



Caring for a person with

diabetes

DIABETES IRELAND

Diabetes Ireland is a national charity dedicated to providing support, education and motivation to people with diabetes.

SERVICES INCLUDE:

[Patient Support](#) via our lo-call diabetes helpline and local volunteer support groups.

[Access to a wide range of diabetes information leaflets](#) and our quarterly magazine “Diabetes Ireland”; online support and information via www.diabetes.ie

[Support for children with diabetes and their families](#) via our Sweetpea Kidz Club; adolescent adventure activities, family weekends and parent support groups.

Access to [direct professional healthcare](#) chiropody & podiatry (foot care), dietetic and counselling services at our [Diabetes Care Centres](#).

Access to [community based patient health education](#) conferences and structured education programmes.

Co-ordinating national and local diabetes [awareness](#) campaigns about the symptoms and risk factors for Type 1 and Type 2 diabetes.

[Health promotion](#) initiatives including: schools awareness, workplace awareness, [early detection and prevention initiatives](#) and diabetes screening.

Funding Irish and international [research](#) via our subsidiary charity ‘Diabetes Ireland Research Alliance’.



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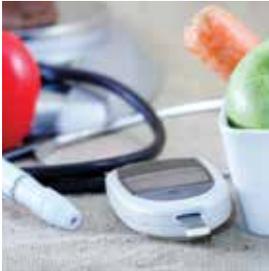
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What is diabetes?

Diabetes mellitus is a long term condition where the amount of glucose (sugar) in the blood is too high. This happens when the body cannot use glucose properly.

THERE ARE DIFFERENT TYPES OF DIABETES.

TYPE 1 DIABETES occurs when the body completely stops producing insulin. Insulin allows the glucose from food to be moved from the blood to be used in cells to provide energy. Type 1 diabetes develops most frequently in children and young people of normal weight. It is not related to poor lifestyle choices and is not preventable. Type 1 diabetes is managed with multiple daily insulin injections or by using an insulin pump, along with healthy eating and regular physical activity.

TYPE 2 DIABETES occurs when the body is able to produce some insulin, but not enough, or the produced insulin does not work properly. Type 2 diabetes is managed by healthy eating, regular physical activity and medication (tablets). Some people with Type 2 diabetes will also require injections – either of insulin or another hormone that prolongs the production of their own insulin – as part of their treatment.

Note: If a person with Type 2 diabetes requires insulin to manage their blood glucose levels this does not mean they have developed Type 1 diabetes, rather they have Type 2 diabetes requiring insulin.



PREDIABETES occurs when the blood glucose level is higher than normal but not high enough for a diagnosis of diabetes. Healthy eating and regular physical activity will help to prevent or delay the onset of Type 2 diabetes. A person with pre-diabetes should have annual blood tests to check for progression to Type 2 diabetes.

GESTATIONAL DIABETES can occur in women who are pregnant. The pregnancy hormones work against the body's insulin, resulting in high blood glucose levels. Gestational diabetes usually only lasts for the pregnancy but the woman has an increased risk of developing Type 2 diabetes in the future. A person who has had gestational diabetes should have annual blood tests to check for Type 2 diabetes.

Signs and Symptoms

SIGNS AND/OR SYMPTOMS OF HIGH BLOOD GLUCOSE MAY INCLUDE:

Feeling tired all the time

Always being thirsty or having dry mouth

Blurred vision

Needing to pass urine very frequently

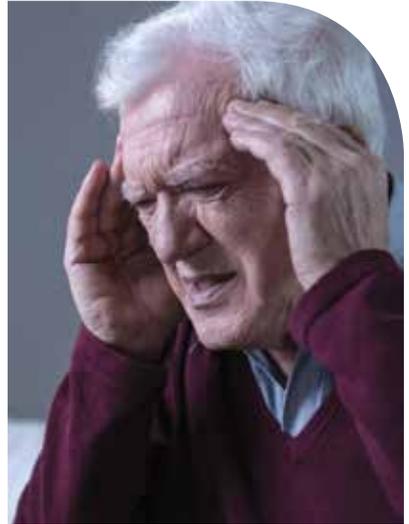
Having frequent infections

Slow healing sores or cuts

Genital irritation or thrush

Unexplained weight loss

Numbness, pain or tingling in hands or feet (often worse at night).



Carers need to be alert to the above signs and symptoms and ask the doctor to check for diabetes if the person is not already diagnosed.

The above symptoms may also be present in a person who has diabetes and if present should be brought to the attention of their doctor.

TYPE 2 DIABETES MAY NOT ALWAYS BE ACCOMPANIED BY OBVIOUS SYMPTOMS.

Often people are diagnosed with diabetes only when they have a set of routine blood tests performed with their GP or they present to the doctor with a complication of high blood glucose levels; therefore, regular screening is recommended for all people with risk factors for Type 2 diabetes.

Factors that increase risk of getting Type 2 Diabetes

Family history of Type 2 diabetes

Age (incidence increases over age 40)

Being overweight for your height

Not being physically active

Previous abnormal blood glucose levels - for example gestational diabetes

History of use of steroids

Having high blood pressure or high cholesterol

The more risk factors a person has, the greater their chance of developing Type 2 diabetes.

Management of Diabetes

Blood glucose levels must be kept as close to normal as possible. High blood glucose levels in the short term can leave a person feeling unwell and tired (see Signs and Symptoms Page 4). High blood glucose levels in the long term can cause damage to blood vessels, and to blood flow to nerve endings. This can lead to complications which include:

- Eye disease
- Heart problems
- Kidney complications and high blood pressure
- Foot problems
- Increased incidence of heart attack and stroke.

