

Endorsed by the Centre for Perioperative Care (CPOC)

My Diabetes Passport Planning for Surgery



Name:

Proposed date of operation:

***This booklet has been provided for you by the
Perioperative Care Team – Please bring it to all
your appointments and when you come to
hospital for your operation or procedure***

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Highlights

PREOPERATIVE CARE

What to do with your medication before surgery

- If you take insulin
- If you take tablets

(see sheet stapled to the inside of this booklet)

Fasting (food and fluids) before your surgery Page 12

Preparing for surgery – getting yourself ready Page 13

HOSPITAL ADMISSION

What to bring to hospital with you Page 15

Looking after your diabetes when you are in hospital Page 16

Dealing with 'Hypos' Page 18

Eating after your operation Page 21

Looking after your feet Page 26

DISCHARGE

Managing your glucose levels when you go home Page 29

Discharge checklist Page 31



Your perioperative diabetes passport


You have been given this booklet because you have diabetes and are having a planned operation.

‘Perioperative’ describes the journey you will take *before, during* and *after* your operation.

It has been shown that patients whose diabetes is well controlled before their operation are less likely to have complications and more likely to be discharged home earlier.

The aim of this perioperative diabetes passport is to help you and the healthcare professionals looking after you ensure that you are in the best possible condition for surgery and to make sure you receive the most appropriate care during your inpatient stay.

You may have noticed that the pages in this diabetes passport are different colours.

The  yellow pages are for you to fill out with information about you that will be helpful to your care.

The  blue are information sheets for you to read.

The  green are for your healthcare professionals to fill in.

Please bring this diabetes passport to all appointments you have with a healthcare professional, relating to your upcoming procedure or operation, both at the hospital and at your GP surgery.

Key points

- Good control before surgery reduces complications.
- Keep this booklet with you during your inpatient stay.



My details

About you...

Name:

I like to be called:

Date of birth:

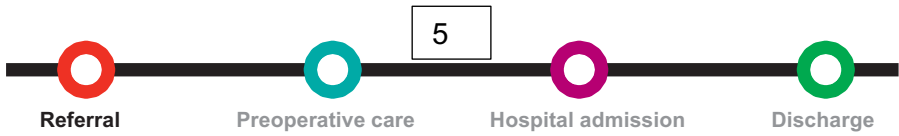
Type of diabetes

Type 1

Type 2

Other

.....



My diabetes

Place of usual care (for example, GP / Hospital team):

.....

Diabetes medication:

(We will have information on the medicines you normally take but please confirm your diabetic medicine.)

Medication Chart	Medication name (Insulin OR Tablet)	Dose / Units
Breakfast		
Lunch		
Evening Meal		
Bedtime		

Are you normally on insulin? Yes No

What is the name of the insulin(s) you use?

What devices do you use?

- Pen and cartridge Pump
 Disposable pen Needle syringe
 Innolet



Eating and drinking

I normally eat at the following times:

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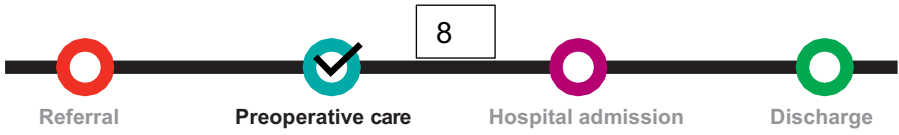
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You should be offered a snack before bed if you are on insulin or certain other diabetes medications, but you may also prefer to bring your own supply of snacks into hospital.

Also please bring in any treatments you may prefer to use for hypo treatment, such as jelly babies.



Preoperative care...



