



DOES **QUALITY OF LIFE** COUNT ANYMORE?



I am Co-Chair of IDDT and editor of this Newsletter and my involvement with diabetes started in 1975 when my daughter was diagnosed with Type 1 diabetes at the age of five years. It was a time of long needles, glass syringes and urine testing. It was also a time when we had to fight for everything, we battled to obtain disposable syringes free on an NHS prescription. When blood glucose test strips came in for home blood glucose monitoring, we battled to obtain them free on the NHS but in the meantime, we cut the strips in half so that we got twice as many tests from one pot of strips!

The introduction of disposable syringes and especially, home blood glucose monitoring were major changes for people with diabetes that greatly improved their quality of life. For the first time, they knew what was really happening to their blood sugars. Speaking from experience, it also changed the lives of parents and partners, because we could carry out tests when our family member was hypo- or hyperglycaemic, enabling us to take remedial action and reduce the number of 999 calls! So, the quality of life improved for everyone.

Nearly 50 years later...

It is difficult to accept that the battles are still going on but they are – the restrictions on the FreeStyle Libre availability, on blood glucose testing strips for people with Type 2 diabetes, on cataract surgery and the limitations on

NHS podiatry services. As you will read in this Newsletter, there are now NHS consultations about insulin pen needles being restricted to those that do not cost any more than £5 per 100 needles. Such a backward step!

At least years ago, we could lobby the government to bring about the change. But since the introduction of Clinical Commissioning Groups (CCGs) and local prescribing decision-making in 2012/13, it is not possible to lobby the NHS nationally because the standard answer is always the same – ‘these decisions are made locally by CCGs’. As a result, the services, treatment and devices people with diabetes receive vary according to where they live and there is very little that can be done nationally, try as we might.

When making their decisions, there are common factors that CCGs do not appear to be considering, long-term savings and the quality of life of people with diabetes. The term ‘quality of life’ should not be taken lightly. Let us just look at what living with Type 1 diabetes means for children and adults: at least 4 injections a day, 4 to 15 finger-prick blood tests a day, living with the daily fear of hypoglycaemia, the risks of diabetic ketoacidosis and, shared with people with Type 2 diabetes, the fear of, and sometimes the reality, of long-term complications and higher than average rates of depression. Frustratingly, there are options to make this life easier and improve the quality of life but some CCGs and NHS England are rationing these options. They should think again!

CONSULTATIONS

Items which should not be routinely prescribed, insulin pen needles and test strips for Type 2 diabetes!



As part of the NHS trying to ensure that NHS money spent on prescription items is not wasted, consultations have taken place to review medicines and devices that could be considered to be of 'low clinical priority'. The responses to the consultations have already been published and the finalised commissioning guidance will then be published with the expectation that CCGs 'should have regard to it'.

In the June Newsletter, we pointed out that, unbelievably, over half of CCGs now include cataract surgery in the category of 'low clinical priority'! In the latest batch of consultations, two more items important to those living with diabetes have been considered, (i) needles for pre-filled and re-useable insulin pens and (ii) blood glucose testing strips for people with Type 2 diabetes.

Needles for pre-filled and re-useable pens

The proposals for these items were that CCGs should be advised (i) to not initiate insulin pen needles that cost more than £5 per 100 needles in new patients and (ii) CCGs should support prescribers to de-prescribe pen needles that cost more than £5 per 100 needles.

- 1. To not initiate insulin pen needles that cost more than £5 per 100 needles in new patients:** the largest proportion of respondents (50%) disagreed with the proposal but there were high levels of support from CCGs (92%).
- 2. CCGs should support prescribers to de-prescribe pen needles that cost more than £5 per 100 needles:** the largest proportion of respondents agreed with this proposal but support was lowest amongst

patient representatives and voluntary organisations or charities and again highest amongst CCGs (89%).

On both of these points there were many issues raised from, more expensive needles should be black listed at one extreme to patients should have a choice at the other extreme. The document therefore proposes clearer guidance and explanations before a decision is made.

Comments: the results show polarisation in views between patients and patient organisations and CCGs and NHS organisations. Perhaps this is not unexpected because their perspectives are very different - members of CCGs and NHS organisations generally are not the people injecting themselves 4 or more times a day!

In terms of pen needles, shouldn't such decisions be made on the basis of evidence? Carry out research with patients using unidentifiable, different brands of needles to find out whether there are problems with comfort, safety, breaking etc and base the decision about prescribing on this evidence.

Blood glucose test strips for Type 2 diabetes

This consultation was on starting new patients on blood glucose test strips that cost no more than £10 for 50 strips. The largest proportion of respondents agreed with the proposal, with the highest being amongst CCGs (95%), but support from patients, voluntary organisations or charities was low, only 9%. However, this proposal is not going to be taken forward at the moment and will be reconsidered when there is evidence of benefit or otherwise of different makes of test strips.



THE IDDT'S LOTTERY DRAW **WINNERS**

We are delighted to announce the winners of our latest monthly lottery draws.

They are as follows:

Winners of May 2019 draw are:

1st prize of £539.04

goes to Ruth from Stonehouse

2nd prize of £404.28

goes to Sylvia from Kettering

3rd prize of £269.52

goes to Kenneth from Luton

4th prize of £134.76

goes to Stephen from Nottingham

Winners of the June 2019 draw are:

1st prize of £524.80

to Jeff from Telford

2nd prize of £393.84

goes to Edna from Shrewsbury

3rd prize of £262.56

goes to Paul from Worthing

4th prize of £131.28

goes to Anon. from Montrose

Winners of the July 2019 draw are:

1st prize of £522.72

goes to Anon. from Bridgnorth

2nd prize of £392.04

goes to Susan from Cambridge

3rd prize of £261.36

goes to Sheila from Hemel Hempstead

4th prize of £130.68

goes to Anon. from Orkney

Note: the winners of the draws for August, September and October will be announced in our December 2019 Newsletter and will be available on our website.

A huge 'Thank You' to everyone who supports IDDT through the lottery.

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

Pump News

Medtronic recalling certain insulin pumps on cybersecurity issues

JUNE 2019

Medtronic is warning thousands of users worldwide that its older insulin pumps may contain a serious cybersecurity vulnerability allowing a

malicious hacker to change drug-delivery settings. According to the warning the affected pumps are those "that were introduced to the market before 2013, including the MiniMed 508 pump and various models of MiniMed Paradigm pumps". Pumps unaffected by the warning include "the MiniMed 530G, nor any 600-series MiniMed pumps (including the 630G and 670G), which are widely used in the U.S."

Security professionals and the FDA have raised numerous concerns over the vulnerability of these devices for years. Medtronic recommend switching to a different type of insulin pump and taking cybersecurity precautions with these existing pumps, such as making sure all devices related to the pump are kept in patients' sight at all times, monitoring blood sugar levels closely, and disconnecting the pump from WiFi when internet connection is not strictly necessary.

FDA issues alerts on Medtronic's MiniMed insulin pumps

JULY 2019

The FDA has issued alerts on Medtronic's 600-series MiniMed insulin pumps to warn patients that the devices' keypad buttons could temporarily become "unresponsive" when air pressure changes quickly, which normally happens during flight take-off and landing. The alerts, classified as a class II recall by the FDA, apply to the MiniMed 620G, 630G, 640G and 670G models.



