



# HELLO SPRING

**IN THIS ISSUE:** • C-peptide roll out in Scotland • DVLA update on testing  
• Living without a pancreas • Diabetes and Covid

## New research breakthrough in Type 1

An article in The New York Times on December 3rd made headlines that are especially important for people living with Type 1 diabetes. It announced that Brian Shelton from Ohio had been cured of Type 1 diabetes. Curing Type 1 requires a renewable source of beta cells that can be produced in the laboratory. Once placed into the body, they need to restore insulin production and automatically regulate blood-glucose levels.

On June 29th, Brian received an infusion of cells, grown from stem cells which were just like the insulin-producing pancreas cells his body lacked. Now his body automatically controls its insulin production and blood sugar levels. He may be the first person to be cured of Type 1 diabetes with a new treatment that leads us all to hope that help may be coming for people with Type 1 diabetes.

This study has not yet been published in a peer-reviewed journal so the results of the trial are not yet known. The findings in this one man need to be replicated in many more people and other questions arise:

- will there be unexpected adverse effects?
- people will need to take immunosuppressants and what are the effects of this?

- will the cells last for a lifetime or does the treatment have to be repeated?

### **Nevertheless, it is an amazing result.**

This latest development was started by a Harvard University biologist, Doug Melton, who has two children with Type 1 diabetes. The challenge was to work out what sequence of chemical messages would turn stem cells into insulin-secreting islet cells. This involved unravelling normal pancreatic development, working out how islets are made in the pancreas and conducting endless experiments to steer embryonic stem cells to becoming islets.

The next step for Melton was to start a company called Semma to finance taking this procedure to the market and later when the stage of clinical trials was reached, pharmaceutical company, Vertex acquired Semma for \$950 million.

The only 'cure' that has ever worked is a pancreas transplant but a shortage of organs makes this unrealistic for the majority of people or a transplant of the insulin-producing cells, known as islet cells. However, this latest development gives us hope.

## Two days later a Canadian study - stem cell-based treatment may help Type 1 diabetes patients produce insulin

Canadian researchers have carried out similar research to investigate whether new stem cell-based treatment that could one day eliminate Type 1 diabetes patients' dependence on insulin injections and also transform many other health conditions.

The study was conducted by researchers at the University of British Columbia and Vancouver Coastal Health (VCH) and shows that a tiny implant infused with stem cells can help the body produce insulin on its own.

Fifteen patients living with Type 1 diabetes took part and they had a small device implanted in their abdomen. Each device contained millions of lab-grown cells that originated from a single stem cell line and were "coached" into becoming beta cells, which make insulin. Six months later, the cells had not only survived, they had started producing tiny bits of insulin when needed.

The study used C-peptide, (released into the blood at the same time as insulin is produced), to measure the amount of insulin released by the implanted cells. The findings showed:

- C-peptide levels rose after eating a meal, showing that they were creating insulin naturally.
- People in the study spent 13% more time in target blood sugar range showing better control of their diabetes.



- Some were even able to reduce the amount of insulin they injected as a result of the implant.

While an exciting development, the study has its limitations. It was a very small study with only 15 participants so researchers want to broaden the study to also include placebos.

In 2022, the researchers expect to begin to do the procedure without immunosuppression drugs, using a novel method of modifying the cells through a genetic technique that will allow the cells to produce their own immunosuppression.

They are also hoping that within next year, somebody in this study will be able to stop taking insulin for the first time since they were diagnosed without having to take anti-rejection drugs.

This study was published in the journal, Cell Stem Cell on December 7th 2021.

**"Scotland to rollout diabetes test for Type 1 patients"**

**This was a headline in November 2021 along with the statement that "Misdiagnosed Type 1 diabetes patients could be freed from the need to take insulin after a new test is rolled out." Scotland will become the first country to offer the C-peptide blood test to all patients who have had a Type 1 diagnosis for at least 3 years. The test became available from 1st November 2021 in Scotland.**



The C-peptide test shows how much insulin a patient's body is producing itself. A healthy pancreas makes equal amounts of insulin and the protein C-peptide so the presence of C-peptide is a sign that your body is producing insulin. A high level of C-peptide generally indicates a high level of endogenous insulin production and might indicate that a person does not have Type 1 diabetes at all. A low level (or no C-peptide) indicates that your pancreas is producing little or no insulin, (although a low level may be normal if you have not eaten recently).

The test is simple and inexpensive and was developed by researchers at the University of Exeter Medical School. They developed a new urine test for C-peptide which showed that this simple test carried out in the clinic can accurately measure C-peptide, replacing previous methods which were expensive and time-consuming. These tests are now available in nearly every hospital in the UK, and cost as little as £10.

### **Development of the test**

According to the University of Exeter Medical School, up to 15% of insulin treated patients are misdiagnosed and this rises to 40% of people developing Type 1 diabetes after age 30. Identifying Type 1 diabetes in people over 30 is very difficult.

The researchers identified optimal storage conditions for the samples, previously thought to be unstable. Using a specific preservative means that blood C-peptide is stable for more than 24 hours so it is viable to conduct a test to be used in primary care and outpatient clinics. This removes the barriers to implementation that previously blocked widespread adoption of this test in routine care.

The group also demonstrated how urine and blood C-peptide can be used to robustly identify the correct sub type of diabetes, which is essential to getting the right treatment and care.

They have also shown that C-peptide can be used as a cheap and convenient test to identify children and young adults with a genetic form of diabetes that requires expensive genetic testing to confirm the diagnosis.

### **The pilot study**

Clinicians at the Western General Hospital in Edinburgh have used the new test on every person in their clinic thought to have Type 1 diabetes for over three years and they have shown that some people actually have other types of diabetes and can stop insulin treatment.

In over 750 people with Type 1 diabetes for 3 years, the results when using the C-peptide test were:

- a new diagnosis of genetic diabetes in 8 people,
- the diagnosis changed to Type 2 diabetes in 28 other people allowing a change in treatment and 12 of these people were able to stop insulin treatment.

The researchers comment that in some instances, C-peptide testing allowed people to stop very long -standing insulin treatment which can be life-transforming. The new test is already available in most NHS trusts, and is now offered to everyone diagnosed as Type 1 diabetes for at least 3 years in Glasgow and Edinburgh.

### **So now....**

There are about 315,000 people living with diabetes in Scotland and the new programme will be offered at hospital diabetes centres to people who have been diagnosed with Type 1 diabetes for at least 3 years.

### **And in England?**

In December 2021. in answer to a Parliamentary Question asking if England was going to follow suit, Health Minister Maria Goldfield said:

“We have no current plans to do so. At present the National Institute for Health and Care Excellence's (NICE) clinical guideline on the diagnosis and management of Type 1 diabetes does not recommend routinely measuring C-peptide or diabetes-specific autoantibody titres to confirm Type 1 diabetes in adults. NICE is currently updating recommendations on C-peptide testing and recommendations will be published in March 2022.”

## First ever injection pen recycling pilot launched in UK pharmacies



Novo Nordisk has launched the PenCycle scheme to enable people to recycle their pre-filled FlexPen and FlexTouch devices by returning them to participating pharmacies or through pre-paid Royal Mail boxes which hold up to 12 used pens (with the needles removed).

This system, called PenCycle, started on 1st November 2021 and is being run in partnership with Alliance Healthcare, Lloyds Pharmacy, the National Pharmacy Association (NPA) and Royal Mail. It will be piloted in 13 clinical commissioning groups in Greater Manchester and Leicestershire and Rutland and in the Greater Glasgow and Clyde health board, ahead of a planned national rollout in 2022. The scheme is thought to be the first of its kind in the UK. In 2020/2021, nearly 2.5 million FlexPen and FlexTouch devices containing insulin were dispensed from community pharmacies in England. Novo Nordisk is aiming to prevent more than one million pre-filled plastic

injection pen devices ending up in landfill or being incinerated by the end of 2022.

