

INDEPENDENT DIABETES TRUST Newsletter



JUNE 2023 Newsletter, Issue 117

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SUMMER IS HERE!

Welcome to our June Newsletter – a time to look forward to better weather and more outdoor activities. In this Newsletter you will see that we have updated our Holiday Tips booklet and the details of how we can send one to you. The booklet contains details of how to look after yourself and your diabetes when on holiday, whether in this country or abroad.

We include an article that questions if insulin makes you fat and a longer than usual 'From our own Correspondents' section as our readers seem to have quite points to make! We are also including details of changes to the NHS and details of National Institute for Health and Care Excellence (NICE) updated Quality Standards for Type 1 diabetes and Type 2 diabetes - updated for the first time since 2011! The Quality Standards help us, as patients, to understand what good care or support looks like so that we can feel confident in the care or support we are receiving. They also enable us to ask questions about our care or support based on what we have a right to expect and to understand our choices and take part in decisions about our care. The 2023 updates identify priority areas for improvement.

It is worth noting that for both people with Type 1 and people with Type 2 diabetes, one of the

updates is that adults have the 9 key care processes carried out every 12 months and very importantly, that they are offered a structured education programme. While this may happen in some areas, it is clear from the phone calls and emails that IDDT receives, that many people are not receiving even basic education about diabetes or how to manage it. This especially applies to people with Type 2 diabetes. We know that some people are simply told that they have diabetes, told to lose weight, even if they are not overweight, and given metformin tablets with no dietary or lifestyle information. Even worse, they are simply told to go on the internet!

We do our best to help when and where we can by listening and sending free Information Packs but we are saddened by the fact that people are in this situation. Having said this, we supply our information booklets to healthcare professionals so they can give them to their patients. The numbers of booklets we are sending in this way is increasing and we are pleased to help in this way.

Finally, we report on the latest consignment of items we have sent to Ukraine and say a huge thank you to everyone who has sent in-date, unwanted items to help people with diabetes.

Update from Ukraine

Update from Ukraine

As we know from the TV News, the situation in Ukraine is still desperate. Although we are having a tough time, the people of Ukraine are in a far worse situation, so we are very grateful for all the donations of unwanted, in-date insulin and diabetes equipment that have been sent to IDDT by members and many other people, including health professionals. Our knitters have continued to send hats, gloves and toys for the children and one of our founder members gave £5,000 worth of sleeping bags for the cold weather which were purchased from a neighbouring country.

In mid-March we sent a consignment of 103 boxes some of which you can see stacked in our hallway ready to go! The contents included:

- 1,026 pre-filled insulin pens, 417 insulin cartridges and 129 vials of insulin,
- 19,075 blood glucose test strips and 650 ketone test strips,
- 4,475 metformin tablets,
- numerous lancets, pen needles and other items.

The financial donations we have received are helping to pay for the fuel for the vans that are



delivering the boxes to Ukraine. This last consignment went in a van with 50 wheelchairs donated by another charity.

Thank you must go to the IDDT staff team who have worked so hard to achieve all this and a huge thank you to everyone who is helping IDDT to help people with diabetes in Ukraine.

What's New?

US approval of new implantable device to treat pain from diabetic nerve damage

On January 26, 2023, Abbott announced that the US FDA approved its spinal cord stimulation system (SCS), Proclaim XR, as a treatment for pain from diabetic neuropathy, or diabetes-related nerve damage.

SCS implantable devices, also called neurostimulators, are implanted through an outpatient surgical procedure. They deliver small vibrations or stimulations to the spine which works to stop pain signals before they reach the brain, so reducing the painful symptoms of neuropathy.

Once the device has been implanted, the user and their healthcare provider can connect to it through the NeuroSphere Virtual Clinic. NeuroSphere, which is available on iOS smartphones through the App store, allows users to communicate with their healthcare provider to make treatment



adjustments, without the need for a visit to the specialist.

Diabetic peripheral neuropathy is a complication affecting around 1 in 3 people with diabetes as a result of raised blood glucose levels damaging nerves in the extremities - the hands, legs or feet. Until now, treatment has focussed on managing blood glucose levels. Medications are also available but these don't work for everyone, some cannot be used long-term and may produce unpleasant side effects.

Hopefully neurostimulators will give longer lasting pain relief and fewer side effects. Clinical studies have shown that Proclaim XR helped limit the psychological impact of chronic pain, and using the device led to significant improvements in participants' physical, mental, and emotional function.

In November 2022, Abbott stated that their NeuroSphere™ Virtual Clinic, the UK's first remote neuromodulation patient-care technology, is now available in six specialist centres across the UK; Bristol, Glasgow, Kent and Canterbury, Leeds, Oxford and Southampton. The DHSC has announced 19 new community diagnostic centres as part of the Government's elective recovery plan and the expectation is that these centres could be where the implants will take place.

Artificial pancreas successfully trialled for use by people with Type 2 diabetes

In January 2023, it was announced that Cambridge scientists have successfully trialled an artificial pancreas for use by people living with Type 2 diabetes. The device, known as an artificial pancreas, is powered by an algorithm and the trials showed:

- It doubled the amount of time people were in the target range of between 3.9 and 10.0mmol/L for glucose compared to standard treatment.
- It halved the time spent experiencing high

glucose levels above 10mmol/L.

- No one on the trial experienced dangerously-low blood sugar levels (hypoglycaemia) during the study.
- Feedback from the participants suggested that they were happy to have their glucose levels controlled automatically by the system and nine out of ten (89%) reported spending less time managing their diabetes overall.
- Downsides included increased anxiety about the risk of hypoglycaemia, which the researchers say may reflect increased awareness and monitoring of glucose levels, and practical annoyances with wearing of devices.

The device combines an off-the-shelf glucose monitor and insulin pump with an app developed by the team, known as CamAPS FX. This app is run by an algorithm that predicts how much insulin is required to maintain glucose levels in the target range.

This is the first trial of the device in a wider population living with Type 2 diabetes. It differs from the artificial pancreas used for Type 1 diabetes because it is a fully closed loop system, whereas people with Type 1 diabetes need to tell their artificial pancreas that they are about to eat to allow adjustment of insulin.

The researchers plan to carry out a much larger multicentre study to build on their findings and have submitted the device for regulatory approval with a view to making it commercially available for outpatients with Type 2 diabetes.

Insulin News



Sanofi to discontinue Insuman® insulins over upcoming months

In February 2023, Sanofi, manufacturers of the human insulin range Insuman® announced that production and sales of this range will end within the next four months. Sanofi is set to discontinue the following products by the end of February:

- Insuman® Basal 100 IU/ml suspension for injection in a cartridge (Insulin isophane human)
- Insuman® Comb 25 100 IU/ml suspension for injection in a cartridge (Insulin biphasic isophane human).

The company is also discontinuing the following products by the end of May and June:

- Insuman® Rapid 100 IU/ml solution for injection in a cartridge (Insulin soluble human) – May 2023
- Insuman® Basal SoloStar 100 IU/ml suspension for injection in a pre-filled pen (Insulin isophane human) – June 2023
- Insuman® Comb 25 SoloStar 100 IU/ml suspension for injection in a pre-filled pen (Insulin biphasic isophane human) – June 2023.

Fewer than 1% of people receiving insulin in the UK are prescribed these insulins, as people with diabetes are increasingly managed with modern analogue insulins. People currently receiving

any of the Insuman® insulins should be moved to a suitable alternative treatment under the supervision of their prescribing doctor as soon as possible.

Pork insulin - misinformation still going on!

Some of our readers will not even be aware that IDDT formed originally when, in 1980s and 1990s, people were changed from natural animal insulin to so-called synthetic 'human' insulin often without being told. This resulted in significant numbers of people experiencing serious adverse effects, the most common being loss or reduced hypo warnings.

When they asked to change back to animal insulin, many people were refused but some people were assertive and changed back to the animal insulin that suited them better. However, then and in the following years, people have been told that animal insulins are no longer being made.

This was not true then and it is not true now! Pork insulin is still available on an NHS prescription in exactly the same way as human and analogue insulins and people are still entitled to an informed choice of treatment.

