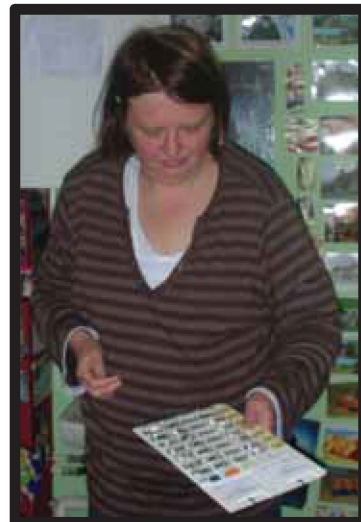


## Diabetes and Learning Disability Professional Carers Information



# Contents...

## What is Diabetes

Insulin	1
Glucose	1
Types of diabetes	1
Type 1	2
Type 2	2

## Healthy Eating 3-4

Eatwell Plate	3
---------------	---

## Newly Diagnosed Type 1

Treatment	4
Monitoring	5
Insulin	7
Devices	7
Injecting	8
Sharps	8
Timing of Insulin	9

## Newly Diagnosed Type 2

Treatment	11
Medication	12
Monitoring	13
Other Information	14
What care to expect	15

## Looking after your feet 16-17

### Illness

Type 1&2	18
Low blood glucose	19
Symtoms	19
Treatment	19
Causes	19

### Eye care

Screening	20
-----------	----

## Other Resources & Contacts 21

## What is Diabetes?...

Diabetes mellitus is a common condition where the amount of glucose in the blood is too high because the body is unable to use it due to a lack of or insufficiency of insulin.

### Insulin...

Is a hormone that controls the amount of glucose in our blood. Insulin is made in the pancreas which lies behind the stomach. Insulin helps the glucose to enter the cells where it is used for energy. The body is normally able to adjust the amount of insulin it produces and this stops the amount of glucose levels from going too high or too low. When you have diabetes this ability is lost.



### Glucose...

Glucose comes from the foods that we eat; these are the carbohydrate (or starchy) foods such as breads, pasta, and rice; as well as from the sweet foods.

### Types of Diabetes...

There are two main types of diabetes:  
Type 1- also known as insulin dependent diabetes  
Type 2- also known as non- insulin dependent diabetes

### Learning Disability...

Prevalence maybe as high as 10%. Increased risk of diabetes in those with / turner syndrome / klinefelter syndrome / downs syndrome. Genetic disorders associates with type 2 diabetes Prader Willi / myotonic dystrophy.

### Talk to me...

Diabetes = too much sugar in your blood



### Type 1 Diabetes...

This develops when insulin production stops because most or all of the insulin producing cells (beta cells) in the pancreas have been destroyed. This type of diabetes usually occurs in the under 40's and in children. It is treated by insulin injections and healthy diet.

### Type 2 Diabetes...

The most common type of diabetes, affects 90% of people. This develops when the body is still producing insulin, but not enough for it's needs, or when the insulin that the body is producing is not working properly known as insulin resistance.

This type of diabetes usually appears in people over the age of 40, often with a family history and/or those who are overweight. It is treated by healthy diet and exercise/tablets/ or tablets and insulin.

### Talk to me...

Type 1 = Insulin injections to feel better  
Type 2 = Tablets to feel better



## Healthy eating...

By eating a good variety and balance of foods, taking regular activity, not drinking too much alcohol and not smoking, you can increase your chance of living a fitter and healthier life.

Try to follow these 10 simple rules for eating well.

- Eat three regular meals a day
- At each meal include a starchy carbohydrate food
- Cut down on fat
- Eat more fruit and vegetables
- Include more beans and lentils
- Aim for two portions of oily fish a week
- Limit sugar and sugary foods
- Reduce Salt in your diet
- Drink alcohol in moderation only
- Avoid 'diabetic' foods and drinks as these can often be expensive, not necessary and can contain laxatives

### The eatwell plate



Use the eatwell plate to help you get the balance right. It shows how much of what you eat should come from each food group.



The Eatwell Plate shows the types and proportions of food, which help make up a balanced diet. For most of us this means a change towards more vegetables, fruit, bread, cereals, potatoes, rice and pasta. These foods are shown in the yellow and green segments on the plate.

The smaller pink segment represents the protein foods; hence the recommendation is smaller portions of meat, poultry and fish. The vegetarian alternatives are also included in this segment such as pulses, nuts and eggs.

