



ask the experts:

vision conference, dublin, 06.10.18





The fight against type 2 diabetes Sinéad Powell from Diabetes Ireland, discusses how we can empower patients to self-manage their diabetes



Low blood glucose alert from your phone "It's an incredible advance," Dr Diarmuid Smith, Consultant Endocrinologist



Professor Gerald Tomkin

Diabetes Ireland



Heart disease Adults with type 2 diabetes are most likely to die from heart disease says Dr Maeye Durkan, from Cork Diabetes and Endocrinologist Group

Don't underestimate the

seriousness of diabetes

People need to understand the factors that can lead to type 2 diabetes and the risks associated with the condition, says Dr Anna Clarke, Health Promotion and Research Manager **Diabetes Ireland.**

iabetes is a growing problem in all countries and that includes Ireland. In fact, instances of diabetes are on the rise by 10-12,000 per year and, along with other chronic conditions, are putting severe strain on our overworked health system. People should be under no illusions about the seriousness of diabetes. If unmanaged or diagnosis is delayed, it can lead to complications like liver damage, blindness, retinopathy, heart disease, kidney disease, amputation and early mortality

In people with diabetes, the pan-

What do we know about diabetes?

creas makes too little insulin to enable all the glucose in their blood to get to their muscles and cells to produce energy. The glucose comes from the food we eat. There are various forms of the condition. Type 1 diabetes is a life-long autoimmune condition thought to affect 15,000 people in Ireland. It usually develops over days/weeks with obvious symptoms of thirst and frequent urination. Treatment is insulin by injection

It's important to stress that this form of the condition is not triggered by lifestyle factors, although a healthy diet and exercise regime is

More people are becoming obese, which can trigger

probably consider type 1 diabetes to be the most serious form. However, most healthcare professionals would point to type 2 diabetes which accounts for 85-90% of all cases— as far more troubling. Type 2 diabetes is where the person produces insufficient insulin to meet body's demands.

Instances of type 2 diabetes are soar-

ing worldwide and, overwhelmingly it's because populations are becoming increasingly overweight or obese and physically inactive. Take Ireland as an example. The latest figures from the World Health Organization show that around a third of us don't achieve recommended levels of exercise, which contributes to our obesity levels and increased risk of type 2 diabetes.

Most members of the public would

person has difficulty clearing all the glucose from their blood and gestational diabetes, when a woman doesn't produce enough insulin to meet the needs of pregnancy. Whatever type of diabetes you have, it's hard to overstate the impact it can have on your life. For instance, to take care of vourself properly vou'll need to plan your daily diet, exercise

We should also mention pre-di-

abetes - an indication that the

Understanding the causes and risks of diabetes

and medication.

Education and awareness of dia betes - as with any medical condition - is crucial because it can help you make an informed choice. See www.diabeteseducation.i.e for online education, which will help vou understand why the medical

profession puts such an empha sis on healthy eating and regular physical activity.

We want to arm people with enough information to put them in control. That might mean taking steps in order to prevent type 2 dia betes or, if they've already been di agnosed with the condition, finding ways to improve their medical man agement — and live healthier, more satisfying and more fulfilling lives.

The largest Diabetes Health and Wellbeing Exhibition takes place in Cork on November 11, see www.dia betes.ie/events for more information. Join us there. ■

Tony Greenway



The silent epidemic of NAFLD in Ireland

Professor Suzanne Norris Consultant Hepatologist/Gastroenterologist,

St James's Hospital & Liver Wellness Professor in Hepatology & Gastroenterology, Trinity College Dublin



There is a silent epidemic of NAFLD in Ireland which if left undiagnosed and untreated may lead to cirrhosis of the liver. However, awareness among patients and healthcare providers in this country is extremely low, leading to underdiagnosis, under-treatment and increased morbidity.

on-alcoholic fattv liver disease (NAFLD) is a liver disease caused by the build-up of fat in liver cells, in the absence of increased alcohol intake, which can lead to cirrhosis of the liver. Screening for NAFLD is strongly recommended for people with type 2 diabetes.

What is NAFLD?

NAFLD, an excess of fat in the liver, may develop as:

 Simple steatosis (fat): the accumulation of fat in the liver, which may slowly progress to liver inflammation and scar tissue (fibrosis) over many decades.

Non-alcoholic steatohepatitis (NASH): the more progressive and aggressive subtype of NAFLD, where inflammation results in cellular damage leading to fibrosis/cirrhosis

Who is at risk for NAFLD? Fatty liver is typically associated

- type 2 diabetes obesity
- high cholesterol
- high blood pressure
- insulin resistance

It is estimated that 25-30% of the global population have NAFLD, and 5-12% develop NASH. A recent Irish NAFLD screening initiative in

abetes mellitus (T2DM) reported that one in five had advanced fibrosis/cirrhosis.

How is NAFLD diagnosed?

Research has proven that up to 80% of T2DM patients with NAFLD have normal liver blood tests. Consequently, the European Association for the Study of the Liver (EASL) Clinical Practice Guidelines (2016), strongly recommend that T2DM patients should be screened for NAFLD irrespective of liver enzyme blood levels, since T2DM patients are at

To screen for NAFLD, a unique ultrasound-based technology called Vibration Controlled Transient Elastography or

risk of liver fibrosis

2017 of patients with type 2 di-FIBROSCAN® is used to measure liver stiffness, a marker of liver

> This non-invasive and painless method has the advantage of also tracking changes in liver fibrosis over time including post treatment

What is the treatment for NAFLD?

The main treatment is lifestyle intervention including diet and exercise. Studies have reported that 7-10% weight loss sustained over 48-weeks results in significant improvement in liver steatosis and inflammation. Lifestyle intervention can improve and reverse NAFLD/NASH, provided significant weight loss is achieved. The 2016 European guidelines recommend also that the aggressive form of NAFLD (NASH) should be identified in patients at risk - such as those with T2DM or metabolic syndrome, and over 50 years of age.

Given the potentially life

threatening complications of undiagnosed liver disease. awareness of liver health in patients with diabetes is critical and should be incorporated in diabetic care pathways.

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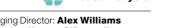
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UCD researchers collaborate to tackle diabetes

A peek inside the UCD Diabetes Complications Research Centre, where scientists pool multi-disciplinary skills to tackle the rise of diabetes and its complications.