IDDT still receives calls from people who have been taking animal insulin for as many as 50 years or more but they are being told that pork insulin is no longer being made and are changed to synthetic insulin. Recently we received a call from a frightened lady who had recently been told by her healthcare team that pork insulin was no longer being made, so she was changed to analogue insulins. She lost her hypo warnings immediately. IDDT told her it is still being made and her relief was tremendous.

This begs the question of why this misinformation is still being given to patients? Where does this misinformation come from when pork insulin is on the NHS drug tariff like all other insulins available in the UK?

IDDT wants to reassure people who are taking pork insulin that it continues to be available and you are entitled to have it prescribed on the NHS.

Does insulin make you fat?

In theory, fat storage should only happen when there is enough energy to store which is when you have eaten more calories than your body needs. In people without diabetes, the pancreas produces the amount of insulin needed to keep blood glucose levels normal by constantly producing insulin in response to variables such as meals or stress.

In Type 1 diabetes

In Type 1 diabetes, the beta cells in the pancreas that produce insulin are destroyed by an autoimmune attack. Therefore, with little or no insulin being produced the body cannot convert food into energy or fat which is why people newly diagnosed with Type 1 diabetes often lose weight. Once insulin treatment starts, weight is usually regained to the proper level.

In the past, people with Type 1 have tended to be slim due to hyperglycaemia but as a result of improvements in treatment and technology, they have now caught up with the general population and are no more or less likely to be overweight. However, increasing numbers of people with Type 1 are overweight or obese and those with obesity are more likely to develop insulin resistance and double diabetes. Double diabetes refers to people with Type 1 diabetes who are overweight, have a family history of Type 2 diabetes and/or insulin resistance.

This can be challenging to manage. Research suggests that those with double diabetes are at higher risk of future complications independently of average glucose control as measured by HbA1cs.

This is quite complicated!

In theory, injected insulin should not cause weight gain unless you are eating too much, however, clinical trials and the reported experiences of people with diabetes suggest that insulin treatment does cause weight gain. In addition, the DCCT, the most rigorous, long-term trial in Type 1 diabetes found that people using intensive insulin treatment gained 10 pounds more than the people using less insulin.

Having said this, they also had improved blood glucose levels and health improvements. It is not clear why this happens and there are several possible explanations:

- Insulin that is injected under the skin is not exactly the same as insulin produced by the pancreas which could introduce some metabolic dysfunction that could cause extra weight gain.
- It could be the frequency of hypoglycaemia which causes people with Type 1 diabetes to overeat to bring blood glucose levels back up and of course, just the fear of hypos may cause some people to deliberately overeat.
- Another possible cause and one that has changed over the years, is that people nowadays are more likely to snack and inject extra insulin to deal with it, to prevent snacking causing blood sugar rises.

In Type 2 diabetes

Most experts believe that starting insulin in the treatment of Type 2 diabetes does cause weight gain, as do some other medications for Type 2 diabetes. Excess weight is highly associated with the progression of Type 2 diabetes and complications, so it is especially important for people with Type 2 diabetes to have treatments that are less likely to cause weight gain.

The research on the explanations for this is conflicting and complicated but one study suggests it could be due to more sedentary behaviour as opposed to the insulin itself. Of course, it could also be as with Type 1 diabetes, snacking to prevent hypos.

Insulin-associated weight gain is not inevitable

There are several modifiable factors that can increase insulin sensitivity which may help to keep weight in check. Here are some tips:



- **Eat healthier** – some diets are better for weight maintenance than others. Foods with plenty of fibre and protein help you to feel fuller faster and reduce the desire to eat whereas foods that are sweet, starchy, fatty and salty make you want to eat more.
- **Exercise regularly** – this improves insulin sensitivity, so smaller amounts of insulin can be used without blood sugars rising.
- **Correct insulin dose** – don't use too much insulin because it will cause hypos and lead to over-eating.
- **Treat hypos carefully** – try not to overeat to correct a hypo as this increases the number of calories and you may need extra insulin for correction the resulting high.
- **Check if you are thirsty** – sometimes when we feel hungry, we may be thirsty so choose drinking water. This is essential to keeping hydrated and also feeling fuller.

Conclusions

Insulin causes the body to store fat and gain weight and many people with diabetes gain weight when starting treatment with insulin. However, weight gain is not inevitable, and there are several things you can do to try and maintain your weight:

- Talk to your doctor or healthcare professional about adjusting your insulin regime and for help with diet.
- Choose foods high in protein and fibre that need less insulin.
- Exercise regularly to increase insulin sensitivity.



NICE Quality Standards for Type 1 and Type 2 diabetes updated (2nd March 2023)

National Institute for Health and Care Excellence (NICE) produces sets of quality standards on various health and social care topics.

The Quality Standards on diabetes can help us, as patients, in the following ways:

- to understand what good care or support looks like, so that you can feel confident in the care or support you are receiving,
- to ask questions about your care or support based on what you have a right to expect,
- to understand your choices and take part in decisions about your care,
- to know how to seek support as a carer,
- to play a part in improving your own health and wellbeing and in preventing disease.

NICE Quality Standard (QS208) for Type 1 diabetes in adults

This quality standard covers care and treatment for adults (aged 18 and over) with Type 1 diabetes. It describes high-quality care in priority areas for improvement. In March 2023, this quality standard was updated and replaced the quality standard on diabetes in adults (March 2011). The 2023 review identified updates or new changes in the priority areas for improvement:

- Adults with Type 1 diabetes are offered a structured education programme.
- Adults with Type 1 diabetes are offered a choice of real-time or intermittently scanned continuous glucose monitoring.
- Adults with Type 1 diabetes aged 40 and over are offered statins for the primary prevention of cardiovascular disease.
- Adults with Type 1 diabetes have 9 key care processes completed every 12 months.
- Adults with Type 1 diabetes admitted to hospital have an assessment of their risk of developing a diabetic foot problem.

- Adults with Type 1 diabetes admitted to hospital are supported to self-manage their diabetes.
- Identification of eating disorders in adults with Type 1 diabetes.

NICE Quality standard (QS209) for Type 2 diabetes in adults

This quality standard covers prevention of and care and treatment of Type 2 diabetes in adults.

Again, in March 2023 this quality standard replaced the March 2011 standards with the following updates:

- Adults at high risk of Type 2 diabetes are offered a referral to the NHS Diabetes Prevention Programme.
- Adults with Type 2 diabetes are offered a structured education programme at diagnosis.
- Adults with Type 2 diabetes who have multiple daily insulin injections and a condition or disability that means they cannot use capillary blood glucose monitoring are offered continuous glucose monitoring. This also applies to those who have their glucose measured by a care worker or healthcare professional.
- Adults with Type 2 diabetes are offered an SGLT2 inhibitor if they would benefit because of co-existing chronic heart failure, cardiovascular disease or chronic kidney disease.
- Adults with Type 2 diabetes have 9 key care processes completed every 12 months.
- Adults with Type 2 diabetes admitted to hospital have an assessment of their risk of developing a diabetic foot problem.

For more information visit the NICE website:

www.nice.org.uk/ and search on **GS208 for **Type 1** and **GS209** for **Type 2** diabetes**

The Major Conditions Strategy

In January, the Secretary of State for Health and Social Care, Steve Barclay, announced the introduction of the Major Conditions Strategy. He opened his statement by saying that currently in England 5.4 million people live with cardiovascular disease, 8.6 million live with chronic respiratory disease and 8.2 million people live with mental health issues. In addition, an increasing number of people live with one or more major conditions and one of the examples given was that people with diabetes are twice as likely to have depression.

In consultation with NHS England and government, his Department will develop and publish a Major Conditions Strategy to tackle the major conditions that lead to people spending more years in ill health. It will set out a shift to integrated, whole person care, building on the NHS Long Term Plan with the aims of (i) relieving pressure on the NHS, (ii) increasing healthy life expectancy and (iii) reducing ill-health related labour market inactivity. The major conditions to be covered are:

- Cancers
- Cardiovascular diseases, including stroke and diabetes
- Chronic respiratory diseases
- Dementia
- Mental ill health
- Musculoskeletal disorders

The Strategy intends to work in the following ways:

- The workforce model needs to adapt, reflecting that the NHS is caring for patients with increasingly complex needs and with multiple long-term conditions.