The blue segment represents the dairy foods. Again these are in smaller segment, so use smaller portions and preferably the low fat alternatives, e.g semi skimmed milk, low fat yoghurts and cheese.

#### Diabetes and Learning Disability...

It can be difficult getting the message across about healthy eating as it may be too difficult for your relative to understand that some sweet food in the diet is ok. Trying to give choices that encourage healthy eating is the ideal.

### Education for those with Diabetes... Newly Diagnosed Type One...

- Referral to diabetes specialist nurse/practice nurse
- Referral to podiatrist
- Referral for screening
- Referral to dietitian
- Plan for diabetes follow up either with GP or local secondary care clinic

#### Treatment...

- Insulin injections will be required
- Assessment of the person's ability to accurately give insulin will be needed

- Support in use of device chosen for delivery of insulin
- If unable to self inject support services/education of carers

#### Information...

- Appropriate literature should be provided, this can be obtained via diabetes specialist nurse/practice nurse
- Other resources:- Diabetes UK careline telephone: 020 7424 103  
www.diabetes.org.uk
- Local groups may also provide support

#### Healthy eating...

- The diet for people with diabetes is healthy eating
- High carbohydrate
- High Fibre
- Low fat
- Low sugar

#### Until seen by the dietitian...

- Regular meals and a supper
- Reduce intake of sugary foods; e.g. sugar, chocolate, cakes, sugary drinks.

#### Learning Disability...

Fear of needles is common reassurance and encouragement will be needed from familiar carers. Devices are available to help with setting of doses and 'hiding' needle.

#### Monitoring...

Most people on insulin monitor their glucose levels with blood glucose monitoring, this involves placing a small amount of blood onto a test strip that is inserted into a meter.



The meter then measures the amount of glucose in the blood and gives a reading, the results will vary throughout the day. Ideally the person with diabetes or their carers will be taught how to monitor their blood glucose levels themselves.

The meters are not on prescription, but the test strips are. Individual target levels will be agreed usually aiming for blood glucose levels between 4 to 9mmols.

**Talk to me...**

You need injections every day to stay well



- A meter may be available via the diabetes specialist nurse/practice nurse
- Remember to wash the hands before testing for accurate results.
- Make sure the meter is coded/calibrated if required
- Treatment will be adjusted on the basis of blood glucose readings

**Other Information...**

Education of people with diabetes is an on going process, it is not necessary to give all the information at once. Other areas that will be covered:

- Hypoglycaemia (low glucose levels)
- Illness and sick day rules
- Exercise
- Care of equipment/sharps
- Holidays
- Prescriptions
- Employment
- Eating out
- Alcohol
- Stopping smoking
- Complications
- Foot care
- Screening and on going care



### Learning Disability...

Some meters are easier to use. Time will be needed to help client get used to blood tests, the lancet is 'hidden' in a finger pricker. Using the side of the finger is less painful. Other areas can be used which are less sensitive with correct equipment.

### Talk to me...

Blood glucose = Sugar in blood



### Insulin...

- There are many different types of insulin. Depending on the type of insulin being used the timing of the injection may differ.
- Analogue Insulin's (Novorapid, Humalog, Humalogmix 25, Novomix) These insulin's are given with or immediately after food.
- Short Acting Insulin (Actrapid, Humulin S) These insulin's are given up to 30 minutes before food.
- Intermediate Insulin (Insulatard, Mixtard, M3, Isophane) These insulin's are given up to 30 minutes before food.
- Long Acting Analogues (Glargine, Levemir) These insulin's are used as a background insulin and are given at the same time each day in combination with tablets or other insulin.



### Devices...

Depending on the insulin chosen and the persons ability to use the devices available different regimes of insulin are used. There are many insulin devices available. If unable to self inject syringes are often used by carers. If carer is using a pen device, a single use covered needle is available.

Each individual needs to be assessed as to their ability to use the device chosen. Appropriate needles also need to be prescribed that are compatible with the device chosen and of a suitable length for the size of the person.

Needle size: 6mm = thin person  
8mm = normal weight  
12mm = obese

#### Learning Disability...

Most clients who have a routined lifestyle can be controlled on 2 injections a day. Those with Type 2 diabetes may have daily insulin with tablets.

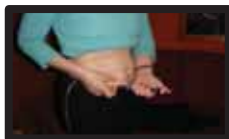
#### Talk to me...

Insulin = injection before breakfast and tea.



#### Injecting...

Getting into a good routine with injecting will help. You are injecting into the fat in either the outer legs, abdomen, buttocks or arms. It is good to start by rotating these sites to avoid lumps which develop from repeated use. Rotation cards are available or devising your own picture chart may help. Check the area each time before injecting.



