



Welcome to the 50th issue of Type 2 & You

A very special welcome to you all this spring and to the Fiftieth Issue of Type 2 and You. To mark this, the centre pages of this issue are a re-print of the first Type and You from October 2009 and it is plain to see, how far we have come, with your help and support. Back to this issue, we have the final instalment of our series on your nine key tests, finishing with foot health. We also have a look at the essential role insulin plays in the management of Type 2 diabetes. There is the usual round up of bits of recent research and developments and our latest lottery winners. We have plenty of other articles, including a piece on making various aspects of your computer easier to use, insulin and diabetes management as well as tips on how to fast safely during religious festivals.



Your 9 Key Tests - Foot Health

This piece is the final article in our series looking at the 9 Key Checks to which everyone with diabetes is entitled, to ensure that they can manage their diabetic health as well as possible. We look at foot care, some of the problems that can occur and also some tips that can help you keep your feet healthy on a daily basis.

Reasons to look after your feet

If you have diabetes, keeping your feet healthy is very important.

Allowing problems to develop can lead to a range of complications, some comparatively minor, others very serious.

- Around 10% of people will develop a diabetic foot ulcer at some point in their lives. Currently, 300 new ulcers are diagnosed every week. Around 130 amputations take place each week and it is estimated that 80% of these are preventable.
- Amputations and ulcers have a huge detrimental effect on quality of life with up to 70% of people dying within 5

- ▶ years of an amputation and 50% of people dying within the same period after developing a foot ulcer.
- People with diabetic foot ulcers may also have some degree of cognitive impairment and so may find it more difficult to manage their foot care themselves.

Neuropathy

Neuropathy is damage to the nerves in the feet. It is just one form of diabetic neuropathy but is probably the most common and well-known. It is caused by long-term diabetes or poorly controlled diabetes.

Neuropathy means damage to the nerves and can affect any part of the body. It is usually divided into two categories:

- Peripheral neuropathy affects the nerves supplying the skin and muscles.
- Autonomic neuropathy affects the nerves supplying the organs of the body, such as the bladder, bowel or heart. It can also affect the nerves controlling blood pressure, sexual function etc.

It can also fall into two other broad groups:

- Diffuse neuropathy affects many nerves. It is the most common and is the one that can affect the feet.
- Focal neuropathy affects individual or small groups of nerves and are confined to, for example, a single limb, areas of the head or torso.

Symptoms of neuropathy affecting the feet or hands

There are several different symptoms of neuropathy. The sufferer may experience one or more of these symptoms:

- Unusual sensations (paresthesias) such as tingling, burning or prickling.
- Numbness and pain in the hands, legs and feet.
- Weakness of the muscles in the feet and hands.
- Sharp pains or cramps.
- Extreme sensitivity to touch.
- Insensitivity to pain or temperature changes.
- Loss of balance or coordination, and difficulty walking on uneven surfaces.

Treatment options for neuropathy

The main treatments for neuropathy are drug-based therapies. Your doctor will discuss with you the suitability of treatment for you:

- Pain relievers
- Medications containing opioids (these can be addictive so are only prescribed when other treatments have failed).
- Anti-convulsant medications.
- Topical treatments.
- Lidocaine patches
- Antidepressants.

All medications cause side effects and what may suit one person may not suit another. Again, take advice from your doctor.

Damage to blood vessels

In addition to neuropathy, people with diabetes can also develop foot problems due to damage to the blood vessels in the feet and legs. This may mean that less blood flows to the skin, muscles and tissues. In turn, this means that any injuries will not heal as quickly as would normally be expected.

Symptoms of changes to blood flow can include:

- Cramp in the calves
- Shiny, smooth skin
- Loss of hair on the feet
- Thickened toenails
- Cold, pale feet
- Changes in the colour of the skin on the feet
- Wounds or sores
- Pain in your feet, especially when raised

If any of these symptoms affect you then seek advice from a health professional.

Other conditions affecting the feet

Diabetic foot calluses – Calluses are a build-up of thickened, hard skin designed to protect the foot. However, for a person with diabetes, calluses can hide a deeper wound or ulcer. It is important that calluses should only be treated/removed by a podiatrist to avoid the risk of infection.