Professor Catherine Godson

iabetes Complications Research Centre Conway Institute & School of Medicine **Jniversity College Dublin**

esearchers at UCD are

working together to

conduct cutting-edge

research into diabetes

and its complications

- and patients are part of the team.

"Collaborative research is key to

tackling diabetes complications. It

accelerates impact bringing benefit

to patients, scientists and the health

service." says Professor Catherine

Godson, Director of the University

College Dublin Diabetes Complica-

tions Research Centre (DCRC) at the

UCD School of Medicine and UCD

Expertise across a breadth of

clinical and scientific disciplines

at the DCRC is brought to bear

on the investigation of how best

to tackle the serious and life

limiting complications of diabetes

including heart disease, stroke and

Diabetes and its associated

complications consume 10% of our

national healthcare spend. "Our

spirit of collaboration also extends

to patients," says Godson. "The

DCRC will host The Patient Voice

in Diabetes Research on November

14. World Diabetes Day, so we

can give them our news and get

Collaboration has already resulted

Research to reverse diabet-

Godson and her colleagues are

researching the role of inflamma-

tion as a driver of diabetic kidney

disease (DKD), heart diseases and

stroke, in a bid to find a new treat-

ment to prevent - and even reverse

Currently, there are no drugs

that stop or reverse DKD. Godson

says: "Failure to resolve chronic

inflammation is a causal factor

in this. In healthy conditions,

inflammation usually resolves in

response to messengers generated

by the body leaving no scars, but

inflammation that does not resolve

sufficiently leads to scarring and

eventual organ failure

in some major steps forward.

ic complications

Conway Institute.

kidnev disease

their feedback."

its effects.

Professor Carel le Roux Co-Director Metabolic Medicine laboratory

Diabetes Complications Research Centre University College Dublin

Link between children with obesity and their grandmothers

and their maternal grandmoth-Fionnuala McAuliffe, who investi at the National Maternity Hospital.

These synthetic molecules might in future, lead to the development of drugs that could transform DKD treatment. Other investigations. as part of a major international effort, are looking for genetic reasons as to why not everyone with diabetes develops complications, an approach that Dr Eoin Brennan says "will help doctors to tailor or

How diet and nutrition

'personalise' treatments.'

The role of diet and nutrition in diabetes is the subject of research by Helen M Roche, Professor of Nutrigenomics at the UCD Conway Institute and UCD Institute of Food and Health

"We have worked with UCD

synthetic chemist, Professor Patrick

Guiry and his team, to generate

molecules that mimic the molecular

messengers that tell the body to

resolve inflammation. Using these

compounds, in research conducted

with collaborators in Australia,

we have been able to reverse both

kidney and heart disease in diabetic

animals. Using human tissue, we

have also seen that these molecules

can dampen inflammatory

reactions in blood vessels."

"Nutritional research requires a lot of hard scientific evidence, and the DCRC offers a bridge to other scientists, such as Dr Fiona McGillicuddy who, from a pharmacological perspective, also studies the impact of dietary regulation of cardiovascular risk related to obesity and diabetes,' says Roche.

"I have colleagues in the nutrition group and public health team, and in clinical medicine. We are all tackling diabetes from different perspectives, so combining knowledge helps everyone - including patients." For example, Professors Cecily Kelleher, Pat Wall and Dr Catherine Phillips lead the field in public health and. together with collaborators at the HRB Centre for Health and Diet Research, are studying obesity across generations

Interesting recent findings indicate a link between obesity in children ers, but not other grandparents. In addition, other colleagues from the School of Medicine, include Professor Donal O'Shea, who leads the national task force on obesity and Professor gates maternal and infant nutrition

Roche's research has revealed that, while some diets lower the risk of diabetes in some people, it's not the same for everyone. "There is more to it than just 'calories incalories out'," she says. "No single diet will reduce everyone's risk of obesity or diabetes." This concept is referred to as Personalised Health.

She explains: "We are looking at why some individuals are more at risk than others of developing problems from eating saturated fats, and how to mitigate their risk."

A group of teenagers who were overweight or obese were given an anti-inflammatory nutritional 'cocktail' and two portions of oily fish (in pill form) daily. Roche reports: "40% responded showing lower insulin and glucose levels but 60% didn't. We are using biomarkers to try to identify people who will respond to particular dietary interventions." So, we can target individuals who will benefit and work on alternative therapeutic approaches for those who do not.

How the gut talks to the

Professor Carel le Roux, Co-Director of the Metabolic Medicine Laboratory, at the UCD DCRC, is researching how the link between the gut and the brain can help prevent - and even reverse - diabetes complications.

"Here, we can discuss theory work in the molecular biology laboratory, and test treatments on the same site. It takes research right

from the bench to the bedside," he says.

"We also have access to local clinical colleagues, including Miss Helen Heneghan (Consultant Bariatric Surgeon at St Vincent's University Hospital) and Professor Donal Brennan (Consultant Surgeon at Mater Misericordiae University Hospital) and international collaborations. Few centres anywhere have this capacity."

le Roux explains: "Patients with type 2 diabetes have a deficiency of the hormone GLP-1, which signals from the gut to the pancreas to make insulin - but it also tells the brain when you have eaten enough. so people lacking GLP-1 do not feel full after a meal.'

Overeating results in a layer of fat building up between organs such as the liver and pancreas, causing insulin resistance. "It's like a wall, and there is not enough insulin to push the glucose from the bloodstream into the cells. Thus, the glucose accumulates in the blood making the problem worse," says le Roux.

There are three current treatments for low GLP-1: specific diet and exercise, which leads to diabetes remission in two out of ten patients; injecting extra GLP-1. which works in three out of ten: and rerouting the gut to send food quickly to the small bowel, where GLP-1 is made, to boost production this works for five out of ten people.

le Roux says: "We are researching which of the three options works best for individual patients and combining all three options to reverse complications in the sickest patients. Our experiments are starting to show that this is possible."

