Newsweet

Autumn 2011

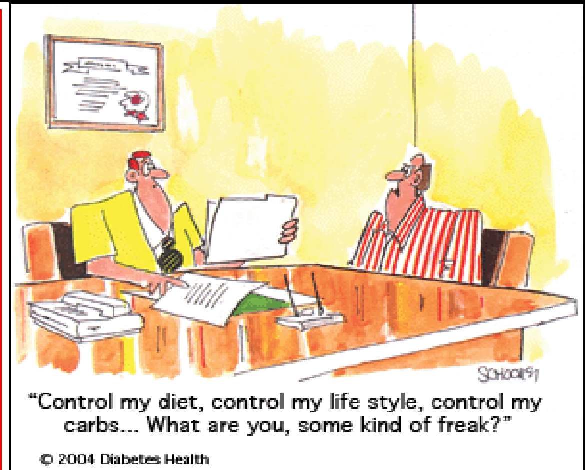
New Zealand Society
NZSSD
for the Study of Diabetes

Dear Colleagues

Welcome to the Autumn Edition of Newsweet. This special extended edition is to acknowledge the sterling efforts of our diabetes colleagues in Christchurch following the earthquake in February. My special thanks to Helen Lunt and the diabetes team who have provided a very personal and insightful review of diabetes care in the event of a disaster. NZSSD extends its thoughts and best wishes to the Christchurch health community as the recovery phase gets underway.

On a happier note, many of you attended the excellent conference in Nelson earlier this month. I have selected some of the standout presentations for inclusion here. Thankyou to the presenters for providing synopses of their presentations.

Catherine McNamara



"Control my diet, control my life style, control my carbs... What are you, some kind of freak?"

© 2004 Diabetes Health

Lessons and reflections from the Christchurch quake

As everyone in New Zealand knows, the Magnitude 6.3 quake that hit Christchurch at 12.51 on 22nd February devastated the city. When we immediately evacuated the Diabetes Centre building, most of us did not realise we were not going to be back in the building for another three weeks. Many of us had no transport home as our cars were inaccessible in a damaged car park building. For those that could make the journey, the journey home was long. Some of us could not however access our damaged homes and neighbourhoods. No-one was allowed into the Diabetes Centre and Society offices over the next couple of days even to get out supplies. This reduced the availability of insulin, pens and meters in Christchurch, at a time when most pharmacies were closed or very low on stock. When the Diabetes building 'opened' again, not all rooms were functional. Even now, patients and staff continue to work around builders and their noise and dust. We are however lucky. Many of our clinical colleagues in other specialities, including primary care, have no offices or are trying to work out of buildings that were not designed for clinical work.

Reflecting on events and what they have meant for us and for people with diabetes in Christchurch has been a healing process for us. We hope that you will never need this information, but if you do, we hope that sharing our own experiences will allow you to become better prepared.

Things the Civil Defence guidelines do not mention but that we learnt the hard way!

If you leave work with only the clothes you stand up and have to walk home, you may regret wearing those high heeled shoes. Have a pair of walking shoes at work (possibly in the 'grab bag' you now keep by your office door with water and a muesli bar in it).

Lock your filing cabinet drawers during the day – they are nasty things when they jump out at you in a quake.

Carry your cell phone with you (i.e. don't leave it on your desk). This is especially important if you are no good at remembering phone numbers and all your emergency phone numbers are stored on the inaccessible cell phone.