DIABETES AND ANAEMIA

It is quite common for people with diabetes to also have anaemia and it is better to manage, if picked up early. Anaemia usually happens because you don't have enough red blood cells and this can make it more likely that diabetic complications may develop, such as eye and nerve damage. It can also worsen kidney, heart and artery disease which are more common in people with diabetes anyway.

Causes

Both Type 1 and Type 2 diabetes often lead to kidney damage and failing kidneys can cause anaemia. Healthy kidneys know when your body needs new red blood cells and they release a hormone called erythropoietin (EPO), which sends signals to the bone marrow to make more. Damaged kidneys don't send out enough EPO to keep up with the body's needs.

- Often people don't realise they have kidney disease until it is very far along but if you test positive for anaemia, it can be an early sign of kidney problems.
- In addition, people with diabetes are more likely to have inflamed blood vessels which can keep bone marrow from receiving the signals they need to make more red blood cells.
- Some medications used to treat diabetes can drop your levels of the protein haemoglobin, which is needed to carry oxygen through your blood. These include ACE inhibitors, fibrates, metformin and thiazolidinediones. If you take one of these, talk to your doctor about your risk for anaemia.
- If you have kidney dialysis you may have blood loss which can also cause anaemia.

Symptoms of anaemia

- Feeling tired and weak because the brain and other organs aren't getting enough oxygen
- Shortness of breath
- Dizziness
- Headache
- Pale skin
- Chest pain
- Cold hands and feet
- Low body temperature
- Rapid heartbeat.

Tests for anaemia

A full blood count counts your red and white blood cells and platelets and checks whether your red cells are a normal size. It also checks the levels of haemoglobin in the blood and the blood volume. You may be anaemic if your haemoglobin levels are low or if you have a lower

percentage of red blood cells.

If you are anaemic, the doctor needs to find out why and so may test you for the following:

- Iron deficiency
- Kidney failure
- Vitamin deficiency
- Internal bleeding
- Bone marrow health

Treatment

- If you're anaemic because your iron levels are low, it may help to eat iron-rich foods and take supplements.
- For people on kidney dialysis, it's best to get iron injected directly into a vein.
- If your kidneys don't make enough EPO, the hormone that boosts the level of red blood cells you make, your treatment may be an injection of a synthetic version of EPO every week or two, or during dialysis. It raises haemoglobin for most people, but it may also increase the risk heart attack or stroke, so your doctor should monitor you closely while you're on it
- If your anaemia is severe, you may need a blood transfusion.
- High blood pressure and high blood sugar can cause the kidney damage that brings on anaemia. If your doctor has prescribed medication for either or both, it is important that you take it.

Lowering the risk of anaemia

You can lower your risk of anaemia by making sure you obtain enough iron from the food you eat. Most women need about 18milligrams everyday and men need about 8. Your body absorbs iron better if you have it with foods that contain vitamin C such as fruit and vegetables. Tea, coffee and calcium tend to make you absorb less iron.

Good sources of iron include:

- Iron-fortified breads and cereals
- Beans and lentils
- Oysters
- Liver
- Green leafy vegetables, especially spinach
- Tofu
- Red meat
- Fish
- Dried fruit such as prunes, raisins and apricots

Note: IDDT has a booklet, Kidneys and Diabetes, and if you would like a copy, call IDDT on 01604 622837, email enquiries@iddtinternational.org or write to IDDT, PO Box 294, Northampton NN1 4XS.

GLIFLOZINS /SGLT2 INHIBITORS

Type 2 drugs, can they be used for Type 1 diabetes?

Gliflozins, commonly called SGLT2 inhibitors, are a group of drugs used to treat Type 2 diabetes. They all work in a similar way. SGLT2 is a protein that is produced primarily in the kidneys and plays an important role in regulating blood glucose levels. It promotes reabsorption of glucose back into blood circulation and this reabsorption subsequently reduces blood glucose levels.

One serious adverse effect of this class of drugs is that they have been associated with sudden onset of diabetic ketoacidosis (DKA) in people with Type 2 diabetes, when blood glucose levels are normal, without the gradual build up as usually happens when DKA develops in Type 1 diabetes. In addition, all SGLT2 inhibitors have been shown to increase the risk of genital infections, such as thrush (candida) and some have been associated with an increased risk of lower limb amputations. On the plus side, some have been associated with improved cardiovascular and renal outcomes, less hypoglycaemia as well as a 20% reduction in mortality compared to non-treatment.

The SGLT2 inhibitors licensed in the UK for people with Type 2 diabetes are:

Generic name	Brand name
Canagliflozin	Invokana
Dapagliflozin	Forxiga
Empagliflozin	Jardiance
Ertugliflozin	Stelagtro

Use in Type 1 diabetes?

As SGLT2 inhibitors have been shown to be safe and effective in Type 2 diabetes, there have been investigations about whether they should be used in Type 1 diabetes but these have raised serious concerns.

Currently, SGLT2 inhibitors are not licensed in the UK for use in people with Type 1 diabetes, although Forxiga has been approved by the European Medicines Agency but restricted to a subset of people with Type 1 diabetes who have a BMI of 27 or over. The FDA, the US drug regulatory body, has looked at an application review for sotagliflozin for Type 1 diabetes, especially in relation to DKA or ketosis. Due to the concerns about DKA, in a study, participants received extensive education, a ketone meter with strips, and instructions on detecting and managing ketosis. Despite this, SGLT inhibitor therapy increased the relative risk of DKA between 5 and 17-fold but the placebo group had a low incidence of DKA.



An international consensus on SGLT2 inhibitors in Type 1 diabetes was released to address the risk of DKA which recommends that health professionals should carry out a thorough risk assessment before starting SGLT inhibitor therapy in Type 1 diabetes.

Careful selection of patients with Type 1 diabetes is vital to reduce the risk of DKA

This includes:

- normal ketone levels,
- the willingness and ability to follow a prescribed regimen to monitor ketones,
- access to health resources for proper monitoring.

SGLT inhibitor therapy is not recommended in patients:

- on low carb diets,
- who skip meals,
- consume excessive alcohol,
- have recurrent DKA or prolonged hyperglycaemia,
- although not absolutely contraindicated, patients on an insulin pump need to take additional precautions due to an increased risk of complications.

Additional research is needed to assess the efficacy and DKA risk of SGLT inhibitors in Type 1 diabetes. The safe use of SGLT inhibitors in Type 1 diabetes does seem possible in patients who meet a set criterion, but due to the increase in the risk of DKA, they should be used with great caution at all times and only under specialist supervision.

Warning - if you are advised to use SGLT2 inhibitors, whether you have Type 2 or Type 1 diabetes, it is important that you read the Patient Information Leaflet (PIL) and if you have any questions or concerns, that you talk to your doctor.

Latest News!

In the US on July 16th 2019 the Food and Drug Administration (FDA) refused to approve Forxiga (dapagliflozin) for use in addition to insulin for people with Type 1 diabetes where insulin alone has not been able to control blood sugar levels. It is approved for use in Type 2 diabetes. The FDA's decision is in contrast to the European Medicines Agency approval for its use in a subset of people. This difference is surprising when both bodies will be looking at the same research.

IDDT Annual Event 2019

COME AND JOIN US!

We are pleased to say that this year we are holding our annual event at the Kettering Park Hotel and Spa on Saturday, 26th October 2019 entitled 'Independent and Empowered'. Many of you will have already received a programme and an application form.