Heel fissures – Heel fissures are common in the general population but for someone with diabetes they can cause serious problems if not dealt with effectively. Heel fissures are deep cracks in the skin and are often painful. They are caused by dry skin and can largely be avoided by the daily application of moisturiser. If you discover a heel fissure then increase moisturiser to two to three times a day. If the fissure has not improved in a week, seek an assessment and advice from your podiatrist.

Charcot foot – Charcot foot is a non-ulcerative condition caused by loss of pain signals in the feet. The loss of pain warning signs can cause the foot to change shape due to the destruction of bones and joints. Diagnosis is notoriously difficult and, it is essential that the affected foot is put out of action. Treatment is with continuous foot care education, protective footwear and routine foot care to prevent the formation of ulcers.

Diabetic holiday foot syndrome

Research has shown that there is a greater risk of foot ulceration and complications while on holiday, especially holidays that are taken in hot countries. This is called Diabetic holiday foot syndrome, the causes are:

- Direct injury
 - Unaccustomed exercise
 - Walking barefoot on the beach or in the sea
 - Burns from walking barefoot on hot pavements
 - Wearing inappropriate bathing shoes
- It is also important to remember to put sun cream on the top of your feet!

How often should foot checks happen?

Adults with diabetes should have a foot check:

- When diabetes is diagnosed and at least once a year after that.
- If they think they have a problem with their feet.
- If they have to go into hospital for any reason, and if they have any foot problems during the hospital stay.
- If they have to go into hospital for any reason, and if they have any foot problems during the hospital stay.

Young people with diabetes who are aged 12–17 years will be looked after by the hospital paediatric team (which looks after children and young people) or the hospital transitional care team (which looks after young adults who are preparing to move to adult services). They should have a foot check once a year as part of their diabetes annual review, and be given information about foot care. If they have any problems with their feet, they should be referred to see a specialist.

What does the foot check involve?

The foot checks will usually be done by the foot protection service. You'll need to take off your shoes and socks, and any bandages or dressings will be removed. Then, both your feet should be carefully examined.

This will involve:

- Finding out whether you have any foot problems at present.
- Examining your foot shape and footwear to see whether you may be at risk of rubbing or pressure.
- Checking your skin for changes in colour and looking for ulcers, sores, areas of hard skin and any signs of inflammation or infection.
- Testing the feeling in your feet to see how well the nerves are working.
- Taking the pulse in each of your feet to check the blood flow.
- Working out your risk (low, moderate or high) of developing a diabetic foot problem.

If you do have a foot problem, or if the foot check shows that you have a moderate or high risk of a problem developing, you may be referred to see another healthcare professional and seen more frequently. Definitions of risk are:

Low Risk:

- No risk factors present except calluses

Medium Risk:

- Deformity
- Neuropathy
- Non-critical limb ischaemia (reduced blood flow)

High Risk:

- Previous ulceration
- Previous amputation
- Being on renal therapy
- Neuropathy and non-critical limb ischaemia together
- Neuropathy in combination with callus and/or deformity
- Non-critical limb ischaemia in combination with callus and/or deformity

Frequency of checks according to risk:

- If the foot check shows that you don't have any foot problems (low risk), you will still need to have a foot check every year. Your healthcare professional should talk with you about your risk of developing foot problems in the future and explain how to look after your feet.
- Frequently (every 3 to 6 months) for people at moderate risk.



- More frequently (every 1 to 2 months) for those with a moderate risk or high risk where there is no immediate cause for concern.
- Very frequently (every 1 to 2 weeks) for those at high risk where there is immediate cause for concern.
- More frequent assessments may be necessary for those at moderate or high risk who are unable to check their own feet.


How can I look after my feet?

There are 10 Golden Rules to follow to look after your feet:

1. Never go bare foot.
2. Wear good fitting shoes – not tight or worn.
3. Break in new shoes gradually and make sure they don't rub.
4. Wash your feet daily using lukewarm water.

