

# Kidney Health NEW ZEALAND

P r e v e n t i o n • S u p p o r t • R e s e a r c h

## Autumn 2013

We certainly can't complain about the summer, unless of course you are a farmer, but these autumnal days are hard to beat with the changing colours and cooler nights, making a decent night's sleep a little more achievable! Here at Kidney Health NZ we have had a busy start to the year with Kidney Health Week and World Kidney Day events.



**Acclaimed New Zealand actor, director and writer Michael Hurst O.N.Z.M has his annual kidney health check with his GP Dr Barney Montgomery.** Michael very kindly supported our focus “if you have a family history of kidney disease you have an increased risk of kidney disease’, as he has a history of kidney problems in his family. Our week focussed on encouraging family members to have a simple kidney check which included a blood pressure check and urine check for protein. Credit card sized cards were given out to family with information which they can take to their GP to have their kidney health checked.

In Northland and Christchurch letters were sent to patients on dialysis asking them to encourage their family members to get their kidneys checked. Kelvin and I from Kidney Health New Zealand and the staff from the renal unit at Whangarei Base Hospital spent World Kidney Day at Forum North in Whangarei testing family members and talking to them about the importance of maintaining a healthy lifestyle and getting checked annually. We were thrilled with the response we received with a large number of people coming along to have their kidney check and look forward to repeating it again soon. The local paper had two separate articles relating to the day in it throughout the week, also raising awareness.



**Kim Calkin from Northland renal unit checks the kidney health of family members at Forum North, Whangarei**

Kidney Health Week coincided with Salt Awareness Week, so together with the Stroke Foundation and St John's Ambulance we visited Weta Workshop in Wellington and provided free blood pressure checks and offered staff the opportunity to test their urine for signs of protein. Once again we were very pleased with the enthusiasm/interest the staff showed and were kept very busy. The synergy between salt and blood pressure was an ideal opportunity to work together as we are singing from the same songbook, so it made good sense to pool our resources.



**Carmel Gregan-Ford from KHNZ and Heather Kizito from Stroke Foundation watch Lucy Smith from St John's take Weta Workshop staff member Emma's blood pressure**

## KEY FACTS ABOUT CHRONIC KIDNEY DISEASE (CKD)

- Chronic kidney disease is common, harmful and treatable
- About 250,000 New Zealand adults will have some sign of CKD
- CKD is silent until well advanced and most people are unaware they have it
- If you have a family history of CKD or kidney failure you are at increased risk of developing CKD yourself
- Other people in our community at increased risk of CKD are:
  - Maori and Pacific people
  - people with high blood pressure or diabetes
  - people who smoke
  - people aged over 50 years
  - obese people
  - smokers
- CKD can be detected by a check of blood pressure, and a simple urine and blood test
- CKD increases the risk of heart disease and stroke ten-fold
- High blood pressure and diabetes are responsible for about 70% of all cases of complete kidney failure in New Zealand
- Early detection of CKD provides opportunities for prevention or slowing the progression of serious kidney disease
- There are about 2,500 New Zealanders on dialysis treatment with complete kidney failure
- One in three people on dialysis are Maori and one in five a Pacific person
- Treatment of kidney failure is estimated to cost the New Zealand health system over \$100 million annually
- Home dialysis is the cheapest and most effective form of dialysis treatment but is time consuming for the patient
- Kidney transplantation is the cheapest and most effective long term treatment for complete kidney failure allowing a return to normal lifestyle
- Investment in kidney transplantation and home dialysis saves lives and money



**Kidney Health**  
NEW ZEALAND  
Prevention • Support • Research

**KIDNEY DISEASE IS A SILENT KILLER**

Are your kidneys OK?

Thousands of New Zealanders are at high risk of developing kidney disease and don't know it. Are you?

For further information:  
Call 0800 KIDNEY (543639)  
or go to [www.kidneys.co.nz](http://www.kidneys.co.nz)



**Kidney Health Check**

Ask your GP for a

- Blood Pressure check
- Urine test to check for protein
- Blood test

Request a copy of results and get to know your numbers.



**Kidney Health**  
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If you would one of our Kidney Health Cards you can email us at [info@kidneys.co.nz](mailto:info@kidneys.co.nz) or call me on 0800 543639

**Every year the International Federation of Kidney Foundations and International Society of Nephrology decide on a topic for World Kidney Day, this year the theme was Acute Kidney Injury. Although we acknowledge this is a very important area of renal medicine, Kidney Health New Zealand decided it would be difficult to promote and decided to focus on family history of kidney disease instead. Below is an article about acute kidney injury written by Dr John Pickering who has a very keen interest in this area, he explains this important area of kidney research.**

## **Stop Kidney Attack**

The theme for this year's World Kidney Day (14 March 2013) is "Kidney's for Life: Stop Kidney Attack." Whereas Chronic Kidney Disease is the name for the progressive and slow forming kidney disease many are familiar with, Kidney Attack, or Acute Kidney Injury as it is more formally known, is the name for rapid onset kidney failure. Few are familiar with this disease despite there being about 30,000 cases a year in New Zealand contributing to about 1,300 deaths!