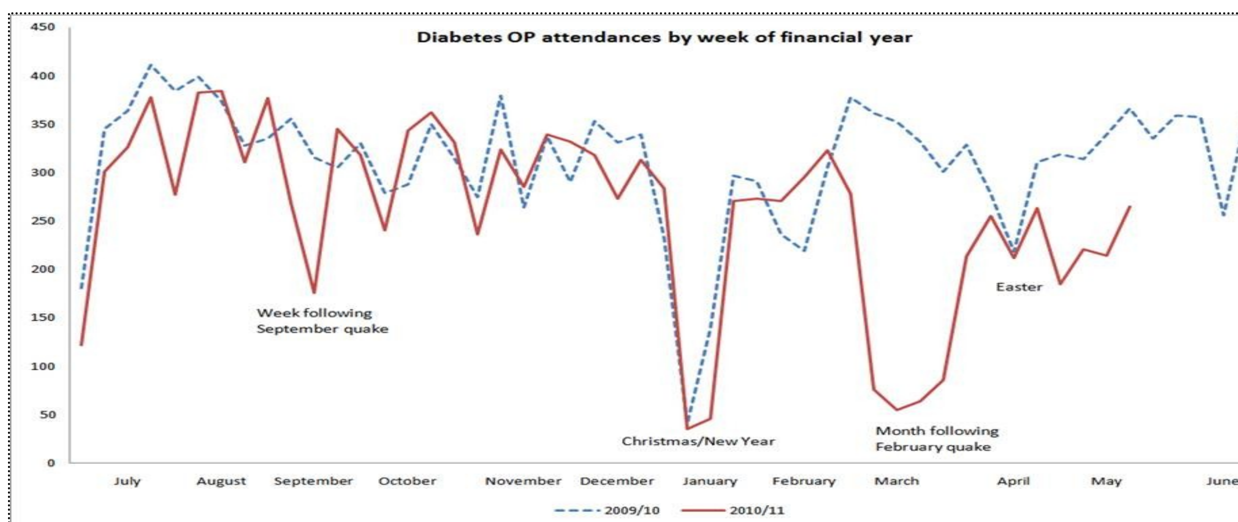
Have as many contact numbers for colleagues, family and friends as possible and maybe even write these down on a piece of paper – your cell phone memory is not much good to you when you are borrowing someone else's phone because you have a flat battery and no electricity to charge your cell phone!

What went well?

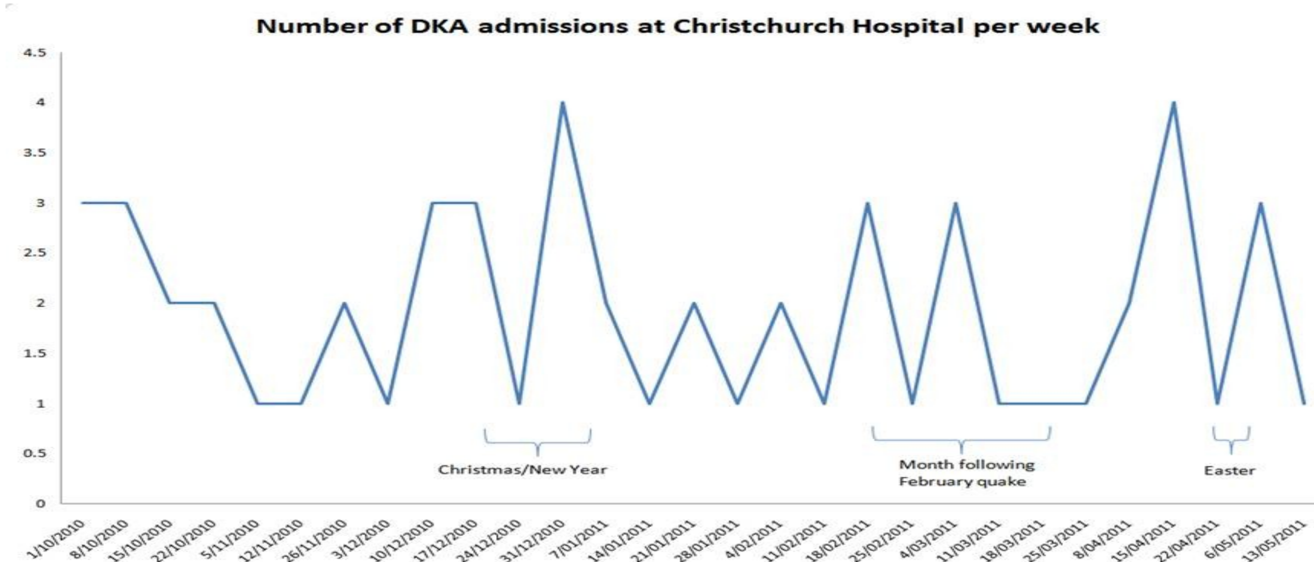
Pooling diabetes supplies and working with the Society (Diabetes NZ Christchurch), together with support from diabetes suppliers from around the country (thank you – you know who you are) allowed us to provide 'free' insulin, test strips and gadgets in the first few days after the quake. We think most patients were able to replenish supplies reasonably quickly.