Dr Neil Docherty, Co-Director of the Metabolic Medicine Laboratory at the UCD DCRC is exploring another angle to optimise the control of blood sugar in patients with diabetes. In a Health Research Board funded collaboration with international experts from Monash University in Melbourne, Docherty

and his team are examining whether a hormone normally associated with skin colouring might also have applications in diabetes, Docherty says: "Curiously a hormone called alpha-MSH which is released from the brain and plays a role in skin pigmentation, is also elevated in the bloodstream after eating. We have evidence demonstrating that this surge of the hormone after eating helps our muscles to burn glucose, hence helping with blood sugar control. Derivatives of the hormone hold promise as novel anti-diabetic drugs and studies in humans are now underway as a result of the Ireland

Professor Helen Roche

UCD Conway Institute / UCD Institute of

Food & Health University College Dublin

Professor of Nutrigenomics

Australia research collaboration. The DCRC team of Principal Investigators also includes Dr John Crean, who is working on re-engineering damaged cells, Dr Orina Belton, working on fundamental mechanisms governing atherosclerosis regression and macrovascular complications of diabetes and Dr Daniel Crean, working on inflammation and repurposing of existing therapeutics for the treatment of organ damage in diabetes.

Funding helps collaboration funders include Science Foundation Ireland, Irish Research Council, Health Research Board, The European Union, Wellcome Trust, the National Institutes of Health the Juvenile Diabetes Research Foundation, European Renal Association (ERA), European Foundation for the Study of Diabetes and the bio-pharma industry. ■

Linda Whitney



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Dr Kevin Moore explains the importance of structured education for patients with diabetes and how technology can improve patients' understanding of their blood sugar and reduce their risk of complications.

Dr Kevin Moore, a Consultant Diabetologist based in Dublin and Kildare, says "HbA1c is the currency of diabetes." The HbA1c blood test reflects blood sugar control over the last two to three months and is the main predictor of complications.

Dr Moore's job is to help patients tread the line between keeping the HbA1c low enough to avoid complications, but not so low as to cause hypoglycaemia (low blood sugar). We know that a relatively small drop in HbA1c is associated with a greatly reduced risk of complications

Patients can lose interest in maintaining good diabetic control

There is a common pattern of an initial surge in interest and enthusiasm for keeping diabetes controlled, explains Dr Moore. His concern however is that diabetes is a "long-term game and if you don't respect it, it'll cause you a lot of trouble".

As time goes by, enthusiasm for good control can lessen and he stresses the importance of diabetic control, even when patients say they 'feel fine'. His interest is not just how the patient feels now, but how they will feel in years or decades to come if poor control has caused complications.

diabetes include, blindness, kidney failure, nerve damage and an increased risk of heart attacks and strokes. Some patients with diabetes will be diagnosed in childhood, so poor control at a

young age can set them on a path to complications by the time they reach their 20s or 30s

Patients must be educated to make good decisions

Dr Moore has been involved in writing the new Irish guidelines for type 1 diabetes. The guidelines emphasise the importance of education. Patients with diabetes must self-manage their condition: they have to make many decisions every day that directly affect their diabetes.

These patients need the knowledge to be able to make the right decisions, day in, day out.

The guidelines recommend that all patients should attend a structured education course within 12 months of diagnosis of type 1 diabetes . The courses are usually run over three to five days and they help to empower the patient to self-manage their diabetes on a day-to-day basis, as well as continuing a regular dialogue with their diabetes team

Dr Moore stresses the importance of patients attending this course, as there is evidence that this education has a significant effect on HbA1c and quality of life

Glucose test results can be downloaded to an app almost instantly

Technology is creeping into all

areas of our life and diabetes is no different. New monitors allow patients to test their blood glucose more frequently; results are downloadable and can be analysed by the patient and by their diabetes team. Dr Moore explains how this means that some patients are now checking their sugar 15-30 times a day and are able to better understand the trends in rising or falling sugars. When he sees the patient, he can download a myriad of data which helps him to analyse and improve diabetic control.

As with anything though, the technology only works if you use it. A patient who only tests their

won't really benefit. In some cases, the ease of checking with newer diabetes technologies can make a huge difference. Patients still need to see their diabetologist usually twice a year. Adolescent and young adult patients should be seen three to four times a year as they often need more support.

All patients with type 1 diabetes should have phone or email access to their team in between appointments and will of course also see their own GP for other medical issues, which may or may not be related to their diabetes.

Type 1 diabetes is an incredibly challenging condition to live with, but education and technology are helping. Patients who work with their diabetes team and maintain good blood glucose control should expect to avoid significant complications of diabetes.

Toni Hazeli



If we want to reduce the mortality of patients with type 2 diabetes, we need to look at more than just sugar control.

Maeve Durkan, a Consultant Endocrinologist at the Cork Diabetes and Endocrinologist Group, says "If you look at patients with type 2 diabetes, they are dying from cardiovascular disease - that's the predominant mortality." "In the 1990s, a patient's chances of surviving for seven or eight years after having had a heart attack, was about 80%. But for patients with type 2 diabetes, their survival rate was only about 20-30%.

Those statistics are alarming and, according to the American Heart Association, adults with type 2 diabetes are far more likely to die from heart disease than adults without diabetes. The prevalence of cardiac events is at least 30% higher in people with diabetes mellitus (DM) compared to those without. It's a significant difference, which can be explained by looking at the vasculature of the heart.

For someone with type 2 diabetes, if there is prolonged hyperglycemia (high blood sugars) these sugars can be toxic and, over time, can damage blood vessels by making them 'stickier'. Cholesterol sticks to the 'sticky vessels' and ultimately other blood cells may stick to that cholesterol, causing plaque. This plaque buildup can damage the vessels carrying the blood to and from the heart, starving the heart of oxygen and nutrients.

Blood pressure and cholesterol also affect diabetes

The initial response from diabetologists has been to focus on

reducing mortality rates by keeping a tight rein on a patient's blood sugar levels and targeting glucose control by targeting HbA1c levels (the threemonth test that reflects overall sugar values over the preceding three months). But further research has gone a step further to show that traditional risks, such as blood pressure and cholesterol, are also significant risk factors in patients with type 2 diabetes - so treatment needs to incorporate more than simply managing blood sugars.

"We have had a huge change in the last five or ten years in the way we manage diabetes. We have now moved on to say we can improve the outcomes with sugar control, blood pressure control and cholesterol control," continues Dr Durkan. "Part of the success of the newer interventions has also been the avoidance of weight gain, (which creates a vicious circle in insulin

resistance and further difficulty in managing diabetes) and, more importantly, the promotion of weight loss, and specifically fat weight loss in the abdomen, viscera and in the liver."

