabetes prevention.

Professor Zimmet said diabetes and its complications would have a huge and growing impact on the health budget, as patients might lose many years of productive life and need intensive treatment for heart disease or dialysis for kidney failure. He called for policymakers and planners to promote opportunities for activity, saying sedentary lifestyle was to blame for many diabetes cases. "Exercise is being engineered out of our lives," he said.

"There is clearly a personal issue here in terms of people's behaviour, (healthy) eating, exercising regularly. But there has to be an environment in the community that's conducive to doing that."

The study, funded by the National Health and Medical Research Council, revisited the health of men and women aged 30 and older, whose weight, waist circumference, blood pressure and cholesterol and glucose levels had been measured five years earlier.

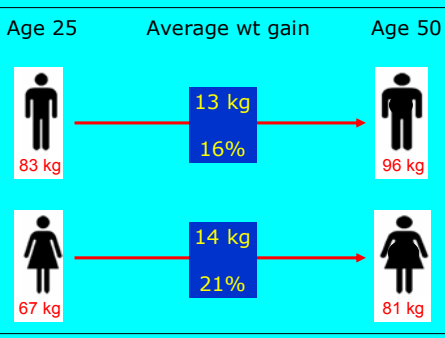
The original survey identified a diabetes rate of 7.4 per cent — much of it previously undiagnosed and the vast majority the Type 2 variety, which is linked to



THE DEADLY DISEASE

- **100,000** people develop diabetes
- **200,000** people progress from being overweight to being obese
- **400,000** people develop high blood pressure
- Over five years the typical adult gained 1.4 kilograms and 2.1 centimetres on their waistline
- More than two-thirds of people who die of heart disease or stroke have evidence of diabetes
- Diabetes increases the risk of dying by the same degree as smoking
- People of Asian, Pacific Islander and Aboriginal descent are at higher diabetes risk
- Women who had diabetes in pregnancy or had a very large baby are at higher diabetes risk

Continued NEWS 4



Did you know?

Useful links:

- International Diabetes Institute - www.diabetes.com.au
- Diabetes Australia - www.diabetesaustralia.com.au
- Australian Institute of Health and Welfare - www.aihw.gov.au
- Dietitians Association of Australia - www.daa.asn.au
- Heart Foundation - www.heartfoundation.com.au
- Aust. Govt. Dept. of Health and Ageing's Nutrition & Physical activity website - www.healthyactive.gov.au
- VICFIT website - www.vicfit.com.au

What is the International Diabetes Institute giving back to Australians with diabetes, obesity and heart disease?

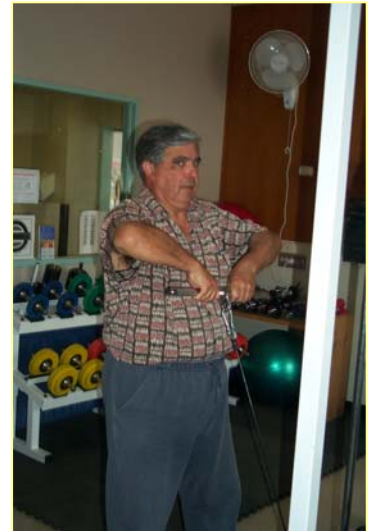


Embarking on a prescribed strength training program can benefit many Australians, especially those with diabetes and other lifestyle-related conditions such as obesity, arthritis and heart disease. In a world-first study called 'Lift, Loosen and Lose', the Institute's researchers found that regular strength training helped people tackle lifestyle-related conditions and may delay, or even prevent, further complications associated with these conditions.

The study, published in 2002, found that in just three months, participants of the strength training program improved their blood glucose control by seven per cent – this effect doubling in six months! Importantly, the substantial improvement seen with strength training matched, or was even greater, than that typically seen with medications.

The Institute has since transformed this research into a community-based program, called Lift for Life®, which helps people establish a regular strength training habit and achieve life changing outcomes.

Whilst Lift for Life is currently available in Victoria (Ashburton, Caulfield, Glenhuntly and St Kilda), it will be launched Australia-wide thanks to the recent support from the Australian Government Department of Health and Ageing.



Lift for Life can help you:

- ◆ achieve better diabetes control
- ◆ increase your muscle size and tone
- ◆ lower your body fat
- ◆ strengthen your bones, thereby reducing the risk of fractures
- ◆ improve your flexibility, balance and posture
- ◆ reduce the pain and disability caused by arthritis
- ◆ better manage any stress or depression you feel
- ◆ improve your ability to perform everyday tasks.

Lift for Life involves:

- ◆ regular assessments and monitoring of improvements
- ◆ supervised small-group sessions in a friendly, social environment
- ◆ individually tailored strength training programs
- ◆ regular feedback and ongoing support.

"I have loved the Lift for Life sessions. They have enabled me to gain strength in my upper body and given me the confidence to resume a walking routine in spite of osteoarthritis. I no longer have pain from my knee." Margot Wood, 67 years, Lift for Life Participant

"During my yearly health check, I was told by my GP that I was grossly overweight and my fitness was in a very bad state. Lift for Life has helped me lose 11kg and I just feel so much better in general. I'm even enjoying long beach walks! Now that I've started, I'm so motivated to continue and better these achievements." Simon Jaski, 69 years, Lift for Life Participant

"I was encouraged to really challenge myself and as a result, feel full of energy. Now I can do things that a few months ago, I wouldn't have even tried." Andre LeGuen, 55 years, Lift for Life Participant

For more information on Lift for Life please call us on (03) 9258 5042, email lifforlife@idi.org.au, or visit www.lifforlife.com.au.



WHO Collaborating Centre for the Epidemiology of Diabetes Mellitus and Health Promotion for Non Communicable Disease Control



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