Everyone with diabetes can reduce their risk of future ill-health by eating a balanced diet, maintaining regular activity levels within their abilities and taking prescribed medication at correct times.



TYPE 1 DIABETES is managed through healthy eating (with an understanding of how, and what foods affect blood glucose levels) regular physical activity and insulin injections or insulin pump therapy.

TYPE 2 DIABETES is managed through healthy eating, regular physical activity and will often also include medication, in tablet or injectable form. Some people with Type 2 diabetes will also require insulin injections as part of their treatment.



Medications & Injections

There are several categories of medications for the management of diabetes. The person you are caring for may be prescribed a combination of these medications. Check with a member of the diabetes team or the pharmacist how the prescribed medication works and if there are any potential side effects.

It is important to ensure that the person with diabetes continues to take their diabetes medication, correctly, and at times that have been prescribed. Medication may need to be reviewed and adjusted, if blood glucose levels are high/low and/or if dietary intake becomes reduced.

If you are caring for a person with diabetes who is taking injections as part of their diabetes treatment, you must be confident that the person is assessed regularly with regard to their ability to decide on and ability to give their injections. If you have concerns, work with the diabetes team or practice nurse with respect to responsibility, best practice and accuracy.

See page 42–46 in this booklet for a brief overview of insulin types and medications for diabetes that are currently available.

Blood glucose levels

In people without diabetes, blood glucose levels are normally between 4 and 7 mmol/l, but when a person has diabetes the levels can go higher or lower than this.

Some people may need to check their own blood glucose levels at home at various times and depending on what medication they are on. This is done using a home blood glucose meter and a finger prick blood test.

Note: blood glucose lancing devices should never be shared.

If the person you are caring for is unable to test their own blood glucose levels, their GP, practice nurse or diabetes nurse will teach you how to do it for them. The health professional will also advise when the best times to test are, what the target range for blood glucose levels should be, and what to do when targets are not reached.

An important point as a carer is to be aware of the eating pattern of the person you are caring for, and note and deal with changes in eating habits and periods of poor appetite (refer to section on healthy eating and eating tips further on in this booklet).

Low blood glucose levels



(HYPOGLYCAEMIA OR HYPO)

All insulin treatment and some oral medications to manage Type 2 diabetes may increase a person's chances of having low blood glucose levels. Check with the diabetes team or pharmacist if the person you are caring for is taking medications - either injections or tablets - that puts them at risk of low blood glucose levels.

Hypoglycaemia occurs when the blood glucose level drops under 4mmol/l. Low blood glucose is often referred to as a 'hypo'.

In people at risk of low blood glucose levels any of the following may cause a 'hypo'.

CAUSES MAY INCLUDE

- Missing a meal or a snack
- Delayed meals
- Not eating adequate carbohydrates
- Exercising more than normal
- Drinking alcohol
- Taking too much medications or if the dose of the medication is too high
- Being in a hot climate.

WARNING SIGNS OF A HYPO INCLUDE ANY OR A COMBINATION OF THE FOLLOWING SYMPTOMS

- Weakness
- Hunger
- Shaking
- Sweating
- Feeling confused or dizzy.

Occasionally a person may not experience the warning signs of a hypo. If you feel the person you are caring for is unwell, check the blood glucose level to confirm that it is not a high or low blood glucose level causing the problem.

TREATMENT OF A HYPO

- 1 If possible check the blood glucose level

- 2 If it is less than 4mmol/l give 4-5 glucose tablets or 100mls of lucozade®* or 150–200mls of sugary drink (provided the person is fully conscious)

- 3 Follow this with something more substantial, a snack, sandwich or meal if it is due

- 4 Recheck blood glucose level after 15 minutes to ensure it has returned to normal. If it is still less than 4mmol/l repeat step 2

- 5 If unresponsive, do not give anything by mouth, call emergency services

A hypo can happen in minutes and needs to be treated immediately.

If unable to test the glucose level – it is best to treat the hypo as above. If a person is at risk of a hypo they should carry some fast acting carbohydrate such as lucozade® or glucose sweets, or have them close by at all times.

Carrying identity information e.g. in a wallet, or wearing an identity bracelet saying the person has diabetes may also be appropriate.

* is a trademark and is registered and protected by its respective owner

FURTHER IMPORTANT TIPS RE HYPO (LOW BLOOD GLUCOSE):

If you are caring for someone with diabetes you need to know if the medication they are on increases their risk of hypos.

If they are at risk:

- Ask the person you are caring for how they feel when their blood glucose drops too low, and learn to be alert for these signs
- If they are not aware of symptoms of hypos when they occur, and/or is at the risk of severe hypo episodes, you may need additional training in the management of this situation. Discuss this with the diabetes team
- Be aware of the eating pattern of the person you are caring for. If they have a poor appetite, or are eating smaller portions than previously, or have weight loss – resulting in consistent low blood glucose levels, their diabetes treatment may need to be reviewed by a doctor
- Always question the reason why the hypo occurred in order to help prevent it happening again.

TIPS TO AVOID HYPOS

Have regular meals

Have a snack close at hand when exercising

If having more than one alcohol drink, take a snack (only if at risk of a hypo)

Always have quick acting carbohydrate i.e. glucose tablets/lucozade® close by.

High blood glucose levels

If blood glucose levels are consistently high in the short term it may cause the person you are caring for to feel unwell. Over long periods high blood glucose levels can cause complications affecting the eyes, kidneys, heart and feet.

HIGH BLOOD GLUCOSE LEVELS CAN BE DUE TO:

Forgetting or omitting to take diabetes medication

Eating more carbohydrate than usual

Being less active than usual

Having an illness/stress/or infection

Some medications such as steroids

Dehydration i.e. not taking enough fluids.