- There needs to be greater emphasis on generalist medical skills to complement existing deep specialist expertise in the NHS, supporting clinical professionals to heal the whole person care.

The Major Conditions Strategy and the upcoming NHS Long Term Workforce Plan work together to set out the standards patient should expect in the short term and over a five-year period.

We are being told that this is about shifting towards preserving good health and the early detection and treatment of diseases.

The Strategy will be increasingly capable of detecting diseases at an early stage, in some cases before symptoms emerge which will ultimately reduce later demand on health and care services.

The Strategy is also intended to tackle areas of disadvantage where people who live in England's most deprived areas live on average 19 fewer years in good health than those in the least deprived areas through the new ICSs (Integrated Care Systems).

We will see what happens....

Specialist medical centres for women during pregnancy

NHS England has announced that pregnant women with serious medical problems will now have access to 17 new centres of excellence. Included are women with pre-existing conditions or conditions that arise during pregnancy so that they are able to quickly get the extra care they may need.

There is at least one centre in every region of the country led by a multi-disciplinary team including at least one obstetric physician. Networks are linked to them to ensure that expert maternal medicine care is available to all women. They also ensure that all maternity services and emergency departments are aware

of the 'red flag' symptoms in pregnancy and have appropriate measures in place.

Maternal mortality in England is very rare and is usually caused by medical conditions that pre-date or develop during pregnancy, such as cardiac disease (23%), blood clots (15%) and epilepsy and stroke (13%). One in five women will have a medical issue during pregnancy.

Most conditions such as well-managed diabetes, can be safely managed locally. Some women with diabetes will be sent for an initial assessment at one of the centres where they will be given a personalised management plan that they can continue at home with the support of their local maternity team.



New NHS commissioning recommendations for blood glucose, ketone meters, testing strips and associated consumables

In the early part of this year, the NHS commissioning recommendations for blood glucose, ketone meters, testing strips and associated consumables went through a national assessment process.

The stated aim is *'to support access to high-quality, cost-effective products so that people with diabetes can monitor and manage their condition appropriately'*.

Apparently, this is because the NHS Long Term Plan sets out a range of actions that the NHS is taking to reduce variation in access to services

and patient outcomes which includes improving the treatment and outcomes for people living with Type 1 or Type 2 diabetes. Of concern is that it is stated that all Integrated Care Boards (ICBs) will be instructed to adopt the new guidance.

We'll have to wait and see, but where is patients' choice in this? Has there been a change in the basic NHS rights of patients that removed the right to choice?

(Although written after 1st April, publication has not appeared)

Bits and Pieces

Closed-loop insulin delivery's benefits in paediatric Type 1 diabetes

A study has found that toddlers and pre-school children with Type 1 diabetes who used Medtronic's MiniMed 780G advanced hybrid closed-loop system for 12 weeks experienced reductions in HbA1c, average sensor glucose values, time above range, as well as an increase in time in range, when compared with non-users. Parental diabetes distress also declined among young children who used the automated hybrid closed-loop system. (Diabetes Technology & Therapeutics, February 2023)

Common issues with CGM use in older adults with diabetes

A study has found that adults with Type 1 or Type 2 diabetes aged 50 to 85 had issues with continuous glucose monitoring devices including understanding results, device adhesion and accessing smartphones.

However, the researchers also said they were able to find "opportunities to decrease the frequency of hypoglycaemia" among the patients using CGM devices. These were through tailored recommendations, shared monitoring results and automated prompts, but they said that "successful prompting will require more attention to engineering the workflow of activity to promote adherence and ease of reporting." (Applied Clinical Informatics, February 2023)

Year-long aerobic exercise cuts diabetes risk in obesity

Recent research found that patients with central obesity who performed a 12-month vigorous or moderate aerobic exercise plan had a lower risk for long-term diabetes, compared with those who didn't perform aerobic exercises. Doing 12-month aerobic exercise program was also associated with significant decrease in waist circumference and HbA1c levels. (JAMA Internal Medicine, February 2023)

Study links diabetic retinopathy, foot ulcers and amputations

According to research, diabetic retinopathy is independently associated with a higher risk of developing diabetic foot ulcers and amputation

among people with Type 2 diabetes who are hospitalised. The research involved over 500 people who had diabetes with a follow-up period of 52 weeks. (Diabetes/Metabolism Research and Reviews, January 2023).

Paediatric Type 1 diabetes may affect children's school attendance

Research in the US has shown that children with Type 1 diabetes had nine more absences from school every year compared with children without diabetes. The findings also showed that children with the most optimal HbA1c levels had significantly better student attainment, while worse student attainment was recorded among children with the least optimal HbA1c levels. (Diabetes Care, January 2023)

Vulnerability

There are various definitions of 'vulnerability' including the following:

- physical vulnerability, economic vulnerability, social vulnerability and environmental vulnerability.
- in need of special care, support, or protection because of age, disability, risk of abuse or neglect.

Most of us recognise these definitions but at the same time, maybe we don't always like to admit that perhaps we fit into the category of being vulnerable! Simply living alone and being old or having a health condition, such as diabetes makes us vulnerable. There are various ways that offer help and support:

Personal alarms

A personal alarm allows you to call for emergency help at the press of a button. They can be worn either around your wrist like a watch or on a lanyard around your neck. Personal alarms are used every day by thousands of people across the UK who are reassured to feel independent in their own homes. With a pendant alarm, if you start to feel unwell or have a fall, you can reach out for help at the press of a button. Personal alarms enable both you and your family members feel safer and the costs start at around £12.99 per month. Some are available through the local authorities or for example:

- from Age UK - order by phone on 0800 011 3846, or online at www.ageuk.org.uk/products/mobility-and-independence-at-home/personal-alarms/

- from Careline – order by phone on 0800 1013333 or online at www.Careline.co.uk

Using your phone for safety

Both Android phones and iPhones have a feature known as "ICE" or "In case of emergency." This feature will let you add a list of emergency contacts to your phone. You can also add medical information, such as allergies or current medications.

Utilities

Vulnerable people can register with their water and energy companies so that they are warned when their water may be cut off or there may be a power cut.

Financial/ economic vulnerability

The Financial Conduct Authority (FCA) suggest that half of UK adults have at least one vulnerability. If you are aware that you may be vulnerable, it is worth knowing that this can improve the treatment you get from financial institutions to avoid falling victim to scams, getting into debt or taking out insurance that will never pay out. Every firm regulated by the FCA, which includes banks, insurance companies and financial advisers, is required to take extra care of vulnerable customers and should train their staff to recognise the signs. Having said this, they don't always comply or don't understand what counts as vulnerable, which can include having an illness, bereavement or job loss. Under new strict Consumer Duty rules coming into force in July, having procedures in place to take care of vulnerable customers should be embedded in the way a company does business.

HbA1c information

As we know, the HbA1c results are a measure of average blood sugar levels over the last couple of months and they are the ones that doctors and healthcare professionals tend to care about the most. In addition, most major research studies tend to evaluate long-term diabetes control by using the HbA1c results. They are a measure of the glucose that attaches itself to the red blood cells, so the higher blood glucose levels, the more glucose attached itself to the red blood cells and the higher the HbA1c.

HbA1c results can be inaccurate

There are a number of situations that can result in HbA1cs not being accurate, so if your HbA1cs don't match up with what you expect, it may be worth considering some of the following common causes of inaccurate HbA1c results:

Anaemia – this is the most common cause of falsely high HbA1cs. It is a condition where the body has too few red blood cells which causes them to live longer. The longer life of the red cells means that they pick up more sugar which leads to misleadingly higher HbA1c results. There are many different types and causes of anaemia – not getting enough iron, vitamin B12, folate and other nutrients, all of which are needed to produce red blood cells. The condition can be diagnosed with a blood test.