### How will the scheme work?

- Any pharmacy in the pilot areas can sign up to join the scheme and they will be sent practical guidance on the initiative, patient information and materials for patients to take home, including a return box.
- The pharmacy then stores filled return boxes in a recycling bin provided by the scheme, which is collected by Alliance Healthcare during a scheduled delivery slot.
- The pens will be sent to Novo Nordisk's headquarters in Denmark for the plastic to be recycled into a range of items, such as chairs and lightbulbs.
- At the end of 2022, it expects that 1.1 million pen devices will have been recycled, with the potential to recycle more than 3 million pen devices in 2023, preventing more than 56 tonnes of plastic waste.

### Just a blast from the past!

The first re-useable pens were introduced by Novo Nordisk in 1985 and in 1989, disposable pens were introduced. At the time, I, along with many other people living with diabetes, raised the issue of all the plastic waste involved in converting people to disposable pens compared to re-useable pens. Yes, we were environmentally aware even then. Our concerns fell on deaf ears and disposable pens were marketed as 'pre-filled pens' which sounds much more acceptable! It seems that after 32 years, our concerns have been heard!

# DVLA updated guide to insulin treated diabetes and driving

The DVLA has updated the guidance on glucose testing prior to driving. This now permits the use of interstitial glucose readings eg using Flash Glucose Scanning (FreeStyle Libre) and Continuous Glucose Monitoring (CGM) systems for Group 1 drivers only. However, finger prick tests are still required (even for Group 1 drivers) under certain circumstances.

### Some things remain the same....

- Drivers who have any form of diabetes treated with any insulin must inform the DVLA
- If you get any warnings symptoms of a hypo, you must stop safely as soon as possible – do not ignore the warnings.
- Group 1 and Group 2 drivers must tell the DVLA if (i) they have a severe hypo while driving (ii) if you or your healthcare team think you are at high risk of developing hypoglycaemia or (iii) if an existing



medical condition gets worse or you develop any other condition that may affect your driving ability.

- Group 2 drivers must stop driving and tell the DVLA if they have a single episode of hypoglycaemia requiring the assistance of another, even if this is during sleep.
- The DVLA must also be told if there is any degree of impaired awareness of hypos, that is loss or reduced hypo warnings.

### What has changed?

The more widespread use of Flash Glucose Scanning (FreeStyle Libre) and Continuous Glucose Monitoring (CGM) has resulted in this advice from the DVLA which includes precautions that drivers taking insulin should follow and these include the following:

- You should **ALWAYS** carry your glucose meter and test strips with you even if you use the FreeStyle Libre or CGM system.
- You should check your glucose less than 2 hours before starting the first journey and every 2 hours after driving started.
- A maximum of 2 hours should pass between the pre-driving glucose check and the first glucose check after driving has started.
- More frequent testing may be needed if there is a greater risk of hypoglycaemia eg after physical activity or an altered meal routine.
- In each case, if your glucose is 5.0mmol/L or less, eat a snack and if it is 4.0mmols/L or you feel hypo, do not drive.
- Always keep an emergency supply of fast-acting carbohydrate within easy reach and carry ID to show that you have diabetes.
- Take extra care during any changes in regime, lifestyle, exercise, travel and pregnancy.
- You must eat regular meals and snacks.

### Advice on hypoglycaemia relevant to driving – here are some changes

- If your glucose is 5.0mmol/L or less, eat a

snack and if it is 4.0mmols/L or you feel hypo, do not drive.

- If a hypo develops while driving, stop safely as soon as possible. Turn off the engine, remove the keys and move from the driver's seat.
- You should not start driving until 45 minutes after a finger prick test shows back to normal of at least 5.0mmol/L as it takes the brain 45 minutes to recover.
- If you use the FreeStyle Libre or CGM system and the reading is 4.0mmol/L or below you must stop driving and confirm your reading with a finger prick test.
- Your finger prick test must be at least 5.0mmol/L before returning to driving.

### Appropriate glucose monitoring systems

- Group 1 drivers may now use finger prick glucose testing and continuous glucose monitoring systems for driving.
- Group 2 drivers **MUST** continue to use finger prick testing for driving. CGM and FreeStyle Libre are **NOT** legally permitted for Group 2 driving.
- As there are times when users of the FreeStyle Libre and CGMs are required to finger prick test, **ALL** users must also have finger prick glucose monitors and test strips available when driving

### Some things worth remembering

- If you are driving, the FreeStyle Libre is not a hands-free device so you will be liable to prosecution if you use it while driving.
- Modern meters of all types keep records of when finger prick tests are carried out, so the police can check if people follow, or do not follow, the DVLA advice.

**The DVLA information can be found at the following link: [inf294-a-guide-to-insulin-treated-diabetes-and-driving.pdf](https://publishing.service.gov.uk/inf294-a-guide-to-insulin-treated-diabetes-and-driving.pdf) ([publishing.service.gov.uk](https://publishing.service.gov.uk))**

## Latest on automatic grading of diabetic eye screening

The UK National Screening Committee has published a consultation outcome on Automated grading in diabetic eye screening, this means using Artificial Intelligence (AI).

The present position is that everyone who is 12 and over is invited for annual diabetic eye screening as part of the NHS Diabetic Eye Screening (DES) Programme. Health professionals

take images of the back of each eye and trained professionals assess the images to determine if any eye disease is present – called 'grading'.

Artificial intelligence (AI) systems are available that can be used within existing screening programmes to grade the images of eyes and potentially reduce the workload on the screening programme.

This consultation in 2021 looked at the use of automated grading in the DES programme and concluded that further research is needed before it can be introduced. AI systems are available which are accurate enough to do the initial reading of images but:

- there is only limited evidence that it provides better health and value for money when compared to manual grading,

- there is uncertainty about the social and ethical aspects of using AI systems in the screening programme.

**The UK NSC is now working on a guidance document that outlines evidence requirements for the use of AI in the DES programme.**

# Living without a pancreas

In conversation with one of our members, he pointed out that the Newsletter covers many aspects of living with diabetes and the need for insulin but it has never covered people like him. He is dependent on insulin because he had to have surgery to remove his pancreas. Surgery to remove the whole pancreas is rarely done anymore but it might be necessary for pancreatic cancer, severe pancreatitis or damage to the pancreas from an injury.

## Can you live without a pancreas?

Yes, you can live without a pancreas but you'll need to make adjustments to your life as the pancreas makes substances that control blood sugars and help the body to digest foods.

- Endocrine cells produce the hormones insulin, glucagon, somatostatin and pancreatic polypeptide. As we know, insulin helps lower blood sugar and glucagon raises blood sugar.
- Exocrine cells produce enzymes that help digest food in the intestine. Trypsin and chymotrypsin break down proteins. Amylase digests carbohydrates and lipase breaks down fats.

After surgery, it is necessary to take medicines to handle these functions. Thanks to new medicines, life expectancy after pancreas removal surgery is rising.

## Pancreas removal

Surgery to remove the whole pancreas is called a total pancreatectomy. Because other organs sit close to the pancreas, it may also be necessary to remove some other organs:

- the duodenum (the first part of your small intestine)
- the spleen
- part of the stomach
- the gallbladder
- part of the bile duct
- some lymph nodes near the pancreas

After your pancreas and other organs are removed, your surgeon will reconnect your stomach and the rest of your bile duct to the second part of your intestine, the jejunum. This connection will allow food to move from your stomach into your small intestine.