New medications provide additional benefits

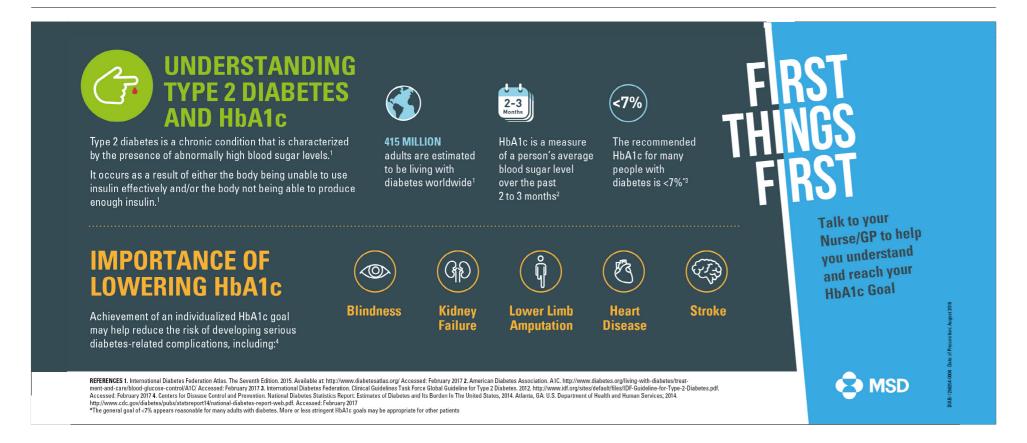
Alongside these developments has come greater research into medications. Many of the older, traditional treatments in the management of diabetes incurred not only a risk of hypoglycemia. but impressive weight gain, which further compounds the problems and risks associated with heart disease.

"Every new drug coming to trial has got to been seen as safe in terms of cardiovascular risk." says Dr Durkan, "Within the last five to ten years, two new classes of drugs have come to the fore

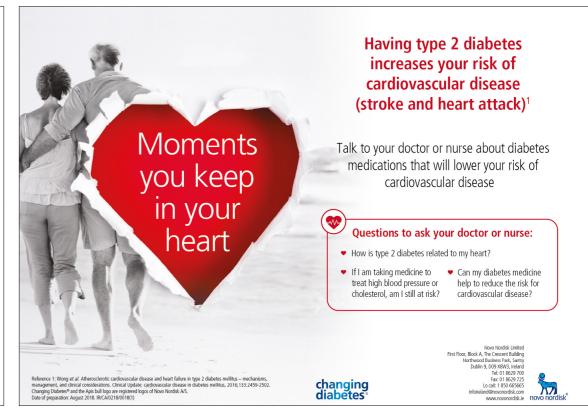
and are not only proven to be safe from a cardiovascular aspect, but actually providing benefit. All new classes of DM drugs must now undergo cardiovascular safety trials - designed to show that they are not only safe, but that they cause no harm. Unexpectedly, we are actually seeing cardiovascular benefits tha are independent of sugar lowering."

The good news is that outcomes are moving in the right direction. According to Dr Durkan, data for the last two decades shows a decline in cardiovascular mortality for both the general population and patients with type 2 diabetes. While heart disease remains the leading cause of death for patients with type 2 diabetes, there is knowledge and support available to help reduce that risk. Patients don't have to suffer alone.

Kate Sharma











Kevin Nolan Kilmacud Crokes

Kilmacud Crokes and former Dublin footballer, Kevin Nolan, was diagnosed with type 1 diabetes in his 20s and is determined not to let it restrict his personal life or sporting career.

When were you diagnosed with type 1 diabetes?

It was December 2011. I'd recently turned 23 and also been diagnosed with coeliac disease. Plus, I'd started a new job at a secondary school teaching PE and science, alongside playing for the Dublin senior football team. So, life was busy

What were your symptoms?

I felt really tired, I lost two-and-a-half stone in weight and I was waking up six or seven times a night to urinate. I thought it was down to the pressure and stress of the new job and doing well with Dublin because we'd just won the All Ireland Championship, Because of that I didn't go to my GP for about two-and-a-half weeks after my symptoms started.

After diagnosis, were you worried it would affect your

Yes. I always look to find the positive, but when you're trying to compete at the highest levels of sport and you're a couple of percent off your best, then it can be a problem. On top of everything else, I had to start thinking about food before training and my blood sugar level during training. But if I knew then what I know now, I would have had a much better understanding of the condition and felt more

It wasn't diabetes that ended my inter-county career with Dublin. That happened because I sustained a couple of injuries and had an operation on my lower back.

How do you manage your diabetes?

I inject with insulin pens six or seven times a day, if not more. Also, because something out of my control is causing my blood sugar to rise. I've applied to get an insulin pump. I also use continuous glucose monitoring and have a sensor in the back of my arm that I change every two weeks and scan with my mobile phone to take a reading. Diabetes tech has advanced a lot since my diagnosis.

How important is exercise and diet?

Exercise helps reduce the amount of insulin you have to take; so, as a sportsman and PE teacher, living a role model lifestyle helps. As for my diet, being a coeliac restricts the foods I can eat anyway.

What would your advice be to anyone newly diagnosed with type 1 diabetes?

Take ownership of your illness and don't let it hold you back. Having diabetes might restrict you a bit at first; but once you get it properly under control there's no reason you can't achieve the dreams you had before your diagnosis. I'm now engaged, relocating to County Monaghan and looking to transfer to Cremartin. So, it's changing times for me – but exciting times, too. \blacksquare



Sinéad Powel Regional Development Officer and Dietitian, Diabetes Ireland

In the fight against type 2 diabetes, healthcare professionals and pharmacies are offering help to everyone by taking the prevention message into the community and empowering patients to help themselves. Here's how they can help you, and how you can help yourself.

t is estimated that 225,840 people in Ireland are living with both type 1 and type 2 diabetes. Only type 2 diabe tes can be prevented. Type 1 diabetes is an autoimmune condition where the body attacks its own cells and is unable to produce insulin. It cannot be prevented and is not caused by lifestyle.

A quarter of Ireland's underfives are overweight or obese, conditions known to increase the risk of type 2 diabetes, so rates of the condition are set to rise. By 2020, it is estimated that there will be 233,000 people living with diabetes. Most of those will be type 2, which is largely preventable

How to deter diabetes

First, increase your awareness of the condition and find out about the help available. Sinéad Powell, Regional Development Officer and Dietitian. Diabetes Ireland, says, "If you feel you may be at risk of developing diabetes - if you are overweight for instance - don't delay taking action.