Unusual haemoglobin variant - haemoglobin is the protein in the red blood cells that carries oxygen and there are many different types. 93% of people globally share the most common type which means that 7% have a less common variant. Some HbA1c tests are designed to work with different variants but others are not, so there can be misleading results. People with lineage from Africa, South and Southeast Asia and the Mediterranean are more likely to carry one of these haemoglobin variants and are therefore more likely to get misleading results from their HbA1c tests.

Chronic kidney disease - chronic kidney disease can result in uraemia, which means that the kidneys are not clearing waste products as well as they should. Dialysis is used to treat

uraemia but this can make HbA1c results inaccurate.

A recent blood transfusion – this can raise or lower the HbA1c results. Donor blood can have more or less glucose in it than the recipients, depending on the storage medium and the health of the donor.

Some pain relievers - two types of pain relievers are associated with an inaccurate HbA1c results salicylates, such as aspirin, and opioids.

The spleen – this organ removes old red blood cells from the blood vessel system but if it has been removed or doesn't function properly then the turnover of red cells is decreased which leads to artificially high HbA1cs. This is why HbA1c tests are inaccurate in people with sickle cell disease, a condition which causes the red blood cells to become hard, sticky and die early so there is a constant shortage of red blood cells.

Age – an analysis in 2014 showed that HbA1c levels increase with age even when blood sugar control stays the same. With or without diabetes HbA1cs increase by nearly 1% per decade.

Vitamin C or E – vitamin E reduces glycation, the attachment of glucose to red blood cells, so may falsely decrease HbA1c results. Vitamin C can decrease or increase HbA1c results depending on the exact test used.

Pregnancy – red blood cells do not live as long during pregnancy so more red cells are produced which can result in artificially low HbA1cs. This change usually occurs by about week 20 of pregnancy and stays the same to the end of the pregnancy.

Margin of error - even a lab-based HbA1c test has a margin of error, reportedly between 0.5 and 0.7%. The results will probably be within a few tenths of a point of your true HbA1c but there is not perfection.

HbA1c remains suboptimal for most people with Type 1 diabetes

In an analysis of HbA1c data from 22 nations, most children and adults with Type 1 diabetes do not have an HbA1c of less than 7.5%, though glycaemic control varies greatly by age and country.

Researchers from the Scottish Diabetes Research Network Epidemiology Group followed up their 2014 study, which analysed data compiled from 2010 to 2012 from 324,501 people with Type 1 diabetes. This earlier study showed glycaemic control varied greatly across data sources and age groups, though most people with Type 1 diabetes had an HbA1c of greater than 7.5%. Similar findings were observed in the follow-up study, which analysed more recent HbA1c data from 2016 to 2020.

Children and young people aged less than 15 years are more likely to have an HbA1c of less than 7.5% compared with adults, whereas large numbers of young adults aged 15 to 24 years were less likely than adults to meet an HbA1c target of less than 7.5% and more likely greater than 9%.

Information from 520,392 people with Type 1 diabetes of varying ages were included in the study.

Average HbA1c varied greatly from 7.2% to 9.4% across different populations and age groups. The proportion of people using continuous subcutaneous insulin infusion also varied widely in all three age groups.

- Women were less likely to meet the target of 7.5% than men.
- Children younger than 15 years were more likely to have an HbA1c of less than 7.5% than adults aged 25 years but those aged 15 to 24 years were less likely to meet an HbA1c target of less than 7.5% than adults.

The researchers said: "Further research is required to better understand whether apparent differences between health systems may relate to such influences as societal factors, structure and delivery of clinical care and resource allocation. Better understanding could help inform development of cost-effective interventions to improve outcomes." (Diabet Med. 2021;doi:10.1111/dme.14766)

RESEARCH

Drug slows Type 1 diabetes in young people

Research has shown that an existing drug, verapamil, slowed the progression of Type 1 diabetes in newly diagnosed children and adolescents. The clinical trial found that a daily tablet of verapamil in young people newly diagnosed with Type 1 up to a year after their diagnosis, slowed the rate of the destruction of the insulin-producing beta cell. This was measured by C-peptide levels (produced at the same time as insulin), which were 30% higher in the group who were given verapamil than the control group who received a placebo.

Verapamil is an inexpensive and widely used drug used to treat high blood pressure. It is available on the NHS to treat heart conditions like angina and irregular heart rate by improving blood flow to the heart.

In the study, the children were split into two groups - one group received a daily verapamil pill for a year and the other group took a daily placebo pill. The dose for each participant was dependent on their weight. 88 children aged 8 – 17 years were involved and started taking verapamil within 31 days of being diagnosed with Type 1 diabetes. Throughout the study, the participants had their HbA1c measured as well as taking 2-hour mixed-meal tolerance tests to measure their C-peptide levels.

They also wore continuous glucose monitors (CGMs) to assess the time their blood glucose levels were in target range. The researchers also checked their participants' blood pressure, heart health and liver function throughout the study as these are known side effects of verapamil. They described the drug as 'well tolerated' meaning that most of the participants didn't experience any of these side effects.

The researchers are recruiting participants for a further study which involves taking verapamil once a day for a year, this time for people aged between 18 and 44 years who have been diagnosed within the previous 6 weeks. Research shows that by the time someone is diagnosed with Type 1, their immune system has destroyed around 80% of their beta cells but preserving 30-40% of the beta cells is probably enough to prevent someone needing insulin treatment at all. Even keeping just 5% of beta cell function makes managing glucose levels and avoiding hypos easier. This is similar to the 'honeymoon period' that some people experience in the first months after their diagnosis of Type 1.

No decline in quality of life for adults with diabetic retinopathy

According to a study carried out in Finland, adults with long-standing Type 1 diabetes and proliferative diabetic retinopathy had worse

functional vision than people without diabetes (controls), but no decline in quality of life was observed from 2007 to 2019.

The researchers looked at information from a follow-up of people with Type 1 diabetes since childhood (1989) and found that those with diabetes had worse central and peripheral visual field sensitivity compared with controls, but those with diabetes did not report a decline in vision-related quality of life from 2007 to 2019. Adults with long-standing Type 1 diabetes and proliferative diabetic retinopathy had a 1.5% decline in HbA1c from 2007 to 2019 with no negative impact on quality of life.



The researchers wrote in the published study that despite severe diabetic retinopathy and 35-year duration of Type 1 diabetes in this group, the proper visual function and good quality of life seemed to remain.

They suggest that this is probably due to good glycaemic control and the beneficial effects of modern glucose monitoring systems and modern treatment of advanced retinopathy with intravitreal anti-VEGF agents.

Of the group with Type 1 diabetes in 2019, 7% had visual impairment:

- 17% had additional diabetic macular oedema,
- 57% had intravitreal haemorrhages - anti-VEGF agents were used to successfully treat those with diabetic macular oedema and anti-VEGF injections were given to those with vitreous haemorrhages,
- the use of using flash glucose monitoring (FreeStyle Libre) increased from 0% in 2007 to 76% in 2019,
- average HbA1c decreased from 9.5% in 2007 to 8% in 2019 and there were no changes in HDL or LDL cholesterol and triglycerides.

The researchers observed slight decreases in quality of life for sleep, usual activity, discomfort and symptoms and sexual activity in 2019 compared with 2007. However, quality of life scores for mobility and distress improved from 2007 to 2019 and there was no change for vision-related quality of life. There was also no difference in overall quality of life score between 2007 and 2019. (Journal of Diabetes and Its Complications, February 2023)

Young people with Down's Syndrome 'four times' more likely to have diabetes

Down's syndrome is when babies are born with an extra chromosome. This usually happens by chance because of a change in the sperm or egg before birth. This change does not happen because of anything anyone did before or during pregnancy.

Recent research by Queen Mary University of London and King's College London has shown that children and young adults with Down's Syndrome are four times more likely to be diagnosed with diabetes. For the first time, this study looked at the incidence of diabetes and obesity in just under 10,000 people with Down's Syndrome and nearly 40,000 without, using data across three decades (1990 to 2020). Researchers found:

- Children aged 5 to 14 with Down's Syndrome have a 10 times greater chance of having Type 2 diabetes than children without the condition.
- People with Down's Syndrome are typically diagnosed with diabetes much earlier – the average age of diagnosis was 38 years old compared to 53 in those without the condition.
- People with Down's Syndrome were found to have a higher Body Mass Index reaching its peak at an earlier age, which means a greater risk of Type 2 diabetes at a younger age.

