InDependent Diabetes Trust Newsletter

September 2017 Newsletter, Issue 94

PO Box 294 Northampton NN1 4XS Telephone: 01604 622837

IN THIS ISSUE...

Discontinuation of beef insulin but pork insulin WILL be available

The raw materials from which beef insulin is made are no longer available anywhere in the world. The number of people using beef insulin is now very small so, while we may not like it, the reality is that the beef insulin crystals are not being made for this very small market. This is not the fault of Wockhardt UK - they simply cannot obtain the necessary beef insulin crystals.

We have received emails from people outside the UK who said, 'there are plenty of cows in the world', but it is not a shortage of cows that is the problem. To make beef insulin, pancreases have to be collected, the insulin extracted, purified and then turned into insulin crystals. Wockhardt have been buying these crystals to make the beef insulin people use and it is these crystals that are no longer being made.

Many of the people using beef insulin have used it all their lives, some for fifty or sixty years, but hopefully many of them will be able to change to pork insulin. We know that there is a small number of people who have been unable to use pork insulin and we hope that they will find alternatives that work for them. To Wockhardt's credit, they have given plenty of notice of the anticipated end of supply dates, so people have time to try various options.

The good news is that there are no such problems with pork insulin and it will continue to be available for the foreseeable future.

In July, we notified our members using insulin that beef insulin will be discontinued. We have already received reports from members that their health professional has said, '*The same will happen to pork insulin before long, so you need to change to human or analogue insulin*'. This is NOT the case, so if you want to stay on natural animal insulin, pork insulin will continue to be available.

It is natural that people worry that this will also happen to pork insulin, but I have been assured by the Managing Director of Wockhardt that it will remain available and I believe him. There is a bigger market for pork insulin and not just for people, dogs with diabetes have to be prescribed pork insulin! When synthetic human insulin was given to dogs and cats years ago, it actually caused them harm, with some dying, so vets were instructed that dogs with diabetes have to be treated with pork insulin. Imagine the uproar if there was no treatment for diabetic dogs! So just looking at this commercially, this makes the market for pork insulin crystals even larger.

Anger!

It is understandable that people feel angry but if we want to blame anyone, we should blame the 'big three' – the global insulin manufacturers who stopped supplying beef and pork in the 1980s and 90s when they introduced genetically modified 'human' insulin. Some people had serious adverse reactions to this GM insulin, the most common being was partial or complete loss of warnings of hypoglycaemia (hypo unawareness). Other adverse reactions included weight increase, feeling tired, headaches, confusion, memory loss and just feeling unwell. These adverse reactions largely disappeared when people changed to animal insulin but this was not believed by the majority of doctors and health professionals.

In the UK, we were fortunate to have a company called CP Pharmaceuticals (now Wockhardt UK), who understood the need for some people to use animal insulins. We became the only developed country where animal insulins remained available and people from other countries, who could afford, have been importing animal insulins from the UK.

A government promise

In 2005, the then Minister of Health, Jane Kennedy, acknowledged at a meeting and in writing to IDDT that some people need animal insulin and it must continue to be available.

Nothing has happened over the intervening years to change this, no research has been carried out to find out why some people have adverse effects when using GM human or analogues insulins. Equally, there has been no research to compare the long-term effects of animal and GM human and analogue insulins, such as the rates of hypo unawareness or complication and death rates, so the need for at least one animal insulin is just as great now as it was in the 1980s. For many doctors and health professionals, animal insulins are a thing of the past but for some people they are essential for them to live healthily with their diabetes and to have hypo warning signs.

It is worrying that IDDT hears from parents whose children do not have warning signs, even have never had them and they need hypo alert dogs or special teaching assistants at school. I wonder if anyone thought of trying pork insulin? I doubt it – because we weren't believed and the necessary research was never carried out. The ramifications of no hypo warnings are enormous for both adults and children – not being safe on their own or not being able to drive a car like their friends and more. Loss of hypo warnings has been put down to long-term diabetes or tight control but neither of these applies to children! Loss of warnings is when Type 1 diabetes can become a very real disability.

Many of the people who have taken animal insulins for years still have hypo warnings 40, 50 and 60 years later, maybe not as strong but they are still present, can the same be said for people on human and analogue insulins so many years later? We don't know, because the research hasn't and isn't being done.

IDDT also hears from people who have never 'felt well' since being put on insulin – tired, headaches, nausea, joint and muscle pains, confusion and large weight increase. They put this down to simply 'having diabetes' but diabetes itself does not cause these problems, there must be another cause which should be investigated. For many people, animal insulin is the answer but doctors and health professionals are unwilling to go down this avenue. Here is one of the many messages IDDT received:
"I was sad to read about the end of beef insulin. Having taken a non-animal insulin for four years, to use the term adverse side effects is putting it mildly. Finding your website a number of years ago now, helped me enormously and I have been on pork insulin twice a day for many years now. I very much appreciate all the work carried out by you and the IDDT staff."

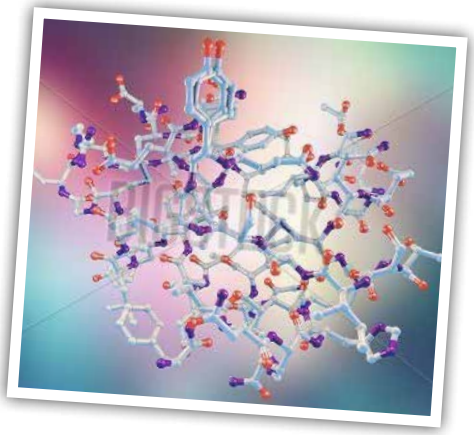
Warning!

If you have to change from beef to pork insulin, your health professional should tell you the differences between the types of insulin. However, within three weeks of the announcement about the discontinuation, one of our members picked up her usual beef insulin from her pharmacy only to notice when she got home that the packs were different. Without discussion with her, she had been given pork insulin! This is just what happened in the 1980s with the change to human insulin, people had their type of insulin changed without being told which could be dangerous because various types of insulin have different durations and peaks of action. A change of insulin should never happen without discussions between the patient and the doctor or health professional and of course, close blood glucose monitoring. Generally, beef insulins are slower and smoother than pork insulins. Hypurin Pork Isophane and Hypurin Pork Neutral are both available in cartridges and vials, so taking into account that pork insulin is a little faster than beef insulin, many people will be able to change to the pork equivalents with careful blood glucose monitoring and perhaps

dose adjustments. However, there are no equivalent long-acting pork insulins to Bovine Lente and PZI. Long-acting analogues (GM) are an alternative but for people who do not want to use a GM insulin because of past experiences, the best suggestion is to change to Hypurin Porcine Isophane twice a day.

Discontinuation dates

The table below from Wockhardt UK gives an indication of the expected dates when the various beef insulins will no longer be available but to keep up to date, Wockhardt will publish monthly updates on their website: www.wockhardt.co.uk



Insulin Type	Form	Predicted depletion date
Hypurin Bovine Isophane	3ml cartridges	December 2017 (Product Expiry)
Hypurin Bovine Neutral	3ml cartridges	October 2018
Hypurin Bovine Isophane	10ml vial	November 2018
Hypurin Bovine Neutral	10ml vial	January 2019
Hypurin Bovine Lente	10ml vial	May 2019 (Product Expiry)
Hypurin Bovine PZI	10ml vial	August 2019

Never heard of animal insulins?

Many people with diabetes more recently diagnosed may not have heard of animal insulin and wonder what this is all about! In simple terms, until the 1980s all insulins were derived from the pancreases of cattle and then in the 1970s also from pigs – both were highly purified. As animal insulin is real insulin, a little glucagon is also present as it is extracted with the insulin. This is not the case with GM produced insulin which is made from yeast or e-coli. A letter in the Lancet pointed out that the extraction of glucagon is why people using animal insulin are more likely to have hypo warnings.