"Figures show that the risk of over the age of 40, with associated risks especially with overweight and a sedentary lifestyle. The longer you remain overweight the greater

Don't be afraid to seek help

You can get help from healthcare practitioners and pharmacists in making lifestyle changes that reduce your risk. Don't be deterred by the Tony Greenway feeling that you may be judged.

lecturing people, we should ask what their healthcare goals are, and how we can help them to get there."

fight type 2 diabetes

"The HSE is encouraging healthcare professionals to open conversations with all patients about their lifestyles in their Making Every Contact Count programme, and to let them know about the support

The risk of developing Practical help over the age of 40

Taking the message to

Powell and her colleagues are also delivering simple messages in workplaces, schools and community diet can reduce the risk of diabetes.

"In workplaces, we are often problems, but we tell them that lifestyle changes in the present can they can expect. help avoid diabetes in the future," she savs.

She and her colleagues have also offers a space for men to pursue practical interests and socialise.

"Many of the men are over 60, so we encourage them to know more improved. Powell says: "In the fight about diabetes prevention and against type 2 diabetes, people power developing type 2 diabetes increases advise on how often to get their is a huge weapon." blood glucose levels tested."

Movement and diet changes

"Simple changes to increase your level of movement help. We offered the Men's Sheds group pedometers and encouraged them to increase their daily number of steps. Most of the men lost weight," says Powell.

The HSE advises that 30 minutes of exercise that increases the heart rate, five times a week, can reduce

"These days," says Powell, "instead of the risk of type 2 diabetes by up to

MEDIAPLANET

Increased movement combined with dietary changes tackles diabetes on two fronts.

"For most people, weight gain revolves around snacking, portion size, eating as a habit or late at night."

"We encourage people to make one small change at a time, such as available in a non-judgemental and taking the stairs rather than the lift, and becoming more aware of portion

Diabetes Ireland encourages people type 2 diabetes increases with type 2 to join one of the three HSE-supported structure education courses. These are communitybased courses and Diabetes Ireland run the CODE diabetes education programme.

"These group courses provide people with education and support to plan and achieve goals around their diabetes management. They initiatives about how movement and have the additional benefit of the support of others, which can improve outcomes," says Powell. addressing people with no current Course participants can find out where to get good care, and what

depending on location but should involve an a HbA1c test to check been talking to groups in Men's average blood glucose level, retinal Sheds - the Men's Sheds movement screening, foot health checks, and more. Course participants get booklets explaining what the test results mean and how they can be

Linda Whitney



Less sugar, more fluids: two keys to better health

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Sarah Keogh Consultant Dietitian

Kieran O'Leary Diabetes Ireland



A diet including excess sugar consumption and poor hydration can impact health, both for those with and without diabetes. Sugar-free hydration is just as important as sugar-free foods in the management of diabetes, says charity Diabetes Ireland, Partnering with MiWadi has been crucial in helping this charity build education and support around diabetes.

hether you have diabetes or not, it pays to monitor your intake of sugar and water. Many people do not realise how much sugar they are consuming or how little water they are drinking. For many. reducing sugar and increasing hydration at the same time can

"Most people, particularly children, are consuming far too much sugar, so it's wise to monitor your intake," says Consultant Dietitian, Sarah Keogh, who attends events with Diabetes Ireland alongside other healthcare practitioners and has worked with drinks brand, MiWadi.

For people with diabetes, sugar-free hydration is especially important - not just to hydrate the body without aggravating effects of high blood glucose levels, or excessive urination that high blood glucose causes.

their condition, but also to

counterbalance the dehydrating

50,000 more people expected to have diabetes by 2030

Unhealthy diets, lack of exercise and being overweight are all risk factors for developing diabetes. Diabetes is linked with increased risk of heart attack and stroke and can also lead to blindness and, in some cases, amputation, if it is not well-controlled. Yet, in Ireland, the number of people with diabetes is expected to rise by a quarter by 2030 - equating to more than 50,000 extra people with the condition.

So why do people still avoid the healthy lifestyle challenge? "Denial, lack of understanding, education and the impact on your social life all play their part," says Kieran O'Leary, Chief Executive of Diabetes Ireland.

Spotting sources of sugar

"There is no need to ban all sugar; so long as you are consuming a balanced diet, but it is worth being aware of sugar in many of the foods that we eat and drink. As well as obviously sugary foods, food products with 'hidden' sugar can add calories to your daily diet and

take a toll on your teeth. It pays to in," says Keogh. "Ensure you drink read the labels on food products. especially if you are watching your weight."

When it comes to nutritional content Keogh says: "Anything with less than 5gm of sugar per 100gm of food and less than 2.5gm per 100ml for drinks is low-sugar according to EU guidelines'

For people with diabetes, it is important to keep blood sugar levels steady. Excess sugar consumption can raise blood glucose levels. "Long-term raised blood glucose can lead to medical issues such as an increased risk of heart disease and kidney problems," says Keogh.

Are you dehydrated? "Our bodies are 55-60% water. This

water is essential for our health and plays a role in keeping our bodies and brains healthy and functioning This is true for people of all ages,"

For most people, including people with diabetes, the recommended intake is around two litres of fluid (that's about eight glasses) daily. "Water is best for hydration, but other good sources include lowfat milk and herbal teas. Adding a cordial, such as MiWadi, can make it easier to drink more water," says

Don't wait until you feel thirsty vou can be 1-2% dehvdrated before the feeling of thirst kicks throughout the day, rather than leaving it until the evening. People tend to be a little dehydrated in the morning, as they have lost water through the breath and skin overnight.'

Balancing sugar intake

Watch out for drinks with added sugar and try to avoid adding it to hot drinks. Keogh advises: "Look for drinks with no or low sugar. Plain water is best of course but you could try adding slices of fruit or herbs such as mint or consider sugar-free drinks such as MiWadi 0% Sugar."

What about sweeteners? "They are a substitute for sugar in some low- or no-calorie foods and drinks, giving a sweet taste but without the added sugar or extra calories," says

Industry support for national healthcare

Ireland must act on the risk its population faces. Currently, there are 225,000 patients with diabetes, with a further 30,000 suspected to be left undiagnosed. Diabetes care is "significantly under-resourced," says Kieran O'Leary.