5. Keep your feet dry, especially between the toes.
6. If you use talc then use it sparingly.
7. Moisturise your feet to make sure they do not get dry or cracked.
8. Cut your toenails straight across, not deep into the corners.
9. Do not use heating pads, hot water bottles, iodine, Epsom salts or alcohol.
10. Check your feet daily and if there are any problems see your doctor or podiatrist.

For a more detailed look at these conditions, as well as others, IDDT has produced two **FREE** booklets, "**Looking after your Feet**" and "**Diabetes – Your 9 key Tests**". To get your copies contact IDDT using the details at the end of this newsletter.



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, 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 have 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 Hijrī 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 last 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 adverse health 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 fast are regarded

as partial or intermittent fasting. Both of the above are regarded as partial or intermittent fasting.

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 medication 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, commonsense 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.



Techy Tips – Part One

By Martin Hirst & Matt Daybles



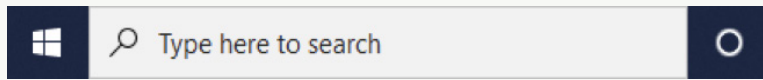
A few years ago, we printed an article about some ways in which you could make it easier to use a computer if you have visual difficulties. As we all know time passes by and as it does, the technology we use changes as well. Microsoft have always provided some options to make computer use easier but the range of these options is now wider than ever, so we thought it was time we caught up on these changes.

As with a lot of these things, they are not

difficult to set up and/or use but you need to know where to find them in the first place. Microsoft have conveniently put them all in one place so you can pick and choose which accessibility option work best for you. The options are grouped into different types according to their use and type. They include options to adapt:

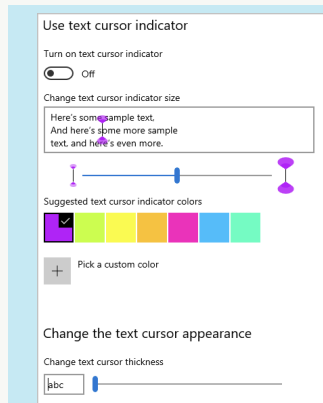
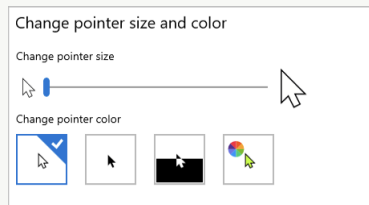
- Vision
- Hearing
- Interaction

In the first part of this article, we will look at how to adapt the vision setting on your computer. To start, find the search box at the bottom left of your screen and type in 'Ease of Access' then press enter.



This will open a window in which you will find options to change the way different features of your computer are displayed.

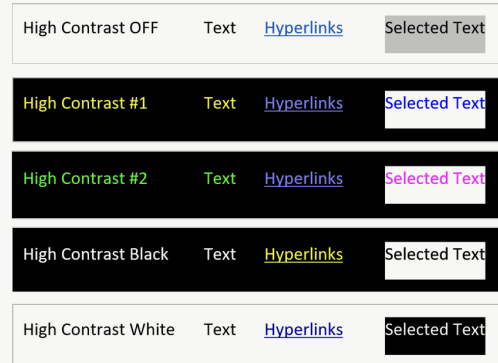
- **Display.** This allows you to make changes to the size of the text on your screen, the brightness of the screen and a range of other elements of the display. (Tip: Try turning off the 'Automatically hide scroll bars' option).
- **Mouse Pointer.** This option allows you to change the mouse pointer colour and size. The default size and colour for the pointer is the smallest and white but you may find it easier to have a larger pointer with a higher contrasting colour.



- **Text Cursor.** This is the vertical line in a block of text that shows you where you will type etc. next. Sometimes it is easy to lose this cursor so this option allows you to make it bolder or to highlight it with different colours.

- **Magnifier.** This pretty much does what it says on the tin and will magnify everything on the screen. To make them smaller again hold the windows icon key and also press the (-) key. It is also worth noting that even without this feature activated you can zoom in and out of documents and websites by holding the Ctrl key and scrolling the mouse wheel up and down.
- **Colour Filters.** This option allows you to change or filter selected colours displayed on the screen. It is particularly useful for people who are colour blind and has filters for both types of red-green as well as blue-yellow colour blindness.