Jeremy Hunt Watch

Apologies

No, not from Mr Hunt but from your editor! We had a few comments that readers missed the 'Jeremy Hunt Watch' in the June Newsletter. Sorry but I couldn't really find anything he did during this period and he was notably absent from broadcasts during the Election campaign!

Message for Mr Hunt

Research published in The Lancet (July 1st 2017) provides evidence that may be useful to Mr Hunt. We all remember the doctor's strike in part caused by Mr Hunt's demand for a 7 day working week for hospitals on the basis that reduced staffing levels at weekends results in increased mortality rates at weekends.

Researchers analysed admissions to four Oxford hospitals between 2006 and 2014 with the primary outcome being death within 30 days of admission. Adjustments for routine test results substantially reduced excess mortality associated with emergency admissions at weekends and public holidays. The study showed that hospital workload was not associated with mortality and suggests that the weekend effect arises from patient differences rather than reduced hospital staffing or services. So perhaps in future, arguments should be based on evidence and not taken at face value!

Long-acting insulin analogues not on the WHO Essential Medicines List

The World Health Organisation (WHO) has decided that long-acting insulin analogues should not be included on the WHO Model List of Essential Medicines. In a press release, Health Action International (HAI) has commended the decision stating:

"Its inclusion would have increased pressure on national governments to purchase long-acting analogue insulins, which are seven to nine times more expensive than human insulin, while providing limited added value to users. The result would have been fewer people being treated and more deaths."

An ongoing study, ACCISS, has found that the long-acting analogue insulins, glargine (Lantus) and detemir (Levemir), were far higher priced and less affordable than human insulins. For the two long-acting analogues, the proposed average government purchasing prices to be added to the Essential Medicines List were $43.19 and $55.58 compared with only $6 for human insulin!

The WHO considers a medicine for non-communicable diseases to be unaffordable if it costs more than one days' wage for a 30 day supply. ACCISS also showed that the lowest paid unskilled government worker would have to pay on average 3-4 days' wages to buy one month's supply of human insulin compared with more than 8 days for long-acting analogues. **Note**: ACCISS is the study, Addressing the Challenge and Constraints of Insulin Sources and Supply. This is a global study looking into insulin access barriers and to identify the causes of poor availability and high insulin prices and to develop policies and interventions to improve access to insulin. For more information: http://haiweb.org/what-we-do/acciss

It shouldn't happen in a developed country like the United States!

IDDT recently received the following email from someone in the US, and it is not the first of its kind.

"I'm a 33 year old diabetic in US who is insulin dependent with no insurance and no money. I am on a waiting list for a free clinic but that can take up to 6 months. My Dad recently passed away and I was given all his insulin but I can't get any help with syringes due to no insurance. I have reused to the point where my last one will not hardly punch the skin. I've called pharmacies and churches and without a prescription, they won't help me."

As readers know, we collect insulin, syringes and lancets to send to developing countries where people cannot afford the treatment they need, but it is shocking that some people in the United States are in the same category!

Professor Irl B, Hirsch (Endocrine News, April 2017) says that one of his patients pays more for her insulin per month than for her monthly mortgage and another has maxed out his credit cards to pay for his insulin. He also points out that many people either reduce the quality of their care or don't take their insulin or medication as they should for one reason - cost.

The American health system is difficult to understand and appears to be in a state of flux but a two-tier system is being created where people who can afford it have a physician of their choice and those who can't, are left to find a doctor on their health plan or spend more of their own money than they did before. People who have the least to spend go to clinics where the doctor spends the least amount of time with them and these same people are the ones who also stop taking their medications or take them every other day.

The cost of diabetes is rising each year and the huge increases in the price of insulin have made matters worse. Profession Hirsch ends by asking: "*Is insulin a right or a privilege? Nobody should be without insulin therapy. Nobody.*"

Sometimes it is good to realise that in the UK, we have a lot to be thankful for!

IDDT's Annual General Meeting 2017

As members are aware, we are unable to afford a Conference every year but we do have to hold an Annual General Meeting to comply with charity law. So we are holding an afternoon meeting on Thursday, November 9th 2017 at the Kettering Park Hotel, Kettering Parkway NN15 6XT (Junction 9 off the A14). We hope that as many of you as possible will be able to join us – it is your opportunity to meet the Trustees and staff and of course, each other.

The programme for the afternoon will be as follows:

12.15 to 1.30 – arrival and free sandwich lunch
1.45 – Annual General Meeting
3.00 – Break for tea and biscuits
3.15 – General discussion
4.30 – Farewell

The AGM 2017

If you would like to nominate someone for election to the Board of Trustees, then please send nominations to IDDT by November 1st 2017 with a letter of agreement from the person you are nominating and seconded by another member of IDDT.

Please let us know!

For catering purposes, please let us know if you are attending by November 1st by contacting IDDT, telephone 01604 622837, Rita by email rita@iddtinternational.org or write to IDDT, PO Box 294, Northampton NN1 4XS. Rita will then send you confirmation and a map to find the Kettering Park Hotel.

Lizzie's Tea Party for Dream Trust

Once again Lizzie and her mum, Cat, have held their annual tea party to raise funds for the Dream Trust in India. This year they managed to raise an impressive £886.17, which will go towards purchasing insulin and supplies for the families of children with diabetes who cannot afford to do so themselves. Here are some pictures of the event – looks like everyone had a good time!

And for 2018 a date for your diary!

We will be holding a Conference in 2018, so the date to remember is Saturday, October 6th 2018.

Amendments!

Ketone testing

In the last Newsletter we gave examples of meters that could be used for testing ketones. This list was not meant to be a definitive list of all meters but we have been asked to point out that the CareSens Dual Blood Glucose and Ketone Meter is available from Spirit Healthcare. For further details visit their website: www.spirit-healthcare.co.uk

Heel Balm

In our last Newsletter, we informed you about Flexitol Heel Balm to treat cracked heels but other products are available. Dermatonics Once Heel Balm is available can be prescribed by GPs in almost 100 NHS CCGs/Trusts. It also helps rough, dry callused heels and feet. As there are strong links between ulceration and callus, it reduces the ulceration risk dramatically. More details are available at www.dermatonics.co.uk

Research

Adults with Type 1 diabetes and coeliac disease at increased risk for thyroid disease

Research carried out at the Royal Hallamshire Hospital in Sheffield has shown that adults with Type 1 diabetes and coeliac disease are at an increased risk of autoimmune thyroid disease. The researchers analysed information from the Swedish National Patient Register between 1964 and 2009 and identified all patients diagnosed with Type 1 diabetes before the age of 31.They then identified all patients with Type 1 and coeliac disease and followed them for 13 years comparing them with matched controls with only Type 1 diabetes.
The results showed:

- 90 patients in the group with both Type 1 diabetes and coeliac disease developed hypothyroid or hyperthyroid at an average age of 25 years.
- Overall, 10.8% of patients in the Type 1 diabetes and coeliac disease group were diagnosed with thyroid disease at some stage of life versus 7.2% of patients with Type 1 diabetes but no coeliac disease.
- The highest risk estimates for developing thyroid disease were observed in the first calendar period of the study (between 1964-1975), which researchers attributed to poor screening for thyroid disease in those with Type 1 diabetes at the time.
- The highest risks were seen after more than 10 years with coeliac disease suggesting that long-term double autoimmunity is a risk factor for autoimmune thyroid disease. (Diabetes Care, December 2015)

Different versions of Type 1 diabetes

UK research analysed pancreas samples. It has been found that in some people with Type 1 diabetes, there are two types of immune cells called T cells and B cells but in other people, there are mainly T cells. Interestingly, the two cells were only seen in people diagnosed before the age of 7.