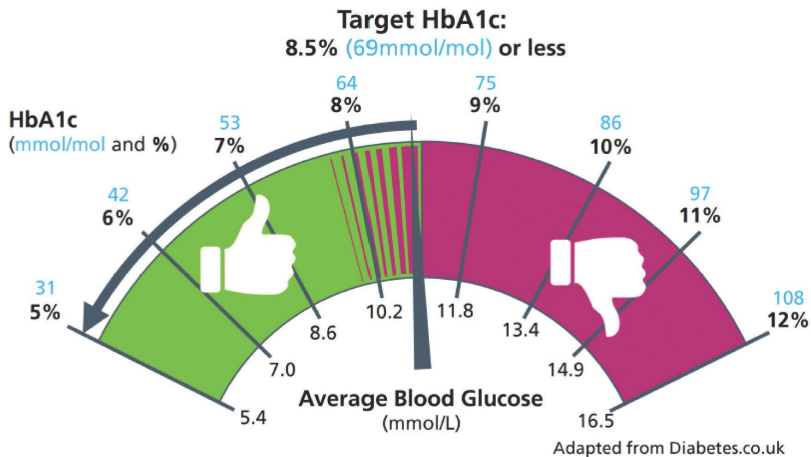
Blood glucose control

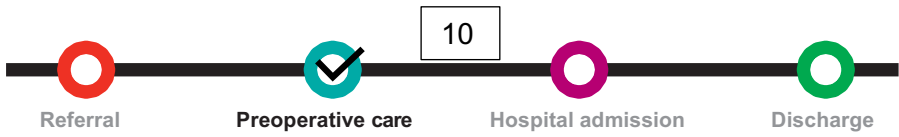
High blood glucose can increase the risk of infections and lead to less favourable outcomes following surgery. Good blood glucose control has also been shown to improve healing after surgery.

HbA1c is a blood test that gives an overall picture of your blood glucose levels over the past three months.

We recommend that your HbA1c should be 8.5% (69 mmol/mol) or less before your operation – the lower, the better.

For certain operations, a lower target HbA1c may be required. Your HbA1c may be tested at your pre-operative assessment and nurses will be able to advise you on the result.





Referrals

Following on from your pre-op assessment you have been referred:

- To an anaesthetist
- Back to your GP
- To the Diabetes team
- Other

The reasons for this referral are:

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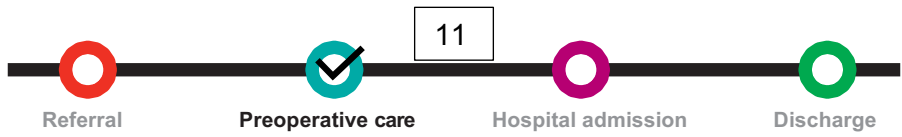
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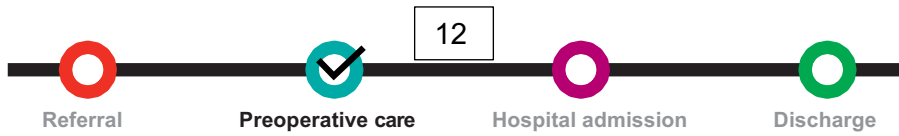
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What to do with your medication before surgery

Please see the separate sheet stapled to this booklet for details about when to stop or continue taking your usual diabetes medication before surgery



Fasting instructions

- If your operation is scheduled for a **morning list** do not eat any food after 12 midnight. You can drink clear fluids such as black tea, black coffee, squash or water up until 06.30 am. Milk or fruit juices are not permitted.
- If your operation is scheduled for an **afternoon list** do not eat anything after a light breakfast which needs to be eaten before 07.00 am. You can drink clear fluids such as black tea, black coffee, squash or water up until 11.30 am. Milk or fruit juices are not permitted.
- If you do not know whether your operation will be in the morning or afternoon, please follow the **morning list** fasting instructions.

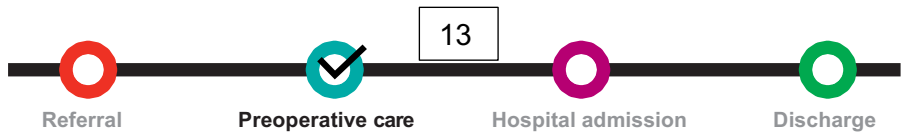
If you begin to feel that you are becoming 'hypo' you could have a drink of squash which contains sugar.

What to do if you are sent an afternoon appointment for your operation

Many considerations determine the order of operating lists. One of the most important goals in patients with diabetes who are having surgery is to minimise the starvation / fasting time so that normal diet and normal medication can be resumed as early as possible.