See [Signs and Symptoms of High Glucose Levels](#) on page 4.



MANAGING HIGH BLOOD GLUCOSE LEVELS

- Try and identify a reason why blood glucose levels may be high
- Drink sugar free fluids to stay hydrated
- Try to maintain a healthy intake of food
- Check glucose readings frequently to observe a pattern, and to see if readings are improving.

SICK DAY MANAGEMENT

- If unwell with the flu or an infection, a medical check-up may be necessary
- Keep taking your medications as prescribed
- Check blood glucose levels more frequently
- Consult with your doctor or nurse with any queries.

If you care for a person with **Type 1 diabetes** it is essential that you are familiar with what immediate steps to take in the event of illness, and how to check for ketones*. Take the opportunity to update yourself now and have SICK DAY instructions in written format from the diabetes team.

If you are caring for a person on insulin injections it is essential that they never miss an insulin injection especially in the event of illness.

If the blood glucose levels for the person you are caring for are above target range, check with the diabetes team what you should do.

* Ketones (waste product of fat) may be present in the blood or urine when glucose levels are high and the body is breaking down fat for energy. If present this can lead to a potentially life threatening condition known as Diabetic ketoacidosis (DKA). See www.diabetes.ie/managing-diabetes-illness

NB: IF IN ANY DOUBT CONTACT THE DIABETES TEAM

Physical activity

Regular physical activity can help control blood glucose by helping the body's insulin work better. It can also help with weight loss as during activity the body burns up its fat stores and uses them for energy.

For the majority of people, 30 minutes of brisk activity 5 days a week is recommended. In order to get the most benefits, a person should try to move at a pace that has them feeling warm but capable of carrying on a conversation. A medical practitioner or nurse can advise on the most appropriate type and amount of activity an individual should do.

Taking regular physical activity may not be possible for everyone. Chair based exercises are useful if mobility is limited, and can be part of everyone's regular activity. For more information See www.diabetes.ie patient information booklets.



HERE ARE SOME SIMPLE WAYS OF INCREASING ACTIVITY LEVELS:

Go up and down the stairs

Get up to switch channels on the television

Move around the room during advert breaks in TV or radio programmes

Get off the bus a stop earlier

Park the car in the most distant part of the car park from where you are going

Walk to the local shop

Being active in the garden is a great way to both be active and socialise with neighbours.



IF YOU CARE FOR SOMEONE WITH DIABETES AND YOU WOULD LIKE TO ENCOURAGE THEM TO BECOME MORE ACTIVE CONSIDER THE FOLLOWING:

- Discuss any activity plans with their medical team
- Simple chair based exercises might be appropriate. If the person lives in residential care or attends a day care service seek further advice by speaking to the physiotherapist or a member of the professional care team
- If the person is at risk of hypoglycaemia you should check their blood glucose level before and after longer activity sessions. They may need to take extra carbohydrate prior to activity and should also carry some quick acting carbohydrate in case a hypo occurs.

Complications of Diabetes

Having high blood glucose levels over an extended period of time (years) can cause damage to the blood vessels and nerve endings leading to eye, kidney, foot problems and heart disease. Uncontrolled high blood pressure, high cholesterol and smoking can also increase the risk of developing complications of diabetes.

Complications of diabetes do not always cause symptoms. Therefore it is essential that everyone with diabetes has certain regular health checks.

REGULAR HEALTH CHECKS NEED TO INCLUDE:

Body weight, body mass index and waist circumference measurement

Blood test known as HbA1c (3 monthly long term “diabetes control” test)

Blood test and urine test to check kidney function

Blood pressure review

Cholesterol review

Eye screening – see www.retinascreen.ie

Foot assessment for circulation and sensation

Other blood tests may include liver function tests and thyroid function tests.

Speak with the diabetes team, or doctor or nurse for further information regarding health checks

DIABETES APPOINTMENTS SHOULD ALSO INCLUDE:

- A review of medication including current insulin/medication regimen suitability
- Dietary review
- Physical activity discussion
- A review of injection technique and injection sites if on injections
- Flu and pneumonia vaccination plan
- Discussion about smoking cessation if appropriate.



Foot Care

Everyone with diabetes should have an annual foot assessment by a healthcare professional to check for the presence of foot problems. This foot assessment checks for problems related to circulation and sensation. The healthcare professional should also advise regarding day to day foot care that is essential for people with diabetes.



Daily Foot Care

As a carer you may need to assist in daily foot care if the person you are caring for is unable to do so, e.g. due to a physical disability or a visual impairment. You should also be aware if the person is at risk of foot problems i.e. if they have reduced circulation or sensation. The doctor or podiatrist (foot specialist) needs to be contacted without delay if any foot problems are detected.

TO PREVENT FOOT PROBLEMS DAILY FOOT CARE IS VITAL AND SHOULD INCLUDE:

Examine the feet daily including in between the toes and LOOK for any colour changes, bruising, cracked or hard skin, problem toenails, fungal nail infections or swelling.

If you see anything you are not sure of, it is always best to seek advice from a health professional.

Wash the feet in lukewarm water and dry thoroughly especially in between the toes.

If the skin is dry it may be necessary to moisturise the skin but don't moisturise in between the toes.

Wear clean cotton socks daily, ensuring they are not too tight.

Not walking barefoot.

Examine footwear before putting it on to ensure that nothing has fallen into the shoes that may cause injury.

Ensure good footwear such as well-fitting shoes that provides support around the arch. Shoes should be soft, cushioned, seamless leather shoes with laces or a soft strap to fasten. Slip on shoes are not recommended.