Other research has shown that people diagnosed with Type 1 at an earlier age were losing their insulin-producing beta cells faster than those diagnosed at an older age. These two studies suggest there are two types of Type 1 diabetes:

- younger children could have a more aggressive form and lose their beta cells more quickly.
- those diagnosed later could lose their beta cells more gradually.

The significance of this is that future research looking into stopping Type 1 diabetes developing by trying to prevent the immune attack on the beta cells, needs to look at two different approaches. For children diagnosed under 7, studies need to look at stopping T and B cells attacking the beta cells but for those over 7, it may only be necessary to stop the T cells.

Insulin production still can occur in Type 1 diabetes 10 years after diagnosis

A study carried out in Sweden has shown that insulin production still occurs in about half of people with Type 1 diabetes who have been living with the condition for 10 years or more.

The researchers studied 113 people who had been living with the condition for more than 10 years. They tested the participants for the presence of C-peptide in the blood. C-peptide is a protein produced at the same time as insulin but it is not in the manufactured insulin obtained on prescription. Therefore, if C-peptide is present in the blood, then insulin is still being produced.

The results showed that nearly 50% of the participants still produced insulin and also that those still producing it had higher levels of another protein called interleukin-35 (IL-35).

The researchers state that IL-35 has been shown to block a type of an immune cell, known as T-helper 17 cells, which may reduce the attack on the beta cells in the pancreas that produce insulin. They do not know whether these levels were higher at diagnosis or whether the level IL-35 increased over the years but previous research has discovered that IL-35 levels were lower in people newly diagnosed with Type 1 diabetes compared to the general population. They believe that IL-35 could help possible future prevention or reversal of Type 1 diabetes. (Diabetes Care, June 2017 online)

Note: It is worth noting that if some people still produce their own insulin, then this may make achieving 'good' control more difficult!

Neuropathy associated with greater distress and depression in older adults with Type 1 diabetes

A Canadian study of older adults with longstanding Type 1 diabetes

found that neuropathy is the strongest predictor of diabetes distress, depression and reduced quality of life, whether or not there are painful symptoms.

The researchers analysed information from 323 Canadians with Type 1 diabetes and an average age of 65 years who had had the condition for at least 50 years. Within this group, diabetic neuropathy was shown to be independently linked to depression, distress and reduced quality of life, especially in older people.

The 323 people in the study completed a questionnaire and it was shown that:

- 207 had retinopathy
- 137 had neuropathy
- 113 had nephropathy
- 95 had cardiovascular disease and 31 had peripheral vascular disease.

Researchers found that there was more distress and depression amongst those with neuropathy compared to those without neuropathy. The cause is not known but there is some evidence that poor psychological outcomes in neuropathy come from non-pain factors, such as restricted quality of life and symptom and treatment unpredictability. The researchers suggest that the results support more intensive mental health screening and multidisciplinary management of older people with longstanding diabetes and neuropathy. (Endocrine Today, May 2017)

The effects of high dose vitamin D on painful diabetic neuropathy

This study was designed to investigate if the effects of a high dose of vitamin D was beneficial to people predominantly with Type 2 diabetes and painful neuropathy. A single intramuscular dose of 600,000 IU vitamin D was given to 143 people and the effects on neuropathic pain assessed over 20 weeks. The results showed that this single dose significantly reduced symptoms of painful diabetic neuropathy with maximum benefit being at 10 weeks. (BMJ, Open Access)

Eye drops could replace eye injections for patients with diabetic eye complications

Diabetic maculopathy is damage to the macula, the part of the retina that is responsible for fine vision, such as reading. Treatment with injections of drugs called anti-VEGF has been shown to be effective but they need to be given monthly and into the white part of the eye.

Researchers at Nottingham University are working on developing eye drops that work for age-related macular degeneration, a condition that shares some similarities with diabetic maculopathy. Injections of anti-VEGF into the eye are not very pleasant and are costly so eye drops would be welcomed but this research is still in the very early stages.

Foot mat measures temperature to detect ulcers

An American study of 129 people with diabetes has tested a mat specifically designed to detect foot ulcers in those with diabetes. People have to stand on the mat for 20 seconds and it then transmits information to servers to be analysed by doctors.

In the study 97% of ulcers were detected about 37 days before they were detected by a doctor. However, the mat also identified a high percentage of false positives – 57% when testing for variations of 2.2 degrees Celius but this decreased to 32% when the variation was raised to 3.2 degrees Celius.

The study participants were only monitored for 60 days, so the results may have been different if it had continued. In addition, all the participants had previously had foot ulcers so the researchers do not know whether the mat would work on people who had never had one.

Genetic links to Type 2 diabetes, high blood pressure and coronary heart disease

UK researchers analysed genetic, medical and socio-demographic information from the UK Biobank of 120,000 people and found that if you are born with genes that increase your body mass index (BMI), then you are at increased risk of developing Type 2 diabetes, hypertension and coronary heart disease. For every 4.8 unit increase in BMI there was an increased risk of Type 2 diabetes of 153%, a 64% higher risk of hypertension and a 35% increased risk of coronary heart disease. (JAMA Cardiology, July 2017)

Nasal glucagon for managing hypoglycaemia

A study of 69 adults with Type 1 diabetes showed that their blood glucose levels returned to normal within 30 minutes of being treated with a nasal glucagon powder in 96.2% of 157 hypoglycaemic episodes. Side effects were similar to injectable glucagon, including nausea and vomiting. There was also some nasal irritation from the powder and headache. The side effects usually only lasted for an hour.

Vaccines to prevent Type 1 diabetes

Human Trials of Type 1 diabetes vaccine

Human trials of a Type 1 vaccine are ready to start by a Belgian company, Imcyse costing 6 million euros. Approval has been given by British and Belgian authorities and the trials will take place in 18 sites in the UK, Belgium, Denmark, France and Germany. People who have been diagnosed with Type 1 diabetes in the previous 6 months will be recruited into the early stage of the trial.

The Type 1 vaccine uses modified peptides called imotropes which work by producing a specific type of immune cell to attack the insulin-producing beta cells. The hope is that imotrope therapy could prevent the development of Type 1 diabetes at the first signs of the autoimmune disease. Imcyse hopes to have results by the end of 2018. (May 2017)

New clinical trials announced to prevent Type 1 diabetes

Researchers in Finland have announced plans to start clinical trials in 2018 for a new vaccine to potentially prevent Type 1 diabetes. Previous research has found that some enteroviruses, a group of viruses common in children, can infect the insulin-producing beta cells in the pancreas which may lead to Type 1 diabetes.

In 2014, Finnish researchers found that a specific type of enterovirus (coxsackievirus B1) was associated with an increased risk of children developing Type 1 diabetes if they were already high risk. They then developed a vaccine to protect against this virus which was safe and effective in mice so they are now moving to trials in people. It may take 8 years to find out if it works.