Genetics and excess bodyweight are thought to be the primary reasons behind this. The above findings suggest that the annual health checks for children with Down's Syndrome need to more closely monitor for excess weight, obesity and early signs of diabetes to diagnose diabetes as early as possible because of their susceptibility and the risk of complications that can occur later in life.

There is also an increased risk of Type 1 diabetes due to extra chromosomes and issues with the immune system in those with

Down's Syndrome. Further research is being conducted to look into how genetics affects a person with Down's Syndrome's predisposition to diabetes and obesity. (October 2022)

Associations between average HbA1c, HbA1c variability and both mortality and macrovascular complications



Both low ($< 6.0\%$ [42 mmol/mol]) and high ($\geq 8.0\%$ [64 mmol/mol]) levels of glycaemic control (HbA1c) are associated with increased all-cause mortality and diabetes-related macrovascular complications. Glycaemic variability is independently associated with increased risk for these outcomes.

Therefore, patients with stable glycaemic level of 6–8% ($42\text{--}64 \text{ mmol/mol}$) are at lowest risk of all-cause mortality and diabetes-related macrovascular complications

(Clinical Epidemiology, January 2023)

Girls with Type 1 diabetes have worse outcomes compared with boys

In the last Newsletter we included a short piece showing reporting that at diagnosis and after treatment began, girls with diabetes were more likely to have higher HbA1cs compared with boys. The differences between girls and boys can partially be put down to puberty but this does not explain the differences in younger children.

The differences between girls and boys can partially be put down to puberty but this does not explain the differences in younger children. It is thought that the differences in this age group may be due to the distribution of fat, insulin resistance, behavioural factors, growth hormone and the early influence of sex steroids.



The researchers searched literature up to June 2021 and identified 90 case-control studies involving 643,217 people.

These studies included assessment of diabetes, sex characteristics, sex distribution and children and/or adolescents with Type 1 diabetes. Most studies showed the following:

- a higher HbA1c for girls at diagnosis and during treatment compared with boys with a steeper HbA1c increase over time among girls,
- many studies also showed higher BMI, a higher prevalence of overweight or obesity and a higher prevalence of dyslipidemia among girls,
- hypoglycaemia and partial remission occurred more often in boys whereas diabetic ketoacidosis and hospitalisation occurred more often in girls,
- girls used pump therapy more frequently than boys and needed higher insulin doses compared with boys,
- there were more comorbidities among females than males, including thyroid disease and coeliac disease and all studies reported a lower quality of life among females.

The researchers suggest concluded that these differences a less favourable clinical profile for young female individuals, with potential consequences later in life. (Diabetologia, March 2023)



Stigma and bias still exist!

For people who have lived with diabetes for many years, we are aware of the stigma and bias that has surrounded diabetes but perhaps it is surprising to learn that this is still the situation.

A survey carried out by Abbott Laboratories of 1,500 people shows that UK population has a good understanding of the impact of diabetes - 76% associated diabetes with 'insulin' and 40% associated it with 'testing blood sugar levels'.

However, there was a difference - 80% of the general public claim they have never witnessed diabetes stigma but 73% of people with diabetes have seen stigma associated with their condition, especially on social media, TV and online. In addition, 24% of people with diabetes agreed that stigma and unconscious bias can lead to negative effects on their emotional wellbeing and health outcomes. Unconscious bias is when the general public are unaware of the stigma experienced by people with diabetes. Stigma is created by a lack of knowledge and fear of the unknown which can make people react negatively.

The survey highlighted the effects of stigma on people who live with diabetes:

- More than one in five people with diabetes are left feeling self-conscious about their condition, with a third believing that the way the public speaks about diabetes has a negative impact on their emotional wellbeing.
- Almost everyone with diabetes surveyed,

with Type 1 or Type 2, believes people assume they are overweight (96%) and that their condition was caused by their lifestyle (64%) and lack of exercise (49%).

- Almost four in five members of the public (78%) associate lack of exercise with Type 2 diabetes. As we know, certain lifestyle factors are known to increase the risk of Type 2 diabetes but the causes for every person are different and complex.
- Almost a third (29%) of the British public inaccurately believe that people with diabetes should only consume low sugar meals, whilst 76% believe people with Type 2 diabetes should give up sugar altogether. This misunderstanding regarding sugar consumption may fuel the unconscious bias behind the stigma and blame felt by those living with diabetes.

A simple thing that many readers will have experienced is "Should you be eating that?" but people with diabetes can also experience exclusion at work and socially. This can lead to feelings of blame and judgement which in turn, can significantly affect emotional wellbeing and can create barriers to people being involved with their care and treatment.

As a result of the survey, Abbott has launched a new campaign in the UK, Let's Change Perspective. This includes a new tool, the Let's Change Perspective Guide which aims to empower everyone to challenge diabetes stigma in the moment in various situations such as in work or hearing a joke or a hurtful comment about diabetes.



How I eat my pizza!

Dear Jenny,
I was interested to read the article in the March newsletter about pizza being a challenge for people with diabetes, especially for insulin users. I thought you might like to hear about my experience concerning this very topic!

I am an insulin user and enjoy pizza but every time I had one my levels would go up quite dramatically. I began to avoid eating them because of the way they always affected me, much to my husband's disgust, as he is not diabetic!

I then discovered if I purchased the supermarket's plain pizza bases and used tomato puree and my own toppings the problem was resolved.

I no longer had high sugar levels as they fell within an acceptable reading on testing before going to bed. I can now enjoy pizza again but limit myself to one a month. I accept that this may not work for everyone but it does for me but worth a try don't you think? Thank you for an informative newsletter and thank you and your team.

Janita Morris
East Yorkshire

I cannot believe it!

Dear Jenny,
I am 83 and as you know, I have had diabetes for 37 years. Pricking my fingers all that time, testing my glucose in shop doorways, toilets and at work until you told me about the

Freestyle Libre 2. It took me some time to get one but my hospital clinic told me I was entitled to one and it's GREAT.

No more finger pricking, beeps before I go low and it keeps a record of when glucose goes up or down. I can live my life a lot better now, I cannot believe it!

Mr B.M.
York

And the other side of the coin

Dear IDDT,
For Type 1s out there desperate to get a Libre, I would recommend taking all the hype with a pinch of salt. I've stopped using mine – I had several sensors which were inaccurate.

Some told me I was High, but finger-pricking revealed I was in range. Worse was it telling me I was Low, when finger-pricking agreed with my lack of hypo symptoms – I was well within range.

I was woken so frequently by low alarms in the night I developed insomnia! I reported one sensor to Abbott (and filled in a MHRA Yellow Card) and it felt like having to go through the Spanish Inquisition with excuses to get a replacement. I'll stick to my trusty blood glucose meter.

Anne in Devon

Is a smartphone essential for a Libre?

Dear Jenny,
I have read the last Newsletter where people are told by their clinics that they have to have a smartphone to have a Libre 2.

This tends to affect older people who haven't got one and really don't want one because they seem complicated, well my clinic told me not to buy one and they gave me a free phone which I use just for testing!

Mr M.B. North East

A valuable lesson learnt!

Dear Jenny,
I do empathise with the member whose insulin pen didn't work though as I was recently in Santorini and had a similar experience.

Fortunately, my Diabetes Consultant had prescribed spare Novo Pens for me and so I had spares with me. However, on the same holiday I also found out that all my spare insulin had frozen in the hotel mini-bar so I had to buy new.

It seems that the Minbar was set on the maximum chill and the hotel thought that I must have turned it up.

I hadn't but it's now taught me a valuable lesson – which is to make sure the setting on any Mini Bar is never at maximum! I didn't realise that a hotel mini-bar, if incorrectly set, can actually freeze liquids. It is worth saying that I had no problem getting hold of replacement Tresiba and NovoRapid but of course pharmacies only sell each one in boxes of 5 vials and so it cost me £100, the price is subsidised in Greece.