#### Sharps...

Safe handling and disposal of all sharps is vital to avoid unnecessary injury (see Local Guidelines). If using devices ensure a new needle is used each time.



REMEMBER: it is safer not to re-sheath pen needles (note Novo Nordisk do make a pen needle remover and novofine auto cover needles)

Sharps bins are available on prescription for home use: contact your local environmental health department for advice on disposal of sharps bins.

Safe Clip Device: can also be used for clipping off needles at home these need to be disposed of when full into a sharps bin; they are available on prescription (B.D. safeclip)

Lancets: needles used for blood glucose monitoring should also be disposed of in a sharps bin.

#### Learning Disability...

Many clients get into the routine of using the same place for their injections and once established may be difficult to change. Encourage rotation of injection sites. Poor rotation of injection sites is a common reason for variable blood glucose levels.

#### Talk to me...

Using different places helps your injection to work better.



#### Timing of Insulin...

Depending on the individuals lifestyle an appropriate insulin regime will be chosen that minimizes changes to lifestyle patterns. The wishes of the person with diabetes needs to be considered.

#### Once Daily...

This regime is sometimes used for those with type 2 diabetes who are starting insulin. In conjunction with tablets.

### Twice Daily...

This regime works well for those who have a predictable lifestyle. Depending on the person's preference insulin can be given with food or 30 minutes before food, with the appropriate insulin being selected.

### Multiple Injection Regime...

This regime works well for those who want a flexible lifestyle and who have variable food intake. Insulin is usually injected with each main meal and a long acting insulin pre bed; this means the person requires two devices for giving insulin.

### Learning Disability...

Most clients have a routined lifestyle and their diabetes can be well controlled on two injections a day.

### Talk to me...

You need your injections before breakfast and tea



## Education

# Newly Diagnosed Type Two...

- Referral to GP practice clinic
- Referral to dietitian
- Referral to podiatrist
- Referral eye screening
- Education group sessions are available in some areas

### Treatment...

Initial treatment is usually dietary unless the person is grossly symptomatic or has other associated health problems

### Healthy eating...

- The Diet for people with diabetes is healthy eating
- High carbohydrate
- High fibre
- Low fat
- Low sugar

### Until seen by the dietitian recommend...

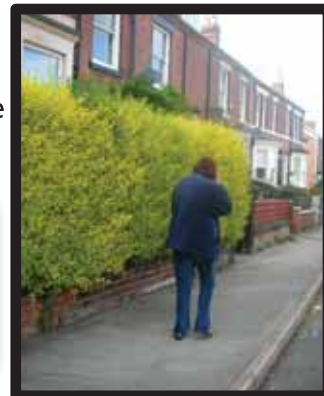
- Regular meals
- Grilled meat, Grilled food, semi-skimmed
- Reduce fat intake if over weight; e.g. fried foods, cheese, butter, fatty meat, full cream milk

### Exercise...

Aim for 30 minutes 5 days a week. Regular exercise will help to reduce the blood glucose levels naturally.

### Learning Disability...

Some clients can not understand the message of sometimes you can and may find it confusing.



### Talk to me...

Activity is good for your sugar



### Medication...

If diet and exercise does not control blood glucose levels then medication may be used in conjunction with diet and exercise. There are many different types of tablets used for diabetes.

### Metformin...

This is the drug of choice in over weight people if tolerated. It lowers the glucose levels by reducing the amount of glucose made in the body and protects the heart. It is taken with or after food. Common side effects are nausea and diarrhoea; it is often better tolerated if increased gradually. A slow release tablet is available.



### Sulphonylureas (gliclazide, glibenclamide, glipizide)...

These work by stimulating the pancreas to make more insulin. They can be used in combination with metformin. They are usually taken twice a day pre meal. Common side effects are upset stomach, hypoglycaemia, weight gain.

### Other diabetes medications...

Glitazones (Pioglitazone with insulin resistance used with caution)  
A newer tablet which helps to control the glucose level. They can be used alone or in combination with metformin or sulphonylurea. Usually taken once a day. Common side effects, localised swelling, weight gain, headache, dizziness.

### Glucose regulators... e.g

These work by helping the pancreas to produce more insulin after a meal. They should be taken before each main meal. Common side effects are, upset stomach, hypoglycaemia.

### Learning Disability...

Making sure the tablets are taken at the right time will help diabetes control. Devices are available to help sort out medication ask your pharmacist.