It is possible to live without the spleen and gallbladder, if they've also been removed. You can also live without organs like your appendix, colon, kidney, uterus and ovaries (if you're a woman).

However, this does mean making adjustments to your lifestyle, taking the medicines your doctor prescribes, monitoring your blood sugar and staying active.

## Living without a pancreas

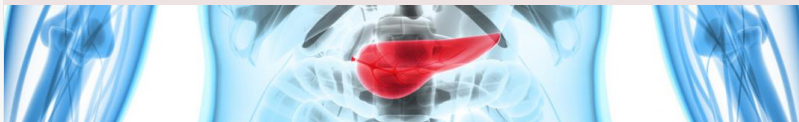
After surgery, changes have to be made:

- As the body no longer produces insulin, or enough insulin, the person will have diabetes and have to manage blood sugars in the same way as people with Type 1 diabetes.
- The body also will not make the enzymes needed to digest food so an enzyme replacement pill has to be **taken** before eating.

## Help and Support

If you are affected by pancreatic cancer, the NHS website says that you and your loved ones will be supported throughout your treatment by a group of specialists. The clinical nurse specialist, or another member of your specialist team, will be able to give you information on local support services that you may find helpful.

There are also national cancer charities that offer support and information about pancreatic cancer and a dedicated charity for pancreatic cancer:



• Website: [www.pancreaticcancer.org.uk](http://www.pancreaticcancer.org.uk)

• Helpline: 0808 801 0707





We probably all have information overload when it comes to Covid-19 and we have tried to keep it to a minimum in our Newsletters but there are some things that specifically affect people with diabetes, so we are going to cover them here.

## Waiting for your operation the opportunity to keep well

Covid-19 has meant that many people have had their elective surgery postponed for an unknown period of time. While this is worrying and potentially stressful, Consultant Diabetologist Professor Gerry Rayman, diabetes clinical lead for the Getting It Right First Time (GIRFT) programme, has led a team that have produced information: 'Keeping well while you wait for your operation'.

The main point that is made is that you can use the time to put your mind and body in the best possible condition for surgery which will help to:

- reduce the time spent in hospital,
- reduce the chances of complications or infections,
- speed up the healing time.

There are 5 key issues to take into account.

**Glucose levels** – keeping blood glucose levels within the normal target range improves outcomes and recovery. HbA1cs should be 8.5% (69mmol/mol) or less before your operation, higher than this is too high for surgery.

**Mind** – waiting can be stressful, worrying and lead to comfort eating and poor sleep. It is important to try to reduce stress and improve sleep patterns.

**Feet** – it is especially important prior to surgery to look after your feet, so they should be checked and moisturised every day. Shoes and socks should be well fitting and you should be careful when cutting nails.

**Choices** – managing weight, not smoking and reducing or stopping alcohol all help.

**Activity** – being physically active helps the body to use insulin better and keep HbA1cs and blood pressure at safe levels. Being active also helps the joints and better recovery.

**Note** – IDDT has leaflets on all these topics, so if you would like any of them,

please call IDDT on 01604 622837, email [enquiries@iddtinternational.org](mailto:enquiries@iddtinternational.org) or write to IDDT, PO Box 294, Northampton NN1 4XS.

## UK healthcare professional experiences of remote care delivery for people with Type 1 diabetes

As we are all too well aware, the Covid-19 pandemic led to the rapid implementation of remote care delivery for people with Type 1 diabetes (and people with Type 2 diabetes). We have to add that some people could not even get this, depending on their GP surgery or hospital clinic.

143 healthcare professionals responded to a survey about remote care - 48% diabetes physicians, 52% diabetes educators and 88% working in adult services. These were from approximately 75 UK centres (52% university hospitals, 46% general and community hospitals). The pandemic forced majority of diabetes consultations into a virtual format.

- Telephone consultations were the main method of care delivery. There was a higher reported time taken for video consultations versus telephone.
- Common barriers to remote consultations were patient familiarity with technology (72%) and access to patient device data (67%).
- There was a reduction in total new pump starts (73%) and renewals (61%). Common barriers included patient digital literacy (61%), limited healthcare professional experience (46%) and time required per patient (44%). Where there were larger pump services, they were less impacted by the pandemic than smaller services.

The survey concluded that initiatives must now focus on addressing the above barriers and support virtual care beyond Covid-19. (Diabetes Medicine, December 2021)

What about the future? Looking ahead to when the Covid situation is better than now, the above conclusion raises one main question about future care: will care be carried out remotely rather than face to face in the future irrespective of Covid-19?

# News on the artificial pancreas (closed loop system)

The artificial pancreas was discussed in the September 2021 Newsletter but here is yet more news.

## Artificial pancreas – high discontinuation rate in young people with Type 1 diabetes

The artificial pancreas, also known as hybrid closed-loop insulin delivery system, continuously monitors blood sugar levels, calculates the amount of insulin required and automatically delivers insulin through a pump.

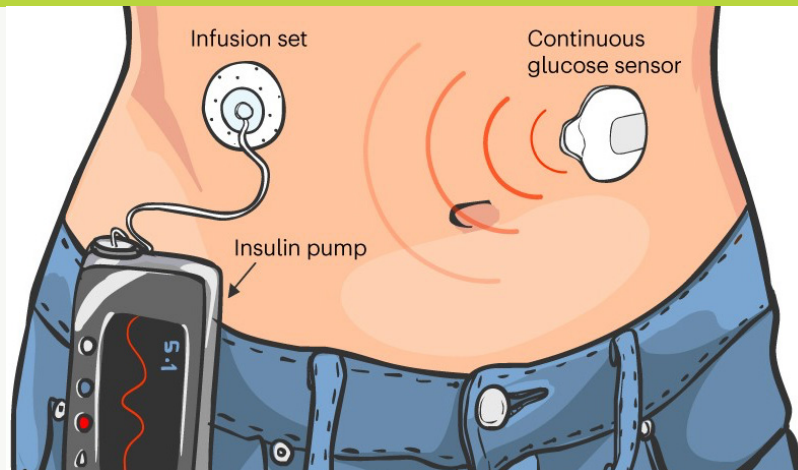
It lets the insulin pump 'talk' to a continuous glucose monitor (CGM) then based on blood sugar levels and the direction they're heading, the device will automatically adjust the amount of background (basal) insulin the pump delivers. Some of the systems can also correct for high blood sugars by delivering a dose of quick-acting insulin but the device still needs to be told when and the amount of carbohydrate eaten to receive quick-acting insulin at mealtimes.

There is much enthusiasm about the development as it has the potential to change lives, making living with diabetes easier and helping people have more stable blood sugar levels. However, a real-world study carried out in 92 children and young adults with Type 1 diabetes who used the artificial pancreas produced some interesting results,

- Only half of the children and young adults who started to use the artificial pancreas were still using the device in auto mode after 6 months.
- 30% discontinued using the system altogether.
- While the closed loop system has the potential to improve glycaemic control, sustained use of the device may be too great a challenge for many young people due to the perceived high workload needed.

## €10 million for major test of artificial pancreas developed by Dutch inventor

An artificial pancreas, as described above, will soon undergo tests involving 240 patients at 12 Dutch hospitals as a result of government funding.



The device, developed by Robin Koops who has Type 1 diabetes himself, consists of a glucose meter which measures the amount of insulin on a permanent basis and a small pump. If the amount of insulin is too high the pump will not administer insulin. If it is too low glucagon is administered. Both hormones regulate blood sugar values which tend to fluctuate in people with Type 1 diabetes. (Dutch News, July 2021)

## Old age is not a barrier to closed-loop therapy

In Australia a two-stage randomised crossover trial was conducted in 30 adults aged 60 years and older with Type 2 diabetes for at least 10 years who previously used an insulin pump.