There is only so much awarenessraising that charities can do alone, though. In its first two years. Diabetes Ireland's partnership with MiWadi 0% Sugar has enabled Mr O'Leary to further develop the

charity into a go-to resource for al people affected by diabetes. The charity has been able

to expand its online resources including sugar-smart food and drink recommendations, information and resources for children affected by diabetes, and it has improved its community outreach and visibility in workplaces and at public exhibitions. Mr O'Leary emphasises the importance of collaboration by saying: "Proactive partnerships are a way of helping people in a way we could never do on our own. The more support we have, the more we can do."

This year, MiWadi has introduced a new range of 0% sugar Super Fruity tasting flavours, a fusion of delicious new flavours from real fruit*, combined with added vitamins and zinc.

> Linda Whitney Ailsa Colquhoun

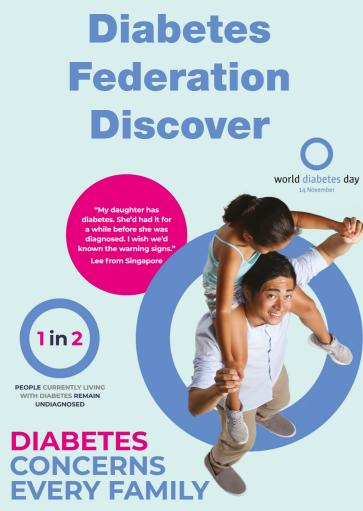
Diabetes Ireland and MiWadi:

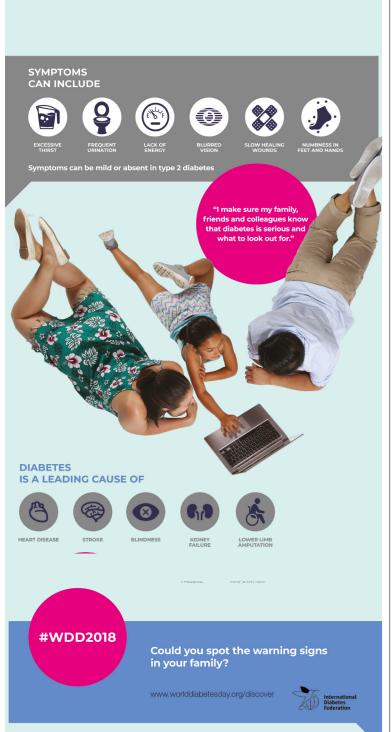
In April this year Diabetes Ireland signed up for a third year of partnership with the MiWadi brand (which is owned by Britvic Ireland





MEDIAPLANET







oday, diabetes is a concern for every family - from the parents of children with diabetes to the relatives caring for an adult family member living with the complications of diabetes. Our current projections suggest the number of people with diabetes will increase to 522 million over the next decade, equivalent to

A SUPPLEMENT BY MEDIAPLANET DISTRIBUTED WITHIN THE IRISH INDEPENDENT

one in ten people. In 2017, diabetes was responsible for an estimated four million deaths, according to figures from the International Diabetes Federation (IDF). Many of these could have been prevented or delayed.

With the rising healthcare and societal costs associated with diabetes - USD727 billion in direct medical costs alone in 2017 we must think about how the increasing prevalence of diabetes, type 2 in particular, can be slowed down, and, hopefully, reversed.

We all have a role to play but governments in particular need to do more to ensure people with diabetes have access to the medicines and care they require to stay healthy and help us protect family members from developing type 2 diabetes and its lifethreatening complications.

Government action to support families

IDF recently asked people across the globe to evaluate the governmental

response to diabetes, Globally, 44% of people believe their government has a responsibility to provide diabetes care. But only 17% think their government is doing enough.1 If governments were to do more,

International Diabetes Federation

such as providing guidance to the one-in-five health professionals who have not received postgraduate training on diabetes, they would support the prevention, early diagnosis and treatment of diabetes and its complications, which would help to build a more sustainable future. As a consequence, governments would spend less money on treating people with diabetes when it's already too late. This could be money saved and misery avoided.

Prevention through education

Of the estimated 425 million people living with diabetes, around 10% have type 1 diabetes. At present, there is no way to prevent type 1 diabetes. If untreated, the diagnosis of type 1 diabetes is a death sentence.

This leaves around 90% with type 2 diabetes. In many cases - up to 80% according to some figures - type 2 diabetes can be prevented through regular physical activity and healthy eating habits. Governments can help stop the rise in type 2 diabetes by

focusing on education initiatives and establishing polices that

support improved lifestyle and dietary choices. They need to help identify people who are not vet diagnosed and those at high risk, so the medical community can intervene early, before people are left needing treatment for diabetes complications.

Stop the epidemic in its tracks

We firmly believe people with diabetes, and their families, should have regular and affordable access to the care, education and support that is required for them to live a full and healthy life with the condition.

Diabetes is a serious global problem and it is at the point of becoming uncontrollable. Governments can make a significant impact in preventing the unnecessary deaths and disabilities of millions of people across the world. We need to work together to make the changes today that will protect the health of



Know your levels with the latest diabetes tech

Dr Diarmuid Smith

Consultant Endocrinologist, Beaumont Hospital, Dublin, Honorary Clinical Associate Professor at Royal College Surgeons Ireland (RCSI), Honorary Secretary of the Irish Endocrine Society



Glucose levels can now be checked continuously, thanks to the latest diabetes technology. For patients with type 1 diabetes, this has been a major breakthrough.

ver the vears. technological innovations have revolutionised the treatment and management of type 1 diabetes, says Dr Diarmuid Smith, Consultant Endocrinologist at Beaumont Hospital, Dublin, and Honorary Secretary of the Irish Endocrine Society.

"Since I started to specialise in diabetes, around 1997, we have had numerous advances in the care of diabetes. We now have better blood glucose testing devices, which will give you a blood glucose result within three seconds, improved insulin injection pens, new insulins, which are helping people with

diabetes achieve better diabetes control, which are more flexible to use, and we also have significant improvements in insulin pump therapy. More recently, we have developed continuous glucose monitoring systems that allow glucose levels to be checked constantly, day and night. These monitors show trends and patterns on whether blood glucose levels are falling or rising and can alert the patient if their blood glucose levels are low."