- If you have type 1 diabetes it is **normally recommended** that you have your surgery in the morning.
- If you are type 2 then it is **normally recommended** that you **do not** have your surgery in the evening.

You may not know in advance whether your operation will be in the morning or afternoon. If you have any concerns, please contact perioperative team for advice.



Preparing for surgery – getting yourself ready

It's important to do what you can to get yourself in the best shape possible before your procedure. Things like increasing the amount of exercise you do or stopping smoking can have a big impact on your experience and recovery. You can find advice on how to improve or maintain your health by following the links below:

- Fitter Better Sooner
<https://rcoa.ac.uk/patient-information/preparing-surgery-fitter-better-sooner>
- myDesmond (for people with type 2 diabetes) <https://www.mydesmond.com/>



Looking after your feet

- You can reduce the risks of developing diabetic foot ulcers by ensuring good foot hygiene, and wearing well-fitting footwear. If you have concerns about your own foot health, you can find more information here <https://keepingmewell.com/services/what-is-podiatry/>

You can self-refer to the podiatry team by calling 029 20 335135

Referral

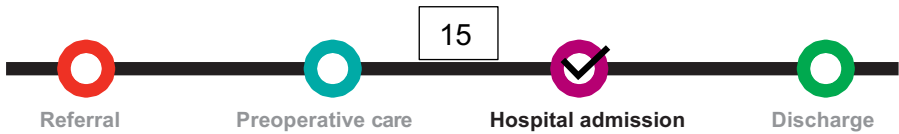
Preoperative care

Hospital admission

Discharge

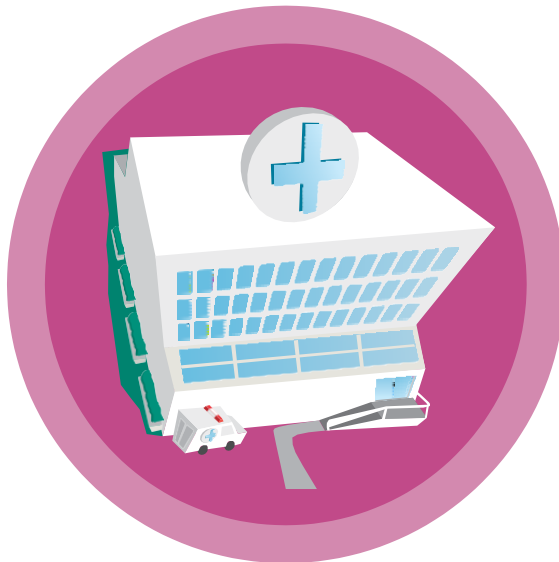
Hospital admission...





What to bring into hospital with you

- Your diabetes medication.
- A supply of insulin needles (if you take insulin). The needles used in hospital are for use of healthcare professionals and may not be the same as you have at home.
- Any other normal medication you take.
- Blood glucose equipment (if you normally monitor your own blood glucose we encourage you to continue to do so whilst in hospital but we may also test your levels).
- Your normal hypo treatments, such as glucose drink/jelly babies.
- A few snacks.



Diabetes self care

Blood glucose testing

We believe it is important that you are able to manage your own diabetes in hospital if you are well enough and capable of doing so. You are allowed to do your own blood glucose tests on your usual device whenever you like.

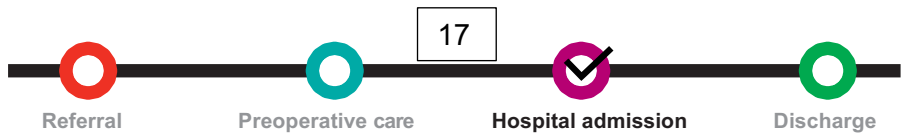
However, to promote safe care, we will also undertake blood tests using our very accurate precision meters which are linked to the hospital computer records system. Please be patient with nursing staff who may need to check your glucose levels at similar times to you performing the tests on your own device.



Insulin administration and dose adjustment

You may also be able to self-inject and decide on your own insulin dose but please agree this with the ward nurse so that it can be documented on your treatment record. If you are having difficulties please ask to see a member of the diabetes team. You should then be able to keep your insulin on you, but at times it may be necessary for your insulin to be locked away.