- **High Contrast.** Effectively this inverts the colours on the screen, so, for example, black become white and vice versa. To turn on high contrast you need to press and hold the left alt and shift keys, then press the print screen (prt sc) key. To return the screen to its default display, simply repeat the above. Many people, either with or without any visual difficulties find high contrast settings easier to work with.



- **Narrator.** Again, this does very much what it says on the tin and, in short, will read aloud what appears on the screen. It has a whole range of options to allow it to be tailored to your individual preferences, including type of voice, volume and speed. To toggle Narrator on and off press Windows key + Ctrl + Enter.

In the second part of this article, we will investigate how your computer can be adapted looking at speech and key board settings. In the meantime, Microsoft have a very useful set of webpages on accessibility that can be found here:

www.microsoft.com/en-us/accessibility/windows

www.support.microsoft.com/en-gb/windows/make-windows-easier-to-see-c97c2b0d-cadb-93f0-5fd1-59ccfe19345d

Alternatively, the RNIB have a whole host of resources on this topic, along with a useful search facility:

www.rnib.org.uk/search/site/computer%20access



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.

- 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

50 Issues of Type 2 and You

This issue of Type 2 and You is a bit special, as it is the 50th issue we have produced. To mark this, the centre pages of this issue are a reprint of the first issue from back in October 2009. Looking back on it now has made us realise how far we have come with the publication. This is in no small part to the continued dedication of the printers contributors, designers and not least,

the readers who have ensured that Type 2 and You has gone from strength to strength. While many things have changed in the diabetes world since the first issue, one thing certainly has not – IDDT's dedication to ensuring that it continues to provide a valuable source of information and support for people living with diabetes.



Type 2 and You



ISSUE 1 OCTOBER 2009

If you have Type 2 diabetes, we hope this first publication of 'Type 2 and You' will be of interest and will help you to look after your diabetes.

IDDT is receiving an increasing number of requests for information from people with Type 2 diabetes who are not using insulin or who are about to go on to insulin. We are aware that our quarterly Newsletter is aimed at people who use insulin, whether they have Type 1 or Type 2 diabetes, so we hope that *'Type 2 and You'* will be of help to people on diet only or tablets and diet.

Type 2 diabetes is a progressive condition, so it may be that at some stage tablets and diet will not control blood glucose levels well enough, which means that you may have to have treatment with insulin. Understandably, many people worry about having to have insulin and it is our aim that future editions of *'Type 2 and You'* will have articles that help you through this situation and will explain that there are positive aspects to this as well as negative ones.

Having said all this, there are many things that Type 1 and Type 2 diabetes have in common. For instance, the complications that can happen are similar, the need for diet and exercise are similar. So the two conditions are not totally separate and it may be that you would like to receive both the Newsletter and *'Type 2 and You'* and IDDT is more than happy to supply both to you free of charge.

Whatever treatment you are using, understanding your diabetes and its treatment is essential and we hope that we can help you.

What IDDT can offer you . . .

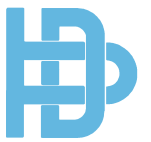
- ◆ **Understanding Your Diabetes** – a free booklet that explains the differences between Type 1 and Type 2 diabetes and describes the basic treatments of both.
- ◆ **Information Leaflets** – free leaflets on many aspects of diabetes, just send for a Publication list to see what is available.

All our information is written in non-medical language because IDDT is an organisation run by people who live with diabetes for people who live with diabetes.

**For further information contact IDDT, tel 01604 622837,
write to IDDT, PO Box 294, Northampton NN1 4PR
or e-mail enquiries@iddtinternational.org**



Looking After Your Feet



From early diagnosis of diabetes, most people are told to look after their feet. This is because long-term or poorly controlled diabetes can cause nerve damage (neuropathy). Most commonly this nerve damage affects the feet and can cause changes, including pain or loss of sensation.