Minor cuts and blisters should be kept clean and checked daily to ensure they are healing. Do not burst blisters; cover any minor cuts with a dry sterile dressing. If no improvement is noted contact the GP, nurse or podiatrist.

Use of hot water bottles and sitting too close to the fire or radiator is not recommended in case of burns.

Corn plasters are not advisable for people with diabetes as they may burn the skin.

Do not depend on the person with diabetes feeling pain. Sensation may be absent if a person has nerve ending damage.

OTHER CONSIDERATIONS

ENTITLEMENTS

All people with diabetes are entitled to diabetes related medication and monitoring supplies free of charge. A person with a medical card can apply also for a Long Term Illness (LTI) card.

The LTI card entitles a person to obtain diabetes related medication without having to pay prescription charges. This form can be obtained from the doctor, pharmacist or local HSE office.

See www.hse.ie or contact the local health office with respect to information regarding carers allowance.

See also www.diabetes.ie

DIABETES CYCLE OF CARE

This service came into effect in October 2015.

Under this service, if the person you are caring for has a medical card or GP visit card, they are entitled to have a full structured review of diabetes twice a year by their GP.

Having diabetes is not an issue for driving but if a person is taking medications that leave them at risk of hypoglycaemia (low blood glucose) extra precautions must be taken and the National Driver Licence Service (NDLS) informed.

Check with the pharmacist if the medications prescribed put the person at risk of hypoglycaemia e.g Insulin or sulphonylureas

If not at risk of hypoglycaemia the (NDLS) National Drivers Licencing Service do not need to be informed, but do declare diet controlled diabetes as a pre-existing health condition where indicated on application/ renewal form and remember the NDLS must be updated if the person subsequently starts any of the medications that puts one at risk of hypoglycaemia.

NDLS CONTACT DETAILS:

Tel 1890 406 040 Email: medicalfitness@rsa.ie Website: www.ndls.ie

You must also inform your motor insurance company of diabetes.

DRIVERS AT RISK OF HYPOGLYCAEMIA ARE ADVISED TO TAKE THE FOLLOWING PRECAUTIONS:

Always carry glucose meter and blood glucose strips. Check blood glucose before driving and stop every two hours while on a journey.

If blood glucose is 5.0mmol/l or less, take a snack. If it is less than 4.0mmol/l or feel hypo, do not drive and take appropriate action to correct blood glucose level.

If hypoglycaemia develops while driving, stop the vehicle as soon as is safe to do so. Switch off the engine, remove the keys from the ignition and move from the driver's seat. Driving must not recommence until 45 minutes after blood glucose has returned to normal. It takes up to 45 minutes for the brain to recover fully.

Always keep an emergency supply of fast-acting carbohydrate such as glucose tablets, Lucozade® or sweets within easy reach in the vehicle.

Carry personal identification to show that you have diabetes in case of injury in a road traffic accident.

Particular care should be taken during changes of insulin/ medication regimens, changes of lifestyle, exercise, travel and pregnancy.

You must take regular meals, snacks and rest periods on long journeys. Always avoid alcohol.

More information on driving with diabetes for group 1 and 2 drivers is available from Diabetes Ireland. Lo-call 1850 909 909 or see www.diabetes.ie or www.rsa.ie

Healthy Eating and Diabetes

A healthy diet contains a balance of the 3 main nutrients – proteins, fats and carbohydrates. Eating regular meals make it easier for the body to control blood glucose levels. Some medications require attention to the timing of meals, whereas others are less strict – talk to the dietitian or diabetes care team about flexibility with meal plans.

Eating well can improve blood glucose control, and reduces the risk of developing long-term complications associated with diabetes.

When a person has diabetes, their nutritional needs are virtually the same as everyone else's – no special foods are needed. A healthy balanced diet such as that outlined by the food pyramid is suitable for most adults.

A dietician can provide individually tailored advice for a person with diabetes. The GP or diabetes care team can refer to HSE services, or see www.indi.ie to access a dietician privately.

See www.diabetes.ie for more information on diabetes and diet and for recipe ideas.

HERE ARE SOME HEALTHY EATING TIPS:**EAT REGULAR MEALS**

Meals should be eaten at regular times each day. It is a good idea to have a breakfast, a lunch or tea time meal and a dinner.

If a person is hungry in between meals then a low fat snack e.g. portion of fruit or a diet yogurt are good choices.

Eating regularly can mean planning ahead.

For example, if making a long journey, prepare some food to take along so there is something suitable available to eat at the usual time.



CARBOHYDRATES

This food group has the largest effect on blood glucose levels because when they are digested carbohydrates are broken down into glucose (sugar). Carbohydrates consist of sugars and starches and are an important energy source for the body and brain. With diabetes it is important to choose both the right amount and type of carbohydrates to help control blood glucose levels.

THE FOLLOWING FOODS ARE SOURCES OF CARBOHYDRATES:

STARCHY CARBOHYDRATES	SUGARY CARBOHYDRATES	NATURALLY OCCURRING SUGARS
All types of breads, wraps and crackers Potatoes Cereals and oats Pasta / Rice / Noodles Yam/Plantain	All sweet foods (cakes, chocolate, biscuits, jams, marmalades, non-diet fizzy drinks etc.)	Fruit and fruit juices Pulse vegetables (peas, beans, lentils) Dairy food (milk, yogurt)



It is a good idea to include starchy foods with each meal. Choose similar sized portions of carbohydrate at each main meal as this can help to control blood glucose levels.

Try to use wholegrain varieties of these foods to increase the fibre content of the diet e.g. wholegrain bread, wholegrain cereals, whole wheat pasta and brown rice. Adequate fibre in the diet ensures healthy bowel functioning.