In general you should aim for blood glucose values of between 5 mmol / L and 12 mmol / L while in hospital, except at bedtime when the target range is a little higher: between 7 mmol/L and 12 mmol / L. Don't worry if an occasional reading is outside these ranges but if you would like advice please ask your ward nurse to contact the specialist diabetes team.



Blood glucose control in hospital

When in hospital it is not uncommon to experience changes in blood glucose control, including high glucose levels.

There are a variety of reasons for this including:

- changed medication and meal times
- altered portion sizes
- being less active
- new medications such as steroids
- **periods of fasting such as before and after surgery**
- the stress of being unwell
- infection.

Maintaining good control can be difficult. In hospital your targets may change for safety reasons. However, provided that your blood glucose is kept within reasonable limits, your recovery will be quicker. For this reason, if your blood glucose is raised above 17 you may need extra treatment, including insulin, even if you normally control your diabetes by tablet or diet alone.

Please ask a member of staff on the ward if you have any queries or concerns about your blood glucose levels.

Hypoglycaemia ('Hypos')

Unless you are treated with insulin or gliclazide (or a similar tablet from the same class) or given either of these treatments for the first time in hospital this section should not be relevant to you.



Hypoglycaemia, also known as a 'hypo' is when your blood sugar (glucose) level falls too low. Any blood glucose below 4.0 mmol / L should be treated.

Sadly it is not unusual for people with diabetes treated with insulin or gliclazide to become hypoglycaemic in hospital. There are many reasons for this, including: changes in people's daily routine, in particular eating times in hospital; and interactions between insulin and necessary medications. At Cardiff & Vale we will do our best to prevent you becoming hypoglycaemic during your inpatient stay and this is partly why we have produced this booklet.

A 'hypo' can occur very quickly and, if severe, it can give rise to confusion or impaired consciousness. However, in most people treatment of early symptoms will prevent severe hypoglycaemia. Be on the lookout for the following early symptoms. They may differ from person to person but include:

Blurred vision, excessive sweating, anxiety or agitation, tingling in mouth or fingers, a fast or heavy heartbeat, odd behaviour (normally recognised by others), sudden difficulty with concentration, and slurred speech.

If you experience any of the above symptoms notify a member of staff as soon as possible so that your blood sugar can be tested and, if it is low, preventative treatment can be given.

Preventing night time hypos in hospital

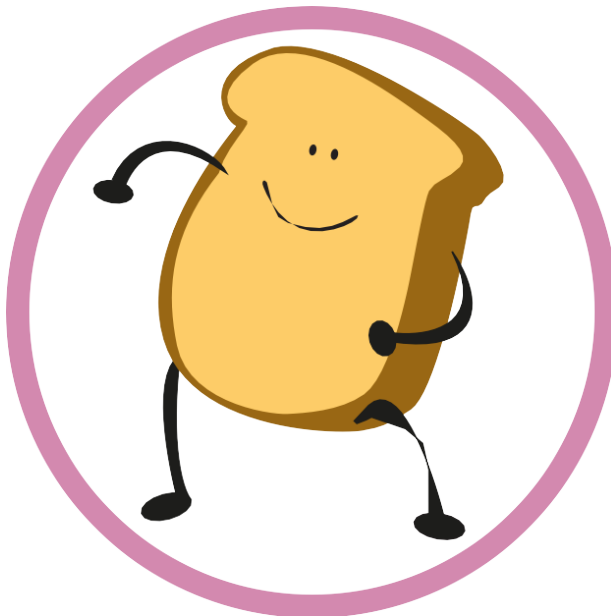
Bedtime snack

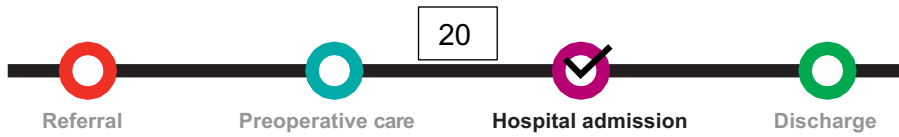
To reduce the frequency of overnight hypoglycaemia, those treated with insulin or gliclazide will be prescribed and offered a snack before bed. Although a bed-time snack may not be your usual practice we would recommend this during your stay.