Asking the Society to lobby on behalf of people with diabetes may have helped get an extension of free prescriptions, allowing people with spoilt insulin to replenish stocks free of charge.

We made seeing our patients for routine review a high priority. We had no way of contacting many patients, for example because mail was not being delivered in their area or because they no longer lived in their homes. We therefore had to 'work around' very high non attendance rates.



Diabetic ketoacidosis rates after a natural disaster reflect in part the 'disaster preparedness' work done by educators before the event. We think the type 1 patients, their nurses and their families coped very well, often by making the difficult decision to leave Christchurch to get treatment elsewhere in the country.



Things we could not change

We know from the descriptions of other natural disasters such as Hurricane Katrina that people with diabetes suffer disproportionally but it is difficult to get this message across to hospital management, when they have so many other priorities to attend to.

Type 2 patients who live/lived in the devastated Eastern suburbs have many needs and priorities that are way ahead of regular medication taking and glucose testing – at times engineers, electricians and plumbers and the people who stock supermarkets with food are far more important than health care professionals.

Our comments and stories:

In my opinion, the most important lesson we learnt was that, during a disaster, managers don't view diabetes care as being a priority, even though we know from stories from other countries that the impact of a disaster on people with diabetes can be very high, especially if you don't do anything. It is vital to be a strong advocate from your patients' welfare and this includes advocatin g keeping some sort of diabetes service going. (Diabetes Nurse)

Once the Diabetes Centre opened again, it was difficult for some staff and also some patients to go back into the building, especially as the building is undergoing highly visible repair work. Some patients would not use the lift. Some did not turn up because they did not believe the building was open. To my surprise and pleasure, there were however some people who turned up after years of staying away because the quake had given them a new appreciation of life and the need to maintain good health. (Diabetes Nurse)

For many people including people with diabetes, getting one meal a day was a priority, regardless of content. Initially, there was an excess of food for those with no electricity but cooking facilities (usually the family barbecue), as the contents of defunct fridges and freezers needed to be eaten before the food spoilt in the summer heat. Shopping for food at a shop or supermarket that was open and stocked became a challenge for many, who then relied on family, friends and donations. When people switch to survival mode and focus on getting food and housing, food content and regular exercise become very low priorities. (Dietitian)

I had expected to see a large number of people with diabetic ketoacidosis. Many people's access to insulin was difficult, esp ecially if their fridge was not working or supplies had run out and their pharmacy was closed or just not accessible. On top of this, there were a lot of broken glucose meters in Christchurch and food supplies were erratic. Imagine my surprise when I found that DKA admissions were low in the first couple of weeks following the quake! This is a tribute to all the disaster planning and sick day management our nurse educators had done before the quake and also a tribute to the resourcefulness of parents of kids with type 1. (Physician)

One nurse's story….

After 12.51 on 22nd February 2011, life for the people of Christchurch would never be the same again. The hours and days ahead held uncertainty and fear as we faced up to living in our devastated city. Parts of the CDB and Eastern suburbs were completely destroyed. In the first few days after the quake, we let anxious whanau in other parts of New Zealand know that we were OK (well, at least physically OK) and did what we could to repair our homes. Once immediate whanau/family needs had been seen to, we got into our trusty Diabetes Service car, a low cc Hyundai and persuaded the car it was now an all terrain SUV capable of navigating liquefaction mud and large potholes and started visiting patients in the Eastern suburbs. Petrol was low and the queues at the petrol stations that were open were very long indeed, but one of our team found a petrol station dispensing petrol for emergency response vehicles. As diabetes health professionals, we did not technically fit this description but after some hard talking and a guarantee that we would only take $20 of petrol, we were allowed a partial fill up. It was becoming clear that we were living in a vastly different world where the necessities of day to day living would be much harder to obtain.