Loss of sensation means that injuries to the foot may go unnoticed eg scalding to your feet with bath water that is too hot. Such injuries can develop into far more serious problems – almost half of all diabetes related admissions to hospital are for problems relating to the leg or foot.

Prevention is always better than cure and it is important to have your feet checked regularly by a health professional and to check your feet yourself every day.

What to check for

Any damage to your skin – cuts, blisters, burns and scalds can take a long time to heal if you have diabetes. Sometimes these wounds can become infected with the potential to become serious.

Hard skin – if an area of hard skin builds up then the pressure on the skin under it starts to increase. Eventually this pressure can cause a wound to form under the hard skin.

Develop a daily routine

It is important to develop a daily routine to check your feet so that any potential problems can be picked up early and be treated by a health professional.

Step One – Check your feet. Check for swelling, redness, changes in skin colour, injuries or pain.

Step Two – Wash your feet with warm water and soap. Dry your feet well, taking particular care to dry thoroughly between the toes.

Step Three – Moisturize. There are moisturizing creams available from your pharmacist which are specifically for your feet.

Golden Rules to follow

- ◆ **Never go barefoot.**
- ◆ **Wear good fitting shoes – not tight or worn.**
- ◆ **Break in shoes gradually and make sure they don't rub.**
- ◆ **If you need to use powder, use the unscented varieties and use it sparingly.**
- ◆ **Cut your toenails following the shape of your toe, not deep into the corners and not too short.**
- ◆ **Wash your feet daily using luke warm water.**
- ◆ **Do not use heating pads, hot water bottles, iodine, Epsom salts or alcohol.**
- ◆ **Check your feet every day and if there are any problems see your doctor or chiropodist.**



For more information on how to look after your feet or neuropathy, IDDT produces a leaflet 'Diabetic Neuropathy' which we can send you free of charge, call IDDT on 01604 622837 or visit our website:

www.iddtinternational.org

The Society of Chiropractors and Podiatrists also produce a very comprehensive range of information. Visit www.feetforlife.org or call 0845 450 3720



Swine Flu – IDDT Policy Statement

In July this year, swine flu was affecting 100,000 people per week in the UK and at the time of writing it is affecting about 4,000 people a week. It is an illness characterised by fever, sore throat, cough, fatigue, headache, muscle aches and sometimes vomiting and diarrhoea. People generally recover after 3-5 days. In people with diabetes, the blood sugar will be elevated during the infection and it is important to keep insulin doses up even though you may not be eating – it is also vital to drink plenty of fluids as dehydration will increase the risk of ketoacidosis. Regular blood testing is important during the illness. The chest infection may be quite severe and patients with diabetes should be given priority by their doctors. Tamiflu and paracetamol are safe to give in diabetes and will shorten the illness by 2-3 days.

What can I eat? What is a carbohydrate?

When people are first told that they have Type 2 diabetes, one of the many things they are told is to eat a healthy diet but how many people, up until this time, have had to give serious consideration to the types of food they eat and the amounts of each type?

The recommended diet for people with diabetes is the same standard 'healthy diet' also recommended for the general population, one which is high in carbohydrates, low in fat and with plenty of fruit and vegetables. To follow this diet to the best of their ability, people need to have an understanding of the basic food groups and the effects that these will have on their blood glucose levels/diabetes.

The term 'food groups' refers to a method of classifying foods that are eaten on an everyday basis, according to their nutritional properties. There are five basic food groups, proteins, carbohydrates, fats, fibre, vitamins and minerals.

Proteins – They help your body to grow and repair itself. They are found in meat, poultry, fish, dairy products, eggs and beans.

Fats – They provide energy and help your body to grow and repair itself. They are found in red meats, dairy products, some poultry and fish. Ready meals, cakes and pastries also contain fats.

Fibre – It helps your body to digest food. It is found in cereals, bread, fruit and vegetables.



Vitamins and Minerals – They are good for keeping your body healthy. Vitamins are mostly found in dairy products, fresh fruit and vegetables. Minerals are found in lots of foods but especially in fresh fruit and vegetables.