### Talk to me...

Your diabetes tablets.



### Information...

An information folder is available for those newly diagnosed via the GP practice. Understanding Diabetes (Diabetes UK) publication is a general information booklet about diabetes and is free. DVD's are also available from Diabetes UK.

### Monitoring...

For those treated on diet alone or diet and tablets it is not necessary to teach blood glucose monitoring. A long term blood test (HbA1c) gives information about how diabetes unless poorly controlled, under 6.5% is good control; individual targets may vary. Some clinics can take this test from a finger prick sample.



Urine testing can be a useful method of monitoring diabetes control if there is anxiety about blood glucose monitoring. Glucose in the urine can be an indication that diabetes is not well controlled.

### Learning Disability...

Getting someone familiar to perform test may help. Remember if any order blood tests are performed check if diabetes tests can be done at the same time.

### Talk to me...

This blood test tells us if your diabetes is ok



### Other Information...

Education of people with diabetes is an on going process it is not necessary to give all the information at once, an agreed careplan should be made. Other areas that will be covered:

- Hypoglycaemia (low glucose levels)
- Foot care
- Exercise
- Illness and sick day rules
- Care of equipment/sharps
- Holidays
- Prescriptions
- Employment
- Eating out
- Alcohol
- Stopping smoking
- Complications
- Screening and on going care
- Insulin treatment

### Established with Diabetes...

Remember that as a carer you are not expected to know all of the information about diabetes, but you are ideally placed to deliver information to people with diabetes.

A training program is offered to carers in Derbyshire county pct.



### What care to expect...

This is an information booklet provided free of charge by Diabetes UK and outlines what care those with diabetes should receive and what ongoing care to expect.

### Annual Review...

This is performed once a year to check for any damage or complications from diabetes digital photo of eyes, checking sensation of feet, testing kidney function, diabetes control, BP (blood pressure & weight test), Cholesterol. Most people see their G.P or practice nurse for this screening. A care plan should be agreed

### Learning Disability...

You will know the ability of your client, any helpful ideas you have to improve communication between them and the diabetes team is valued

### Talk to me...

Annual review = my meeting



## Looking after your feet...

**Foot problems are common with people who have Diabetes. If it is uncontrolled diabetes can affect the nerves, causing loss of sensation or numbness, and can damage blood vessels, leading to poor circulation.**

When the feeling is lost to the feet they can be damaged without you knowing it. A reduced blood flow to the feet cause pain and impair hearing.

You will have your feet examined when you are first diagnosed with Diabetes or when you have your annual review and be given a 'risk' category. Your Healthcare professional will assess the general condition of your feet, your sensation and what the circulation in them is like. If there are any problems, they will refer you to the appropriate person.

You can reduce the risk of developing problems with your feet by keeping your blood glucose and blood pressure levels under control, and looking after your feet.

### Taking care of your feet...

- Examine your feet every day looking for breaks in the skin, discharge or inflammation.
- Cover any small cuts or blisters until they have healed.
- Contact your GP or Nurse if you notice any signs of swelling, heat, redness or pain.
- Applying a moisturising cream, such as E45, if you have dry skin around your heels. Try not to get any cream in-between your toes as this can make the skin too moist.
- Do not walk barefoot. When the feeling is lost to the feet they can be damaged without knowing it. A reduced blood flow to the feet can cause pain and impair healing.

- Keep feet at a constant temperature – do not sit too close to radiators of the fire and remove hot water bottles before getting into bed. If you have loss of feeling in your feet you may not notice when your feet get too hot or cold.
- Make sure you don't put your feet into water that is too hot, test the temperature of water in your bath with your elbow, or ask someone to do this for you.
- Buy shoes that are the correct length, depth and width as they can cause damage and injury to your feet. Shoes with laces are a good choice as they hold your feet in place, avoiding rubbing and blisters.
- Wear socks made from cotton or wool mix; ensure they are free from bulky seams.
- Check toe nails after a bath or shower when they are softer. Do not cut them too short and never cut the corner of the nail or dig down the side.
- If your feet are at high risk (you have lost the sensation in them or have poor circulation), use a nail file to shorten nails instead of cutting them.
- If you develop corns, hard skin, in-growing toe nails or other foot problems make an appointment to see a podiatrist. Your GP or Nurse will be able to give you more information on how you can access this treatment free of charge.
- If your feet are high risk, (loss of sensation or poor circulation) you should see a podiatrist regularly so they can check and treat your feet.