We learnt a lot from the September 2010 earthquake but this did not prepare us for the February 2011 event. You need to have been in Christchurch on that tragic day and the days that followed to fully understand the terror many of us experienced and the confusion and uncertainty that accompanied many of the simplest of practical tasks, such as cooking a meal or sending an e-mail. There will always be things we could have done better but we take hope that sharing our experience will allow others to learn and cope better, if tragedy strikes in the future. We pray that New Zealanders will never live through another earthquake this devastating. We did not however feel as if we were alone as we knew we were part of an amazing country that stepped up and supported us when we needed it most. Our thanks can never be expressed by words alone.

Me te mihi nui mo o koutou manaakitanga
Tena rawa atu koutou
Ma te Atua a manaaki
In appreciation of everyone's kindness
Thank you all
God bless
Kit Hoeben and Helen Lunt on behalf of Christchurch Diabetes Centre staff, May 2011

Feedback from NZSSD Annual Meeting Nelson May 2011

Winning Oral Presentation at NZSSD Conference Nelson 2011-

Low Dietary Fibre and raised fat mass increase insulin resistance in adolescent males

Martin De Bock, Craig Jeffries, Paul Hofman, Jose Derraik, Wayne Cutfield

Martin is conducting a randomised, placebo controlled trial looking at the benefits of increased fibre (supplementation 6g) in the diet of adolescent males aged 15 and 16y. Outcome measures include 2hr OGTT and surrogate marker of insulin sensitivity.

The talk was entertaining and very informative. We look forward to hearing the results presented next year.

Feed back from NZSSD Annual Meeting Nelson May 2011

Diabetes Nurse Specialist Study Day, Rutherford Hotel, Nelson, May 3rd, 2011-05-10

The DNSS study day provided the opportunity for ongoing professional development at an advanced level. The keynote speaker was Dr Peter Sears (Dermatologist—Nelson) who provided an enlightening overview of diabetic related skin conditions which included the importance for our patients to 'look' and identify any changes on the skin e.g. moles, freckles, skin integrity.

Jenny Philips (Nurse Practitioner – Wound care, Manawatu) presented on diabetes related wound care. The key message form this presentation is to encourage colleagues to lift the sheets and look at patients' lower limbs and feet, every time we see them. The relationship between diabetes and wounds is usually related to glycaemic control. In clinical practice we work in multi-disciplinary teams and referring on to the appropriate health professional in a timely fashion is important.

Jo McClintock (Clinical Psychologist- Waikato) works in the area of paediatrics and adolescents. Jo presented on the; principles of behaviour change and facilitating positive health outcomes. The key message form this presentation for clinical practice is the importance of identifying what is on 'top' for the patient and starting there, setting goals with a realistic approach.

I presented on periodontal disease and diabetes, highlighting the association between the disease process and glycaemic control. The key message is to educate patients on the importance of life long oral health, identifying infections or inflammation early and seeking prompt dental review. There are significant barriers and inequities in accessing oral health services both in New Zealand and internationally. As health professionals our role is to assist our patients to optimise their glycaemic control improving recovery from oral infections and helping them to identify resources that will allow them to access oral health services in a timely fashion.

Congratulations to the DNSS committee and local organising team, a successful day with lots of learning.

Mary Meendering.

RapidE clinical guidance for four priority areas in the management of type 2 diabetes.

JI Mann, PL Drury, CM Gerard, J Berentson-Shaw and J Fraser.