Few are familiar because Kidney Attacks are almost always following some other event; including cardiac surgery, severe infections, trauma, overdose, use of contrast agents in scans etc etc etc. Every Heart Attack is a Kidney Attack because when the heart stops pumping blood, even for a few minutes, no blood reaches the kidneys. Normally the kidneys receive 25% of the blood from each beat of the heart. No blood means a no oxygen to the kidney tissues resulting in damaged kidney cells. Damaged kidney cells mean that filtration does not occur as it should. This can be temporary or permanent or fatal. About 4-5% of all hospital patients have a kidney attack. Within the intensive care unit one third or more of patients have an attack, often a serious one. The worst require supportive dialysis – at this stage there is only a 50% chance of survival. When an attack occurs the odds for dying in hospital rise four fold. Recent research has shown that Kidney Attacks also increase the chance of a person getting Chronic Kidney Disease or End Stage Renal Disease at a later date. Furthermore, those with Chronic Kidney Disease are more at risk of Kidney Attack should they be in hospital for any reason.

For decades Kidney Attack has been one of those diseases only diagnosed in retrospect. The problem is that the method of detection has been slow. The physician is often only aware of the Kidney Attack a day or two after it has occurred. This is like water running down a drain. If there is a partial blockage a long way down we only know some time later when the water has backed up all the way to the sink (and overflowed it on to the floor inevitably!). Many of us have had a car that breaks down, inevitably in the middle of the nowhere, costing us lots of time and money. Wouldn't it be better to know before it breaks down at a time when we can do something about it? Detecting Kidney Attack early has been a priority for the international nephrology research community and the Christchurch Kidney Research Group (CKRG) over the past few years. We are looking for metal filings in the oil drops of the garage floor to identify if the engine has been damaged. In reality this means looking for signals of damage in the blood plasma and, in particular, in the urine. That is why my children call me a "pee scientist."

It was the new techniques of proteomics and genomics that have helped identify the first new biomarkers of kidney injury. For the scientists this was like the first X-rays of broken bones – whereas previously a physician was able to tell if the arm was not functioning well, they could now see the actual injury – very exciting. Now we have a tool to measure injury – the injury biomarker. Much of our research is about identifying what those new biomarkers mean and how they can be used clinically.

From 2005-2008 Professor Zoltan Endre of CKRG oversaw in Christchurch and Dunedin Intensive Care Units the world's first trial of the drug Erythropoietin (EPO – the same stuff the cyclists cheated with!) for the prevention of Kidney Attack. Critically it was the first trial to ever use one of the new biomarkers to detect injury to the kidney early, rather than wait a day or two for the more traditional methods. While a new treatment was not discovered, it was a breakthrough in methodology. Much has been learnt about a multitude of biomarkers measured during that trial and subsequent studies.

Our latest finding, with the help of some mathematical modelling and the good staff of Christchurch Hospital's Emergency Department and Intensive Care Unit, is that following a heart attack the traditional method of telling that a patient does not have a Kidney Attack is flawed. Indeed, the marker measured in the blood that was thought to represent Kidney Attack only if it increases was found to represent Kidney Attack even if it remained unchanged. With this knowledge physicians may avoid further stress to the kidney and give it support to recover, and researchers may trial new interventions designed to Stop Kidney Attack.

Dr John Pickering  
Christchurch Kidney Research Group,  
Department of Medicine,  
University of Otago Christchurch

## **From the Medical Director**

### ***Sugar, obesity, diabetes and chronic kidney disease***

#### ***- what are the links?***

Most people know that obesity, resulting from less physical activity and eating too much, is thought to be the strongest risk factor for type 2 diabetes. Diabetes is the commonest cause of chronic kidney disease (CKD) and nearly half of new patients starting dialysis treatment have diabetes as the cause of their kidney disease.

One in four adults New Zealanders are obese. The rates are even higher for Maori (45%) and Pacific people (58%): two groups in our community at increased risk of both diabetes and CKD. Even more worrying is the evidence that the rates of obesity are still rising.

While there are plenty of reasons to reduce our obesity rate, the amount of sugar you eat (or more usually drink), on its own, may be more important for your risk of diabetes.

Added processed sugar is an important source of calories in New Zealand. The United Nations Food and Agricultural Organisations reported in 2010 that the amount of sugar consumed in New Zealand had been increasing over the previous 40 years from 126g a day in 1961 to 138 g in 2005; a 25% increase occurring mostly between 1980 and 2005. The Ministry of Health reported in 2003 that for New Zealand adults, between 8–10% of daily energy consumed came from sucrose (sugar) whereas children (aged 5

to 14) consumed between 10–16% of daily energy from this source, with 25% coming from beverages. The 2008/09 New Zealand Adult Nutrition survey results show a reduction in the usual daily intake of total sugars from all sources for males(120g) but not for females (96g) since then. Non-alcoholic beverages, sugar and sweets contributed to 32% of total sugar intake. Older people tended to have lower sugar intakes than younger adults. Younger adults tended to get more of their sugar through beverages. There is no up-to-date data on sugar consumption in children. Evidence suggests that soft drink consumption is a growing source of sugar in the New Zealand diet with sales increasing 4% per annum in the early 2000s. Chacko and co-workers suggested in 2003 in the New Zealand Medical Journal that replacing sugar-based soft drinks with sugar-free alternatives could slow the progress of the obesity epidemic. What one might term the “*Diet Coke approach.*”