If a person is referred to a dietitian they will be advised on how many portions of the different food groups they should eat. A person's age, gender and activity levels will all determine number of portions that a person needs to eat for a healthy balanced diet.

Sugar and sweet foods can cause blood glucose levels to rise outside the target range. It is important to choose foods that have low sugar content. The following table shows suitable healthy alternatives.

Tips for healthier food choices

HEALTHY OPTIONS

INSTEAD OF...	GO FOR...
Breaded or crumbed chicken	Skinless chicken and turkey
Fatty meats	Meat with little visible fat
Battered fish	Plain fish without coating, tinned fish
White bread	Wholegrain breads
Cream crackers	Oat cakes, rye crackers
Sugary cereals	Porridge, or oat and wholegrain based cereals
Full fat milk	Low fat, or skimmed milk
Yoghurt	Plain, natural, diet or 0% yoghurt
Butter	Oil-based spread or reduced fat spread
Mayonnaise	Low fat or extra light mayonnaise or relish or chutney
Salads made with mayonnaise	Plain salads or those dressed with vinaigrette
Crisps	Popcorn, rice cakes, baked crisps
Sugary drinks	Sugar free squash, water, fizzy drinks labeled diet, free or zero
Sugar, honey, syrup, treacle	Sweetener such as Canderel®, Hermesetas, Splenda®, Stevia

Having Type 2 diabetes increases the risk of coronary heart disease but eating less fat in the diet can help reduce that risk. As well as eating less fat overall, it is important to eat the right types of fat.

TYPES OF FAT IN OUR DIET:

SATURATED fat in our diet raises bad cholesterol and increases the risk of a heart attack and stroke. Saturated fat is found in butter, lard, cream, fat on meat, meat products such as sausages and black and white pudding, cakes, tarts, take-away foods, crisps, chocolate, fudge, pastries and pies.

UNSATURATED fat in our diet helps to lower blood cholesterol. Unsaturated fat comes in two forms - monounsaturated and polyunsaturated.

MONOUNSATURATED fat is found in olive oil, canola (rapeseed) oil, nuts such as peanuts, almonds, cashew nuts and spreads labelled high in monounsaturates. Try to include more monounsaturated fats instead of saturated fats.

POLYUNSATURATED fat is found in sunflower, corn and soya oils as well as in spreads high in polyunsaturates. Oily fish is rich in a specific polyunsaturated fat called omega 3 that is very heart protective. It reduces inflammation and helps lower cholesterol. It is recommended that people with Type 2 diabetes eat oily fish twice weekly. Oily fish includes salmon, sardines, kippers, mackerel, herring and trout.

TRANS FATS in our diet raise cholesterol. Trans fats are often found in hydrogenated margarines and some confectionary.

If a person has been advised to lose weight, cutting down on fat in the diet can help to achieve and maintain a healthy weight.

As we age, our sense of thirst lessens but the body still needs the same amount of water. For people with diabetes, lack of fluids can cause dehydration which artificially raises the blood glucose level by concentrating it. High blood glucose levels in older people can lead to incontinence in addition to increasing the risk of urinary infections.

It is recommended to drink up to 2 litres (close to 4 pints) of fluid daily.

Drinks such as water, coffee, tea, and herbal teas are all fine, but do not add sugar. Artificial sweeteners can be used in foods and drinks – they won't raise blood glucose. Examples are Canderel®, Hermesetas, Stevia, Splenda®, and many supermarkets now have their own brand versions which are also suitable.

Avoid high sugar drinks such as fizzy drinks, energy and sports drinks. Fizzy drinks labelled Diet, Zero and Free, and no added sugar squash are suitable alternatives.

Fruit juice and fruit smoothies are concentrated sources of natural sugars, so need to be used sparingly as they can have a significant impact on blood glucose levels. The suggested serving size is 100ml, and preferably these drinks should be taken at mealtimes.

Eating fibre-rich foods helps our bowels move regularly, lowering the risk of constipation. A high-fibre diet can also lower the risk of many chronic conditions including heart disease, obesity and some cancers, and can help better manage a person's blood glucose levels.

Good sources of fibre include wholegrain breads and cereals, fruits and vegetables and pulses such as beans, peas and lentils. Breakfast can be a super way to get a high fibre start to the day: e.g. seeds or chopped fruit or berries can be added to a wholegrain cereal or yoghurt, or prune juice could be taken instead of orange juice. Introduce fibre to the diet slowly, and remember it is important fluid intake be increased together with fibre.



Treat foods tend to be high in calories (energy) and can contribute to unwanted weight gain. If a person is watching their weight, treats should be kept for special occasions. Lower calorie 'treat' foods such as low calorie hot chocolate drinks, diet yoghurts, plain popcorn, sugar free jelly or maybe individually wrapped 'fun size' bars or ice pops can be taken in moderation as part of a healthy diet. Try not have these foods everyday.

As well as energy, treat foods are often high in sugars and can cause blood glucose levels to rise. Other names for sugar include glucose, dextrose, fructose, syrups, lactose, maltose, hydrolysed starch, treacle. Reading the ingredients list and food label can help identify sources of sugars.

See www.diabetes.ie for more information on food labelling.



Remember: Try not to add sugar or honey to coffee or tea.

Use an artificial sweetener instead, if required.

WHAT ABOUT SPECIAL 'DIABETIC' FOODS SUCH AS CHOCOLATES AND JAMS? ARE THESE NECESSARY?

No! Special 'diabetic' foods such as chocolates, biscuits and jams can contain high amounts of fat and are sweetened with sorbitol. Sorbitol can have a laxative effect and cause an upset tummy.