Those involved were cognitively healthy but a third of them had impaired awareness of hypoglycaemia. Participants were randomly assigned to 4 months of closed-loop therapy in auto mode or sensor-augmented therapy in which the same device was in manual mode.

They crossed over to the opposite therapy after 4 months. The study showed:

- 6.2% more time in their target HbA1c during the closed-loop stage compared with the sensor-augmented pump stage.
- Closed-loop therapy was also associated with 5.4% less time above the target and 0.5% less time below range compared with a sensor-augmented pump therapy.



- There was 10% more time in range overnight, with an average of 87% during closed loop. Importantly, there was less time below hypoglycaemic thresholds overnight with closed-loop than with sensor-augmented pump.
- There was no change in overall doses of insulin.

The researchers recommend that further research is needed to look into the effects and safety of closed-loop systems among people with frailty or major cognitive impairment.

### And a US recent study...

A 3-month study involving 111 children and 124 adults between the ages of 14 and 70 years trialled what is described as an automated insulin delivery system. The results were:

- HbA1cs were significantly reduced in children by 0.71% and in adults by 0.38%.
- Time in range was improved compared to standard treatment by 3.7 hours a day in children and by 2.2 hours a day in adults.
- This was accomplished by a reduction in time spent in hypoglycaemia.

The researchers concluded that the system is safe and allowed a significant improvement in HbA1c levels and time spent in target range with a very low occurrence of hypoglycaemia (Diabetes Care, July 2021)

### The UK Position

On January 14th, Health Minister, Maria Caulfield, said: NHS England and NHS Improvement are currently collecting data on the use of closed loop systems. This is due to be analysed in April 2022. The findings will be shared with NICE to inform a multiple technology appraisal, the outcome of which is expected in autumn 2022. This will determine whether the technology will be offered in the NHS and which patients it is recommended for. If recommended by NICE, trusts would be expected to routinely offer the technology within six months of the publication of the guidance.

There are four artificial pancreas systems licensed for use in the UK, they are: Medtronic MiniMed 670G, Medtronic MiniMed 780G, Tandem Control IQ and CamAPS, an app which works with Dana Diabecare RS or DANA-i insulin pumps and Dexcom G6.

### What next?

Scientists hope to build a fully automated artificial pancreas, which would remove the need for people to manually count and enter carbs in order to get their insulin at mealtimes. While this would dramatically change day-to-day management of diabetes and remove the worry about short or long-term blood sugar control, the needs of the people expected to use these systems must be taken into account.

## Foody Bits and Pieces

### Caesarian section and peanut allergy

A study has found that babies born via Caesarian section had decreased levels of a bacteria called bacteroides and an increased risk of developing a peanut allergy by age 3, especially Asian infants. The decreased levels of bacteroides were also usually accompanied by decreased levels of proteins called sphingolipids, which are important for immune system development. This may be of interest as women with diabetes often have to have a C-section. (Gastroenterology, April 30 2021)

### Sardines may reduce the risk of Type 2 diabetes and cardiovascular disease

This study found that consumption of 200g of sardines a week for 12 months was associated with an increase in high-density lipoprotein-cholesterol (good cholesterol) and adiponectin, as well as a decrease in triglycerides, blood

pressure and insulin resistance. Therefore, there was a lower risk for Type 2 diabetes and cardiovascular events among older adults at risk of Type 2 diabetes (so-called prediabetes). This is due to the high amounts of omega-3, vitamin D, taurine, fluorine and fatty acids in sardines. (Clinical Nutrition, May 2021)

### Link between milk intake and lower disease risk

A UK study suggests people who consistently drink milk have a 14% lower risk of coronary disease, an 11% lower risk of Type 2 diabetes and lower levels of good and bad cholesterol. It remains unclear whether it is the fat content in dairy products that is contributing to the lower cholesterol levels or it is due to something unknown about milk. (International Journal of Obesity, May 2021)

## Another new department or just a change of name?

The Department of Health and Social Care has created a new body to tackle health disparities – the Office for Health Improvement and Disparities (OHID). This is the new name for what was previously the Office for Health Promotion and it was officially launched on 1st October 2021. Its aim is to tackle health disparities, many of which have been made worse by the COVID-19 pandemic, and improve the public's health.

Health disparities can undermine people's ability to work and live long healthy independent lives while creating pressure on the NHS, social care and other public services. Ill-health amongst working-age people alone costs the economy around £100 billion a year and it's estimated that 40% of health care

provision in the UK is being used to manage potentially preventable conditions.

The new body will tackle the top preventable risk factors for poor health including:

- obesity caused by unhealthy diets and lack of physical activity,
- smoking and alcohol consumption.

It will work across the health system to drive forward action on health disparities including:

- improving access to health services across the country,
- coordination of government departments to address the wider drivers of good health, from employment to housing, education and the environment.

## Forxiga (dapagliflozin) 5mg should no longer be used for Type 1 diabetes

On 25th October 2021, manufacturer, AstraZeneca, in agreement with the European Medicines Agency and the [National Competent Authority], announced that Forxiga (dapagliflozin) 5mg is no longer authorised for the treatment of patients with Type 1 diabetes

and should no longer be used in this population. This is based on Astra Zeneca's decision to remove the Type 1 diabetes indication for dapagliflozin 5mg. If this affects you, then please discuss this with your consultant or healthcare team.

## Intensive support for severely obese children and young people

Announced in November 2021, in the coming months a pilot of 15 new specialist clinics will be set up by the NHS in England. One thousand children a year, who are aged between 2 and 18 and experiencing health complications related to severe obesity, will be supported to lose weight through the new services.

They will receive specialist treatment and tailored care packages developed with their family, which could include diet plans, mental health treatment and coaching. Obesity affects one in five children in the UK and the aim of the pilot is to prevent long-term health problems such as Type 2 diabetes, liver conditions and early heart disease.

## Pharmacists carry out lifestyle checks

From October 2021, pharmacies in England have been able to provide lifestyle checks to people aged 40 and over as a result of a new arrangement between the NHS and pharmacies. Predictions suggest that if 2.5 million people have their blood pressure checked in this way, an additional 250,000 people could receive

treatment for hypertension. Cardiovascular disease claims 136,000 lives a year and is a major cause of health inequalities with about half of heart attacks and strokes being associated with high blood pressure, so the detection and control of high blood pressure is important to save lives and reduce health inequalities.



## Better Health campaign

Health Minister Maggie Throup has announced the new Better Health campaign which offers free support and guidance to those working towards a healthier weight. Better Health is working in partnership with 15 weight management and physical activity companies who are providing both free and discounted offers. The campaign highlights 6 benefits that could have a lasting impact on a person's health by being a healthier weight:

- Decreased risk of common cancers
- Lowered risk of increased blood pressure
- Reduced risk of heart disease
- Less risk of developing Type 2 diabetes

- Less strain from chronic back and joint pain
- Decreased risk of being hospitalised or becoming seriously ill with COVID-19

### The Better Health partners include the following:

Physical Activity Partners: Our Parks, Sport England, Better Leisure Centres, InstructorLive, Anytime Fitness, Pure Gym, Her Spirit

Weight Management Partners: Slimming World, GetSlim, MAN v FAT Football, WW (Weight Watchers), Second Nature, Healthier for Life EFL Trust FIT Fans, Noom Weight

## More people to benefit from flash glucose monitors

In November, it was announced that half of people with Type 1 diabetes in England are now benefiting from the use of flash monitors, the FreeStyle Libre, which allows them to check their glucose levels more easily and without finger prick tests. So around 125,000 people with Type 1 diabetes are now using these monitors to help control their condition.