You don't need to finger prick test all the time

There are two continuous glucose monitoring technologies. Continuous glucose monitoring (CGM) is a sensor typically inserted subcutaneously underneath the skin of the belly for 7 to 10 days at a time, which continuously measures interstitial glucose (an equivalent of blood glucose) and can then immediately relay information about blood sugar

levels to the person's smart phone, or to their insulin pump. "You can even set an alarm to alert you if your blood sugar is low," says Dr Smith.

"This technology doesn't completely do away with the need for a finger prick test (a way to self-check blood glucose levels), because it's necessary to calibrate the monitor and it is still currently a requirement to check your blood glucose (finger prick) before you drive if you are on insulin therapy.

But, the benefit of CGM is that you don't need to finger prick test all the time and increasing data suggests that the more a person uses the CGM the more likely they are to have an improvement in their diabetes control."

The other type of monitoring innovation, known as flash glucose monitoring, is a sensor the size of a 20-cent piece, which sits in the upper arm, again for two weeks at a time. "A person's blood sugar level is revealed when they swipe

a reader over the sensor," says Dr Smith. "They can see if their level is rising or falling — and how quickly or slowly the glucose level is rising or falling — or if it's steady."

As with CGM, the sensor is simply applied and easily replaced. "An advantage for the flash sensor, for example, is for the parent of a child with type 1 diabetes; the child does not need to be woken up in the middle of the night to have a reading taken.

The comfort this gives parents with children with type 1 diabetes is indescribable, says Dr Smith, "It's an incredible advance"

Early data from flash sensors is also showing an improvement in diabetes control, a reduction in hypoglycaemia and significant improvement in quality of life for people with diabetes. However, at present, flash sensing technology won't alarm when the glucose level is low, unlike CGM.

Availability of innovations

Unfortunately, glucose monitor ing technology is not free in Ireland in the majority of cases. "Di abetes medication and insulir therapy is paid for by the state," says Dr Smith. "The flash sensor is available for free for anyone under 21 with type 1 diabetes; everyone else currently has to pay for the flash sensor

"Typically, CGM monitors also have to be paid for by the patient although the government may provide this technology free in some instances for patients who have severe, recurrent hypoglycaemia." Dr Smith encourages the government to ensure that these new technologies are available free to all patients with diabetes on insulin as soon as possible. ■

Tony Greenway





CONTINUOUS GLUCOSE MONITORING

ACCURATE REAL-TIME GLUCOSE READINGS

SMARTPHONE

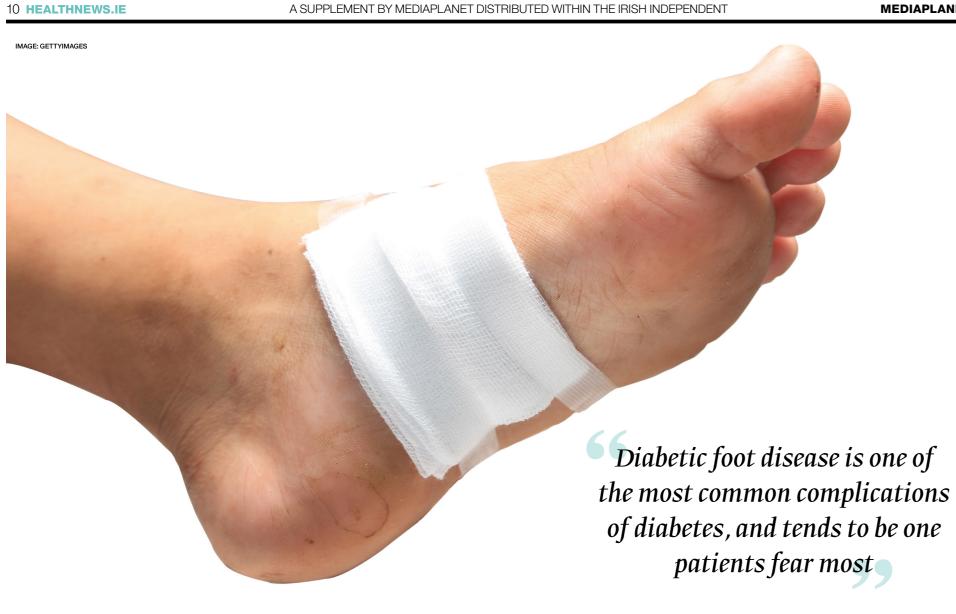
SMALL SENSOR

SIMPLE AUTO-APPLICATOR

10-DAY SENSOR WEAR

ALERTS AND ALARMS SHARE GLUCOSE DATA

AGES 2 YEARS AND UP



Diabetic foot: signs, support

and education

Ronan Canavan

Consultant Endocrinologist St Columcille's Hospital and St Vincent's University Hospital and HSE National Diabetes Programme Lead (2013-2016

Year on year, the number of people in Ireland requiring hospital treatment for diabetes-related foot complications is increasing. What can be done to stop this worrying trend?

There are over 225,000 patients with diabetes in Ireland and around 300 patients require amputations each cut or lesion to develop into an ulcer, year. "Diabetic foot disease is one of the most common complications untreated, can risk the whole viabilof diabetes, and tends to be one paity of the limb," says Dr Canavan. "It tients fear most," says Dr Canavan, Consultant Endocrinologist. "If left untreated and mismanaged, it is associated with severe health complications and devastating outcomes, of which patients may not be aware.

The National Diabetes Foot Care Programme by the HSE began in 2010 and today employs 22 podiatrists. Dr Canavan believes Ireland requires 120 podiatrists to effectively provide local screening and early intervention to the foot, as it does not disturb sleep the diabetes community. This is why or cause pain, and can even lead to identifying high-risk patients is critical to early intervention and effective treatment from Irelands stretched specialist services.

What is diabetic foot?

Diabetes can cause nerve damage and blood vessel disease in the feet. This can cause skin and tissue breakdown, which can develop into non-healing wounds (ulcers) and an increased risk of infection.

"Patients with both nerve damage neuropathy and circulation issues are at much greater risk of a small then to an infection, which, if left is important to note you tend to have diabetes for some time before nerve damage and circulation issues are in-

Identifying the disease early

Dr Canavan warns of the difficulty of self-identifying the early signs of diabetic foot and recommends patients with diabetes seek annual assessment. Key signs are frequently missed such as losing sensation in more damaging behaviours.