Medication adjustment

For some people we may reduce their basal or evening insulin dose and, again, for some people on gliclazide the evening dose may be reduced.

If you are adjusting your own insulin doses in hospital please bear in mind the different circumstances of being in hospital and adjust your insulin accordingly. The first priority is to **avoid hypoglycaemia**, but it is also important to avoid excessively high blood glucose levels.





How will my hypo be treated in hospital?

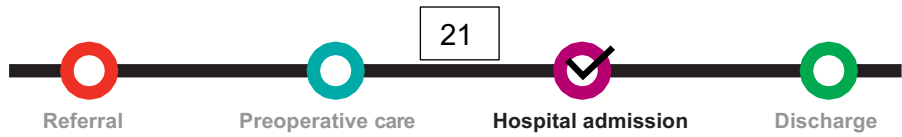
If you experience a hypo in hospital you may be treated with a drink of glucose powder dissolved in water, or a glucose gel. However, many patients prefer to bring in their own hypo treatments. These could be:

- 150–200 ml of concentrated orange juice
- 4–5 GlucoTabs® or 5–6 Dextrose® tablets
- 4 jelly babies.

If you have a hypo, treat it with some rapid-acting carbohydrate as above, let the ward sister know and test your blood glucose 10 – 15 minutes later. If it is still below 4.0 mmol / L, you should repeat the rapid-acting carbohydrate.

Don't forget you should also follow this treatment with a more long-acting source of carbohydrate such as a banana, cereal bar or sandwich to prevent hypoglycaemia recurring several hours later.

If you are experiencing regular hypos whilst in hospital please ask your staff nurse to refer you to the specialist diabetes team.



Eating for safe glucose control in hospital

Three key messages for patients, relatives, medical, nursing and catering staff.

When you are able to eat and drink normally food choice and meal size must not be restricted.

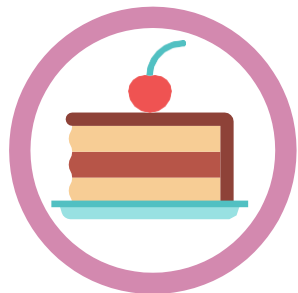
Hypoglycaemia in hospital is very common and must be prevented. For this reason food choices should **not** be restricted.

People with diabetes should eat what they eat at home.

The size of the meal should be as close to that eaten at home even if this is not what healthcare professionals would consider the ideal diabetes diet. This is how the patient normally manages so restricting their food without adjusting their treatment will result in hypoglycaemia. The Diabetes team are there to help with adjusting medications during admission if required.

Bedtime snacks are to be encouraged

Because of the longer gaps between meals than occurs at home, snacks are available between meals for those receiving insulin or treated with gliclazide. This is especially so at bedtime as the evening meal is early in hospital there can be up to 15 hours before breakfast!



IV infusions

What is an intravenous (IV) insulin infusion?

This is a way of giving insulin directly into the bloodstream in order to establish and maintain good control of your blood glucose. This is usually achieved using a pump which drives a syringe of insulin

connected to a small cannula (slim plastic tube) inserted into a vein in the arm. Insulin acts very rapidly when given directly into the bloodstream. By varying the rate of the insulin infusion very good diabetes control can be achieved when linked to hourly or two-hourly finger-stick blood glucose measurements.



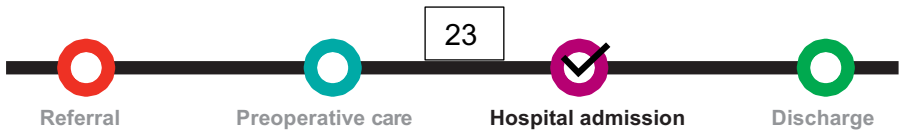
We realise this will result in a disturbed night but it is important to have these regular blood glucose checks for the infusion to be used safely. An infusion may also be referred to as a **VRIII (variable rate intravenous insulin infusion)**, or sliding scale. The insulin infusion will be accompanied by a drip containing a glucose solution to keep you fed. If you are on a background (also called basal) insulin, this will usually be continued while you are on the insulin infusion but other insulins will be stopped.

Who will require an insulin IV infusion?