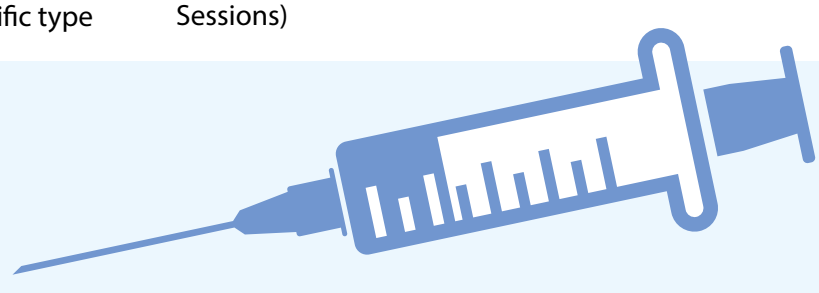
But - Diamyd vaccine fails to prevent Type 1 diabetes

IDDT has previously reported on studies of Diamyd (Alum-GAD), another vaccine it was hoped would prevent Type 1 diabetes by preserving the beta cells. The study involved 50 children between the age of 4 and 18 who were at high risk of developing Type 1 diabetes. Half the children received the vaccine and half received a placebo (dummy treatment) on days 1 and 30. Intravenous and oral glucose tolerance tests were conducted every 6 months for 5 years.

The results showed that the vaccine was safe with no serious adverse effects but it did not prevent or delay Type 1 diabetes in these high risk children - 18 out of the 50 of them developed Type 1 during the 5 year trial period.

Investigators have not discontinued the research and there are 4 ongoing trials exploring the use of this vaccine with larger numbers. (ADA 77th Scientific Sessions)

Reminder about flu jabs



More people who can get the flu jab for free should be vaccinated, says NICE.

New draft guidance from NICE highlights the need to educate people that having a flu jab each year is the single best protection against catching or spreading flu.

In the last flu season (October 2916 to March 2017), 953 people were admitted to intensive care units with confirmed cases of the flu and 107 of them died.

To help reduce these deaths and hospital admissions, the new draft guidance recommends eligible people are made aware and offered the vaccine every winter. People should be offered the flu jab at every opportunity which could be during a GP appointment, when picking up prescriptions or during a hospital stay or home visit.

Millions of people who are at highest risk are eligible for free vaccines on the NHS including older people, very young children, pregnant women and those who have an underlying long-term condition. This includes people with diabetes, so remember to ask about this at your GP surgery.

WHAT IS CHOLESTEROL?

The body needs cholesterol to work properly but too much cholesterol may mean an increased risk of cardiovascular disease. Cholesterol is needed to make certain hormones and it is an important building block for cell walls. Most cholesterol is made in the liver and only a small amount comes from the diet we eat. The bloodstream carries cholesterol from the liver to other organs and tissues in the body and any unused cholesterol is carried back to the liver in the bloodstream.

Cholesterol does not dissolve in water or blood, so in the liver, it is packed into tiny parcels of cholesterol, proteins and fats (lipids) called lipoproteins. There are two different kinds:

- LDL cholesterol (low-density lipoprotein) carries cholesterol from the liver to the rest of the body. High levels of LDL cholesterol are associated with a higher risk of cardiovascular disease, hence it is known as "bad" cholesterol.

- HDL cholesterol (high-density lipoprotein) carries cholesterol back to the liver from the organs and tissues. High levels of HDL cholesterol are associated with a lower risk of cardiovascular disease, so known as 'good' cholesterol.

A change in views

In recent years, researchers have changed their views about how LDL cholesterol influences the risk of cardiovascular disease. Most people have small inflammations in the walls of their blood vessels, depending on age and lifestyle. In people with high LDL cholesterol, phagocytes (scavenger cells) in the blood attack cholesterol particles so that it is more likely to stick to the blood vessel walls.

Inflammations can also weaken the blood vessel walls which may tear and if blood suddenly comes into contact with the cholesterol deposits, a blood clot may form. A big clot can completely block the blood vessel causing a heart attack or stroke. However, the blood clots are often only small and fix to the blood vessel walls causing damage without any symptoms. The damage heals on its own but this can lead to scarring and calcification of the vessel wall so making it narrower. The wall becomes thicker and stiffer – this is arteriosclerosis.

Inflammations can develop in any artery but are particularly dangerous in the large arteries to the brain and heart:

- Narrow coronary blood vessels can cause chest pain during exercise (pectoral angina).

- If a coronary blood vessel is blocked, blood will no longer flow to the heart muscle which may cause a heart attack.

- If a blood vessel in the brain becomes blocked, it may lead to a stroke.

Research – the link between cholesterol and diabetes

- People with naturally lower levels of LDL cholesterol have a decreased risk of heart disease but a slightly increased risk of diabetes.

- People with DNA containing versions of genes that naturally increase their levels of fat in the blood, such as LDL cholesterol or triglyceride, showed an increased risk of heart disease.

- People with genes that naturally increase their LDL or HDL cholesterol, and possibly triglyceride levels, were at a slightly decreased risk of Type 2 diabetes.

These findings suggest that having lowered LDL cholesterol can cause a slight increase in the risk of Type 2 diabetes.

It has been known that statin treatment increases the risk of Type 2 diabetes but this research indicates the risk may be a result of having lowered LDL cholesterol, rather than a direct effect of the statins. Further research is needed but in the meantime, the researchers say that the advice about the use of statins should not change but people should be monitored for their risk of Type 2 diabetes. (JAMA Cardiology, August 2016)

Treatment

Treatment is usually with statins but there is still a big ongoing debate amongst professionals about prescribing for the general population over 45 years or just those at risk of heart disease.

For people who have adverse effects from statins, ezetimibe is an alternative. This blocks the absorption of cholesterol into the blood from food and bile juices in the intestines. It tends to be not as effective as statins, but rarely causes side effects.

From our own correspondents

Insulin that you feel best on!

Dear Jenny,

I have just read your cover story in the last Newsletter with interest. (Should we not be told the truth too? Issue 98). I have been on animal insulin as a child and teenager, and on human insulin, and analogues, and back on animal (in my insulin pump), and then back to analogue.

I feel there is a problem with relying on studies to measure overall efficacy of a type of insulin at a personal level. I felt good on animal, and it did remove some symptoms, such as finger problems – from being unable to straighten a finger, it became normal again. Back on analogue, this disease progressed until last October when I had it operated on.

However, bringing down high blood sugars was not easy - in me, at least. It took ages, and I do not feel well with a high blood sugar. HbA1c levels notwithstanding, I do think the shorter time you spend high like this must be better. Gentler insulin I think does mean that you are less likely to become high/low/high, however the 'tail' of the action in me meant I had unexpected hypos all over the place. Hypos bring down the average HbA1c, but it does not mean your control is good. I had a brilliant HbA1c, but a terrible life.

I don't think HbA1c should be the overall consideration, I think how someone feels overall, and how easy it is to live their life should be considered in conjunction with this measure.

Also, there is a new insulin on the market – Fiasp, made by Novo Nordisk. If it proves safe, it is a game-changer. It has a 2 hour action and is gone. It starts working immediately. I no longer have any highs after meals. My levels are within limits 95% of the time and I confidently expect my HbA1c to be much better than normal - last time it was 6.8.

Just thought I'd put the other side! ! am still in favour of everyone using the insulin they feel best on.

By email

What more can we do?

Dear Jenny,

Until recently my husband had his toe nails cut at the Diabetic Podiatry Clinic within our local hospital but now the hospital has stopped this service. Unfortunately, my husband who has had Type 1 diabetes for 58 years, cannot reach to cut his toe nails and I am in a wheel chair. I have contacted the local CCG, his diabetes consultant and GP to ask for this service to continue for him because his vascular surgeon has stated that my husband has had significant intervention in his left leg and he needs good chiropody care to avoid further problems. The CCG have refused to consider all this.

I have received quotes from several podiatrists and these are all between £45 and £50 per visit, something we cannot afford every 6 weeks.

What can we do?

I feel a new woman!