Carbohydrates – They give you energy. They are sugars and starches and are found in bread, potatoes, rice, pasta, cereals and sugars. Eating carbohydrates directly affects the amount of glucose in the blood.

People who have Type 2 diabetes either do not produce enough insulin or the body does not use correctly the insulin it does produce. So when people with Type 2 diabetes eat carbohydrates their blood glucose levels rise.

Because of this, it is important for people with Type 2 diabetes to keep a check on the amount of carbohydrate they eat. However, it is not just the amount of carbohydrate that is eaten that is important but also the type of carbohydrate.

Different types of carbohydrate

Quick-acting carbohydrates

Some carbohydrates are quick acting eg sweet foods such as cakes, puddings, chocolate and some fruits. Sugary foods will raise blood sugars more quickly and higher in people with diabetes compared to those without diabetes. Sugary carbohydrates tend not to last as long in the body so blood sugars may drop before the next meal. Sugary carbohydrates tend to make blood glucose levels peak and trough.

Slow-acting carbohydrates

Some carbohydrates are slower acting and last longer eg bread, potatoes and high fibre cereals. These carbohydrates do not raise the blood sugars as quickly or as high after eating. They last longer and therefore tend to give more even blood glucose levels.

If you want to know more about foods, their carbohydrate value and some great recipes, then you may find the following resources useful:

- ◆ IDDT produces a free leaflet on carbohydrates and can also supply a copy of the Collins Gem book ‘Carb Counter’ at a subsidised cost of £2.99, just telephone IDDT on 01604 622837
- ◆ Dana Carpender’s low carb recipes visit her website:
www.holdthetoast.com her books can be obtained from
www.amazon.com
- ◆ Dr Richard Bernstein’s website is www.diabetes-normalsugars.com His book Diabetes Solution, A Guide to Achieving Normal Blood Sugars is published by Little Brown & Co and the ISBN is 0316099066
- ◆ IDDT is frequently asked for information about carbohydrate values of foods and there is a comprehensive list on this website:
www.carbohydrate_counter.org
- ◆ Ron Raab – the low carbohydrate insulin regime: [www.diabetes-low-carb](http://www.diabetes-low-carb.com) or the University of Pittsburg site for a Power Point Presentation
<http://www.pitt.edu/~super1/lecture/lec17721/index.htm>
- ◆ Diabetes Life have a website that has hundreds of useful recipes:
<http://www.dlife.com/diabetes/diabetic-recipes/>

Insulin



What is insulin and what does it do?

Insulin is a hormone made in your pancreas; a gland located behind your stomach. It allows your body to use glucose for energy. Glucose is a type of sugar found in many carbohydrates. After a meal or snack, the digestive tract breaks down carbohydrates and changes them into glucose (sugar). This glucose is then absorbed into the bloodstream. Once glucose is in your bloodstream, insulin allows cells throughout your body to absorb the glucose and use it for energy.

For people with Type 2 diabetes, the pancreas does not work properly or does not produce enough insulin or indeed, none at all, causing blood glucose levels to rise. While other medicines may remedy this, sometimes they are not effective and insulin injections become necessary.

Insulin is arguably the most powerful anti-diabetic treatment available and its most important function is to reduce blood glucose levels. This, as with any medication, has its positives and negatives and these are discussed later in this piece.

Different types of insulin

While there are many different insulins available and can be grouped in several ways, such as animal, human and analogue, they can also be roughly split in to three groups another way; long, intermediate and short acting insulins. They are split into these groups according to their duration of action (the length of time they remain active in the body).

The table opposite shows the onset (the time it takes for the insulin to start working), the effective duration (the length of time the insulin remains effective in the body) and the maximum duration (the length of time the insulin remains in the body). All measurements are in hours and are approximate, with different insulins acting differently in different people.

Type of insulin	Onset of Action	Effective Duration	Maximum Duration
Short	0-5 - 1	2 - 3	3 - 6
Intermediate	2 - 4	4 - 10	14 - 18
Long	2	24	24

It is also important to remember that:

- The speed of action of injected insulin varies at different injection sites. For example, some insulins act much quicker if injected above the belly button rather than below.
- The depth of the injection can also affect the speed of action and it is important to have the correct sized needle for the amount of fat at injection sites.