It will be an interesting day with speakers and group discussions. You will be able to attend two of these group sessions as there is one on foot care, one on treating hypos and a third for the complications of diabetes. There is also a group just for carers of people with diabetes. Carers are family members who live with someone with diabetes and the important role they play is often underestimated. This is an opportunity for them to express their concerns and learn how other carers manage what can be difficult situations, such as low blood sugars.

The title of 'Independent and Empowered' recognises some of these day to day difficulties of living with diabetes and what we can do to support each other. In addition to the group sessions, our speakers will be Dr Laurence Gerlis and Dr Gary Adams. Abbott Laboratories will be making a presentation on the use of the Freestyle Libre. Later in the afternoon there will be a session entitled "Where Do We Go From Here?" led by Dr

Gary Adams, which will give you an opportunity to discuss issues that have been raised during the day.

It is also your opportunity to meet other people with diabetes as well as the Trustees and staff of IDDT. We hope that many of you come along.

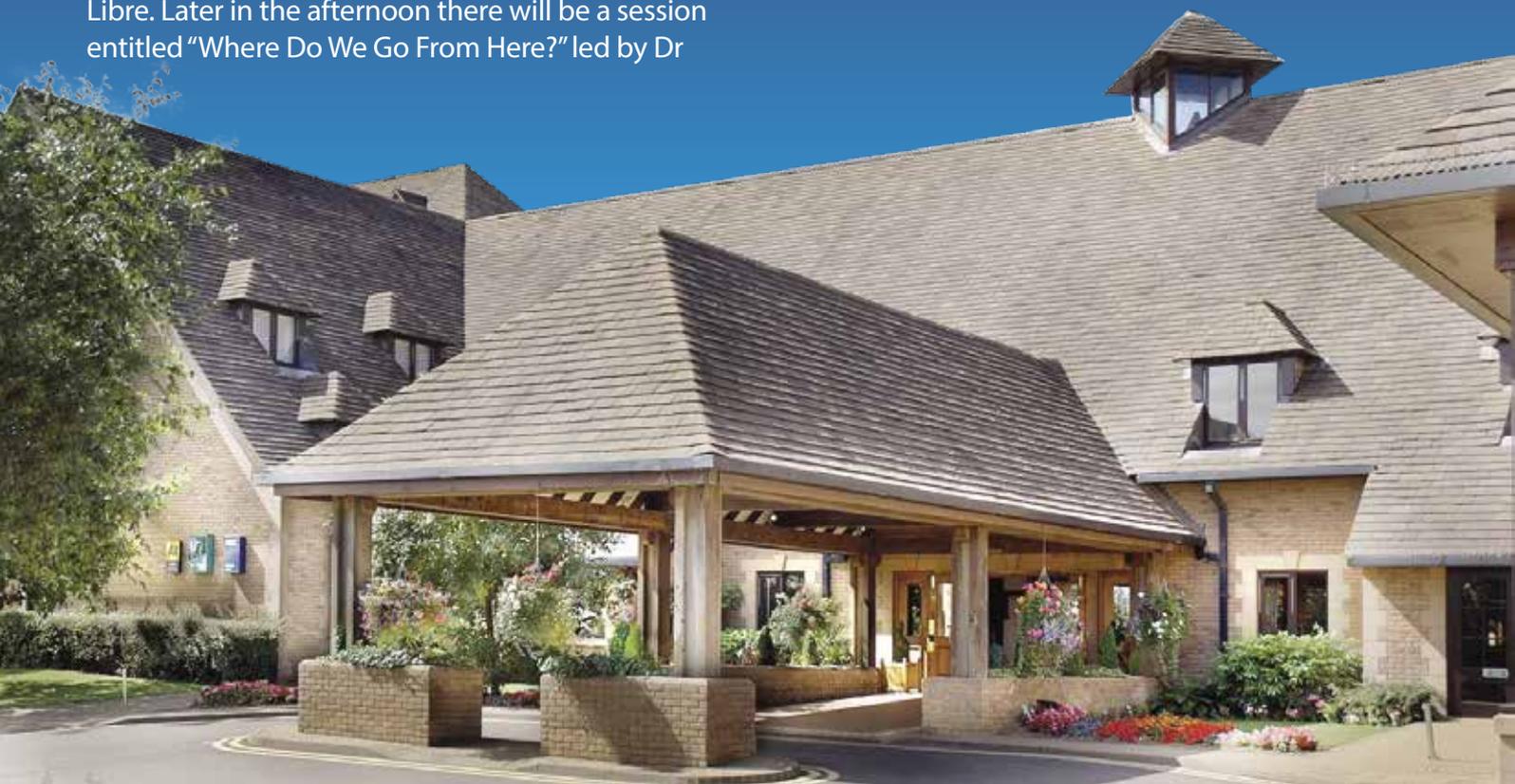
In addition, we are holding our Annual General Meeting at the beginning of the day so, if you would like to nominate someone for election to the Board of Trustees, then please send nominations to IDDT by October 11th with a letter of agreement from the person you are nominating and seconded by another member of IDDT.

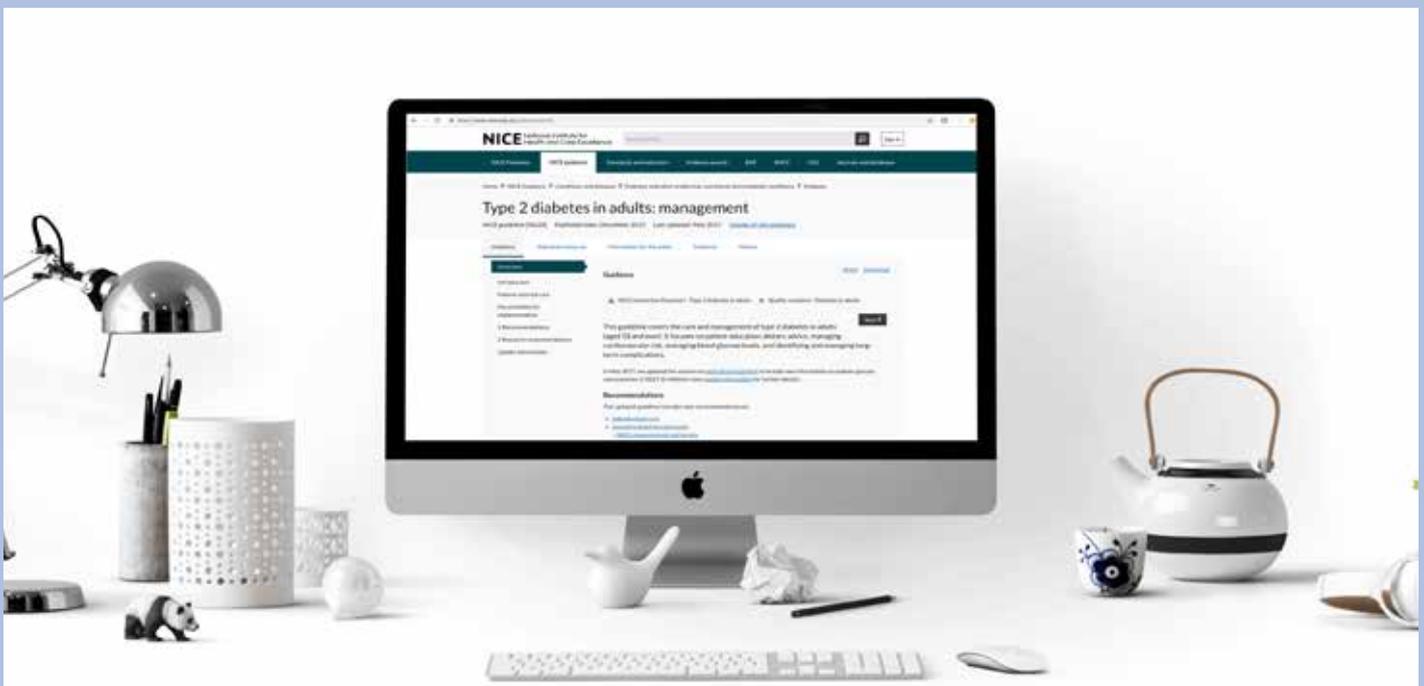
The Kettering Park Hotel and Spa is easy to access from north, south, east and west by road from the M1 and M6 as it is just off junction 9 of the A14 in Northamptonshire. In addition, Kettering is only an hour from London by train.