Using implementation as the starting point, the New Zealand Guidelines Group (NZGG) has piloted a new approach to delivering evidence-based tools more rapidly than possible when traditional guidelines are developed. The 'RapidE' methodology has been deployed in the area of type 2 diabetes and new evidence-based resources have been developed with sector input. The project and the resources were presented at the recent NZSSD Conference in Nelson.

John Fraser (NZGG) briefly described the approach taken, which focused on four priority areas of clinical practice.

1. Earlier identification of patients at high risk of diabetes-related complications
2. More effective diabetes self-management education
3. Better management of raised blood pressure and microalbuminuria
4. Improved glycaemic control (including insulin initiation in primary care)

The project, funded by the Ministry of Health, produced a targeted revision of existing guidance for the management of type 2 diabetes, focusing on specific patient outcomes, and with greater attention to implementation. The evidence summary combined relevant clinical recommendations from the Scottish Intercollegiate Guidelines Network (SIGN) guideline with local case study evidence. Implementation solutions were scoped and costed, and resources have now been developed in **three** of the four priority areas.

Jim Mann presented the new guidance, which has been translated into a series of charts and algorithms for use in primary care.

New resources include:

charts: 'Determining level of risk for diabetes-related complications'

'Management: Moderate to high risk of diabetes-related complications', which contains advice on more intensive intervention and follow-up for these patients

an algorithm: 'Management of raised blood pressure for people with type 2 diabetes'

an algorithm: 'Management of glycaemic control'

an algorithm: 'Initiation of insulin in primary care', which outlines the importance of: assessing blood glucose profile in order to select insulin regime; dose titration; follow-up; and when to seek specialist advice.

Updated advice on management of raised blood pressure and glycaemic control in the resources includes:

target blood pressure is <130/80 mm Hg for people with type 2 diabetes. A lower target (<120 mm Hg) is not desirable

target HbA1c is <50 55 mmol/mol (~ 6.5–7.0 %) or as individually agreed. Metformin, sulphonylureas and insulin are the mainstay of treatment. Other agents including thiazolidinediones, DPP-4 inhibitors, GLP-1 agonists and acarbose have a specified role.

The resources will be available for free download on the New Zealand Guidelines Group website (www.nzgg.org.nz) from 1July.

A NEW ZEALAND SPECIFIC ON-LINE CARDIOVASCULAR RISK CALCULATOR FOR PEOPLE WITH DIABETES

Many people will recall the initial presentation by Raina Elley in Christchurch of the NZ Diabetes Cohort Study (DCS) involving follow-up of the majority of the 'Get Checked' primary care cohort of people with type 2 diabetes. Since then the DCS team - Raina, Tim Kenealy, Dale Bramley , Elizabeth Robinson and I - have extended the follow-up of this massive cohort to nearly 4 years median with over 10,000 patients followed beyond 5 years – making this one of the largest such studies worldwide and including over 6500 cardiovascular events.

The data has been published as a full paper in Diabetes Care[1] and includes a risk equation derived from the northern part of NZ and validated in a more southerly cohort. This analysis showed that the equation performs significantly better than the Framingham equation currently employed.

We had always intended this to be widely available but were lacking the funding to convert it to an on-line calculator. NZSSD have generously funded the software development by Zest Media and the calculator is in the final stages of testing; it was presented at Nelson and a 'beta-version' screenshot is displayed below. In addition to the usual risk variables it includes ethnicity, duration of diabetes, degree of albuminuria and glycaemic control, all of which are highly significant in the equation. These represent "real-life" values rather than the pre-treatment levels of Framingham or the precise but selected clinical trial situation. There are help and information sections, the major limitation being that it is only valid for patients who have not yet had a cardiovascular event. The output can be printed or copied to the 'clipboard' and is presented as 5-year 'cardiovascular' risk and also 5-year MI risk, thus fitting with the NZ Guidelines Group CV risk guidance.

The application should be available to download within the next couple of months, and we hope it will prove particularly useful in identifying and targeting high-risk patients but also in avoiding excessive or inappropriate treatment where risk is not so high. For best understanding and value we do suggest that you read the paper as well!