These factors are learned from experience which, as with anything, is gained over time.

Moving on to insulin

For some people other diabetes medicines become less effective over time, so moving on to insulin may be necessary. So far, this all sounds fairly daunting and managing a regime of injecting short and long-term insulins can be complex, so it is likely that you will start by taking a pre-mixed insulin. This is a combination of two insulins mixed together, one short-acting and one intermediate-acting or long-acting. This has its advantages in that it can reduce the number of injections needed each day and also avoids the complexities of drawing up your own different insulins. There are risks and benefits to insulin therapy and your doctor or nurse should discuss these with you before you start using insulin. The main risk is the increased possibility of low blood sugar levels (hypoglycaemia or hypos), whereas benefits include more stable blood sugar levels and an improvement in general well-being.

Before starting on insulin most people will have been taking tablets, commonly metformin and a sulphonylurea (e.g., gliclazide), which increase the body's ability to use the amount of insulin it produces or stimulate the body to produce more insulin respectively. Because of the way sulphonylureas work, they can lower blood sugar levels and cause hypos.

Your doctor or nurse should show you how to gradually increase your insulin dose until your blood sugar levels are stable at a level agreed at the start of treatment. Regular blood testing and recording is important to avoid hypos and to stabilise your blood sugar levels as quickly as possible. If you do find you are having frequent hypos then you should discuss this with your doctor or nurse and it is likely that they will reduce or discontinue the sulphonylurea. Here is a list of things that you **should** be given before you start using insulin:

- Education about how to use the insulin and the injection device prescribed for you, how insulin works, how it affects the body, and how you need to think about and control what you eat and drink.
- Information about hypoglycaemia, how to best avoid it and what to do if it happens.
- A blood glucose meter to check your blood sugar levels, and information about how to use it.
- How to read the results and how to use them – for example, you should have information on what to do if there are unexpected changes in your blood sugar levels (see below).
- Support (on the telephone and face-to-face) from a doctor or nurse with training and experience in managing insulin therapy.

Blood Glucose Levels

As we have said, the main effect of insulin is to lower blood glucose levels. Similarly, not enough insulin can cause blood sugars to rise. Below are the NICE recommended target blood sugar levels. Levels outside these recommendations are considered to be low or high respectively. These figures provide general guidance only. An individual target set by your healthcare team is the one you should aim for.

- A normal pre-prandial (before meal) blood glucose level will be between 4 and 7 mmol/l.
- After eating (post-prandial) levels should be below 9 mmol/l when tested 2 hours after a meal.

Low and high blood glucose levels and their treatment

The causes of low and high blood glucose levels are far too many and varied to go into here but there are several basic rules that should be followed in each case.

Treating a hypo:

- Give a quick-acting carbohydrate in the form of a sugary drink or sugary food. This should then be followed by some
- long-acting carbohydrate such as a wholemeal bread sandwich or a bowl of cereals, to stop the glucose levels dropping again.
- If the hypo remains untreated then the blood sugars drop even further

and this can lead to coma which, in some people, may be accompanied by a seizure. Medical treatment must be sought under these circumstances.

Treating a high blood sugar:

- Most people will rectify a high blood sugar by administering additional insulin.
- If this does not work and symptoms persist then medical advice/attention should be sought.

The question of "control" and complications

Finally, we can touch on the issues of control and complications. The term "control" refers to how well blood sugars are maintained within normal levels. Staying within normal levels is referred to as being well controlled. Frequent deviation from this range is referred to as being poorly controlled one you should aim for.

The degree of control that can be achieved is dependent on several things such as lifestyle and adherence to an advised diabetic regime. Good control can give general well-being and good health. Poor control does not facilitate these things and in the long term can lead to diabetic complications, particularly in those who run high blood sugar levels.

Complications of diabetes are a range of health conditions that may develop. These can commonly affect the eyes, heart and cardiovascular system, the kidneys and nerves. Your doctor or nurse should conduct a series of annual health checks to monitor/manage any complications that may arise.