Mr C.J.
Email

Your Life in YOUR hands - March 2023 Newsletter

Dear Jenny,
An interesting read and worthy of reflection as a 75year old Type 2 on insulin. This letter reflects my months on TRULICITY, and the failure to 'draw together' the various experts to monitor 'The Whole Person'. If, like me, your care is fragmented no one takes responsibility, hence difficult decisions following months on Trulicity - dire side effects ignored and told 'things will improve, weight loss, less need to inject more insulin'.

However, ticking off the side effects of the invasive weekly injection, means you cannot move too far from a loo, cannot walk, worried about other issues like renal deterioration to which scans awaited etc.

The drug was 'sold to me with glowing confidence', however, despite a variety of questions, and my health not improving, my decision to stop was met by shock from the nurse specialist to relief (I guess) from my GP, who was reluctant to prescribe.

So, diet can be controlled, that's Trulicity aim, insulin can be reduced and provided the Orthotics team sort out already received four sets of mis-fitting footwear, my life is in my hands, a safer option to live longer, save the NHS money and hopefully prove to my family I'm still growing old gracefully?

Mr S. A.
Lincoln

Can I have a rant?

I have been reading, listening and watching all the advice to seek advice from a pharmacist before 'bothering the GP', so I visited a Boots pharmacy for some advice and hopefully an over-the-counter medication. The word 'Pharmacy' was on the wall at the back of the shop, but no pharmacist in sight and no meds behind the counter. I mooched around for about 20 minutes looking for what I may be advised to purchase and above all, looking for a pharmacist – but no one appeared.

I reached the till with some other non-medical purchases but couldn't ask anyone there because all the tills were self-service!

It appears that Boots have made a decision to cut attending pharmacist's hours in some of their shops and in some, have no attending pharmacists at all. Looking up this particular shop, Boots now describe it as a 'beauty supply shop'. As there was no other pharmacy in the location, the government's advice to talk to my pharmacists was absolutely no good to me!

Jenny Hirst

HbA1c conversion table

HbA1c		HbA1c		HbA1c		HbA1c	
%	mmol /mol	%	mmol /mol	%	mmol /mol	%	mmol /mol
5.0	31*	7.0	53	9.0	75	11.0	97
5.1	32*	7.1	54	9.1	76	11.1	98
5.2	33*	7.2	55	9.2	77	11.2	99
5.3	34*	7.3	56	9.3	78	11.3	100
5.4	36*	7.4	57	9.4	79	11.4	101
5.5	37*	7.5	58	9.5	80	11.5	102
5.6	38*	7.6	60	9.6	81	11.6	103
5.7	39*	7.7	61	9.7	83	11.7	104
5.8	40*	7.8	62	9.8	84	11.8	105
5.9	41	7.9	63	9.9	85	11.9	107
6.0	42	8.0	64	10.0	86	12.0	108
6.1	43	8.1	65	10.1	87	12.1	109
6.2	44	8.2	66	10.2	88	12.2	110
6.3	45	8.3	67	10.3	89	12.3	111
6.4	46	8.4	68	10.4	90	12.4	112
6.5	48	8.5	69	10.5	91	12.5	113
6.6	49	8.6	70	10.6	92	12.6	114
6.7	50	8.7	72	10.7	93	12.7	115
6.8	51	8.8	73	10.8	95	12.8	116
6.9	52	8.9	74	10.9	96	12.9	117
						13.0	119

* Less than / equal to 40 mmol/mol (5.8%) - rule out hypoglycaemia

Glycaemic Control:				
Excellent	Good	Poor	Less than poor	Very poor

INTERNATIONAL News

The global cost of inactivity

The World Health Organisation (WHO) estimates that almost 500 million people worldwide will develop obesity, diabetes, heart disease and other noncommunicable diseases from 2020 to 2030 as a result of physical inactivity unless countries take action. The WHO report states that more than one in four adults

and more than 80% of adolescents do not meet WHO's recommended levels of physical activity for optimum health.

It also estimates that the global cost of treating preventable diseases linked to inactivity could reach \$27 billion per year and a total of \$300 billion by 2030.

A shortage of nurses across the world

The International Council for Nurses (ICN) issued a report in March this year highlighting that there is a shortage of nurses across the world, including in countries that provide nurses for international recruitment. The report says that this worldwide shortage of nurses needs to be considered as a global health emergency. The findings were from workforce surveys from over 25 countries, including the UK. It showed that globally 40-80% of nurses had experienced symptoms of psychological distress since the start of the pandemic. The number of nurses reporting an intention to leave their job rose to 20% or higher, and annual staff turnover in hospitals rose to 10% or higher.

It is estimated that even before the pandemic, the world shortage of nurses and midwives was 30.6 million but the pandemic made this worse with nurses leaving the profession.

The report also highlighted:

- a lack of investment in nurse education,
- which had led to inadequate numbers of nurses being trained, globally, even countries with a long history of training nurses for them to emigrate to work in higher income countries such as the US and the UK, are now suffering from a nursing shortage.

The ICN comment that the toll the pandemic had taken on nurses was getting worse with many nurses are leaving the profession, and those who remain are so concerned about the after effects on patient safety and the wellbeing of colleagues, that they have had to take industrial action and even outright strikes. The recovery of the nursing workforce is an essential prerequisite to rebuilding health systems and to think otherwise is a fantasy. (Report: Recover to Rebuild)

Report: Rising obesity, overweight worldwide

Research from the World Obesity Foundation projects that 51% of the world's population, about 4 billion people, will be considered overweight or obese by 2035 if more action is not taken to reverse the trend. Obesity rates are anticipated to increase the most for children and adolescents, rising from 10% to 20% in boys and from 8% to 18% for girls over the 15-year period to 2035. (February 2023)

California Attorney General Sues Drugmakers Over Inflated Insulin Prices

The 47-page civil complaint alleges three pharmaceutical companies that control the insulin market, Eli Lilly, Sanofi and Novo Nordisk, are violating California law by unfairly and illegally driving up the cost of insulin. It also targets three distribution middlemen known as pharmacy benefit managers.

The attorney general said a vial of insulin cost \$25 twenty years ago but now costs about \$300. A 2021 US Senate investigation found that the price of a long-acting insulin pen made by Novo Nordisk jumped 52% from 2014 to 2019 and that the price of a rapid-acting pen from Sanofi shot up about 70%. From 2013 to 2017, Eli Lilly had a 64% increase on a rapid-acting pen. (14th January 2023)

The high cost of diabetes drugs has led to a flourishing black market in the US

Without anywhere else to turn, online communities dedicated to people living with diabetes often become platforms where those in need of insulin and other diabetes supplies can connect with those who have extra. Sometimes, used equipment, such as insulin pumps, glucose monitors or unwanted insulin, is for sale at deeply discounted prices. This is illegal but huge hurdles to accessibility have led to a thriving underground trade for diabetes supplies. (NBC News, 9th February 2023)

Insulin products and patents in the USA in 2004, 2014, and 2020: a cross-sectional study part of the ACCISS study

To treat diabetes, one of the most prevalent diseases globally and in the USA, the US Food and Drug Administration (FDA) has approved a wide range of synthetic insulin products since the early 1980s. Despite this range of products, access to insulin remains challenging in part due to the prices. Drastically increased per-person expenditures on insulins have been accompanied by a shift from animal and human insulins to high-cost analogue versions with modified new chemical structures, delivery devices, or other changes. (The Lancet Diabetes and Endocrinology, February 2023)

Interesting that many of us who were around at the change from animal to human insulin remember that one of the 'selling points' from insulin manufacturers was that synthetic insulins were easier to make and would be cheaper for the world – that never happened!!!

Now good news for Americans

Some relief, at long last, for people with diabetes in the US who can pay as much as \$1,000 a month for the insulin they require. On March 1st 2023, Eli Lilly announced that it will be cutting insulin prices, some immediately and some later this year. This will include its most commonly prescribed insulins, Humalog, and Humulin, by 70%.