Today, the most important message for people with diabetes is to eat a balanced diet, in the same way that is recommended for the whole population.

Look out for reduced sugar jams and marmalades, sugar free jellies and no added sugar squashes and 'diet' or 'healthy options' in other products. Always choose the reduced or low fat varieties of dairy products.



FOOD TIPS FOR OLDER PEOPLE:

As we age, we need fewer calories, especially if we are not very active. It is easier for a person to eat well when meals are planned and enjoyable.



If you care for older people the following tips may be of use:

Encourage the person to grocery shop with a friend. This can help save money if larger items are shared e.g. head of cabbage, bag of potatoes.

Cook ahead and freeze portions to have healthy and easy meals to hand that only require reheating.

Keep frozen or canned vegetables, beans, and fruits on hand for quick and healthy additions to meals. Rinse canned vegetables and beans under cold running water to lower their salt content.

Look for fruit canned in natural juice, instead of syrup.

Make meal times social events. Company at meal times or attending a lunch club can help increase a person's appetite.

If the person you care for tends to get full quickly, encourage them to eat little and often, and try to not to fill up on fluids before or during meals.

EATING WELL WITH A SMALL APPETITE AND DIABETES:

If a person's appetite is poor, or they are losing weight unintentionally, sometimes a healthy eating diet needs to be relaxed, and 'high energy' foods eaten instead to ensure the person's calorie intake is adequate. Often blood glucose levels remain the same as portions eaten are small and taken instead of normal food intake. The dietitian or diabetes team can give more advice on individualised needs. Generally the priority is to prevent further weight loss and avoid hypoglycaemia (low blood glucose levels). Medication / diabetes treatments may need to be adjusted accordingly.

When portion size needs are small, consider adding skimmed milk powder to cereals, soups and puddings, or adding butter, cheese, or gravy to foods to increase energy intake where appropriate. Snacks could be given after evening tea at suppertime or bedtime – such as milky drinks (malted drink, hot chocolate, warm milk), piece of cake, cheese and crackers, or a sandwich, when normal dietary intake is poor.



WHAT ABOUT NUTRITIONAL SUPPLEMENTS FOR THE PERSON WITH DIABETES:

Oral nutritional supplements (ONS) are commonly prescribed as a treatment for unintentional weight loss and poor appetite. They come in many flavours and types such as drinks, puddings and milkshakes. However, these products should not be used as the only treatment for unwanted weight loss or poor appetite and should always be given in combination with professional dietary advice and advice on food fortification. They must not replace meals.

For individually tailored advice, it is a good idea to see a registered dietitian – see www.indi.ie.



Additional resources and information for Health Care Professionals in residential care settings

According to the International Diabetes Federation, (IDF) who have produced guidelines with respect to managing older people with Type 2 diabetes

- All older people should be regularly tested for undiagnosed diabetes
- All older people on admission to an aged care home should be tested for diabetes if not already diagnosed.

For further information on these guidelines re screening diagnosis and prevention see <http://www.idf.org/guidelines/managing-older-people-type-2-diabetes>

DIABETES AWARENESS PROGRAMMES

DIABETES IRELAND has developed two awareness programmes both with category 1 approval from An Bord Altranais: One programme is specifically for staff working within residential care settings for older people, such as long stay residential care, respite and day care facilities. The second programme is for staff working with individuals with intellectual disabilities. For further details and booking see page 51 of this booklet or email info@diabetes.ie

All persons with diabetes, regardless of who is responsible for their health should receive a level of diabetes care appropriate to their needs. All of the information contained in the first section of this leaflet remains applicable even when the person with diabetes requires additional support to maintain their diabetes management.

The aim of diabetes care for the person who is no longer able to look after their own health is to maintain the highest degree of quality of life and well-being without subjecting the person to unnecessary actions. For many individuals, it may be appropriate to aim for blood glucose control which avoids the malaise, lethargy and urinary frequency of high blood glucose whilst permitting the highest level of physical and mental function to be attained.

A named person should take responsibility for the daily diabetes needs. This will involve supporting/providing a healthy diet, monitoring of blood glucose control and availing of medical assistance when necessary.

When the carer is a qualified healthcare professional, they should meet with the person's diabetes team and take part in the annual review process. In residential care situations, the named person is accountable for their own diabetes education and passing on their diabetes knowledge to other healthcare workers responsible for the care of the patient with diabetes when they are not present.

A dietitian should be involved in provision of dietary recommendations taking into account the medical and nutritional status of the person with diabetes, their dietary preferences and available catering facilities. The nutritional recommendations should make provision for days when complete meals are not taken.

NOTE

Blood glucose monitoring lancing devices must NOT be shared

Insulin pens are prescribed per patient and must NEVER be used for somebody else

It is imperative that medical professionals check www.hiqa.ie and www.imsn.ie regularly for safety alerts relating to blood glucose monitoring devices, lancet use and insulin administration.

REGULAR SKILLS UPDATE is recommended for the health care professional with respect to management of high glucose levels (Hyperglycaemia) and/or illness and sick day management for the individual with Type 1 diabetes (see page 14) to prevent the life threatening situation of DKA (diabetic ketoacidosis).

If a person in your care has Type 1 diabetes, it is essential to have ongoing educational updates regarding management of severe hypoglycaemia, to discuss with family and diabetes care team as to the use of emergency treatment, and to document what steps to take if the person with diabetes has a severe hypoglycaemic event and/or is unconscious.

Along with skills update on issues such as hypoglycaemia and management during illness, with regard to the person with Type 2 diabetes, regular skills update on HHS awareness (HyperosmolarHyperglycaemic state) is recommended.