Dear Jenny,

You very kindly sent me Diabetes – Everyday Eating, the 4-week eating plan, and I am so happy to be able to let you know that I have managed to lose over one stone in weight already and feeling much better and more confident. This was after a year of feeling that I was in the wilderness after a GP diagnosis of "pre-diabetic" and not a word of help.

I am just back home after a visit to my doctor on a matter not related to my diabetes but I asked her if my fasting bloods results were back from a week ago. I am absolutely over the moon to report that all tests had excellent results. I asked my GP if I am no longer classed as "pre-diabetic" and she looked a little shamefaced and said that I could now disregard the comment made by her colleague last May that I had "impaired glucose regulation".

So thank you, thank you once again - I feel quite the "new woman" this morning and I hope it lasts.

By email

Comment: While the prevention of Type 2 diabetes is important, diagnosis of pre-diabetes does upset people. It is worth remembering that only one in ten people diagnosed with 'pre-diabetes' actually go on to develop Type 2 diabetes.

Scaremongering or prevention of problems?

Dear Jenny,

In 2016, I bought from you the neuropad test pads and carried out the test adhering to the instructions. My left foot pad turned pink easily, which means no problems, but the pad on my right food stayed mostly blue with a little pink on it. This concerned me so I went to see the nurse at my GP surgery.

The nurse was very insistent that this test was not reliable and that the cost to buy was a waste of money. She is a trained diabetic nurse and said these tests were scaremongering and that no trained health professional would take any notice. I have to say I am still concerned about this several months later because she still maintains my feet are fine.

I thought I would let you know that after happily buying such an item which I thought would give me peace of mind, I am left now worrying about who to believe. I check and moisturise my feet daily but nonetheless I am concerned this could happen to other people.

Surely staff in the NHS dealing with people with diabetes need to be much better informed to avoid this situation happening to anyone else?

By email

Comment: Perhaps the nurse has not yet heard of the neuropad which is going through the NICE approval process. The evidence can be found at the link to the NICE Scope at: https://www.nice.org.uk/guidance/indevelopment/gid-mt513 It is worth remembering that prevention is important!

GP surgery letter

Dear Jenny,

I received a letter from my GP surgery saying that the practice is looking at all patients with Type 2 diabetes '*with a view to ensuring we best manage your diabetes within national guidelines and local policy*.' It goes on to invite me to attend a clinic consultation to:

- *Discuss your current therapy/discuss alternative therapy where appropriate.*
- *Ensure we have up to date health assessment check (blood pressure and sugar levels).*
- *To ensure we are addressing any further opportunities to improve your health and wellbeing.*

Apparently the appointment will last no longer than 15 minutes with a pharmacist from a company called Interface Clinical Services (ICS). What concerns me is that it is sponsored by Takeda UK Ltd, a company that makes drugs to treat Type 2 diabetes. I have attended all my appointments with my doctor and nurse, so I don't understand why I need this clinic visit, especially as it is by a private company and paid for by a drug company. Is it to transfer me to a Takeda drug?

Ms N.H.
East Midlands

Note: The ICS website says: Working across all levels of the NHS from primary to secondary care, Interface Clinical Services (ICS) partner with clinicians and commissioners to deliver clinical programmes tailored to meet the needs of both the patient and the organisation. ICS is an NHS Business Partner, the highest level awarded to non-NHS organisations and an official recognition and testament of the continuing partnership between ICS and the NHS.

What are the barriers to uptake of insulin pumps and CGMs?

The uptake of insulin pumps and continuous glucose monitors (CGMs) continues to be low. Obviously cost is one barrier, depending on the health systems in various countries however, there are other barriers and a study has been carried out to find out what these barriers are, in which group of people they exist and whether they can be changed. A survey of 1,503 adults with Type 1 diabetes with an average age of 35 years and an average duration of diabetes of 20 years showed the following:

- The most common barrier was related to the hassle of wearing devices (47%) and disliking devices on their body (35%).
- CGM users were older than non-users (37%), had diabetes for longer and had more positive attitudes to technology than non-users.
- The youngest age group (18-25) had the lowest CGM use (26% vs 40-48%) and insulin pump use (64% vs 67-77%),. They also had the highest diabetes distress and the highest HbA1c levels - 8.3% (67mmol/mol) vs 7.2 -7.4% (55-57 mmol/mol)

The researchers concluded that efforts to increase device use need to target the physical barriers to wearing devices and should focus on young adults as they had the lowest device uptake rates, highest distress and highest HbA1cs compared to older age groups. (Diabetes Care, November 2016)

Pumps versus multiple daily injections

Previous research has suggested that insulin pumps may help some people to obtain better blood sugar control than they achieve with multiple daily injections. However, doctors have questioned whether this is because people using pumps receive more intensive training (education) on managing their blood sugars than do people using multiple daily injections.

In a study, 235 adults with Type 1 diabetes had the same education on managing their blood sugars and then they were randomly assigned to use pumps or daily injections. The blood sugars were then compared over 2 years using HbA1cs levels as the measure.

Results

- At the start of the study, the participants had average HbA1c levels of 9.1%, indicating poorly controlled blood sugars.
- After 2 years, there was no statistically significant difference between the two groups - a reduction in HbA1c of 0.85% in those using a pump compared to 0.42% in those using multiple daily injections.
- There was no difference between the groups in the number of severe hypos.
- More people on pumps experienced diabetes ketoacidosis (DKA) – 17 events per person per year compared to only 5 in the injection group. DKA events were mostly due to infections but nearly 1 in 5 was due to pump failure.
- Both groups saw a reduction in blood glucose levels and fewer hypos over 2 years, but only 1 in 4 participants met the NICE blood glucose targets.
- Once the researchers accounted for other factors such as age, sex and treatment centre, the difference in HbA1cs for pumps versus injections was too small to rule out that the difference was due to chance.
- Pump users showed some modest improvements in satisfaction, dietary freedom and daily hassle. (BMJ, online March 30, 2017)

Comments

Dr Simon Heller: "The trial shows fairly unequivocally that education/training can produce considerable benefit, although it leaves many patients still a long way from current glucose targets".

Dr Edwin Gale: "Because pumps are much more expensive than injections, it doesn't make sense to use them unless they have a proven advantage for blood sugar control. I think the take-home message for patients is that pumps won't do the job for you. They are not for everyone and many people can do just as well on multiple injections".

Note: In the UK, pumps cost about £2,500 plus an additional £1,500 a year for batteries and other supplies.

Continuous glucose monitoring (CGM) in people with Type 1 diabetes and impaired hypo awareness

It is known that people with hypo unawareness have a 3 to 6 times increased risk of a severe hypo. This study looked at whether continuous glucose monitoring (CGM) improves glycaemic control and prevents severe hypos compared with self-monitoring of blood glucose (SMBG) in a group of people with Type 1 diabetes. Severe hypos were defined as those requiring the assistance of another.

The study involved 52 people with Type 1 diabetes between the ages of 18 and 75 with impaired hypo unawareness (loss or reduced warning signs of hypos) and the findings were as follows.

- People in the CGM group had 14 severe hypos compared with 34 in the SMBG group.
- People using CGM had 6.8% of time spent in hypoglycaemia compared with 11.4% in the SMBG group.
- People on CGM spent more time within the normal range of blood glucose levels than those using SMBG. (The Lancet Diabetes and Endocrinology)

Continuous glucose monitoring and quality of life

There is plenty of evidence that CGM use improves glycaemic control but less evidence for its effects on quality of life.