NICE has confirmed that it is beginning to consult on expanding access to the convenient and effective kit and this could potentially include people with Type 2 diabetes. Eligible patients are currently able to access the monitors on prescription from their local GP or diabetes team, helping them to better manage their blood sugar levels.

## Non-diabetic hyperglycaemia – National Diabetes Audit 2021



This is from a report on the NHS Diabetes Prevention Programme for England which aims to prevent or delay Type 2 diabetes. Information was collected from GP practices and the National Diabetes Audit for 2020-21.

The findings were as follows:

- 2.4 million people in England were recorded as having non-diabetic hyperglycaemia during January 2020 to March 2021.
- This is an increase from 2.1 million in 2019-20 but this increase is thought to be largely due to an increase in diagnosis.

### Confusion - what exactly is non-diabetic hyperglycaemia?

The report defines non-diabetic hyperglycaemia as blood glucose levels that are above normal but not in the diabetic range of HbA1c levels of 42-47mmol/mol (6.0-6.4%) or fasting plasma glucose of 5.5-6.9mmol/l. However, this is the same as the definition of pre-diabetes, so it is somewhat confusing!

### What is the definition of hyperglycaemia?

Hyperglycaemia is generally defined as when blood glucose levels are too high – usually above 7mmol/l before a meal and above 8.5mmol/l two hours after a meal.

### And pre-diabetes?

As regular readers will be aware, IDDT has never liked the term 'pre-diabetes' because it causes unnecessary stress when only 1 in 10 people actually go on to develop Type 2 diabetes. We have always preferred the term 'at risk of Type 2 diabetes'.

Interestingly, the definition of non-diabetic hyperglycaemia in the National Audit is exactly the same as the published definition of 'pre-diabetes', so is the term 'pre-diabetes' being officially dropped in favour of 'non-diabetes hyperglycaemia'? If so, we will be really pleased but can we have a consensus view so that we all know what we are talking about and there is no confusion!

# Sourdough bread and carbs

Sourdough bread has been around for thousands of years. It is the oldest type of leavened bread (bread that rises due to yeast or other ingredients) on record. According to some studies, sourdough bread acts as a prebiotic, which means that the fibre in the bread helps feed the “good” bacteria in the intestines.

These bacteria are important for maintaining a stable, healthy digestive system. Sourdough is also lower in gluten than other forms of bread.

Sourdough bread is a rich source of antioxidants, vitamins and minerals. However, the same qualities that make sourdough bread healthy can also create complications for people.

## Carbohydrate content comparisons for a large slice:

Conventional white bread	20.5g
Sourdough white bread	18.5g
Conventional whole wheat bread	18.8g
Sourdough whole wheat bread	18.8g
Traditional German rye bread	18.0g
Sourdough German rye bread	16.0g



These are the total carbohydrates but this is not the only count to be made as fibre is a factor to be taken into account when calculating the true carbohydrate intake. Look for the fibre content on the pack and this should be taken away from the total number of carbohydrates.

For example, if the packet label says:

- Total carbs are 33grams of which dietary fibres are 3 grams and sugars 1.6 grams
- The net carbohydrate intake would be 30 grams.





# Parliamentary Questions related to diabetes

## **The future of diabetes care and treatment**

MP Feryal Clark asked the Secretary of State for Health & Social Care what recent steps his Department has taken to improve the public health provision of diabetes (a) treatment, (b) support, (c) care and (d) prevention services.

The answer was as follows:

- The NHS Long Term Plan set out a number of key ambitions, to improve care and outcomes for those individuals with diabetes.
- To support patients to potentially achieve remission from their Type 2 diabetes while improving management and control, NHS England and NHS Improvement are piloting at scale, low-calorie diets.
- To improve care, NHS England and NHS Improvement have invested approximately £120 million of Transformation Funding into local services to target variation and improve performance in the treatment and care of people living with Type 1 and 2 diabetes since 2017/18. This covers the four priorities, including: footcare teams; inpatient nursing teams; treatment target attainment; and supported self-management.
- NHS England and NHS Improvement's diabetes prevention programme identifies those most at risk of developing diabetes and refers them onto a behaviour change programme.
- Following a successful two-year pilot programme that saw a significant increase in the adoption of flash glucose technology across all clinical commissioning groups, over 35% of patients living with Type 1 diabetes are now benefitting from flash glucose monitoring.

**What steps are being taken to support greater self-management among people with Type 1 diabetes?**

*The answer from Jo Churchill MP on 7th July 2021 was as follows:*

NHS England and NHS Improvement commissioned two remote structured education programmes including MyType1 Diabetes and DigiBete, to provide education and self-management support for those living with Type 1 diabetes. These are available free of charge across England. The latest technology to support individuals to gain better control over their glucose levels is currently undergoing assessment by the National Institute of Health and Care Excellence. Hybrid closed-loop insulin delivery systems, allowing the system to react to insulin demands in real time, will begin testing in the next few months. The findings from the pilots will feed into the technology to inform future use.

**Comment:** we have to point out that the education programmes mentioned can only be used by people who have access to the technology, and not everyone has, so what happens to these people?

**What assessment has been made of the adequacy of the number of blood tests being administered for patients with diabetes by NHS England?**

*The answer was given by Maria Caulfield MP on 3rd November 2021:*

No formal assessment has been made. However, the National Diabetes Audit provides data on completion of key care processes for diabetic patients, including blood tests. It shows that between 2016 and 2020 we saw significant improvement in the completion of these processes. As a result of the pandemic, we have seen a reduction in face to face checks. However, we are providing £2 billion to address the backlog in all services.



# RESEARCH *News*

## Study shows negative impact of Type 1 diabetes on male fertility

This recent Italian study finds that Type 1 diabetes might impair male fertility. It found that men with Type 1 diabetes had lower normal sperm morphology (the size, shape and appearance of a man's sperm), sperm progressive motility and seminal volume, compared with men without the condition. The findings also showed that the rate of children was lower among men with Type 1 diabetes compared with those without

the condition, especially among those who had the disease for longer.

Infertility affects about 15% of couples worldwide and 50% of this is due to a male factor. Environmental and genetic factors have been implicated but in one in three infertile people the cause is still unknown. (Andrology, 14 December 2021)

## Early steps towards drug to treat hypoglycaemia

New research led by the University of Exeter has taken a step towards a treatment for the common diabetes complication of hypoglycaemia (low blood sugar). The researchers have found a way to help to defend against hypoglycaemia by boosting hormonal defence systems. They believe they have found a promising target in the brain that could be useful for future drug development to create an anti-hypoglycaemia drug.

Experiments were conducted using a pre-clinical test compound (R481) that acts a little like metformin, a Type 2 diabetes drug. However, R481 works differently because it enters the brain and switches on a brain fuel gauge called AMPK (AMP-activated protein kinase). This provides a better understanding of the brain-pancreas communication to boost the body's defences against hypos.

In healthy rats, this compound boosts the hormonal defence against hypoglycaemia, by increasing the release of the hormone glucagon from the pancreas. It switched on a brain-

pancreas link to defend against hypos but did not change fasting blood sugar levels.

The long-term aim is to create a pill that could be swallowed before bed, to prevent night hypos. This is early research but let us hope that it will eventually make life easier for people living with diabetes by new treatments for hypos and hypo unawareness. (Frontiers in Endocrinology, December 2021)

It is estimated that the 400,000 people with Type 1 diabetes in the UK have an average of 2 hypos per week and one severe episode per year. People with Type 2 diabetes have up to 5 hypos per year. Hypos often occur at night, disrupting sleep and sometimes causing seizures. People with Type 1 report that the fear of hypos is one of the most difficult aspects of living with diabetes and this also applies to family members, especially parents of children with diabetes, who report that they regularly lose sleep for fear that their loved one will have a night hypo.