MEDICATION MANAGEMENT

All people with **TYPE 1 DIABETES** require insulin injections or use of insulin pump. As regime and insulin type will vary with all individuals, the health care professional must be familiar with the individual management, insulin type, regime, best practice and care regarding injections and insulin delivery. See <http://www.diabetes.ie/living-with-diabetes>
See tables overpage.

TYPE 2 DIABETES may require treatment with tablets, or a combination of tablets (OHAs) and injection (GLP1 by injection, or insulin by injection).

INSULIN

Insulin ranges include rapid acting, short acting, intermediate acting and long acting basal insulins.

Premixed combinations are also in use.

Examples include

ACTION	BRAND NAME	DRUG NAME	
RAPID ACTING (MEAL TIME)	NovoRapid®	Insulin Aspart	
	Apidra®	Insulin Glulisine	
	Humalog®	Insulin Lispro	
SHORT ACTING	Actrapid®	Human Insulin	(vial only)
	Insuman Rapid®	Human Insulin	
	Humulin S®	Human Insulin	
INTERMEDIATE ACTING	Insulatard®	Isophane Human Insulin	
	Humulin I®	Isophane Human Insulin	
	Insuman Basal®	Isophane Human Insulin	
LONG ACTING (BASAL)	Levemir®	Insulin Detemir	
	Lantus®	Insulin Glargine	
	Toujeo 300®	Insulin Glargine	This is high dose glargine, however it is not bio-equivalent to regular strength glargine. For this reason, care must be taken if switching from another insulin to Toujeo.
	Abasaglar®	Insulin Glargine	
	Tresiba®	Insulin Degludec	
PREMIX COMBINATIONS	Novomix®30	Biphasic Insulin Aspart	30% rapid acting + 70% intermediate
	Humalog Mix®	Insulin Lispro/ Insulin Lispro Protamine Suspension	Various combinations available
	Insuman Comb®	Biphasic Isophane Insulin Suspension	Various combinations
	Humulin M 3®	Biphasic Isophane Insulin	30% soluble + 70% isophane

The types of medications are broken down into different groups by the way they work in the body;

BIGUANIDES

DRUG NAME	BRAND NAME
Metformin	Glucophage, Metformin Bluefisher, Metformin Mylan, Metformin Pensa, Metformin Aurobindo

HOW THEY WORK: They increase the effectiveness of the body’s insulin and also stop the liver producing new glucose.

SOME SIDE EFFECTS: Nausea, flatulence, soft bowel motions or diarrhoea, metallic taste. This tablet may help with some weight loss.

WHEN TO TAKE THEM: As prescribed, with food to minimise side effects.

SULPHONYLUREAS

Examples:

DRUG NAME	BRAND NAMES
Gliclazide (slow release)	Diaglyc, Diamicron MR, Diacronal MR, Diaclide MR, Diacronal MR, Vitile MR (MR = modified release)
Gliclazide (short acting)	Diaclide, Diamicron, Diabrezide
Glimerpiride	Amaryl
Glibenclamide	Daonil

HOW THEY WORK IN THE BODY: They stimulate the pancreas to make insulin regardless of what the blood glucose level is.

SOME SIDE EFFECTS: Tablets in this category may cause low blood glucose levels (hypos). See page 10 for information on hypos and page 23 for driving guidelines. Other side effects may include upset tummy and headache and an

occasional skin rash. Increased appetite can cause weight gain.

WHEN TO TAKE THEM? Take as prescribed, with food.

PRANDIAL GLUCOSE REGULATORS (MEGLITINIDES)

Examples:

DRUG NAME	BRAND NAME
Repaglinide	Novonorm

HOW THEY WORK: They stimulate extra insulin production when carbohydrate is taken. Its effect do not last very long and therefore, is only taken with meals.

SIDE EFFECTS: Most common side effect is low blood glucose levels (hypos) but it is unlikely due to the short duration of the tablet.

WHEN TO TAKE THEM: Take as prescribed, before meals. If you miss a meal don't take the tablet.

ALPHA-GLUCOSIDASE INHIBITORS

Examples:

DRUG NAME	BRAND NAME
Acarbose	Glucobay

HOW THEY WORK: They help to slow the break-down of food in the digestive system, slowing the absorption of glucose into the bloodstream.

SIDE EFFECTS: These can cause stomach upset and flatulence.

WHEN TO TAKE THEM: Take as prescribed, with food to help alleviate side effects.

THIAZOLIDINEDIONES (GLITAZONES)

Examples:

DRUG NAME	BRAND NAME	COMBINATION WITH METFORMIN
Pioglitazone	Actos	Competact

HOW THEY WORK: They increase the effectiveness of the body's insulin.

SIDE EFFECTS: Fluid retention, weight gain, respiratory infection, abnormal vision and numbness. If you are taking this tablet and you experience fluid retention, shortness of breath and unusual tiredness report these symptoms to your doctor without delay.

HOW TO TAKE THEM: Take as prescribed, with or without food.

INCRETIN BASED THERAPIES COME IN TWO CATEGORIES. GLP-1 AGONISTS AND DPP4V INHIBITORS.

GLP-1 AGONISTS

DRUG NAME	BRAND NAME
Exenatide/Exenatide extended release	Byetta/Bydureon
Dulaglutide extended release	Trulicity
Liraglutide	Victoza

HOW THEY WORK: GLP-1 agonists increase insulin production when food is present and reduce glucose production from the liver to lower blood glucose levels. They also cause a reduction in appetite and delay stomach emptying which causes weight loss.

SIDE EFFECTS: Nausea, weight loss, headache, diarrhoea, vomiting, decreased appetite, upper respiratory infection, dizziness. Persistent and severe stomach pain must be reported immediately.