It will cut the price of its authorised generic version of Humalog to \$25 a vial starting in May and will immediately cap monthly out-of-pocket costs at \$35. People without insurance will get that \$35 price if they sign up at Eli Lilly's website: [InsulinAffordability.com](https://www.insulinaffordability.com) NBC News reported that Humulin and Humalog and its authorised generic brought in a total of more than \$3 billion in revenue for Lilly last year and more than \$3.5 billion the previous year. Surprise! Surprise! Later in the month the other two global insulin manufacturers, Novo Nordisk and Sanofi, announced that they too would be cutting their insulin prices.

Novo Nordisk will be cutting some of their insulin prices by up to 75% starting next year and Sanofi will cut the cost of Lantus by 78% (a \$35 cap) and Apidra by 74% in early 2024

Semaglutide - clarification

Ozempic and Rybelsus

Semaglutide is made by Novo Nordisk and was first introduced as a treatment for Type 2 diabetes. Under the brand name, Ozempic, as a once-weekly injectable and as Rybelsus in tablet form, both are used to improve blood glucose control alongside diet and exercise.

It can induce weight loss and may also reduce the risk of cardiovascular events such as heart disease and stroke. It is not to be used by people with Type 1 diabetes.

Wegovy

In March this year, NICE approved semaglutide under the brand name of Wegovy, again made by Novo Nordisk, but as an option for weight loss and weight maintenance in some obese and overweight adults alongside a reduced calorie diet and increased physical activity. Wegovy is in a pre-filled pen and is injected once a week.

As a weight loss drug, it is only approved for specific groups of people:

- Adults who have at least 1 weight-related comorbidity and a body mass index (BMI) of at least 35kg/m².
- People with an BMI of between 30-34.9 kg/m², with 1 weight-related comorbidity who are eligible for referral to specialist weight management services could also be prescribed the drug.

In the News!

On 13th March, the Observer published an article alleging that Novo Nordisk gave millions to obesity charities and healthcare professionals to boost the profits of weight loss drug semaglutide (Wegovy). Some experts who supported the drug are being accused of not being transparent about receiving funding from Novo Nordisk.

The Observer report stated that Novo Nordisk paid £21.7 million to obesity charities, NHS trusts, Royal Colleges, GP practices, healthcare education providers and universities between 2019 and 2021.

The Observer described this as an “orchestrated PR campaign” to boost the drug firm’s influence in the UK.

Investigators behind the report stressed that there was no suggestion that payments broke any rules and they also stated that funding recipients had said they were not influenced by money received and that interests had been properly declared. According to the *Observer*:

- the European Association for the Study of Obesity, received more than £3.65 million from Novo Nordisk between 2019 and 2021 and that this funding was not declared in the charity’s accounts.
- the World Obesity Federation was paid more than £4.3m by Novo between 2019 and 2021, which reportedly did not show up in the charity’s accounts.

Novo Nordisk reprimanded

Novo Nordisk was publicly reprimanded on December 2022 for sponsoring free weight management courses on LinkedIn in breach of code of practice of the Association of the British Pharmaceutical Industry (ABPI). As a result, the Royal College of Physicians (RCP) has ended its corporate partnership with Novo Nordisk following the company’s membership suspension by the ABPI for serious breaches of its Code of Practice. Central to this decision is returning any outstanding grants to the company and putting on hold projects associated with those funds. The RCP publish names of all major sponsors in their annual report and funding from the pharmaceutical sector is declared on the ABPI disclosure portal and on all project-related materials.

Just a note: as regular readers know, IDDT is totally opposed to charities and health organisations accepting pharmaceutical company money. What other reasons can there be for companies handing out millions than to influence sales of a drug or product? In addition, it takes some creative accounting for charities to hide incomes of over £3million and surely, this is not right!

Diabetes affects the microvascular system, which is responsible for delivering hormones to the body's reproductive organs

The microvascular system is one of the most commonly affected systems among people with diabetes who, therefore, may experience changes that result in some form of sexual dysfunction.

A study published in 2021 that 36% of men and 31% of women reported some type of sexual dysfunction.

It also reported that both men and women with diabetes reported a higher rate of impaired physical well-being, lower emotional well-being and moderate to severe anxiety compared to people without diabetes. Issues that men might experience:

- **Erectile dysfunction (ED)** - men with diabetes are three times more likely to experience ED than men without diabetes. Diabetes can decrease blood flow to the penis, which can inhibit a man's ability to achieve and maintain an erection. (Diabetic Medicine, 2017)
- **Decreased libido** - men with diabetes may have decreased testosterone levels, which may lead to decreased libido and sexual desire.
- **Pain when having sex** - men with diabetes are more likely to develop a rare condition known as Peyronie's Disease, which is a curvature or bend in the penis which can result in painful sex.

Fewer studies have been done about the sexual health of women with diabetes compared to the number of studies for men. Women with diabetes have their own specific sexual dysfunction issues that can affect their mental health and women's issues are no less distressing than those experienced by men. Issues that women may experience:

- **Vaginal dryness** – this is experienced by many post-menopausal women, but women with diabetes across all age groups report this problem more often than women without diabetes.
- **Urinary tract infections (UTIs) and yeast infections** - women with diabetes are at a higher risk of developing UTIs, often chronic, and yeast infections, which can result in painful sex.
- **Decreased libido** – this tends to be more problematic for women than men. There is research that shows that 50% of women with diabetes reported decreased libido, which can lead to feelings of depression and low self-esteem.
- **Difficulty achieving orgasm** – again there is research that found that women with diabetes between the ages of 40-80 were 80% more likely to experience trouble reaching orgasm than women of the same age without diabetes.

Experts agree that the most important thing that people with diabetes can do to reduce sexual anxiety and improve mental health is to take control of their diabetes, however, as we know this can be easier said than done!

Nevertheless, watching your diet, exercising regularly, taking your medications and maintaining a healthy lifestyle (quit smoking, monitor your alcohol intake, get regular check-ups for your feet, eyes, teeth, etc.) are good for your general health as well as your sexual health. (Diabetic Medicine, 2021)

Note: IDDT has a booklet 'Sexual Dysfunction in men and women' and if you would like a copy, call IDDT on **01604 622837** or email **enquiries@iddtinternational.org**

Dry eye - symptoms, treatment and prevention

Dry eye is another eye condition that is common in people who have diabetes, although often not discussed.

There is research that suggests 54% of people with diabetes have dry eye.

What is dry eye?

Dry eye happens when your eyes don't make enough tears or when your tears don't work correctly. It can also involve tears not having the right consistency or evaporating too quickly. Tears are necessary to help maintain moisture on the surface of the eye and for clear vision.

In some cases of dry eye, the surface of the eye becomes inflamed and if not treated, pain, ulcers, scars, and possibly loss of some vision can occur.

Fortunately, dry eye is treatable and there are a lot of things that you can do to stay comfortable.

The symptoms of dry eye

Any of the following symptoms could be a sign that you have dry eye:

- Stinging, burning or feeling of grittiness in the eye
- Stringy mucus in or around your eyes
- Pain in the eyes, eye redness or fatigue
- Sensitivity to light
- Blurry vision
- Heavy eyelids
- Excess tears following periods of very dry eyes
- Inability to wear contact lenses.

Causes of dry eye

The lacrimal glands in the eyes produce tears to keep the eyes wet but dry eye can happen when:

- Your eyes don't make enough tears
- The tears dry up too quickly
- The tears don't work well enough.

Tears are made up of 3 layers – fatty oils, aqueous fluid and mucus. Problems can occur in any of these layers which can include:

- **Age** – the older we get, the drier the eyes can get and most people over 65 have it to some degree.
- **Gender** – women are more likely to have dry eye than men due to hormonal changes.

- **Medications** – blood pressure medications, birth control pills, antihistamines, decongestants and antidepressants can reduce tear production.
- **Medical conditions** – diabetes, rheumatoid arthritis, lupus, thyroid problems and certain eye problems increase the risk of dry eye. In people with diabetes, it is typically linked with autonomic neuropathy which can affect the nerves controlling tear production.
- **Environment** – dry, windy or smoky climates increase dry eye risk as can staring at a computer screen all day.
- **Refractive surgery** - can decrease tear production and lead to dry eye

How is dry eye treated?