## Increasing health inequalities for children and young people with Type 1 diabetes in the UK

The 2019/20 audit involved 29,242 children and young people with diabetes up to the age of 24 years with 27,653 having Type 1. There were two key findings:

- those from ethnic communities have higher HbA1cs compared to white ethnicity,
- there was significantly lower use of insulin pumps or real-time continuous glucose monitoring amongst black children,

- there has been an increasing trend of widening health inequalities reported over the last 6 years.

The authors recommend that urgent research is carried out to look into the barriers of access to technologies in the UK including provider bias, systemic issues in the health system and individual and family factors.

## Social media - another perspective on depression!

Many of us who are older often feel irritated by the fact that so often, things have to be done online when a smartphone is needed, even for government websites or apps.

- People while recognising the obvious advantages of keeping in touch with people via social media, especially during the pandemic, the consequences should also be recognised.

Previous research has found that social media is damaging for the mental health of young people but a recent analysis is one of the first studies looking into the link between social media and depression in middle-aged adults. It showed:

- People above the age of 50 are more at risk of developing depression if they regularly use social media apps.
- Middle aged adults experience more symptoms of depression and anxiety if they are using social networks that are popular with the younger generations, such as TikTok, Snapchat and Facebook.

This was a year-long study from Havard University and over 5,000 adults filled in several assessments on their emotional wellbeing and which social media platforms they use.

The findings were:

- 9% of the group had experienced a decline in their mental health by the end of the trial among those who reported using TikTok, Snapchat and Facebook.

- Snapchat users in their fifties were 50% more likely to develop depression and middle-aged TikTok users felt more depressed than younger people using this app. People who self-reported feelings of sadness after using Facebook were largely under the age of 35.



The researchers' analysis suggests that not fitting in with the target demographic of a social media platform could explain why middle-aged adults felt depressed after frequent use of Snapchat and TikTok because these are mainly used by younger people. Facebook users are predominantly middle-aged which could explain why younger people feel sad after using it. They also point out that people who are sad or depressed after social media use, could be a marker of underlying vulnerability to depression. Something worth bearing in mind?

# Wolfram Syndrome – a rare form of diabetes



**All of you will have heard of Type 1 and Type 2 diabetes and some of you will have heard of some of the less common forms of the disease, such as Latent Auto-immune Diabetes in Adulthood (LADA) or Maturity Onset Diabetes in the Young (MODY). However, there are other conditions that can cause diabetes and can often be extremely rare but nonetheless share many characteristics similar to the more common forms of the condition. Wolfram Syndrome (WS) is one such condition.**

Wolfram Syndrome is an ultra-rare, genetic condition, sometimes known as DIDMOAB. It is so rare that there are only about 90 people in the UK diagnosed with the condition but it is estimated that there may be around 50 more who are undiagnosed or mis-diagnosed (sound familiar?). The majority of health professionals will never come across a person with WS.

There are 4 main features of WS:

- Diabetes Insipidus
- Diabetes Mellitus,
- Optic Atrophy
- Sensorineural deafness

Not everyone with WS necessarily has all 4 features but will classically have Diabetes Mellitus and Ocular Atrophy. They may also be affected by ataxia, respiratory problems and have issues with anxiety, depression, aggression as well as wide range of other problems. Early-onset diabetes is usually the first diagnosed symptom,

followed by visual problems caused by ocular atrophy (death of the optic nerve). These symptoms are often linked and often lead to significant difficulties in getting a proper diagnosis. Another confounding factor of WS and its diagnosis and management is that the progression of the condition is different for each individual. Through discussions within the WS community it has been recognised that the management of blood sugar levels can be described as, at best atypical, and it is believed that this may be due to the fact that some people with WS still produce some insulin themselves.

Not least because of this and the other symptoms and conditions that affect each person with WS differently, each person has to be treated with the relevant medication, aids and adaptations according to their needs. There is no cure for WS but currently international clinical drug trials are being led by the WS Research Team at University Hospital Birmingham. It is hoped that the research will eventually result in the development of a drug that may slow or even halt the progression of the condition. Wolfram Syndrome UK (WSUK) is the only support group and charity in the UK for this condition. It was set up by parents, Paul and Tracy Lynch, in 2010 following the diagnosis of their then, 8-year-old daughter.

As a fellow patient-focused charity IDDT are happy to offer their support to WSUK. To find out more about WS and the work that WSUK do please go to their website

[www.wolframsyndrome.co.uk](http://www.wolframsyndrome.co.uk)



# INTERNATIONAL

## News

### Biocorp and Novo Nordisk join forces for digital diabetes health

Biocorp and Novo Nordisk are collaborating to develop and distribute a smart add-on device for the Novo Nordisk FlexTouch pen. Mallya is a Bluetooth-enabled smart add-on device for injection pens and collects the dose and time of each injection and transfers information in real-time to a companion software.

Most Novo Nordisk's insulins use the FlexTouch pen and a specific version of Mallya will be developed for it. Due to the unique dosing mechanism of FlexTouch, the push button does not extend at any dose and allows insulin to be administered by pressing the low injection force button. The current Mallya device required a redesign to meet the needs of this mechanism, keeping its accuracy and reliability.

Novo Nordisk plans to distribute the smart device in selected countries upon successful development, and Biocorp expects to ramp up production volumes from 2022. (October 25, 2021)



### Eli Lilly's biosimilar insulin approved in the US

Eli Lilly has received approval from the FDA for Rezvoglar, as the second biosimilar version of Lantus (insulin glargine), for improving glycaemic control in children and adults with diabetes.

The biosimilar can be used as a substitute for Lantus, but it requires its own prescription as the products are not deemed interchangeable. Again, this will lower the price. (December 2021)

### News on inhaled insulin

Afrezza is a powder form of insulin for inhalation and is the only inhaled ultra-rapid-acting mealtime insulin. It is made by MannKind Corporation in the US and is approved by the FDA in the US for adults (18+) with Type 1 or Type 2 diabetes but is not approved in the UK.

MannKind has announced that a new study, the INHALE-1 Study of Afrezza, has officially begun enrolment for those aged 4-17 living with Type 1 or Type 2 diabetes. The multi-centre study will assess the efficacy and safety of Afrezza versus multiple daily injections of insulin, both in combination with basal insulin.

# From our own correspondents



## Regular purchases, beware!

Dear Jenny,  
I recently purchased my favourite brand of baked beans. The printing and weight were exactly the same as usual. Having consumed half a tin, I later checked my glucose level and was shocked to see it was unusually high. I looked at another tin of the same brand and noticed the carbohydrate content had gone up by a third.  
So, my message is beware when purchasing items that you regularly use, as the carbohydrate content may have changed.

Mr A.T.  
Hants

## And by phone..... "Just google it"

IDDT received a call from a desperate mother of a 21year old with Type 1 diabetes. Her daughter was concerned that she was getting blurred vision but had not had her eyes screened since before the pandemic. In addition, she had not had an HbA1c test since 2019 and then it was a lot higher than it should have been.

Both mum and daughter were concerned, especially about the lack of eye screening, so they contacted the GP practice to see when this was going to be done. The answer was that they should "google it" - unbelievable! IDDT did offer the following advice:

- ring her hospital diabetes clinic for an urgent appointment
- if this fails, ring 111, that's what is there for
- if necessary, book an appointment for an eye test with an optometrist making sure that they will carry out a visual field check. This may help to put their minds at rest and if necessary, a referral from the optometrist may have more effect.