HOW TO TAKE THEM: These medications are injections but they are not insulin. You should be instructed how and when to use this medication by a doctor or a nurse before it is prescribed.

DPP4V INHIBITORS

DRUG NAME	BRAND NAME	COMBINATION WITH METFORMIN
Sitagliptin	Januvia	Janumet
Vildagliptin	Galvus	Eucreas
Saxagliptin	Onglyza	Komboglyze
Linagliptin	Trajenta	Jentadueto

HOW THEY WORK: They have the effect of increasing insulin production when needed and reducing glucose production from the liver when it is not needed.

SIDE EFFECTS: Stomach discomfort, diarrhoea, sore throat, stuffy nose, upper respiratory infection. Report persistent and severe stomach pain to your doctor without delay.

HOW TO TAKE THEM: Take as prescribed.

SGLT2: SODIUM GLUCOSE CO-TRANSPORTER 2 INHIBITORS

Examples

DRUG NAME	BRAND NAME	COMBINATION WITH METFORMIN
Dapagliflozin	Forxiga	Xigduo
Empagliflozin	Jardiance	Synjardy
Canagliflozin	Invokana	Vokanamet

HOW THEY WORK: They work in the kidney removing excess glucose and associated calories via the urine. They have the additional benefit of weight loss.

SIDE EFFECTS: As they work by eliminating glucose through the kidneys, they are associated with a higher incidence of genital infections such as thrush and urinary tract infections, they may increase urination.

Caution should be exercised if renal disease present.

HOW TO TAKE THEM: Take as prescribed.

For further information on updating your knowledge on diabetes medications, insulin types and regimes consult the diabetes team.

GETTING ACTIVE FOR BETTER HEALTH is a booklet available on www.diabetes.ie or Lo-call Diabetes Ireland 1850 909 909.

A CHAIR BASED EXERCISE PROGRAMME may encourage physical activity for adults with restricted mobility. The HSE have a programme which is free to download at www.healthpromotion.ie.

For local groups, classes and more information on activity see www.getirelandactive.ie.



See page 18 of this booklet, and also see www.diabetes.ie 'living with diabetes' for information on diabetes complications.

EYE HEALTH

Every person with diabetes over 12 years of age is entitled to free diabetic retinopathy screening under the national diabetic retinal screening programme – Diabetic Retinascreen, see www.diabeticretinascreen.ie for more information. You can check if the person you are caring for is registered by phoning 1800 45 45 55. If they are not registered, log onto www.retinascreen.ie and click on 'register for screening'.

FOOTCARE

See "Taking steps towards good FOOTCARE for at risk feet" which is available from www.hse.ie.

Health care professionals should check with the GP or local HSE diabetes team if access is available to a local HSE footcare service, and see **HSE MODEL OF CARE for the diabetic foot.**

OTHER NEUROPATHIES

When a person with diabetes has prolonged exposure to high glucose levels this may also cause damage to the blood supply to nerve fibres, to other organs and glands including the heart, intestinal tract and urinary tract.

Diabetic neuropathy (amyotrophy) can affect nerves in the thighs, hips and buttock, characterized by weakness and associated pain, and if occurring, tends to be in the older person with Type 2 diabetes.



DRIVING

Driving with diabetes guidelines are available from Diabetes Ireland – lo-call 1850 909 909 or www.diabetes.ie or see www.ndls.ie. A person must inform their motor insurance company that they have diabetes. They need to inform the Road Safety Authority if they are on medication that leaves them at risk of low blood glucose levels.

See page 23 for more specific information.

FURTHER RECOMMENDED READING:

www.hiqa.ie

www.idf.org

Managing older people with diabetes – global guideline 2013

www.diabetes.ie

www.indi.ie

www.diabetes.org.uk

www.nice.org.uk

www.inmo.ie

(provider of Diabetes Management Module in Care of the Older Person)



DIABETES IRELAND HAS DEVELOPED THE FOLLOWING TWO AWARENESS PROGRAMMES:

1. DIABETES AWARENESS IN RESIDENTIAL CARE SETTINGS

A 2 hour awareness session specifically for staff working within residential care settings for older people, such as long stay residential care, respite and day care facilities. This 'Diabetes awareness – Caring for a person with diabetes' session is suitable for nurses, healthcare attendants and any other staff involved in caring for the person with diabetes.

In creating this An Bord Altranais approved session, consideration has been given to the current National Quality Standards for Older People in Residential Care Settings (HIQA), and other best practice documents.

OVER THE 2 HOUR SESSION, TOPICS COVERED INCLUDE:

- What is diabetes? Signs and symptoms, risk factors
- Management of diabetes, including medication update
- Healthy eating, nutrition support and varying nutritional needs
- Short and long term complications of diabetes
- Day to day management and entitlements.

2. ACHIEVING A BALANCED DIET - FOCUS ON DIABETES & PRE DIABETES

A 3 hour awareness session specifically for staff working with individuals with intellectual disabilities, also approved by An Bord Altranais, with consideration given to the current National Standards for Residential Services for Adults with Disabilities, (HIQA).

OVER THIS 3 HOUR SESSION, TOPICS COVERED WILL INCLUDE:

- What is diabetes? Signs & symptoms, risk factors, management of diabetes, including medication update
- Physical activity
- Nutritional needs - Healthy eating, nutrition support, weight management
- Complications of diabetes
- Reading food labels, shopping, menu planning
- Day to day management and entitlements.

For further information on Awareness sessions for your workplace for either of these sessions, phone Diabetes Ireland on lo-call 1850 909 909 or email info@diabetes.ie

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