"One of the side effects of having a loss of sensation is patients look for shoes that are tighter, so as to able cardiovascular risk factors such

achieve the sensation of tightness between shoe and foot. This can introduce ill-fitting footwear, injuring the foot further," he says.

Diet, exercise, body weight, and cessation of smoking are the first steps to avoiding diabetic foot

A simple, two-minute check with simple instruments can check the sensitivity of the foot to pressure assessing the sensation response of the limb along with an assessment of circulation by examining skin colour and health along with feeling for the main pulses in the feet. This should be undertaken by your GP or diabetes team. Once this assessment has taken place, referral to podiatrist for further risk-assessment and potentially treatment plans can be initiated.

How to avoid complications

Patient education on the importance of blood glucose control and modifi-

as diet, exercise, body weight, and cracked skin where ulcers and cessation of smoking are the first steps to avoiding diabetic foot.

"There are a number of good education programmes around the country for patients. Xpert is a widely available community diabetes education programme and provides information on how to look after your tion problems, it is recommended feet and how to look after your diabetes in general," says Dr Canavan.

Regular foot check-ups and 'staying vigilant' with your own foot health is also recommended to avoid developing further foot complications. "If you are in a high-risk category and you get an ulcer on your foot, treat that as an emergency and seek review from your GP, specialist podiatrist or diabetes clinic within 24hours," says Dr Canavan.

Taking care of your feet

Many specialists recommend regular, or daily, foot checks, to identify changes in levels of sensation, colnotice any changes, contact your diseases can be reduced. ■ healthcare professional.

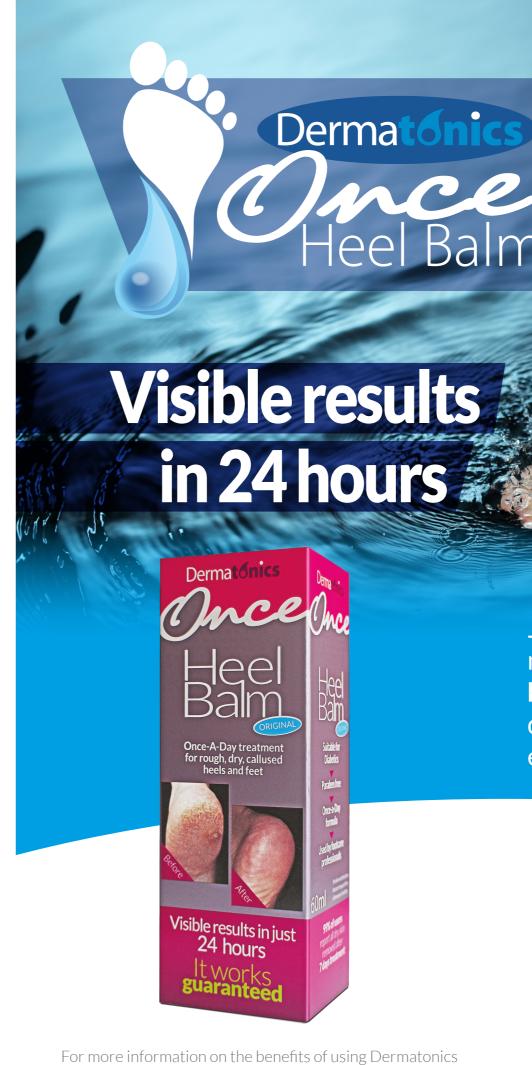
"A special type of nerve damage called autonomic neuropathy - pre infections can develop. If you think this is happening, contact your podiatrist; they can recommend specialist moisturisers to keep the skin supple," he says.

If your feet are at risk, with established neuropathy or circula that you seek a professional podiatrist with any foot care, including nail cutting and the removal of dry skin, "The analogy is you wouldn't be expected to pull out your own teeth or do you own dentist work? says Dr Canavan

The future implications of diabetic foot are dependent not just on furthering investment in specialist services but also on patient participation, awareness and understanding.

Through taking precautions with good glycaemic control, regular foot assessment, appropriate footwear, patient education, and early referral for pre-ulcerative oration, lesions or shape. If you do lesions - cases of this debilitating

Alex van den Broek



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A WEIGHT LOSS SOLUTION FOR TYPE 2 DIABETES

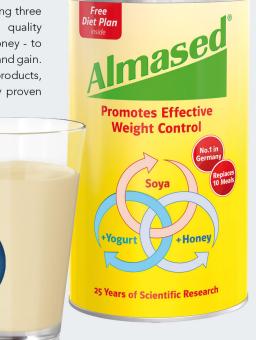
Germany's No.1 Meal Replacement¹ not only supports weight loss but can also help people with Type 2 Diabetes lose weight.

or overweight people with Type 2 diabetes, losing weight is an essential part of managing the condition, however difficult this may be. Today, a scientifically proven meal replacement can provide safe and effective weight loss which is easy to follow and can be used by anyone suffering from Type 2 diabetes*.

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to have positive effect on weight loss and importantly, for those with Type 2 diabetes, improve glycaemic control.



...simply because it works

*HELPFUL ADVICE

Please consult your healthcare professional before starting any weight loss programme such as $\text{Almased}^{\textcircled{\tiny{\textbf{0}}}}. \text{ Almased}^{\textcircled{\tiny{\textbf{0}}}} \text{ is a meal replacement which can be used to replace up to two of your daily } \\$ meals. Depending on how your diabetes is treated, you may require support to a) start checking your blood glucose levels/to check them more regularly, b) to make changes to your medications.

1. Euromonitor International(2018) † Reader's Digest. Trusted Brands 2018. Germany



How Almased® can help people with Type 2 diabetes lose weight

Almased® contains a high proportion of plant based protein and a reduced carbohydrate content which results in the product having a low glycaemic index (27) and an extremely low glycaemic load (4). Foods with low GI and GL are slowly absorbed into the body and ensure blood glucose levels are only raised slightly while the body's requirement for insulin is reduced. As a result of this lower insulin requirement, fat stores are utilised for energy making it easier to lose weight.

Almased® can help people with Type 2 diabetes lose weight and furthermore, maintain weight after weight is lost. Our clinically tested 12-week plan is simple and easy to follow and can support your weight loss goals. Once this has been achieved, Almased® can be used once a day for the purpose of weight maintenance. IT IS CLEAN WEIGHT LOSS IN EVERY SENSE - Almased® contains NO artificial flavours, fillers, preservatives or stimulants.

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