## Illness...



During times of illness the blood glucose levels will vary. Closer monitoring of blood glucose levels during illness is required and temporarily changes in medication may be necessary.

### Type 1 Diabetes...

- Monitor blood glucose levels 4-6 hourly
- If glucose level above 15mmols check urine for ketones if positive seek medical advice
- Give at least the usual amount of insulin (unless hypoglycaemic)
- Replace food with sweet drinks if unable to eat
- Encourage sugar free drinks in between
- Be prepared to give extra insulin
- If unsure seek advice
- INSULIN SHOULD NOT BE STOPPED

### Type 2 Diabetes...

- Give usual diabetes medication (unless hypoglycaemic)
- Replace food with sweet drinks if unable to eat
- Encourage sugar free drinks in between
- Be prepared that insulin may be necessary temporarily
- If unsure seek advice
- monitoring of blood glucose may be needed

### Learning Disability...

Check that your client knows who to contact when unwell.

### Talk to me...

Tell someone if you feel poorly.



### Low blood glucose (Hypoglycaemia)



This can only happen if the person is on treatment for their diabetes (either gliclazide or insulin) it does not happen on diet alone or with metformin alone. Hypoglycaemia occurs when the blood glucose drops below 4mmols.

### Symptoms...

- Pale
- Sweaty
- Trembling/shaking/tingling lips
- Hunger
- Confusion/ change in temperament/aggression
- Dizzy/altered vision
- Headache
- Loss of consciousness
- Fit

Individuals may have one or more of these symptoms; until treated the symptoms will get worse.

### Treatment...

- Stop activity
- Give glucose (either 3 glucose tablets or 50mls of lucozade or 100mls of sugary drink)
- Follow with starchy food (e.g. bread/biscuit/fruit)
- Establish reason why hypoglycaemic.

### Causes...

- Extra activity
- Missed or delayed food or less food than usual
- Too much medication
- Alcohol
- Lumpy injection sites

### Learning Disability...

It can be confusing to be told you need something sweet but only at certain times, using glucose tablets maybe less confusing.

### Talk to me...

Glucose tablets = Special sweets when I am poorly.



### Eye care...

Damage to the eye from diabetes is called retinopathy high blood sugar levels can damage the blood vessels that supply the retina- this is the part of the eye that "sees"

### Screening...

Good control of blood sugar and blood pressure protects the eyes. All people with diabetes are offered a yearly eye screen with photographs taken of the blood vessels in the back of the eye

### What to tell your relative...

you will be offered an appointment at a local clinic where the special cameras are based you will have eye drops put into your eyes so that the small blood vessels can be seen clearly having the photo of your eye does not hurt the eye drops can sting for a few minutes you need to be able to sit in front of the special camera and keep your head still for a good photograph

### What can be done...

if there are any signs of damage to the eyes your doctor will talk to you about improving the control of your blood sugar to stop more damage some people may need laser treatment to stop further damage

### Learning Disability... Info for clients

Talk to me...  
retinopathy = special eye photo



### Other Resources...

Booklets available in this series include.

- Diabetes and insulin
- Diabetes and tablets
- Living with someone with Diabetes.
- Exercise DVD Featuring clients with learning disability and diabetes.

Diabetes UK produce both written and taped information about diabetes and problem DVD (see catalogue), plus information about local groups.  
[www.diabetes.org.uk](http://www.diabetes.org.uk)  
telephone: 020 7424 1000

NICE Guidelines on the management of diabetes. [www.nice.org.uk](http://www.nice.org.uk)

Department of Health. National Service Framework for diabetes  
[www.doh.gov.uk/nsf/diabetes](http://www.doh.gov.uk/nsf/diabetes)

Local health resource libraries will lend materials.  
Communication resources have been produced and used individually and for group education

### Contacts...

Michelle Denyer Lead Community Diabetes Specialist Nurse  
Derbyshire County PCT: 01629 593024  
[Michelle.denyer@derbyshirecountypct.nhs.uk](mailto:Michelle.denyer@derbyshirecountypct.nhs.uk)

Lorna Wynne Learning Disabilities Nurse (Special interest diabetes)  
Orchard Cottage, Darley Dale, Matlock. 01629 733400  
[Lorna.wynne@derbyshirecountypct.nhs.uk](mailto:Lorna.wynne@derbyshirecountypct.nhs.uk)



**Derbyshire Community Health Services**

*a part of Derbyshire County PCT*

copyright ' Derbyshire County Primary Care Trust