If you would like another application form or more information, call IDDT on 01604 622837 or email enquiries@iddtinternational.org

We hope that many of you will be able to join us on 26th October this year.

We look forward to seeing you!





NICE guidance updates

NICE guidelines are arrived at after careful consideration of the evidence available. Professionals and practitioners are expected to take these guidelines fully into account, alongside the individual needs, preferences and values of their patients. However, it is not mandatory to apply the recommendations, and the guidelines do not override the responsibility to make decisions appropriate to the circumstances of the individual, in consultation with them and their families and carers or guardians. Local commissioners and providers of healthcare have a responsibility to enable the guidelines to be applied when individual professionals and people using services wish to use them. The following guidelines have been updated.

Type 1 diabetes in adults: Diagnosis and management

Reasons for updating

- **Late-onset Type 1 diabetes** – new evidence suggests that people with late-onset Type 1 diabetes may be at risk of misclassification. Clinical

characteristics (age at diagnosis and body mass index) may not be as accurate as C-peptide tests when distinguishing between diabetes types in people aged over 35 years.

- **Blood glucose management: telemedicine, smartphone applications and online platforms; flash glucose monitoring; continuous glucose monitoring (CGM)**
 1. evidence indicates that the use of smartphone applications to enhance self-monitoring and telemedicine interventions (such as remote monitoring devices, online education platforms and teleconference sessions) help people to significantly reduce their HbA1c levels,
 2. evidence was identified to support the use of flash glucose monitoring (FreeStyle Libre),
 3. evidence was also identified which supports the use of CGM in people having multiple daily injection therapy with sub-optimal glucose control.
- **Insulin therapy: long-acting insulin; ►**

biosimilar insulins; adjuncts to insulin; closed-loop systems

1. evidence supports the use of ultra-long-lasting insulin degludec but the safety profiles and dosage conversions will also need careful consideration,
2. there is evidence that various biosimilar insulins may be non-inferior to original insulins (meaning just as good) and the potential cost savings are highlighted,
3. the research on the use of SGLT-2 inhibitors in addition to insulin in Type 1 diabetes is not complete, therefore this should be assessed later,
4. while there is new evidence suggesting a benefit of closed-loop insulin delivery, there are no recommendations on its use.

- **Managing complications**

- **Eye disease** – evidence supports the use of anti-VEGF treatment for diabetic retinopathy and laser therapy for diabetic macular oedema. There are currently no specific treatment recommendations but many treatments are covered by NICE suggesting there may be a gap in NICE's guideline on Type 1 diabetes in adults.

Full NICE guidance can be found online:
<https://www.nice.org.uk/guidance/NG17>

Diabetes (Type 1 and Type 2) in children and young people: diagnosis and management

Reasons for updating

- **Diabetic retinopathy in children and young people with Type 1 or Type 2 diabetes** – evidence indicates that compared to usual care, quality improvements including behavioural change techniques such as goal setting and additional social support lead to a substantial increase in diabetic retinopathy screening attendance and

are likely to be cost effective.

- **Flash glucose monitoring** – current NICE guidance does not contain any recommendations on flash glucose monitoring (FreeStyle Libre), however a number of experts highlighted UK guidance on its use, which indicate that children aged 4 years and older may receive a monitor (if other conditions are met).
- **Fluid and insulin therapy for diabetic ketoacidosis** – evidence indicates that rapid fluid infusion at volumes higher than those currently recommended is not associated with an increased risk of cerebral oedema in children and young people with diabetic ketoacidosis; and that in the case of severe diabetic ketoacidosis, more rapid fluid infusion rates may be associated with faster improvements in mental status. This is an area which should be reviewed.

Full NICE guidance can be found online:
<https://www.nice.org.uk/guidance/NG18>

Type 2 diabetes in adults: management

The new guidance updates the following areas: managing blood glucose levels, antiplatelet therapy and erectile dysfunction. The reasons include

1. safety concerns surrounding some blood glucose lowering medicines (dipeptidyl peptidase 4 (DPP 4) inhibitors and glucagon like peptide 1 (GLP 1) receptor agonists),
2. the potential impact of drugs coming off patent on health economic issues,
3. new evidence and safety issues relating to the off label use of antiplatelet therapy (aspirin and clopidogrel) in the primary prevention of cardiovascular disease.

Full NICE guidance can be found online:
<https://www.nice.org.uk/guidance/NG28>

INSULIN AFFORDABILITY, OR NOT!

Insulin costs in the United States

We have discussed the high costs of insulin globally in several Newsletters and more recently the cost of insulin in the US, where it is unaffordable for many people who have to ration their insulin doses putting their health, and sometimes, their lives at risk.

- In May 2019, insulin manufacturer Eli Lilly introduced a generic version of Humalog (Insulin lispro) to the US. The costs are \$137.35 per vial and \$265.20 for a pack of 5 KwikPens - half the price of the branded product. The largest savings will be for people who are uninsured, have high-deductible health insurance or have Medicare Part D plans.
- Also in May, Colorado became the first US state to introduce a cap on monthly insulin payments, a significant victory for campaigners. A survey carried out earlier this year showed that almost half of people with diabetes have gone without insulin temporarily due to cost. The new law means capping insulin to payments of \$100 for people with private insurance when average monthly prices are between \$600 and \$900. It is hoped this will then pave the way for other states to follow suit.
- An enterprising group of people travelled 800 miles on a bus for 15 hours, across 5 US states and the Canadian border to buy their insulin at a Walmart pharmacy. Here one person paid

\$26 for a vial compared to \$340 for a vial in her home town of Minneapolis!

Much of the blame for this high cost has to be the monopoly held by the insulin manufacturers - only 3 insulin manufacturers to supply the whole world. Nevertheless, this is not a justifiable reason for prices being so high that people die for lack of affordable insulin.

While talking about the price of insulins...

The Canadian province of British Columbia has announced that its public drug plan will switch as many as 20,400 patients from three branded biologic drugs to cheap near-copies, called biosimilars, which will save an estimated \$96.6 million over 3 years. One of these drugs is Sanofi's long-acting insulin, Lantus.

Biologic drugs are large molecules made using biological processes and they tend to be expensive. Biosimilars work in the same way as biologics, but unlike generics they are not identical to the drug they are copying.