Paul Drury

[1] Elley C, Robinson E, Kenealy T, Bramley D, Drury PL. Derivation and Validation of a New Cardiovascular Risk Score for People with Type 2 Diabetes: The New Zealand Diabetes Cohort Study. Diabetes Care 2010;33(6):1347-52.

We thank the Health Research Council for initial funding of DCS, many members of the team at the School of Population Health, University of Auckland and NZSSD for funding of the programming work involved. It has been a great collaborative effort. The calculator will shortly be freely available on both the University of Auckland and NZSSD websites.

DIABETIC RETINOPATHY SCREENING IN NEW ZEALAND – CAN THE HEALTH SYSTEM COPE WITH THE DEMAND?

Kirsten Coppell[a], Edward Hutchins[b], Kia miang Sii[a], Ainslie Morris[c], Gordon Sanderson[b].

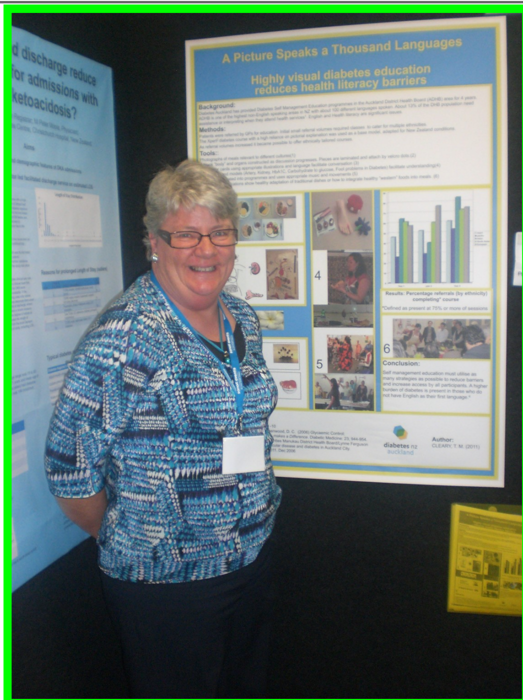
[a]*Edgar National Centre for Diabetes and Obesity Research, Department of Medicine, University of Otago.*
[b]*Ophthalmology Section, Department of Medicine, University of Otago.*
[c]*Ophthalmology Department, Canterbury District Health Board*

Blindness is the most feared complication of diabetes. Approximately 30% of people with diabetes have retinopathy, which threatens sight in 10% of people with diabetes. Visual impairment from diabetic eye disease is preventable through organised retinal screening. In New Zealand the National Diabetes Retinal Screening Grading System and Referral Guidelines were developed to provide a nationally consistent approach to classifying and differentiating the severity of DR, and it was intended data would be collated to measure and monitor grading and referrals, and to monitor trends nationally.

A recent audit of moderate diabetic retinopathy and mild diabetic maculopathy at four main centre retinal screening services identified a number of issues – no centre collected the recommended national retinal screening dataset, grading practices and referral rates varied between the four centres. Of 6,642 patients screened taken during the 4 month audit period, 157 (2.4%) were recorded as having moderate retinopathy or mild maculopathy. Only 29% of these were referred for assessment and seen within 4-6 months as recommended. Of concern, is that of the 60 patients assessed within 12 months of the index screen, 13% required laser treatment.

A subsequent national survey of 90 retinal photo screeners and graders identified about two-thirds of the 42 graders had had specific training, and 80% reported quality assurance programmes in place at their worksite. A lack of clinical capacity was the most common reason given for non-referral of patients with moderate retinopathy or mild maculopathy, and for those referred not being seen within the recommended 4-6 months. As one respondent aptly stated, "***photo screening has become photo monitoring by default***". However, is this good practice when the rate of progression from moderate non-proliferative to proliferative retinopathy is 12-26% in 1 year and 30-48% in 5 years?

It was concluded that retinal screening in New Zealand urgently requires further development to attain a high quality equitable programme in order to achieve the goal of reduced visual loss and blindness from diabetes. Appropriate expertise, quality assurance and regular national monitoring are necessary prerequisites.