Diabetes Care, April 2017

This study investigated quality of life in 158 adults with poorly controlled Type 1 diabetes on multiple daily injections and compared CGM with self-monitoring. At the end of the

study the participants completed a survey which assessed overall well-being, health status, diabetes distress, hypoglycaemic fear and hypoglycaemic confidence. The results showed:

- The CGM group showed a greater increase in hypoglycaemic confidence and a greater decrease in diabetes distress than the self-monitoring group.
- CGM satisfaction was not significantly associated with glycaemic changes but was associated with reductions in diabetes distress and hypoglycaemic fear and increases in hypoglycaemic confidence.

The researchers concluded that CGM makes a significant improvement in diabetes-specific quality of life such as diabetes distress and hypoglycaemic confidence in adults with Type1 diabetes but not with quality of life measures not specific to diabetes, such as well-being and health status. CGM satisfaction was not associated with glycaemic outcomes. (Diabetes Care, April 2017)

Unexpected shortcomings with CGM - Pediatric Endocrinology Reviews, June 2017

A review, 'Continuous glucose monitoring in pediatrics; the gap between potential benefits and the reality of utility' is by the Diabetes Centre for Children in Philadelphia which has experience of over 400 CGM only patients ranging from 12 months to 24 years old. The review provides a perspective on CGM use from observations of this group.

The reviewers acknowledge the many clear advantages of CGMs, including prevention of hypos and the reducing of anxiety associated with hypos, but they have found various shortcomings.

Families long for a device like the CGM without fully understanding the technology and the impact all the information will have on them and their child, such as the risk of feeling an increased burden of self-care. There are a number of challenges that need to be addressed, some of which are listed below.

Financial

The ongoing high cost of the sensors make CGMs unaffordable for many people.

Physical

Some experience skin problems including insertion site pain, sensor tape not adhering and skin irritation which can lead to contact dermatitis or increased risks of infections. This can cause patients and/or parents decreased or ineffective use of the device.

Technological

It is important to understand that CGMs measure interstitial fluid and not blood glucose levels to be better able to interpret the results.

- The inaccuracy of the CGM has caused frustration amongst those using them. The accuracy depends on several facts including proper calibration of the device and sensor placement. Calibration needs to be done at least every 12 hours by entering a finger prick blood glucose test results. It is recommended that only stable blood glucose results are used to calibrate to maximum accuracy and unstable levels can lead to the CGM giving inaccurate results and setting off the alarm unnecessarily.
- Sensor placement can also cause problems, such as sites that cause tissue compression during sleep which can lead to false low blood sugar alarms.

Psychological barriers

The constant feedback of glucose levels can be a source of stress for parents and children.

- They can be overwhelmed by glucose variability which can result in not using the device.
- Adolescents can see the device as an invasion of their privacy because other people can also access the results and know if they have been 'breaking the rules'.
- Many families reported family conflicts and tensions with increased diabetes-related arguments between child and parents and between the parents themselves.
- Fear of hypos can lead to overtreatment of glucose levels merely because the frequent results have the potential to lead to a hypo. This increases unnecessary weight gain and higher HbA1cs.

While this review was about children and young people using CGMs, it is not difficult to see that some of these points could also apply to adults using continuous glucose monitoring.

Testing glucose in the future with CGMs

Here are just a few of the CGM developments going on at the moment. Of course, we have to be aware that CGM is not suitable for everyone and is unaffordable for many people and organisations.

Medtronic and Qualcomm work on new types of continuous glucose monitoring (CGM) systems

Initially these two companies will work together to develop a single-use CGM system for use by GPs treating people with Type 2 diabetes. Then they intend to work on more affordable, easier to use CGM systems which they hope will produce a new sensor and smaller design for near real-time glucose information. They also intend to provide automated observations and clinical decision support to help to create a personalised care plan. They believe that this will fundamentally change the treatment of Type 2 diabetes.

When there are people in the UK who can't get test strips on the NHS let alone CGMs, this news seems as if it is for people outside the UK!

FDA panel votes for Dexcom CGM to replace finger prick testing

Continuous glucose monitoring has always required additional finger prick blood glucose testing before making insulin dose adjustments. In July 2016, a US FDA Panel voted eight to two to recommend Dexcom's G5 Continuous Glucose Monitor to replace finger-stick testing in diabetic patients over the age of two. In the UK, finger prick testing in addition CGM is still required for making insulin dose changes.

Non-invasive, handheld breathalyser, blood glucose monitor in the pipeline

Researchers have developed a device the size of a small book to monitor blood glucose levels using a minimally invasive breathalyser to measure acetone levels in the breath. When this new device is blown into, it immediately takes a reading of the acetone level in the breath.

In a small trial, early clinical results show clear correlations between blood glucose levels and breath acetone, except for one participant who was a smoker.

Although finger prick testing has improved in recent years, the researchers reported that up to 67% of people may not properly monitor their blood sugars because the finger prick testing is invasive and can be painful.

Further work is being carried out to make the device even smaller and get it to patients by the end of 2017. (Presented at the American Assn. of Pharmaceutical Scientists 2016)

Implantable CGM safe and effective in diabetes

A study has shown that a new implantable continuous glucose monitoring (CGM) system appears to be safe and effective for people with diabetes and an accurate alternative to the present CGMs which work through the skin. The researchers maintain that implantable systems may have the advantage of ease of use as there is no need for frequent sensor insertions through the skin. However, the implantable CGM would need a minor surgical procedure which may be a problem for some people but this study supports the implantable CGM as a worthy alternative to current transcutaneous CGM. (Diabetes Care, November 2016)

PHARMACEUTICAL NEWS

Recalls for NovoPen Echo and NovoPen 5 devices, July 2017

Novo Nordisk has warned that the insulin cartridge holder used in the NovoPen Echo and NovoPen 5 could crack or break if exposed to certain chemicals, such as household cleaning products.

This only applies to certain batches of the pens and there is no reason for concern if you have pens with a batch number that has not been affected. The list of the batches affected can be found on the Novo Nordisk website along with images of how to find the batch number. The batch numbers of the Novo Pen Echo and NovoPen 5 pens can be found by dialling up the pen - the NovoPen Echo can be red or blue in colour, whereas NovoPen 5 can be blue or grey.

It is important for the cartridge holder in affected batches to be replaced as soon as possible because damage could cause the pen to deliver a smaller dose of insulin than required which could lead to high blood sugar levels (hyperglycaemia). If you have an affected pen then you should not stop treatment without consulting your doctor and be aware of the symptoms of hyperglycaemia – increased urination, tiredness and thirst.

To request a replacement holder, you should ring Novo Nordisk customer care line on 0845 600 5055 or go online:https://www.novonordisk.com/novopenecho5/en_gb.html or ring

Biosimilar version of Humalog

As we have discussed before, the best way to describe a biosimilar insulin is that it is copy of the original insulin, like generic drugs are copies of the original drug once their patent runs out, so are cheaper. As the biosimilar versions have the same active ingredients, they do not have to go through as many trials.

Already on the market is Abasaglar which is the biosimilar version of Lantus. In June, news appeared that Sanofi's biosimilar version of Humalog made by Eli Lilly has been recommended for approval in the EU. It is called insulin lispro Sanofi and has been recommended for use in adults, children and the newly diagnosed.

Diabetes and sweating

Gustatory sweating

Gustatory sweating is something that can happen in people with diabetes and something people have called IDDT about. So what is gustatory sweating?

It is sweating that appears within seconds of eating food. Sweat appears on the forehead, then face, the throat and neck and it can even appear on the shoulders and chest.

Sometimes it can be so serious that it prevents people from eating sufficient amounts of food. Any foods can cause gustatory sweating but cheese and spicy foods are common triggers.

It is associated with autonomic neuropathy and the worse the neuropathy, the more likely a person is to have gustatory sweating. One study showed gustatory sweating in 69% of people with nephropathy (kidney damage), 36% of those with neuropathy and more than 5% of people without these complications or people without diabetes.