In Canada, pharmacists cannot swap the original biologic drugs for a biosimilars once patents expire, the way they can with generics, doctors must specifically prescribe the biosimilar, and they have been slow to do that.

The biosimilar to Lantus is called Basaglar in Canada and Abasaglar in the UK.

Lizzie's Tea Party!

Once again Lizzie and her Mum, family and friends held their annual Tea Party in Ballater, Aberdeenshire to raise funds to help the children and young people with diabetes at the Dream Trust in India. Despite the rain, a lot of fun was had and they raised an amazing £1,080.25! Many thanks to everyone involved, this makes a big difference to the lives of families who cannot afford the insulin and treatment their children need.



THE CASE FOR THE FREESTYLE LIBRE IN TYPE 1 AND TYPE 2 DIABETES

The evidence is building up to support the use of the FreeStyle Libre in people with Type 1 and Type 2 diabetes on multiple doses of insulin. This should surely add weight to the case for widening the already narrow criteria for people to be able to access the device free on the NHS so having better control and reducing the risks of complications.

The FreeStyle Libre improves control in people with Type 1 diabetes during the first 6 months

An audit from the Association of British Clinical Diabetologists (ABCD) of 1,299 people with Type 1 diabetes compared the 12 months prior to starting the FreeStyle Libre and the result of using it for 6 months.

The results showed important benefits for those using the Libre in terms of lowering glucose levels in people with high levels before using the device and a reduction in the number of hypos. Below are the key results:

HbA1cs - there was a significant improvement in diabetes control, especially in people who had higher glucose levels before using the FreeStyle Libre.

Hypoglycaemia

- 79% reduced their time spent in hypoglycaemia with the Libre,
- 31% were able to reduce the rate/frequency of hypos,
- 39% reduced night time hypos,
- 9% of people reported that they had reversed their hypo awareness.

Hospital admissions were reduced for – hypoglycaemia, hyperglycaemia and diabetic ketoacidosis (DKA).

Diabetes distress - there was a considerable improvement in diabetes-related emotional distress.

The researchers concluded that the results for the use of 12 months are needed to clearly demonstrate the improvements that can be made.



FreeStyle Libre in people with Type 2 diabetes using insulin

In a recent study, 101 people with Type 2 diabetes on multiple daily insulin injections for at least a year were randomly assigned to treatment with the FreeStyle Libre or standard care. They were followed for 10 weeks and instructed on adjusting their insulin doses.

Results

The people using the FreeStyle Libre system found:

- Treatment was significantly more flexible and they would recommend it to other people.
- Satisfaction with the system was high.
- The changes in HbA1cs were 9mmol/mol (0.82%) in the Libre group versus 3.6mmol/mol (0.33%) in the standard care group.
- 68% of the Libre group had their HbA1c reduced by 5.5mmol/mol (0.5%) compared to 30.2% in the standard treatment group.

The researchers concluded that the FreeStyle Libre (flash glucose monitoring) tends to improve treatment satisfaction and can improve glycaemic control in people with Type 2 diabetes and multiple daily injections without increasing the frequency of hypoglycaemia. (Diabetes Care, April 2019)

Abbott reveals more evidence of the benefits of the FreeStyle Libre system

Abbott research has shown that its FreeStyle Libre glucose monitoring system significantly reduces HbA1c levels in certain adults with Type 2 diabetes who had used multiple daily insulin injections for an average of 8 years. Researchers evaluated records of 363 people in this category in France, Germany and Austria and assessed their HbA1c levels over 3 to 6 months.

The results showed:

- Lower HbA1c levels with the use of the Libre after at least three months of use. There was a nearly 1% drop (0.9% or 9.7 mmol/mol) in HbA1c levels with the average HbA1c being 8.9% (73.3 mmol/mol) before FreeStyle Libre system use and 8.0% (63.6 mmol/mol) after.
- Researchers detected no differences based on age, gender, body mass index or duration of insulin use. According to Abbott, this indicates the findings apply to the broad population of people with Type 2 diabetes and not just a particular subset.

One of the lead researchers said, "By using the real-time results, people have trends and patterns from the technology right at their fingertips and they are becoming more actively engaged in making better decisions to control their glucose levels and improve their own health."

Production of the pioneering FreeStyle Libre is to be stepped up as part of a drive to make it more accessible for people in the UK and around the world.

There are over half a million Libre users globally and the manufacturers, Abbott, has said it is hoping to increase the manufacturing process by 3 to 5 times over the next few years.

The next generation Libre has already been approved for use in Europe and is on the verge of being given US approval too. The revamped version has more features, including alarms that alert the user when blood sugar levels go too low or high but it will remain the same price as the current version.

SMART INSULIN DEVELOPED TO PREVENT HYPOGLYCAEMIA

Researchers at the University of California have developed a smart insulin (known as i-insulin) that they say could help to prevent hypoglycaemia. They have added an extra molecule to insulin. The new insulin lets glucose get into the cell but the added molecule prevents too much insulin from going in when blood glucose levels are normal, so preventing hypoglycaemia.

So far i-insulin has only been tested in mice with Type 1 diabetes and the first injection was shown to be effective at keeping blood sugar levels within the normal range for 10 hours. A second injection was given 3 hours later and this continued to protect against hypos.

The researchers think that the new insulin will also protect against high sugars

The next step is to carry out a trial of i-insulin in humans. (Proceedings of the National Academy of Sciences, March 2019).

A reminder about AmazonSmile

In the June Newsletter we told you how to help IDDT by using AmazonSmile. It is a simple and automatic way for you to support IDDT every time you shop, at no cost to you. When you shop at smile.amazon.co.uk, you'll find the exact same low prices, selection and convenient shopping experience as amazon.co.uk, with the added bonus that Amazon will donate a portion of the purchase price to your selected charity, IDDT.

However, we did not tell you that in order to select IDDT as your chosen charity you need to select our full name and search for 'The Insulin Dependent Diabetes Trust' on your first visit to smile.amazon.co.uk Amazon will remember your selection, and then every eligible purchase you make at smile.amazon.co.uk will result in a donation to IDDT.

Follow up from the last Newsletter

Research shows that most older adults with 'prediabetes' don't develop diabetes

In the last Newsletter, we published an article about a change of heart in using the term 'pre-diabetes' amongst many experts and why IDDT has never liked it. Now Swedish research has shown that older adults with slightly raised blood sugars (often called pre-diabetes) usually do not go on to develop Type 2 diabetes.

The researchers followed 2,575 men and women aged 60 and older without diabetes for up to 12 years. At the start of the study, 918 people (36%) of the group had higher-than-normal blood sugar levels that were still below the threshold for diabetes.

Results

- Only 119 people (13%) of those who started out with elevated blood sugar, went on to develop diabetes.
- Another 204 (22%) had blood sugar levels drop enough to no longer be considered prediabetic.
- the chance to stay prediabetic or even revert back to normal blood sugar without taking medication is actually pretty high (64%) and lifestyle changes may prevent pre-diabetes from progressing.

One of IDDT's main objections to using the term 'pre-diabetes' is that often people worry or are anxious because they think they have been diagnosed with a condition/disease when, in fact, they have not. This research backs up previous studies in showing that only 13% of people with raised blood sugars actually go on to develop Type 2 diabetes.

Definitions

- HbA1cs (average blood glucose levels over 6 to 8 weeks) of 6.5% (48mmol/mol) or above is the level at which diabetes is diagnosed.
- HbA1cs between 5.7% and 6.4% (39 and



46mmol/mol) are considered to be elevated but not yet diabetes.