If you will not be eating or drinking for a prolonged period, for example if you are having a major operation or if you become too ill to eat or drink sufficiently, then an intravenous insulin infusion is the best way to maintain good diabetes control.

How long will I be on the insulin IV infusion?

As soon as you are able to eat and drink normally the infusion should be discontinued – if not, ask why not. The sooner you are back on your usual treatment the better.



What to do if the insulin IV infusion or glucose drip stops?

If the insulin infusion is stopped, the blood glucose can rise very rapidly; this is one reason why frequent blood glucose tests are required. The infusion may stop because it becomes accidentally disconnected, is switched off and not switched back on again (for example when you are having a scan), or if the cannula becomes blocked or displaced. If you notice any of these occurring, let your nurse know straight away so that it can be immediately restarted.

If the glucose drip stops then your blood glucose could drop too low causing hypoglycaemia. Therefore if you notice a problem with the glucose drip again, let your nurse know straight away so that it can be immediately restarted.

Is there anything I should know about restarting my usual treatment?

If you are on tablets these will be restarted at an appropriate time after your procedure.

If you are already on insulin it is important that the infusion is continued for the first 30–60 minutes after your first insulin injection. This is because after the infusion is stopped, there will rapidly be no insulin in your system; 30–60 minutes gives enough time for the subcutaneously injected insulin to get into the bloodstream from the injection site. If your background insulin has not been continued while you are on the insulin infusion, this must be given before the infusion is stopped.

Switching back to the subcutaneous insulin should ideally be at a meal time, after short-acting insulin or mixed insulin has been given. This switch should not occur at bedtime when there is less observation by staff.

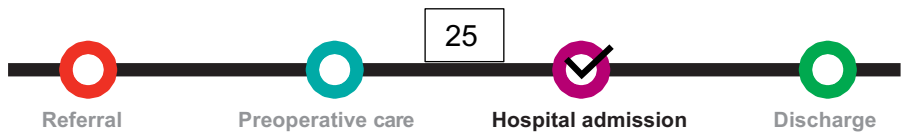
Self-management of your insulin pump (continuous subcutaneous insulin infusion [CSII]) during your hospital admission

Insulin pumps may be used by people with type 1 diabetes to optimise blood glucose control. Pump users undergo detailed education and training in the use of the pump by the diabetes specialist team and are very familiar with self-management even during illness.

Insulin pumps use rapid- or short-acting insulin which is infused continuously subcutaneously at a pre-programmed rate set by the patient, often with the advice of the diabetes specialist team. Bolus doses are then taken for each meal. If the pump is discontinued for any reason without an alternative provision of insulin, diabetic ketoacidosis is likely to develop within a short space of time because there is no reservoir of long-acting insulin.

For this reason an insulin pump should **never** be discontinued without immediate substitution of rapid-acting insulin via an alternative administration route.

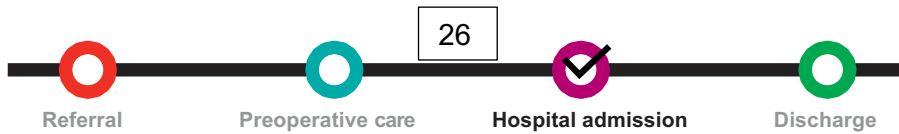




Managing your pump for procedures requiring a short period of starvation

General principles

- Continuous infusion of subcutaneous insulin via a pump is designed to maintain a stable blood glucose level during the fasting state.
- You should be allowed to self-manage if you are well enough to do so. If the procedure requires you to be nil by mouth for a limited period (no more than one missed meal) you should still be able to manage your diabetes with a pump.
- However, if you are unable to self-manage because of your illness the pump will be discontinued and a **variable rate intravenous insulin infusion** (see section on variable rate intravenous insulin infusion) will be started immediately.
- The diabetes specialist team should be notified of all patients in hospital receiving subcutaneous insulin pump treatment, with the exception of day surgery patients. If you are on a pump, please ask to speak to a member of the diabetes team.
- If your insulin pump is discontinued it should be stored safely until you are ready to go back on the pump. Please inform the nursing team where it is stored as this should be documented.