Professor Jim Mann and others from Otago University’s Department of Human Nutrition in a paper in the British Medical Journal published this year analysed 71 studies on the effects of sugar on body weight. They found that reducing the amount of sugar adults eat in their normal daily diet causes a weight loss of 800 grams on average over the period covered by the studies, which was from two weeks to more than a year.

Baby boomers know about the relationship between sweets, “Berty Germ” and dental decay but new research findings from a recent international study suggest that sugar intake, independent of obesity, may be associated with type 2 diabetes. The researchers followed changes in diabetes rates, sugar availability and other social and health factors in 175 countries between 2000 and 2010 and found that in countries where the incidence of diabetes went up, the availability of sugar had increased earlier and in roughly the same proportion. The researchers concluded that eating a lot of sugar can cause diabetes whatever your weight. A daily 150 calorie increase in the availability of sugar – about the equivalent of a can of Coke or Pepsi – was estimated to raise the incidence of type 2 diabetes by about 1%. Earlier research which followed people for up to 20 years showed that with each daily serving of soft drink a person consume the risk of developing diabetes rose by 15% to 25%. If these results are correct, an increase in sugar intake may be responsible for a quarter of cases of type 2 diabetes in NZ.

Whether obesity or sugar consumption is the biggest factor driving the diabetes epidemic it makes sense to reduce our sugar intake, particularly sweetened drinks.

Kelvin Lynn. KHNZ

### **Kidney Health New Zealand current projects.**

Our most popular resource “Living with Kidney Failure” Book has been updated and is now called “Living with Kidney Disease”. We have used this opportunity to add a couple of extra chapters with increased information for patients and their families, we have made sure the content is relevant to New Zealand, as with all of our resources, and are currently working on a DVD which will be available for people with end stage kidney disease, with the plan to have it available in Samoan and Tongan. The completed books will be sent to every renal unit throughout the country. If you would like a copy let us know on 0800 543639 or email [info@kidneys.co.nz](mailto:info@kidneys.co.nz)

Guy and Carmel have been visiting Kidney patient support groups throughout the South Island to talk to them about Kidney Health New Zealand’s Strategic plan and to identify key areas of need and where they see our role as the national organisation. These have been very useful as we plan our future work and we look forward to visiting support groups in the North Island shortly.

During our visit to the Southland Kidney Society in Invercargill we were thrilled to see a city bus on at least two occasions with "Give Life, become an Organ Donor" on the back of it and our 0800 number. Well done to the local kidney society. This initiative was driven by Hazel Sycamore, together with her late husband Alan. Hazel has been a tireless worker for the kidney society over many years and has always enthusiastically supported Kidney Health New Zealand too. Hazel sadly resigned from the committee of the Southland Kidney Society recently and we would like to acknowledge her commitment to improving life for people with kidney disease, we wish you all the very best Hazel, thank you.

We are currently working on Know your numbers resource which will talk about your blood tests and what the number means for each test. As our new cards advise we recommend you get to "know your numbers", as this will enable you to see the changes in your results and know how well you are doing, knowledge is power!

**Something of interest, this has been recommended to us as a very thought provoking documentary.**

'Tales From The Organ Trade' will have its world premiere at the New Zealand Documentary Edge Film Festival in Auckland and Wellington in April and May. Here's a link to the film's page in the Documentary Edge program: <http://www.documentaryedge.org.nz/2013/ak/film/tales-from-the-organ-trade> The film will air on HBO U.S. and Shaw Media in Canada later this year.

**Farewell to Maree McDonald – Renal Nurse at Dunedin Hospital for over 40 years**

Maree retired recently as charge nurse manager of the dialysis unit at Dunedin Hospital after a working life at the front line of the evolution of treatment for kidney disease.

In the words from the award Maree received from the Renal Society of Australasia last year for her outstanding contribution to renal nursing

"Maree inspires those who work with her by the passion with which she practises and her commitment to improving the lives of her patients. Her sense of humour, readiness to share knowledge and practical grasp of what works continues to motivate her colleagues and peers."

KHNZ wishes Maree a well deserved retirement, you are truly an inspiration to all who know you and have worked with you; you will be missed, but never forgotten.

**Yes, I want to help in the fight against kidney disease and support**

**Kidney Health New Zealand**

\$100    \$50    \$20    \$10   or Other \$.....

Enclosed is a cheque payable to the Kidney Health NZ, or please charge:-

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Account number:

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Signature: .....

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A receipt for your donation

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Information about kidney donation/transplants.

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