- HbA1cs of 5.7% (39mmol/mol) or below is considered normal.

Worldwide, about 352 million adults have elevated blood sugar that is not high enough for a diagnosis of diabetes and by 2045, it is estimated that this will rise to 587 million, 8.3% of adults worldwide.

How many people with Type 2 diabetes have access to a blood glucose test every 3 months as standard?

In the last Newsletter, we discussed that under the NHS people, with Type 2 diabetes are denied access to blood testing strips and instead it is recommended that HbA1cs are measured 3 to 6 monthly. We questioned whether this is actually happening.

Interestingly, in July there was a Parliamentary Question asking if people with Type 2 diabetes have access to this test being carried out every 3 months as standard.

The answer from the Minister was the usual one – local Clinical Commissioning Groups are responsible for local services. So presumably the Department of Health does not know whether it is happening or not!

If it is not happening for you, then ask for it so that your blood glucose levels are checked and adjustments made to your medication, diet and/or exercise to help your diabetes control.

Children and young people

Disturbed eating behaviours in Type 1 diabetes

The signs of eating disorders are a restricted or chaotic food intake, a morbid preoccupation with food, weight, and shape and a distorted body image. Eating disorders are defined as anorexia nervosa, bulimia nervosa, binge eating disorder, other specified and unspecified feeding and eating disorder. When eating disorders occur in people with Type 1 diabetes, they are often referred to as 'diabulimia' although this is not a recognised medical term.

In addition, there are reports of some lower degree eating disturbances which do not meet frequency or severity criteria for a formal eating disorder diagnosis and these have been defined as disturbed eating behaviours. People with Type 1 diabetes are also at risk of developing disordered eating behaviours and it is thought that the rates are 2–3 times higher than in people without diabetes. Possible contributing factors to the cause include the weight loss at diagnosis followed by subsequent weight gain with the start of insulin treatment and the monitoring of food intake in order to plan insulin doses.

Finally, the availability of insulin omission as a unique, Type 1 diabetes-specific compensatory behaviour (to lose weight) has been reported in up to 37% of females with the condition and is a potential risk factor for developing disordered eating behaviour. Disordered eating behaviour is associated with increased risk of developing diabetes complications and increased mortality rates compared to people with Type 1 diabetes without this behaviour.

The majority of research in this area has focused on female adolescents and young adults and a recent study in these groups lasting over a year found that disordered eating behaviours remained stable in the total group studied but the following differences were observed:

- 19% showed persistent disordered eating,
- 8% increased,
- 7.3% decreased over time,



- The remaining people scored low on disordered eating over time.

These four groups differed in that the behaviours were insulin restriction, omission, diabetes specific functioning and depressive symptoms. The researchers concluded that substantial numbers of young people with Type 1 diabetes are at risk of disordered eating behaviours and these may continue into adulthood. They recommend the importance of assessing eating behaviours over time. (Diabetes Care, June 2019)

And in adults...

Another piece of research has shown that disordered eating behaviours also occur in adult men and women with Type 1 diabetes. It involved 282 adults with Type 1 diabetes between the ages of 18 and 79 years and a total of 20.3% had disordered eating, 13.3% in males and 24.8% in females. In addition, 6.2% had depression and 19.0% anxiety.

Symptoms of disordered eating decreased with increasing age and when information from children and adolescents from previous research were included, there were peak levels of disordered eating behaviours during late adolescence and young adulthood. (Journal of Eating Disorders, September 2019) ►

Night-time insulin requirements greater for young children versus teenagers and adults

Children with Type 1 diabetes have a greater range of insulin requirements, particularly at night, compared with adolescents and adults with the condition, according to a study of hybrid closed-loop insulin delivery system users.

The study involved a retrospective analysis of information from 20 children aged 6 years or younger, 21 children aged 7 to 12 years, 15 children aged 13 to 17 years all with Type 1 diabetes and 58 adults with Type 1 diabetes who took part in trials assessing hybrid closed-loop insulin delivery systems. Participants were recruited from Austria, Germany, Luxembourg, the United Kingdom and the United States.

The results showed:

- children with Type 1 diabetes have a greater range of insulin requirements, particularly at night, compared with adolescents and adults with the condition, compared with children aged 13 to 17 years, insulin delivery requirements varied by 10.2% more for children aged 12 years or younger at night and by 6.4% more during the day,
- when compared with insulin delivery variance for adults, the measures for children aged 12 years or younger were 10.7% higher during the night and 6.4% higher during the day. (Diabetes Care, June 2019)

The researchers explained that it was expected that young children have highly variable insulin needs during the day due to their unpredictable eating patterns and activity levels but it was surprising that this also applied at night. They also recommended that young children should have priority access to diabetes technology. (What a shame this was not taken into account when the criteria for access to the FreeStyle Libre were developed!)

This research will help parents have a better understanding of managing their child's diabetes.

Family conflict may impair children's glycaemic control

Researchers investigated 1,095 children with Type 1 diabetes between the ages 10 and 17 years. They found that family conflict between parent and child and related to diabetes had a negative effect on the child's blood glucose control with three insulin regimes. The researchers recommended addressing issues linked to diabetes-related family conflict and identifying those at risk for high HbA1c levels. (Diabetic Medicine, May 2019)

Investigating babies at risk of Type 1 diabetes

About 1% of children have genes which put them at high risk of developing Type 1 diabetes which means they have a greater than 10% chance of developing the condition. A new study is going to take place called the Primary Oral Insulin Trial. The trial aims to involve 100 babies at increased risk of Type 1 diabetes to take part in this trial from Berkshire, Buckinghamshire and Oxfordshire.

The babies will be given an insulin powder or placebo until they are 3 years old and will be monitored for six years.



From our own correspondents



Podiatry checks

Dear Jenny,

If ever there was a simple preventative course of action, it's introducing twice yearly Podiatry checks.

Where I live, GP led reviews do not include feet examination in any detail. Referrals have to be made through the Practice

and there is often a long waiting list. So, staff cuts reduce the opportunity to 'catch' serious problems, though once you're on the radar the service is good.

Too many lose out because the system here is not joined up and ultimately can lead to permanent loss of lower limbs.

By email S.A.

Low carb diet and Type 2 diabetes

Dear Jenny,

I feel the urge to contact you after receiving my June issue. I have had Type 2 diabetes for the past 7 years, gradually progressing through the medications to injecting insulin.

A year ago, I went for my yearly check-up and was told all was well and that I was managing my diabetes well, also my liver was fine. I was injecting 44 units a day.

At this time I had to visit a consultant about a bowel problem, he sent me for blood tests and then informed me that I had fatty liver disease and my diabetes wasn't being managed well. I told him about my previous diabetes check-up and he informed me and my GP may have done a basic liver test but he does an ELF test. ELF stands for Enhanced Liver Fibrosis, approved by NICE in 2017 which is used to assess the severity of liver fibrosis (damage).

I asked what to do to improve my health,

and I was told to cut carbs, fruit and reduce my dairy intake. I began my new diet on the 30th November and by the end of April I had reduced my insulin to nil and my 4 metformin tablets to 2 a day. Hopefully, in a few weeks I will be able to stop completely. I have lost just over 2.5 stone so far.

I have never been told to lose weight, just been told to increase insulin.