Protecting your feet

Some people with diabetes, when in hospital, are at high risk of developing wounds and pressure ulcers on their feet, particularly on their heels. These can be prevented by identifying those at risk and providing preventative foot care.

You can reduce your risk of developing foot ulcers by making sure your footwear is well fitting.

You should expect to have your feet examined when you are admitted, to determine whether you are at increased risk of developing foot problems in hospital. If you reduced blood flow in your legs or feet (also known as peripheral arterial disease, PAD) or a loss of feeling in your feet (also known as neuropathy) you can be at increased risk.

Your doctor or nurse will undertake a very simple examination consisting of a visual foot inspection and a test of your ability to feel touch on the tips of your toes. This is called the Ipswich Touch Test. If you have not had your feet examined, please remind the medical or nursing staff.

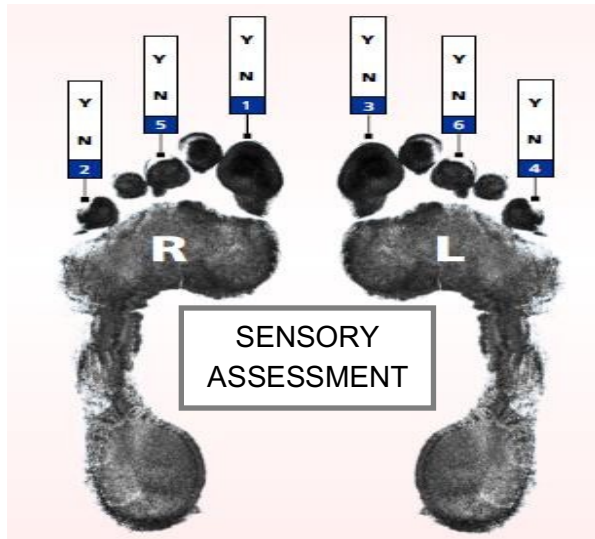
You should also have your heels inspected daily to detect any early skin changes which, if addressed, can prevent the development of a heel ulcer. If you are found to be at increased risk, your feet will be elevated off the mattress to reduce pressure on your heels and it is recommended that moisturising cream is applied to your feet daily.

You can find out more about the podiatry service here <https://keepingmewell.com/services/what-is-podiatry/>

The Ipswich Touch Test

The following information can be used by your healthcare team to check the sensation in your feet. A video of how to perform the test can be found by following this link

<https://diabeticfootonline.com/2012/04/01/the-ipswich-touch-test-iptt-your-diagnostic-tool-is-at-hand/>



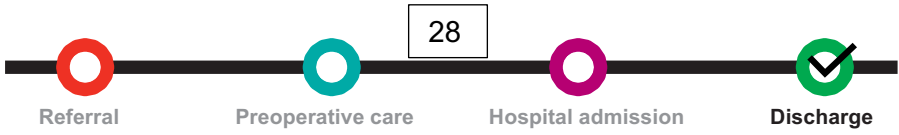
Look, Feel and Touch test (Sensory Assessment)

1. Ask the patient to close their eyes for the duration of the test
2. Remove footwear, including socks, or stockings.
3. Look at the foot colour and observe for wounds, blisters, skin breaks, callous formation, nail and or bony deformities.
4. Ask the patient to say "yes" when they feel contact or touch
5. Perform the "touch" using the tip of an index finger, and start by touching the tip of the toes.

Test the toes as indicated on the image and circle Y for Yes and N for No.

Loss of sensation in ≥ 2 of 6 toes





82

Discharge...

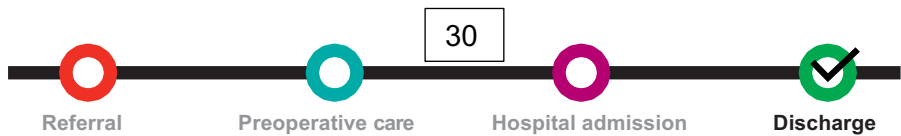


Sick day rules for people with diabetes

What should I do if I am unwell after my operation?