WINNING POSTER:

A picture speaks a thousand languages: Highly visual diabetes education reduces health literacy barriers

CLEARY, T. M, Diabetes Auckland

Theresa's colorful poster presentation highlighted the value of using visual methods of education in DSME. Some of the tools utilized in the Diabetes Auckland Program include photographs of meals relevant to different cultures. A blank "body" and organs constructed as discussion progresses (pieces are laminated and attached by velcro dots). In the past three years approximately 200 patients belonging to each of the five main ethnic groups living in Auckland, have completed the course.

Conclusion:

Self management education must utilise as many strategies as possible to reduce barriers and increase access by all participants. A higher burden of diabetes is present in those who do not have English as their first language.

The Society had much pleasure in awarding the following life memberships at the recent AGM dinner:

Professor Jim Mann, Director Edgar National Centre for Diabetes Research, Dunedin and Consultant Endocrinologist, Dunedin Hospital

Dr Michael Crooke, Clinical Head of Chemical Pathology at Capital and Coast District Health Board, Wellington, and Lead Chemical Pathologist at Aotea Pathology, Wellington.

Dr Peter Dunn, Clinical Director, Waikato Diabetes Service, Waikato Hospital

2011 Eli Lilly Diabetes Specialist Research Award

Dr Tim Cundy, Auckland

"Pilot intervention to improve management of Chronic Kidney Disease in Pasifika people with type 2 diabetes"

2011 Eli Lilly Diabetes Nurse Specialists Research Award

Lindsay McTavish, Wellington

"In search of the most effective protocol to treat hypoglycaemia in type 1 diabetes"

Inaugural NZSSD Research Grant

Dr Helen Lunt, FRACP DM, Clinical Senior Lecturer and Physician, Christchurch Diabetes Centre

Project title: Accuracy and precision of capillary glucose meters in pregnancy related diabetes: Relationship to a) prandial status and b) non pregnant states

NZSSD Professional Development Awards

February 2011

- ⇒ Vickie Corbett
- ⇒ Claire O'Shea
- ⇒ Heather Campbell

July 2010

- ⇒ Alison Fellerhoff
- ⇒ Belinda Ihaka
- ⇒ Lynne Ferguson
- ⇒ Roberta Milne
- ⇒ Mary Meendering

NZSSD student scholarships over summer

Awarded to Hana AHN, studying at the University of Auckland. Project:

"Corneal nerve changes post pan-retinal photocoagulation in type 2 diabetes".

The next round of professional development awards closes 1 July 2011

Congratulations to Helen Snell on gaining a PhD recently.

Reward for much hard work!

I'm delighted to announce, for those who weren't glued to the TV , that NZSDD member and my Auckland Diabetes Centre dietitian colleague, Nadia Lim, won ***Masterchef NZ 2011***. Our warmest congratulations to her - and especially for her consistent message that healthy food can be great food.

We wish Nadia well in her next exciting year

Dr Paul Drury

SUBSCRIPTIONS 2011/12

At the recent Nelson AGM it was proposed from the floor that the NZSSD subscription should be increased as it now includes GST, represents very good value and has not been increased for many years while expenses and grants have risen

We are also exploring the practicalities of changing the financial year to the calendar year (e.g. ending 31 December) to allow accounts to be available for the AGM, and to lessen the seasonal load on the Treasurer

The new amounts agreed at the AGM are:

$69 GST inclusive from 1 April 2011 except for physicians, whose rate will increase to $115 including GST

Secretariat: TheSecretariat and membership secretary is Jan Brosnahan, based in Dunedin. Jan can be contacted at info@nzssd.org.nz or telephone (03) 4747 007 extension 8510

NEWSWEET is the newsletter of the New Zealand Society for the Study of Diabetes (NZSSD). Contributions **are welcome** and should be sent to Catherine McNamara at: catherine.mcnamara@waitematadhb.govt.nz