IDDT has a **FREE booklet "Type 2 Diabetes – Management & Medication"** which looks at many aspects of Type 2 diabetes, including insulin. To get your FREE copy then simply contact IDDT using the contact details at the end of this newsletter.

Bits and Pieces

Effects of SGLT-2 inhibitors on serum uric acid (SUA) in patients with T2DM

A study in Asia has shown that SGLT-2 inhibitors could significantly reduce SUA levels in patients with T2DM, especially dapagliflozin. Therefore, SGLT-2 inhibitors look extremely promising as an anti-diabetes treatment option in patients with T2DM with high SUA (Diabetes, Obesity and Metabolism). Bearing this in mind, high levels of uric acid in the blood (Hyperuricemia) is a classic feature of gout, a condition to which people with Type 2 diabetes are more prone.

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 (Journal of Diabetes Research and Clinical Practice). 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.

<https://www.diabetesselfmanagement.com/news-research/2021/10/08/sedentary-time-linked-to-foot-ulcer-risk-in-diabetic-peripheral-neuropathy/>

Type 2 diabetes in adults – everything NICE says in an interactive flowchart (NICE).

The National Institute for health and Clinical Excellence (NICE) has launched an on-line flow chart allowing viewers to easily see and access the wide range of documents NICE has published about Type 2 diabetes, from prevention to the management of complications. It can be found here:

<https://pathways.nice.org.uk/pathways/type-2-diabetes-in-adults>

The impact of COVID-19 vaccination on blood glucose levels in individuals with Type 1 and Type 2 diabetes using insulin.

Concerns exist about the effects of vaccines on glycaemic control among people living with diabetes, potentially holding them back from getting vaccinated. Immune responses can trigger alterations in insulin sensitivity, potentially increasing insulin requirements. The study published in Diabetes Care revealed that COVID-19 vaccination per se did not change glycaemic control in people with diabetes. Researchers suggest that further study may be warranted.

SGLT-2s and anaemia among diabetic patients in real clinical practice.

SGLT2i (inhibitors) are reported to increase haemoglobin levels, thus reducing anaemia, in multiple clinical trials. This beneficial effect of SGLT2i on anaemia seems to have a partially beneficial role in improving cardiovascular events. However, it is unknown whether SGLT2i improve anemia in real clinical practice in diabetes patients with various comorbidities and reduced kidney function. The study showed two things: (i) the use of SGLT2i was associated with higher hemoglobin among those with advanced kidney diseases; and (ii) the use of SGLT2i was associated with a lower prevalence of anemia in real clinical practice. (Journal of Diabetes Investigation)

All Wales Medicines Strategy Group advice on prescribing SGLT-2s and Cardiovascular Disease.

In the last issue of Type 2 and You we wrote about the BMJ's guidance on the prescribing of SGLT-2s and GLP-1s for people with cardiovascular disease (CVD) and/or chronic kidney disease (CKD). In September last year, the All Wales Medicines Strategy Group published its own, complimentary, evidence on the prescribing of particular SGLT-2s for these conditions.

For example, it recommends empagliflozin over ertugliflozin for people with high-risk cardiovascular disease.

The full recommendations can be found here:

<https://awmsg.nhs.wales/files/guidelines-and-pils/all-wales-advice-on-sglt2-inhibitors-in-t2d-and-cvd-patient-characteristic-considerations-pdf/>

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. It covers areas such as:

- The impact of sleep on health and diabetes management

- The benefits of improving the quality of sleep
- How to catching 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 using the details at the end of this newsletter.

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. This can be done in advance of the ADM by putting forward a nomination in writing, along with the consent of the nominee, addressed to the IDTT office. 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 ring IDDT on 01604 622837 or email enquiries@iddtinternational.org. If you would like to read the report onlast year's event then go to www.iddt.org/iddt-get-together-october-2021.

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.



Santa's Presents



Blue Trees



First Day of Christmas

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



Christmas Veggies



Three Kings

Just to remind you....

2022 Diabetes Everyday Diaries still available!

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**



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
Visit our website www.iddtinternational.org**



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