I have been back to my nurse and she seemed at a loss when I told her what I had done. I honestly feel there is not enough information out there for patients and professionals and I guess probably no interest from pharmaceutical companies as they want people to need their drugs!

Please encourage others with Type 2 diabetes to try a diet of low carbs and very low fruit intake, eat good fats cut out processed food.

Sorry to ramble on but feel so strongly about this and feel very lucky I met a consultant that took time to help and support me as he continues to do.

O.C. By email

MEET THE TEAM

IDDT runs thanks to a small but very dedicated staff team and we thought it would be a good idea to put names to faces.



Top row, left to right, Martin Hirst, Matt Daybles, Keith Millhouse
Bottom row, left to right, Jo Wootton, Jenny Hirst, Rita East

Jenny Hirst

Board of Trustees Co-Chair

Hi, my involvement with diabetes started in 1975 when my daughter was diagnosed with Type 1 diabetes. I co-founded IDDT 25 years ago with the aim of maintaining animal insulins for the people who need them and we have succeeded in this aim. I chair the Board of Trustees and we are jointly responsible for maintaining the good management of IDDT and further developing the organisation to help people with diabetes and their families.

Martin Hirst

Chief Executive Officer

Hi, I have worked for IDDT for over 12 years. I was originally recruited as Fundraising Manager, I am now the Charity's CEO and ensure that the charity operates within legal frameworks. With the help and support of a small but highly dedicated staff team we are able to promote the aims and objectives of the charity, namely, to support the needs of people who all live with diabetes.

Matt Daybles

Office Administrator

Hi, I joined the IDDT team in April 2017, my main role is the overall running of the mail room. This entails preparing and mailing orders of information packs and booklets, organising bulk mail-outs and email campaigns as well as the sorting and distribution of incoming mail. My duties also include recording stock levels of our publications and office supplies. Over my time I have also taken on extra duties such as assisting Martin with health and safety tasks and the recording, organising and mailing of insulin and diabetes supplies for the Insulin for Life program.

Rita East

Database Manager

Hi, I am IDDT's Database Manager and have worked for the charity for over 13 years, more recently in a part-time capacity. As well as having overall responsibility for the membership database, I also have responsibility for monthly membership and finance records and the development and maintenance of data entry procedures.

Keith Millhouse

Deputy Database Manager

Hi, I am IDDT's Deputy Database Manager. I joined IDDT's, small, friendly team in April 2019. I'm responsible for maintaining the database of members, for managing membership renewals, general enquiries and ensuring all monies are managed and accounted for on the database. My varied role involves a wide range of administration tasks, such as generating letters, as well as answering the helpline.

Jo Wootton

Database Administrator

Hi, I have been with IDDT since October 2017, my mother-in-law has Type 2 diabetes which is controlled by diet alone, I am a personal trainer by trade so I have an understanding of exercise and diabetes. My job within IDDT is varied I assist with the maintaining of the database of members as well as running the monthly lottery draw and the sending of insulin to Tanzania. I am also back up for the post room when Matt is away on holiday.

Each member of the team brings a valuable set of skills to the charity who, supported by the Board of Trustees, ensure that IDDT is able to support people living and working with diabetes. We hope that you will continue to give us your ongoing support. Thank you.

MATT HANCOCK WATCH



At the time of writing, Matt Hancock is still the Minister for Health and Social Care, so we have continued to 'watch' his actions.

Halving childhood obesity

On May 30th, Secretary of State for Health and Social Care, Matt Hancock, announced that he has commissioned the Chief Medical Officer to urgently review the different ways in which the Government can meet their ambition of halving childhood obesity by 2030.

As part of the childhood obesity plan, some interventions are already underway and a green paper on prevention has recently been put out for consultation.

Mr Hancock said: "What I do not underestimate is the scale of the problem we face and we should not rest on our laurels. By 2030, if we want to see a real improvement to our children's health, we are going to have to use every tool in our arsenal, so today I have asked the Chief Medical Officer to report back on what else we can take forward."

NHS in collaboration with Amazon

In a press release issued on 10th July, Matt Hancock announced that there is to be a collaboration between the NHS and Amazon. The aim is to provide reliable health information from the NHS website through voice-assisted technology using Amazon's Alexa. It will use information from the NHS website to provide answers to voice questions such as:

- "Alexa, how do I treat a migraine?"
- "Alexa, what are the symptoms of flu?"
- "Alexa, what are the symptoms of chickenpox?"

Mr Hancock said, "We want to empower every patient to take better control of their healthcare and technology like this is a great example of how people can access reliable, world-leading NHS advice from the comfort of their home, reducing the pressure on our hardworking GPs and pharmacists." (Only if you have an Alexa!)

Banning energy drinks to under-16s

It has been reported Matt Hancock is trying to push through a ban on the sale of energy drinks to under-16s and introducing mandatory calorie labelling in the out of home sector.

He wrote to all Cabinet Ministers before the new Prime Minister took office: "Following a high level of interest in the consultation, we plan on announcing that we will be ending the sale of energy drinks to children under the age of 16".

Advancing our health: prevention in the 2020s

This is the title of the long-awaited green paper from Matt Hancock. It was released on Theresa May's last day in office without an accompanying press release. It includes proposals aimed at tackling smoking, drinking and poor diets, including some proposals that Boris Johnson is expected to oppose. So, it remains to be seen what will happen to it.

As a green paper it is a consultation document and so anyone can comment online. If you would like to do so, the website is as follows:

<https://www.gov.uk/government/consultations/advancing-our-health-prevention-in-the-2020s>

New heart rate monitor detects hypoglycaemia in Type 1 diabetes

On average people with Type 1 diabetes have about two episodes of symptomatic hypoglycaemia a week but people with impaired hypo awareness are six times more at risk of hypos.

In addition to the well-known hypo warnings, heart rate variability is one of the measurable symptoms for the early detection of hypoglycaemia. In this small study, researchers assessed if changes in heart rate variability sensed by a wearable monitor could help to detect hypos in people with Type 1 diabetes with no history of cardiac arrhythmias.

The participants were asked to wear a HealthPatch to make electrocardiogram recordings for 5 days. Glucose levels were also measured and recorded. Heart rate variability associated with hypoglycaemia was observed in participants with short diabetes duration and further influenced by gender, physical activity and glucose peak level before and fall toward a hypoglycaemic event. The researchers concluded that changes in heart rate variability could be detected by a wearable device to further prevent a severe hypo, especially applying to people with hypo unawareness. (Diabetes Care, April 2019)

38% of adults with Type 1 diabetes are misdiagnosed with Type 2

We have mentioned this in previous Newsletters but now a study from Exeter University has shown that nearly 40% of people with Type 1 diabetes are misdiagnosed and initially treated for Type 2 diabetes and not given the insulin they needed.

Worryingly, further analysis showed that half of those misdiagnosed were still being treated for Type 2 diabetes 13 years later! For people with Type 1 diabetes who are misdiagnosed, taking tablets and losing weight are not effective because they need insulin treatment. If they don't receive insulin, they are in danger of consistently high blood sugars and diabetic keto

acidosis (DKA). In addition, people who spend years being wrongly treated are at greater risk of complications developing.

People with Type 2 diabetes may eventually need insulin but generally, not at this early stage.