It has been successfully treated with topical glycopyrrolate cream, so this needs to be discussed with your doctor.

Other causes of sweating

One of the very common symptoms of hypoglycaemia is sweating as a result of the release of adrenalin in response to low blood glucose levels. It is estimated that between 47 and 84% of people with diabetes experience sweating when hypo.

Sweating can also be caused by some medications, such as exenatide (Byetta), pioglitazone (Actos) and antidepressants.

NHS NEWS

Diabetes prescriptions rise compared to overall prescribing

According to a report published by NHS Digital on August 1st, prescription items for the treatment of diabetes in primary care have increased by 80.1% over the last 10 years compared with a 46.0% rise across all primary care prescribing. In addition, the report shows that in the last year the number of items prescribed for diabetes grew more than twice as fast (4.7%) as the overall prescriptions across primary care (2.0%).

- 52 million items were prescribed for diabetes in 2016/17, a rise from 49.7 million in 2015/16, and 28.9 million in 2006/07.
- Prescribing for diabetes in primary care has grown nearly twice as quickly as the rise in diabetes prevalence across the population. The prevalence of diabetes in England rose by 22.6% between 2009/10 and 2015/16 but prescriptions increased by 40% over the same period.
- The cost of diabetes drugs increased over the last year compared to the cost of prescriptions across primary care in which there was a fall. Since 2007/08 the cost of drugs for diabetes accounts for the highest cost of drugs for all treatment areas.
- In 2016/17 prescriptions for diabetes accounted for around £1 in every £9 of the cost of prescriptions in primary care but in 2006/07, this was less than £1 in every £14.

These figures hit headlines in many newspapers but they are somewhat misleading because the reports do not point out that as diabetes progresses people need more drugs, either to prevent or treat the complications of diabetes. This especially applies to people with Type 2 diabetes. (Report: Prescribing for Diabetes: England 2006/07 to 2016/17)

Consultation on reducing items that can be prescribed on the NHS

In July, NHS England announced a consultation on items that should not be routinely prescribed by GP practices, following a call earlier this year to save £128 million from ten products that could be classed as 'low priority' spending for the NHS. There are 18 treatments which presently cost the NHS £141million a year that are being considered as 'low priority' including gluten-free foods and re-classifying several pain killers, muscle rubs and antidepressants as 'low priority' for NHS funding.

We are told the aim is to then re-direct the saved funds to high priority areas, including primary care and mental health.

The consultation is also asking for views on prescribing items which are available over the counter at supermarkets and other retailers, often at a lower price than the cost to the NHS. This applies to around 3,200 prescription items, such as paracetamol, cough mixture, cold treatments and eye drops, which presently cost the NHS around £645m.

The BMA will be responding to the consultation and have stated that restricting the prescribing of effective drugs that are also available over the counter cannot be supported as it is likely to increase health inequalities and they are concerned about the harm this may cause for those already most disadvantaged in society. They add that GPs cannot apply arbitrary means tests or judgements as to the likelihood of patients not taking recommended medicines on the basis of cost.

Type 2 diabetes prevention programme

NHS England has confirmed the 13 new areas to benefit from the expansion of the NHS Diabetes Prevention Programme. This expansion will cover another 25% of the population, with an estimated 130,000 referrals and up to 50,000 additional places made available. Funding has also been agreed for another 12 months in the 27 sites already running.

NHS NEWS

Success of diabetic retinopathy screening in Wales

The number of people in Wales diagnosed as blind or living with sight loss caused by diabetes has nearly halved since the introduction of a national diabetic retinopathy screening programme in 2003.

The researchers analysed new certifications in Wales for sight loss and blindness due to diabetes between 2007 and 2015 and the results showed:

- There were 339 fewer new certifications for all levels of sight loss from any cause in 2014-15 compared to 2007-08.
- There were 22 fewer people with diagnosed diabetes with sight loss specifically caused by their diabetes.
- There was a 49% drop in new certifications for severe visual impairment , from 31.3 to 15.8 per 100,000 people.

During the period of the research, 52,229 (40%) more people in Wales were diagnosed with diabetes so these improvements show that the retinopathy screening programme is effective and enables treatment at an early stage to prevent people with diabetes from losing their sight. It is an encouragement for people to attend screening appointments.(BMJ, July 2017)

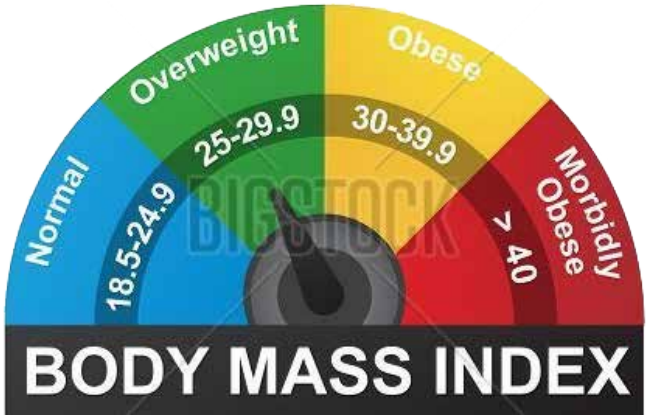
Hospitals to cut sales of sugary drinks

In May, NHS England announced proposals which demand that hospital shops cut their sales to 10% or less of their overall drinks sales within a year. Any shops unable to do this will face a ban on selling sugary drinks. This plan is supposed to 'kick-start a major health drive'. However, doctors' leaders have said that this does not go far enough and hospital shops selling sugary drinks gives out mixed messages to patients, visitors and staff who sometimes use on site vending machines for their food.

CCGs not complying with guidance on bariatric surgery

A freedom of information request made to all NHS Commissioning Groups (CCGs) shows that several have adopted policies which attempt to ration weight loss surgery to very obese people. They are choosing to ignore advice from NHS England and NICE on who should be eligible for surgery so making it more difficult for overweight and obese people to get effective treatment.

The NICE guidelines state that surgery should be considered in people with a Body Mass Index (BMI) of over 35 with another medical condition, such as Type 2 diabetes, or a BMI of 40 without another condition. However, some CCGs require people to stop smoking or to have a BMI of over 50! This is despite evidence showing that bariatric surgery is safe and effective and saves the NHS money.



By April 1st 2017, NHS England handed over commissioning of bariatric surgery to CCGs but at the time of writing 80% of CCGs had not decided on their policies. Importantly, six CCGs admit that they are not complying with the official guidance which may cause people harm.

We have to ask, what is the value of evidence-based guidelines if CCGs cannot be compelled to abide by them? Equally, do we really have '**National**' Health Service when CCGs decide to ignore recommended guidelines?

PARENTS PART

Higher quality of life linked with better HbA1c levels in young people with Type 1 diabetes

An international study has found strong links between higher quality of life and improved diabetes control in young people with Type 1 diabetes. The study involved 5,887 young people between the ages of 8 and 25 years from 20 countries and they were assessed in 3 age groups: 8 to 12 years, 13 to 18 years and 19 to 25 years.

Diabetes control was assessed by HbA1c levels and quality of life by participants completing a questionnaire and interviews to talk about family-related matters. The results showed:

- lower HbA1cs were associated with higher quality of life scores and this was true for all age groups,
- the lowest quality of life scores were in 19 to 25 year olds,
- females had lower quality of life scores which were lower than males in all three age groups.

In addition, the study found three factors that are linked with improved blood glucose control:

- using advanced ways to measure food intake,
- more frequent blood glucose testing,
- taking exercise for 30 minutes on more days per week.