- **NEVER** stop taking your insulin – illness usually increases your body's need for insulin.
- If you are vomiting, have diarrhoea or become dehydrated **STOP** taking metformin and SGLT2 inhibitors (dapagliflozin, canagliflozin and empagliflozin, ertugliflozin).
- **TEST** your blood sugars at least four times a day, if you have the equipment to do so.
- **If you are unable to test your blood sugar you should inform your GP that you are unwell and ask that your blood sugar be checked.**
- **DRINK** at least 100 ml of water/sugar free fluid every hour – at least 2.5 litres a day.
- **EAT** as normally as you can. If you cannot eat or if you have a smaller appetite than normal, replace solid food during illness with one of the following:
 - 2 cups of milk
 - 200 ml carton of fruit juice
 - 150–200 ml of non-diet fizzy drink
 - 1 scoop of ice cream.
- Even if you are eating less than usual, being unwell usually makes your blood glucose rise.
- Symptoms of high blood glucose include:
 - thirst
 - passing more urine than usual
 - tiredness.

Not all illnesses have this effect and in some patients rather than rising the blood glucose level may fall when they are not eating. In this circumstance patients on gliclazide/glimepiride tablets or insulin may need to reduce their dose of diabetes medication.



Extra instructions for people with Type 1 diabetes

- If you are unwell and have a high blood glucose (12 mmol / L) you should follow the 'sick day rules' overleaf – they are also available online at www.trend-uk.org/wp-content/uploads/2018/03/A5_T1Illness_TREND_FINAL.pdf
- The golden rule is to **NEVER** stop insulin even if you are not eating.
- You should test regularly to track the changes in blood sugar.
- **TEST** your urine or blood for **KETONES** every two hours.
- **You will need more insulin if your urine KETONES** are ++2 or +++3 (or for those testing with a blood ketone meter, the level is 1.5 mmol / L or more). In this case contact your diabetes care provider.

When should I call my diabetes care provider or GP?

- If you have continuous diarrhoea and vomiting and/or a high fever.
- If you are **UNABLE** to keep food down for four hours or more.
- **HIGH** blood glucose levels with symptoms of illness (if above 15mmol/L you may need more insulin).
- If you become **DROWSY** and **BREATHLESS**, call 999 or go to your nearest **Emergency Department**.

OUTSIDE NORMAL WORKING HOURS consult your local out-of-hours service or go to your local hospital's A&E department.

Discharge checklist (for your information)

This page contains an example checklist for people with diabetes that should be reviewed before you leave hospital. Have a look to see if anything has been overlooked.

INSULIN AND / OR GLICLAZIDE TREATED PATIENTS

Hypoglycaemia avoidance

- Confirm that the patient/family member/carer has been informed of the potential for hypoglycaemia
- Confirm that the patient / family member / carer knows how to recognise and treat hypoglycaemia (give patient leaflet on 'hypoglycaemia' if necessary)
- Confirm that the patient has access at home to usual hypoglycaemic treatments (eg fruit juice)

INSULIN TREATED PATIENTS

Insulin administration

- Confirm that the patient is competent at injecting or, if not, arrangements are in place for community (district) nurse / carer to administer

Insulin dose and timing

- Confirm that the patient / family member / carer has **written** instructions on insulin doses and correct timings

Treatment supplies

- Confirm the supplies listed below have been provided

All patients on insulin therapy therapy:

- | | |
|------------------|--------------------------|
| Vials | |
| Syringe | <input type="checkbox"/> |
| Preloaded pen | <input type="checkbox"/> |
| Needles | <input type="checkbox"/> |
| Pen device | <input type="checkbox"/> |
| Insulin passport | <input type="checkbox"/> |
| Cartridges | <input type="checkbox"/> |
| | <input type="checkbox"/> |

Patients new-to-insulin must also be provided with:

- | | |
|------------------------|--------------------------|
| Blood glucose meter | |
| Insulin passport | <input type="checkbox"/> |
| Blood glucose strips | <input type="checkbox"/> |
| Sick Day Rules leaflet | <input type="checkbox"/> |
| Lancets | <input type="checkbox"/> |
| Sharps box | <input type="checkbox"/> |
| Monitoring diary | <input type="checkbox"/> |
| | <input type="checkbox"/> |

Please use this space to jot down any questions you may want to ask before or during your hospital stay...