Currently, NICE guidance does not recommend rigorous testing to tell the difference between Type 1 and Type 2 diabetes. This research shows that if a person is diagnosed as having Type 2 diabetes but needs insulin within 3 years of diagnosis, they have a high chance of having Type 1 diabetes and they need a blood test to confirm which type of diabetes they have. (Diabetologia, April 2019)

Statins again

A recent a Netherlands study reported a 38% increased risk of Type 2 diabetes associated with statins. Earlier this year experts called for increased prescription of the drugs to over 75s, although they are associated with short-term side effects such as headache, tiredness and muscle pains as well as an increased risk of Type 2 diabetes.

A more recent US study looked at the risks of Type 2 diabetes developing by collecting information from 4,600 men and women without diabetes taking statins to lower their cholesterol levels and reduce the risk of stroke and heart attack. The results showed that taking statins for any length of time more than doubled the risk of developing Type 2 diabetes when compared to those who did not take a statin. Those who took the drugs were 6.5% more likely to have higher HbA1c levels. Increased duration of statin use was associated with an increased risk of diabetes, called a dose-dependent relationship.

The researchers recommend that there should be large prospective studies to consider how statins impact on human health overall. Both risks and benefits should be considered and not just the disease that is being treated by the specific drug. (Diabetes Metabolism Research and Reviews, June 2019)

BITS AND PIECES

What proportion of CCGs commission services to enable patients with (a) Type 1 and (b) Type 2 diabetes to access remote online consultations with healthcare professionals?

This was a parliamentary question asked on July 19th and the key points in the answer were as follows.

Since April 2017 NHS England has made £26.4 million available so clinical commissioning groups (CCGs) can offer an expanded number of structured education places to support people with diabetes to manage their condition. In April 2019, NHS England and NHS Improvement wrote to all CCGs to remind them of this.

They are currently working to widen access to digital self-management support for people with Type 1 and Type 2 diabetes but in the meantime, there are online resources aimed specifically at people with a new diagnosis of Type 1 and Type 2 diabetes to support them to self-manage. Here are the links:

- <https://www.nhs.uk/conditions/type-1-diabetes/>
- <https://www.nhs.uk/conditions/type-2-diabetes/>

Insulin errors in hospitals

A campaign, Insulin Safety Week, to reduce insulin errors in hospitals across the UK took place during the week of May 20th this year with a total of 531 sites taking part, mainly hospitals but also some GP surgeries and care homes.

Hospital teams put up posters etc with the messages 'choose safety, think insulin' and 'right insulin, right dose, right time, right route, right device, right patient'.

The campaign is in response to the high numbers of insulin errors which occur in hospitals, the latest National Diabetes Inpatient Audit showing that 40% of people with diabetes experience an error related to the administration of insulin during a hospital stay.

Hypoglycaemia linked to lower quality of life and poorer psychological health

Italian researchers investigated 2,229 adults with Type 1 and Type 2 diabetes and found a lower quality

of life, more diabetes distress, fear of hypoglycaemia and poorer general and psychological health amongst those who had experienced a severe hypo in the previous year compared with those who had not experienced such an event. The results showed that the fear of hypos was more likely among women, those taking insulin, those who had had severe hypoglycaemia and those who had at least a high school education. (Nutrition, Metabolism and Cardiovascular Diseases, May 2019)

Unhealthy foods in hospitals

An unpublished report from the University of Aberdeen found that three quarters of food bought in NHS hospitals was deemed to be unhealthy, such as crisps, chocolates, cakes and pastries. There were only 5 healthy items in the top 20 best-selling items.

The researchers also found that medical staff, patients and visitors tended to choose unhealthy snacks over nutritional food. Sugar was the worst offender but pork pies containing 39g of fat, fizzy drinks with 56g of sugar and a slice of raspberry cake with 641 calories were very popular. The researchers called for radical restrictions on junk and unhealthy foods.

NHS England launched a plan in 2017 offering cash incentives to hospitals if 80% of snacks sold by them had less than 250 calories. Hospitals in Scotland were told to ensure that 'enhanced nutritional standards' should be met by more than half of food sold. Two years on, it seems that these attempts to reduce obesity are not really working!

Early research – a use for inhaled insulin

Early research presented at the Alzheimer's Association Conference in Los Angeles has shown promise for an inhaled insulin spray in people with mild cognitive impairment or mild Alzheimer's disease.

There is a link between insulin and Alzheimer's which is being investigated. The researchers know that inhaled insulin can reach the brain faster, while not affecting the body's blood sugar levels. In the study, at 12 months people using the inhaled insulin did not show any improvement but at 18 months a small group started to show encouraging signs by performing better on memory tests and with improvement in biomarkers of Alzheimer's.

More research and a larger study is needed.



SNIPPETS

Camel's milk

Camel milk could be used to reduce inflammation in people with Type 2 diabetes according to researchers at Cardiff Metropolitan University. Camel milk is very nutritious with the milk fat being an important component as it has a higher level of polyunsaturated fat than cow's milk. However, because of the complexity of camel milk's makeup, the researchers only evaluated its effect on inflammation.

Lipids (blood fats) in camel milk were able to prevent macrophages developing in abdominal fat. People with Type 2 diabetes who have inflamed abdominal fat around the waist are at an increased risk of complications including heart disease and stroke, and macrophages play a significant part in the progression of this inflammation.

However, the researchers said: "We can't say for certain whether camel milk 'cures' diabetes, or if it would reduce inflammation if a person with Type 2 diabetes regularly consumed it. Further studies are needed." (Functional Foods in Health & Disease, June 2019)

Weight Watchers will be prescribed on the NHS to tackle Type 2 diabetes

The popular weight loss programme has been chosen by the NHS in England as the official provider of its Diabetes Prevention Programme. Doctors will be able to refer patients to Weight Watchers which has been renamed as WW.

New figures show that one person is diagnosed with Type 2 diabetes every 3 minutes in the UK.

It must be said that not every case of Type 2 is caused by excessive weight – age, family history and ethnicity can also contribute to someone's risk but it is the single greatest risk factor for developing the condition.

Two hours a week in green spaces linked to better health and happiness

A survey of 20,000 people in England has shown that spending only 2 hours a week in green spaces such as parks, woods and fields has been linked to people feeling healthier and happier. Those surveyed reported how long they had spent in these environments in the past week and their health and wellbeing.

The people who spent less than 2 hours a week in green spaces were no more likely to report good health or wellbeing than those who spent no time at all but those who spent more than 2 hours had consistently higher health and wellbeing levels. This was not linked to increased activity, just sitting on a park bench had the same effect.

The health gains at 2 hours seems to be a magic number because the gains diminish after this with the cut off being 5 hours. Apparently, the average person spends 94 minutes in natural environments. (New Scientist, 10 June 2019).

A link between weight loss and the time of exercise

A recent study suggests that the time of day to exercise contributes to successful weight loss. The researchers observed 375 adults involved in several physical activities of moderate to vigorous physical activity and who were asked to report the frequency of their exercise and the time of day they exercised.

At the end of the study, the researchers found that those who exercise at the same time each day had a more significant weight loss. In addition, they found a link between different levels of physical activity and consistent exercise regardless of the time of day.

They recommend further research to find out whether promoting consistency in the time of day for planned physical activity can help people sustain higher levels of physical activity and if this will help people who have low levels of physical activity develop a physical activity habit. (Obesity, July 2019).

FROM YOUR EDITOR – JENNY HIRST

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