The researchers suggest that for young people who are having difficulty controlling their Type 1 diabetes, they should concentrate on these three factors to try to improve their diabetes control which in turn, is likely to improve their quality of life. (Diabetes Care, May 26 2017)

National Diabetes Transition Audit 2003 – 2014

This Audit was published in June 2017 as a joint enterprise by the National Diabetes Audit (NDA) and the National Paediatric Audit (NPDA). These audits have been linked so that the care of young people with diabetes can be tracked during the transition from paediatric services to adult diabetes services in the age groups of 12 – 24 years.

The key findings for the annual care processes were:

- The annual measurement of HbA1c decreases after transition.
- Annual measurements of blood pressure and cholesterol remain similar but kidney, foot, retinopathy and smoking checks increase after transition.
- The differences in the above care processes before and after transition do not seem to be influenced by gender, ethnicity or living in a deprived area.
- Before transition annual care process completion rates fall as the age at transition increases but after transition, completion rates increase as the age at transition increases.
- The least variation in rates of care process completion was found where transition occurred between the age of 16 and 19. This could be because planned transition usually occurs between these ages.

The key findings for treatment targets were:

- The target for HbA1c levels is more likely to be reached before transition than after.
- The difference in achieving HbA1c targets is not affected by gender, ethnicity or living in a deprived area.

The key findings for risk factors were:

- For cholesterol and blood pressure, the percentage of children achieving the targets is higher before transition than after.

The key findings for diabetic ketoacidosis (DKA) were:

- There are a higher number of DKA admissions after transition. The Audit summary suggests that this increase could be due to increasing duration of diabetes. (As a parent, I would add that it could be due to the increasing 'independence' of teenagers.)

THE IDDT'S LOTTERY DRAW WINNERS

We are delighted to announce the winners of the draw of our monthly lottery for May 2017. They are as follows:

1st prize of £420.00
goes to Anon. from Bournemouth
2nd prize of £315.00
goes to Fraser from Bournemouth
3rd prize of £210.00
goes to Geoffrey from Doncaster
4th prize of £105.00
goes to David from Doncaster

Winners of the June 2017 draw are:

1st prize of £420.96
goes to Anon. from Rugeley
2nd prize of £315.72
goes to Anon. from Belfast
3rd prize of £210.48
goes to Andrew from Bath
4th prize of £105.24
goes to Leslie from Carlisle

Winners of the July 2017 draw are:

1st prize of £421.20
goes to Anon. from Hereford
2nd prize of £315.90
goes to Anon. from Barnstaple
3rd prize of £210.60
goes to Christine from Doncaster
4th prize of £105.30
goes to John from Normanby

Note: the winners of the draws for August, September and October will be announced in our December 2017 Newsletter and will be available on our website.

THANK YOU TO EVERYONE WHO JOINED IN IDDT'S LOTTERY.

If you would like to join in for just £2.00 per month, then give us a call on 01604 622837 or email tim@iddtinternational.org

Self-adjusting insulin dose in people with Type 1 diabetes

One of the important parts of structured diabetes education courses for people with Type 1 diabetes is learning how to adjust insulin doses to different blood glucose levels, carbohydrate intake, exercise and illness. This study looked at 117 people with Type 1 diabetes for at least 2 years with average HbA1cs of 7.1% (54mmol/mol) who had all taken part in a structured education programme. The results were interesting!

Although the people were trained to adjust their dose using an insulin-to-carbohydrate factor and a factor for correction:

- Only half of them (48%) used these complex rules in their daily life and 44% used personal experience or feelings to determine their insulin dose.
- Both groups understood the principles of self-adjusting insulin doses.
- There were no differences in HbA1cs and the frequency of non-severe hypoglycaemia between people adjusting their insulin dose by experience/feelings and those using adjustment rules used on the education course.

Conclusions

The research could only conclude that people who were trained to use an insulin-to-carbohydrate ratio and a factor for correction, did not show better blood glucose control than those who judged their insulin dose by experience or feelings. (Diabetes Research and Clinical Practice, 30 April 2016)

So will the findings of this research raise questions about future education courses? Is the system people are taught too complicated for everyday life for many people?

Research suggests lower dose of basal insulin gives better control in Type 1 diabetes

Researchers tested the idea that lower doses of basal insulin (the long-acting) may be associated with better control as measured by HbA1c levels. The study involved 89 children and young adults with Type 1 diabetes between the ages of 3 and 29 years about half of whom were treated with pump therapy and the rest with multiple daily injections. The basal insulin used was Lantus (glargine).

The results showed that the injection of less total daily basal insulin resulted in lower HbA1c levels, despite the same total bolus insulin dose (the short/rapid-acting insulin). (Journal of Pediatrics, November 29 2016)

SNIPPETS

Children shorter with non-cow's milk consumption

Canadian researchers found that children who drank non-cow's milk such as goat, almond, soy or rice milks, were 0.4cms shorter on average for every cup of non-cow's milk they drank daily. The research involved 5,034 Canadian children between the ages 2 and 6 years between 2008 and 2015. (American Journal of Clinical Nutrition, June 2017)

Higher risk of gestational diabetes with higher temperatures

A recent study in Canada found that increases in average outdoor temperatures were associated with higher risks of gestational diabetes. This is consistent with previous studies. (Canadian Medical Association Journal, May 2017)

Antidepressants largest increase in prescriptions in 2016

A report from NHS Digital shows that for the fourth year running, the numbers of prescriptions for antidepressants showed the greatest rise in England between 2015 and 2016. They increased by 3.7 million items, from 61 million to 64.7 million items. This follows the trend for the last 10 years when there were 31 million antidepressant items dispensed in 2006.

The greatest number of prescription items dispensed in 2016 was for hypertension and heart failure. However, when it comes to cost, for the tenth year running diabetes treatments cost the most, at £2.7 million per day. The cost increased from 2015 to 2016 by £47.6 million to a total of £984.2 million. The number of diabetes items dispensed in England in 2016 was 51.5 million, an increase of 2.4 million from 2015.

89.4% of all prescriptions were dispensed free of charge – 61% to people aged over 60 and 4.4% to children and young people aged 16 to 18 and in full time education.

Long-term use of aspirin in people over 75

A study in The Lancet, June 2017, has shown that long-term daily use of aspirin increased the risk of bleeding, especially in people aged 75 and over. Aspirin is inexpensive and effective in people who have had a heart attack or stroke. This latest study shows that aspirin is still appropriate treatment for this group of people but the Royal College of GPs points out that it also highlights the importance of managing its use carefully and that some people may need additional medication to protect them.

Exercise during pregnancy

UK Chief Medical Officers have issued new advice on physical exercise for expectant mothers aiming to reduce obesity, diabetes and other health conditions during pregnancy. The latest evidence suggests that pregnant women should carry out 150 minutes of 'moderate intensity' exercise every week. This is described as 'activity that makes you breathe faster' while still being able to hold a conversation. If women are not already active, then they should start gradually and build up the time.

Broccoli and sprout extract improves fasting glucose levels in Type 2 diabetes

Umps and continuous cauliflower, cabbage, garden cress, bok choy, broccoli, brussels sprouts and similar green leaf vegetables. Researchers in Sweden have found that sulforapane significantly improved fasting blood glucose levels in obese adults with Type 2 diabetes. It was also found to reduce glucose production in cultured liver cells and appeared to reverse abnormal gene expression in the liver of rats.

They tested the effects of broccoli sprout extract on 97 obese adults with Type 2 diabetes in a 12 week study and found that the consumption of this significantly reduced fasting blood glucose levels when compared to a placebo. (European Medical Journal, July 18th 2017)

www.iddtinternational.org enquiries@iddtinternational.org