## Free prescriptions

Dear Jenny,  
I have heard that the Government is proposing to review prescription charges and I would like to know if free ones for people with chronic conditions, such as Type 1 diabetes, will continue. My main concern is that blood glucose test strips may no longer be free.

When I went to my pharmacy yesterday I was told my GP practice had refused to include them on my last prescription. However, I then spoke to my GP practice and my original request was met. It does pose the question how long free prescriptions for us will continue.

## IDDT response:

At the time of writing, the proposed changes in prescription charges are linked to the age at which people receive their old age pension, now 66. So, the proposal appears to be that free prescriptions should be in line with this – that is to start at 66 and not 60. There has been no suggestion that the medical conditions free prescriptions are going to change and no reason why it should because it is unrelated to age. There have been many objections to the 60 to 66 changes but if the government was to remove medical exemptions, there would be an outcry. Having said this, at the time of writing, this is all still under consultation.

**If you would like to express your views or concerns, just call jenny on 01604 622837 or email; [jenny@iddtinternational.org](mailto:jenny@iddtinternational.org)**

## Get your FREE COPY of 'Diabetes - The Importance of Sleep'

Over the last few months, you will probably have heard a lot in the media about the importance of sleep. Last year IDDT produced a new booklet 'Diabetes – The Importance of Sleep'. This booklet covers many aspects of healthy sleep and diabetes such as:

- the impact of sleep on health and diabetes management
- the benefits of improving the quality of sleep
- how to catch up on sleep

- napping – to nap or not to nap
- restless leg syndrome and other problems that can disrupt sleep and how to try and avoid them.

To get a free copy of this booklet for yourself or someone else in the family, contact IDDT by phone: 01604 622837, email: [enquiries@iddtinternational.org](mailto:enquiries@iddtinternational.org) or by post: PO Box 294, Northampton NN1 4XS

## A Diary Date – The IDDT Event, Saturday 29th October 2022

Following a successful event last year, in spite of all the disruption caused by the pandemic, IDDT will be holding its annual event at Kettering Park Hotel and Spa. The day will start with our Annual General Meeting which will give you the opportunity, among other things, to nominate someone to become a Trustee. The programme for the rest of the day will be an informative mix of speakers and discussion along with plenty of opportunity to meet other people living with diabetes.

At the time of writing, we still have Covid 19 restrictions in place but we will ensure that the

venue has all the necessary safety measures and facilities in place to manage the event.

We hope that as many of you as possible will be able to come and it is as nice to see new faces as much as it is to see those who have been before. Tea, coffee and a lunchtime meal will be provided on the day and we will be sending out more details of the programme along with a booking form with the June newsletter.

If you have any questions then please contact IDDT as above.

**Christmas cards:** We would like to thank everyone who bought Christmas cards from us in 2021. We still have some cards available and these now cost only £2.50 per pack of 10, with no additional charge for p&p.

If you would like to order any of the designs to your right, or the Diabetes Diary, then please contact the details above.

Santa's Presents	Blue Trees	First Day of Christmas	Christmas Veggies	Three Kings

**Just to remind you....**

**2022 Diabetes Everyday Diaries still**



Last year we published our Everyday Diary for anyone who lives with diabetes, whether you have diabetes, your partner has diabetes or your child has diabetes. This proved very popular, so we have published another Diary for 2022. We still have some copies left and these are available **for the reduced price of £3.99**



# Analysis reveals major concerns over Type 2 diabetes information on the web

By Martin Hirst, CEO, IDDT and published in The Diabetes Times, 13th November 2021

**The internet is “awash with misleading information and terminology” about Type 2 diabetes leading to “exploitation of a vulnerable group”, analysis by a charity shared ahead of World Diabetes Day has found.**

Only 46% of the content, both adverts and websites, from the first 10 pages of a search on Google for ‘Type 2 diabetes’ was legitimate, according to a snapshot survey carried out by the InDependent Diabetes Trust (IDDT). Of the 158 results – released to mark World Diabetes Day, which took place on November, 14th 2021 – 26% were sites promoting and selling lifestyle choices, including low carb, keto diets, often claiming to reverse or even cure Type 2 diabetes.

However, as stated recently, guidance from international bodies, including the American Diabetes Association and the European Association for the Study of Diabetes, the condition cannot be ‘cured’, instead they recommend the term ‘remission’ is used, more correctly, to define a return to normal glucose levels.


Of the sites selling a specific product, which accounted for 15% of the results, as well as products such as meters and insulin pumps, this category also included herbal remedies with no proven clinical benefit.

In total, 6% of sites were selling insurance specifically for people with diabetes.

The legitimate sites included NHS, charities and recognised private medical facilities.



Martin Hirst, the charity’s Chief Executive, who undertook the project, said it raised major concerns over-terminology and misleading information and that there were some sites presenting themselves as charitable or philanthropic organisations, while in fact being businesses. He said: “The majority of results are not providing genuine, quantified advice and evidence. The high number of sites that promote products and, or, lifestyle changes that purport to ‘reverse’ or ‘cure’ Type 2 diabetes, are more often than not for financial gain.” “It’s not about concerns regarding the advertising platform, it’s about criticising the content of the adverts. Basically, the internet is awash with misleading information and terminology, it’s capitalising on ignorance. These companies need to clean up their act, their actions are leading to the exploitation of a vulnerable group who already receive very little support when needed, for example, upon diagnosis.”



# Fasting and Diabetes

This article looks at religious fasting and its impact on the management of diabetes during periods of abstinence and fasting. There are other reasons than religion for abstinence and fasting, one of the commonest being weight loss and we will look at these another time. Two major religions, Islam and Christianity (many other religions also have fast periods), have periods of fasting around this time of year so, we will have a look at their fasting practices and then some of the general issues around diabetes and fasting. Many of you will have fasted before, so this article may be nothing more than a reminder, for those of you who have not, we hope it provides some helpful tips for staying safe and well during your fast.

## Islam - Ramadan

The dates for Ramadan are calculated using the Muslim or Hijri calendar. Ramadan is based on the ninth month of the lunar calendar, so this year it is expected that the fast of Ramadan will commence at sunset on 22nd April and will last until 1st May. Ramadan moves forward each year by about 11 days which means the length of fasting is greater in certain years than others.

During Ramadan it is expected that Muslims who participate will abstain from food, water, beverages, smoking, oral drugs and sexual intercourse from sunrise to sunset.

## Christianity - Lent/Easter

Easter Sunday is celebrated on the first Sunday following the full Moon that occurs on or just after the spring equinox. Easter Sunday is a feast day following Lent. Although not followed by all Christian denominations, Lent lasts for 40 days, concluding on Maundy Thursday,

immediately prior to Easter Sunday. This year, Lent is from 2nd March to 14th April and Easter Sunday is on 17th April. During Lent, certain days are regarded as fast days, and again have implications for people with diabetes.

People of either faith with diabetes may be exempted from fasting but the majority of people with diabetes do fast so run increased risks of health adverse effects, such as hypoglycaemia, hyperglycaemia, diabetic ketoacidosis and dehydration. Most of these are as a result of a reduction of food and fluid intake and the timing of meals. Both of the above are regarded as partial or intermittent fasting.

## Yes, it's all a bit confusing!

### Diabetes and fasting

As you can imagine, if you have diabetes fasting can cause complications in managing the condition, some, arguably, more serious than others.

The best first step is to speak to your doctor or diabetes nurse to discuss the potential risks and problems associated with fasting. This will help you to formulate a plan to manage the period of your fast. Things you may want to think about and discuss could include:

- Complications of diabetes such as poor vision or heart or kidney disease, can be aggravated by fasting and you may want to consider whether to fast or not.
- If you take insulin and/or certain tablets, you may need to think about changing the amount and timing of your insulin dose to control blood sugar levels.