Dry eye can be treated in a number of ways but it can be an ongoing condition. You may need to try one or more types of treatment to find relief. The type of treatment that's prescribed will depend on the severity of your symptoms, as well as the cause. Treatment options may include prescribed or over-the-counter eye drops. Moisturizing gels and ointments can also be used for relief.

Self-care

You can help your eyes feel better by trying the following:

- Applying warm compresses on the eyes and massaging the eyelids
- Cleaning the eyelids to remove debris and oil and to help the glands in your eyelids function properly
- Limiting screen time and blinking regularly when at the computer and when reading
- Wearing sunglasses when outdoors and limiting time spent in wind, air-conditioning, and in smoky rooms
- Using a humidifier at home and at work
- Keeping your blood sugars in your target range as often as possible

Dry eye is an uncomfortable, chronic condition that can affect the quality of your life if it's not treated. However, there are treatments available.

Note: IDDT has a booklet 'Diabetes and the Eye' and if you would like a copy, call IDDT on 01604 622837 or email enquiries@iddtinternational.org

Holiday Tips

If you are going on holiday this summer, it may be the first time you have travelled since your diabetes was diagnosed.

Whether you are staying in this country or going abroad, for people who live with diabetes, going on holiday means more planning and a bit more care when you are away.

IDDT has a booklet on Holiday Tips which contains information and useful tips for holidays whether at home or abroad. It covers things like:

- **Travelling by air and jetlag**
- **Dealing with heat**
- **Medication safety**
- **Diabetic Holiday Foot Syndrome**

If you would like a copy of this handy FREE leaflet then please contact IDDT using the details at the end of this newsletter. Alternatively, the Holiday Tips are also on our website:

www.iddt.org



Sorry to mention it but.... Covid 19

While the UK may have lifted its foreign travel restrictions, it cannot be guaranteed that other countries have done the same. We would advise that you check for restrictions before you travel. The Government guidance on foreign travel and Covid 19 for England, Wales, Scotland and Northern Ireland respectively, can be found using the links below:

www.gov.uk/guidance/travel-abroad-from-england-during-coronavirus-covid-19

www.gov.wales/international-travel-and-wales-coronavirus

www.gov.scot/publications/coronavirus-covid-19-international-travel-quarantine/

www.nidirect.gov.uk/articles/coronavirus-covid-19-travel-advice



Little something from us...

If you are going away, you may find one of our FREE Tote Bags. Measuring 35cm x 40cm, made from environmentally-friendly, unbleached cotton and displaying our logo, they are ideal for carrying beach towels, sun cream and other holiday essentials.

For your FREE bag simply contact us using the details at the end of this newsletter.

IDDT Event 2023 – 'Tips, Techniques and Trials'



We are holding an Event for you again this year. It will be held at the Kettering Park Hotel on Saturday, 30th September 2023 and there is an event booking form accompanying this Newsletter.

The day will start with our Annual General Meeting and then it will be an interesting day with speakers and group discussions.

The title is 'Tips, Techniques and Trials' to reflect some of the issues that are important to people living with diabetes.

We are pleased to tell you that we are being joined by Dr Mayank Patel, Consultant diabetologist and we hope to also have a pharmacist as one of our speakers. We will also be joined by Jane Chatham from Abbott Laboratories manufacturers of the Freestyle Libre.

So, something for everyone and we hope that you and your family - the spouses, the partners and the parents of those with diabetes, will be able to join us at the event.

Just complete the form and return it to IDDT. Remember, the date for your diary is 30th September 2023!



If we can be of help in any way, please contact:

InDependent Diabetes Trust (IDDT), PO Box 294, Northampton NN1 4XS

Tel: 01604 622837 email: enquiries@iddtinternational.org Or visit our website: www.iddtinternational.org



LOTTERY RESULTS

WINNERS OF THE JANUARY 2023 DRAW ARE:

1st prize of £481.44 goes to Anon from Cardiff

2nd prize of £361.08 goes to Janet from Bexley

3rd prize of £240.72 goes to Anon from Exeter

4th prize of £120.36 goes to Ian from Cardiff

WINNERS OF THE FEBRUARY 2023 DRAW ARE:

1st prize of £482.40 goes to John from Farnborough

2nd prize of £375.50 goes to Anon from Larkhall

3rd prize of £241.20 goes to Paul from Wetherby

4th prize of £120.60 goes to Sylvia from Kettering

WINNERS OF THE MARCH 2023 DRAW ARE:

1st prize of £482.88 goes to Anon from
Stratford on Avon

2nd prize of £362.16 goes to Neil from Thetford

3rd prize of £241.44 goes to Shelley from Bedford

4th prize of £120.72 goes to Anon from Doncaster

Note: The winners of the draws for April, May and June 2023 will be announced in our June 2023 Newsletter and 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 jenny@iddtinternational.org

SNIPPETS

Diet, exercise may affect Type 2 diabetes risk after gestational diabetes

It is well known that women who have gestational diabetes, are at risk of developing Type 2 diabetes later in life. Recently published studies have shown that people who have had gestational diabetes may help prevent progression to Type 2 diabetes by eating a high-quality diet, exercising regularly, drinking alcohol only in moderation and not smoking. A second study in the same journal found an association between gestational diabetes and an elevated risk for cardiovascular and cerebrovascular diseases. (The BMJ, September 2022)



Study links coffee to lower diabetes risk

A recent study has found that people who drank an extra cup of coffee a day had a lower risk of developing Type 2 diabetes, with the greatest benefit seen among drinkers of espresso or filtered coffee. The study was based on information from 152,479 UK Biobank and Rotterdam Study participants and suggests that coffee may lower insulin resistance and offer anti-inflammatory effects. (Clinical Nutrition, March 2023)

Study examines social media's impact on eating disorders

A meta-analysis of 50 studies examining social media, body image and eating disorders found that pre-existing body image issues may make social media more harmful and create a "self-perpetuating cycle of risk." The researchers recommend that more research is needed into this complex topic noting "the things that make kids vulnerable to bad outcomes offline are similar to the ones that make them vulnerable to bad outcomes online." (PLOS Global Public Health, March 2023)

Big Pharma made in USD 90 billion in profits with COVID-19 vaccines

Pfizer, BioNTech, Moderna, and Sinovac made an extraordinary USD 90 billion in profits on their COVID-19 vaccines and medicines in 2021 and 2022.

A new report Pharma's Pandemic Profits shows that these enormous gains are largely due to decades of research funded by public investment, billions in grants for development and production, and tens of billions in Advanced Purchase Agreements (APAs) with governments.

Increase in antidepressant use

The Organization for Economic Cooperation and Development (OECD) data shows a dramatic increase in anxiety and depression during the COVID19 pandemic. OECD data demonstrates the defined daily dose (DDD) consumption of antidepressants used in the treatment of endogenous and exogenous depressions. (Endogenous depression means a form of depression triggered by internal contributing factors, while exogenous depression refers to a form of depression brought on by external contributing factors.)

The average antidepressant consumption across 18 European countries was 30.5 DDD per 1,000 people per day in 2000 rising to 75.3 DDD in 2020, a 147% increase. However, this overall average conceals very different starting points for antidepressant use in 2000 in certain countries, ranging from 6.4 DDD in Estonia to 70.5 DDD in Iceland. These figures include antidepressant use in the UK which was 38DDD in 2000 to 108 in 2022.

Type 1 diabetes incidence in Scotland between 2006 and 2019

The incidence of Type 1 diabetes in children increased in many countries during the twentieth century although increases have been less marked more recently among high incidence countries. However, there is limited information on incidence of Type 1 diabetes in adults.

Recent research has shown that the incidence of Type 1 diabetes varies by age, sex and socio-economic status and has remained approximately stable from 2006 to 2019 in Scotland.

It varies by age and sex and by socio-economic status for people above 14 years of age. Among children incidence of Type 1 diabetes is higher compared to previous periods in Scotland, to other regions of the United Kingdom and to most other European countries. (14th February 2023)