You may also need to change the type of insulin you are using, for example, pre-mixed insulins are not recommended during fasting.

Research has shown that both education about the effects of fasting and relevant advice can dramatically reduce the likelihood of problems occurring, both low and high blood sugar levels.

High blood glucose levels can develop during a fast if you do not take prescribed medication or if you are less physically active than normal, which, in turn, could lead to diabetic ketoacidosis (DKA) – a serious condition requiring hospital treatment.

If you are still happy to proceed with your fast then there are some simple, common-sense tips and tricks to help manage your diabetes:

- Before starting the fast, you should eat foods containing slowly absorbed carbohydrates, such as rice, dhal, potatoes and pasta, along with fruit and vegetables.
- You should check your blood glucose levels more often than you normally would.
- When you break the fast, have only small quantities food and avoid eating only sweet or fatty foods.
- Try to eat just before the break of dawn, when you commence the next day's fast.
- At the end of fasting, you should drink plenty of sugar-free and decaffeinated fluids to avoid being dehydrated.



**Above all – Stay safe and well!!**

## First pre-filled glucagon pen, Tetris Pharma's Ogluo®, now available in the UK for the treatment of severe hypoglycaemia

Tetris Pharma has announced that people living with diabetes in the UK now have access to Ogluo® (glucagon Pre-Filled Pen). This is the first ready-to-use, pre-mixed and pre-measured liquid glucagon injection to treat severe hypoglycaemia in adults, adolescents, and children aged two years and over.

Severe hypoglycaemia is currently treated with a glucagon treatment requiring eight stages to prepare and inject. When someone is unconscious or unable to take glucose orally and a number of steps to mix the glucagon powder and liquid prior is required, this is often not done successfully under pressure, which may delay recovery.

Providing glucagon as a liquid in a new, easy-to-use auto injection pen could make this process far simpler and mean greater freedom for people with diabetes and their families.

In a simulated human factor study of 16 individuals both trained & untrained, only 31% of participants were successfully able to administer the glucagon solution.

Ineffective treatment of hypoglycaemic episodes can substantially increase overall direct and indirect healthcare costs as a result of a patient's need for emergency

support and hospitalisation. The estimated total cost of a severe hypoglycaemic episode can be over £2,000.

Ogluo, unlike current glucagon emergency kits, is a reliable two-step administration of glucagon through a pre-filled pen in case of a severe hypoglycaemia. In a study, 99% of participants were successfully able to administer it. To help ensure the right dose, two pre-measured dosing options for adults and children are available. Sub-cutaneous glucagon has an established safety profile, with Ogluo being stable at room temperature, portable, ready-to-use with no visible needle, and can be stored for up to 27 months for the 1mg & 24 months for the 0.5mg.

Hypoglycaemia is responsible for an estimated 70,000–100,000 emergency callouts in the UK costing between £16m–£24m/annum.

Severe hypoglycaemia occurs when blood glucose levels drop below 4mmol/L and is defined as requiring assistance from another person to treat it. Severe hypoglycaemia has an annual prevalence of 30–40% amongst people living with Type 1 diabetes and is the second most common cause of hospital admissions for drug-related adverse events.





# LOTTERY RESULTS

## WINNERS OF THE OCTOBER 2021 DRAW ARE:

1st prize of £549.12 goes to David from Newport

2nd prize of £411.84 goes to Kenneth from Porth

3rd prize of £274.56 goes to Susan from Hereford

4th prize of £137.28 goes to Doreen from Ely

## WINNERS OF THE NOVEMBER 2021 DRAW ARE:

1st prize of £545.28 goes to Anon from Barnstaple

2nd prize of £408.96 goes to Anon from Fife

3rd prize of £272.64 goes to Kenneth from Leyland

4th prize of £136.32 goes to Sylvia from Kettering

## WINNERS OF THE DECEMBER 2021 DRAW ARE:

1st prize of £546.24 goes to Sylvia from Kettering

2nd prize of £409.68 goes to Kathleen from Stockton-on-Tees

3rd prize of £273.12 goes to Rosemary from Raunds

4th prize of £136.56 goes to Sylvia from Kettering

Note: The winners of the draws for January, February and March 2022 will be announced in our June 2022 Newsletter and on our website. A huge 'Thank You' to everyone who supports IDDT through the lottery.

Readers may notice that Sylvia from Kettering often wins a prize in the draws. IDDT is very grateful to her because she does support the Lottery, and therefore IDDT, by purchasing a lot of tickets.

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](mailto:jenny@iddtinternational.org)



# InDependent Diabetes Trust

## Snippets



### **60 million drugs to treat people with diabetes**

New NHS information shows that between 2020 and 2021, nearly 60 million drugs were used to treat people with diabetes in England, rising by eight million since 2015. This cost £1.19 billion and made up 12.5% of the total spend on all prescription items prescribed in England. This is an increase from 2015/16, when 49.7 million diabetes items were prescribed for a cost of £958 million, 10.4% of the total spend.

The study entitled 'Prescribing for diabetes England 2015/2016 to 2020/2021', also found that there was over three and a half million people in hospital being prescribed drugs for diabetes in England in 2020/21. This was a 1.5% increase from three million people in hospital in 2019/20, and a 12.7% increase from 2.70 million in 2015/16.

### **Globally one in 10 adults has diabetes**

The latest data from the International Diabetes Federation shows that globally an estimated 1 in 10 adults has diabetes and nearly 240 million of them have not been diagnosed. It also estimates that the number of adults with diabetes will increase by 46% from 2021 to 2045, going from 537 million to 786 million. However, The Lancet reports that fewer than half of countries in central and east Asia and western sub-Saharan Africa have the necessary policies and registries to account accurately for the numbers and needs of patients with diabetes. It also reports that globally, an estimated 76% of children with Type 1 diabetes are unable to stay within the recommended glycaemic ranges putting them at risk of life-threatening short and long-term complications. In addition, more than 50% of people with Type 2 diabetes are unable to receive the insulin they need. (November 2021)

### **Effects of sedentary lifestyle on development of foot ulcers.**

Sedentary time is an independent factor in the development of foot ulcers in people with diabetic peripheral neuropathy, according to a new study. Reported sedentary time was

significantly higher in participants who developed a foot ulcer — an average of 12.8 hours per day, compared with 9.4 hours per day in those who didn't develop a foot ulcer. Other factors were found to influence the risk of developing a foot ulcer, such as nerve and blood vessel function but sedentary time was one of the strongest predictors of who would develop a foot ulcer. (Journal of Diabetes Research and Clinical Practice, November 2021).

### **What steps is the Dept of Health taking to support charities which are researching Type 1 diabetes?**

This was a Parliamentary Question answered by Health Minister Maria Caulfield on November 25th 2021 as follows:

"The Department supports research charities, including those researching Type 1 diabetes, through the National Institute for Health Research (NIHR) and Research England's Quality Related Charity Research Support Fund. This includes supporting the charity-funded ADDRESS-2 diabetes research database resource through the NIHR's Clinical Research Network.

This Department and the Department for Business, Energy and Industrial Strategy announced a £20 million initiative to support medical research charity-funded early career researchers. All fundraising medical research charities in the UK, including charities researching Type 1 diabetes which have funded an early career researcher in 2021/22 were eligible to apply."

### **100 Years of Insulin 2021 - UK 50p Silver Proof Coin**

In the year of its 100th anniversary, The Royal Mint celebrated the discovery of insulin with a commemorative limited-edition UK 50p coin as part of the Innovation in Science series. The design combines an artistic illustration of insulin's molecular structure with its chemical symbol in a numismatic tribute befitting such a historic discovery. Just 3,500 coins were available made in 925 sterling silver.