

Guidance for Diabetic Persons having bowel preparation for a flexible sigmoidoscopy or a colonoscopy or a combined gastroscopy and colonoscopy

This guidance is provided to assist with your preparation for your endoscopic procedure. If you feel unclear about how to proceed after reading this information, please contact your diabetes specialist nurse, or practice nurse or general practitioner for personalised advice.

Do I need to inform the endoscopy department?

In preparing for your procedure it is important to inform the endoscopy department that you have diabetes; you may have already discussed this with the hospital doctor in clinic. If you are not sure we know about your diabetes phone 01225 821425 or 01225 821788 and ask to speak to a registered nurse.

We aim to place people with diabetes early on the endoscopy lists to avoid prolonged fasting. If you are having a colonoscopy or flexible sigmoidoscopy (lower examination) your food choices are affected.

It is important all diabetics have had their kidney function checked on a blood test within three months of their bowel preparation, if there is **reduced kidney function** the laxative regime is amended to kleen prep instead of picolax. If you know you have kidney problems and have received picolax, please contact the department. If you have **heart failure** or **kidney failure** this should be discussed with our department, as we may need to adjust the recommended fluid regimen, or provide your laxative bowel preparation as an inpatient.

This leaflet is for people with type 1 diabetes and type 2 diabetes who are on medication for their condition. If you have type 2 diabetes managed by diet alone you do not need to read this leaflet.

Diabetes Treatments

What type of medication am I on?

- **Oral diabetes medication (tablets):** Metformin, Gliclazide / Gliclazide MR, Glibenclamide, Glipizide, Glimepiride, Pioglitazone, Sitagliptin, Saxagliptin, Vildagliptin, Lingalipitin, Acarbose, Repaglinide, Nateglinide, Dapagliflozin
- **Long acting insulin:** Lantus/Glargine, Levemir/Detemir
- **Intermediate acting insulin:** Insulatard, Humulin I, Insuman basal, animal isophane.
- **Short acting insulin:** Novorapid, Humalog, Apidra, Actrapid, Humulin S, Insuman Rapid, animal neutral
- **Mixed insulin:** Novomix 30, Humulin M3, Humalog Mix 25 or 50, Insuman Comb 15, 25 or 50.
- **Other injectable treatment (GLP-1):** Exenatide (Byetta), Liraglutide (Victoza), Lixisenatide (Lyxumia), Bydureon.

If you are not clear on your insulin type or other diabetes medications please contact your diabetes specialist nurse, or practice nurse or general practitioner for personalised advice.

Two days before

How do I prepare in the 2 days before a colonoscopy or flexible sigmoidoscopy?

- For two days before your examination you should have only light meals and avoid red meat, fruit and vegetables in any form.
- You may eat eggs, cheese, fish, white meat, white bread, pasta or rice.
- If you have type 2 diabetes and take insulin, and this diet reflects a significant decrease in your usual food intake,

you may need to reduce your insulin doses. This can be discussed your diabetes specialist nurse, or practice nurse or general practitioner for personalised advice.

- If you have type 1 diabetes and are carbohydrate counting, you can continue this. Otherwise, you may need to reduce your dose of short-acting insulin. This can be discussed your diabetes specialist nurse, or practice nurse or general practitioner for personalised advice.

The day before

How do I prepare the day before a colonoscopy or flexible sigmoidoscopy?

- You may eat breakfast after your first laxative dose, sticking to the above dietary restrictions and from now on any fluids should be clear i.e. no milk in tea or coffee
- Take additional sugary clear fluids (drinks such as Lucozade, or sugar-containing squash, cordial or juice) to maintain your blood glucose levels if necessary
- At midday you may have a light lunch without vegetables. After this you need to start a liquid diet as per diet sheet
- At 2.30pm after the second laxative dose, start to drink one half pint (250mls) of clear fluids each hour, the more fluids that you drink, the better the bowel preparation works.
- Although two forms of bowel preparation are available in the department, we recommend persons with kidney impairment having kleen prep. If you have been sent picolax and have kidney problems, please contact our administrative team on 01225 821412 or 01225 824069 between Monday and Friday, 9am-5pm and ask for kleen prep.

How do I adjust my medications the day before a colonoscopy or flexible sigmoidoscopy?

- Continue to take Metformin and Pioglitazone as usual
- Do not take any other ORAL diabetes medications (see page 1)
- Continue to take GLP-1 injections (see page 1) as usual
- Check your blood glucose level before all insulin injections
- Long-acting and intermediate-acting insulin doses do not need adjustment
- If you have type 2 diabetes, halve the usual dose of short-acting or mixed insulin
- If you have type 1 diabetes and are carbohydrate counting, you can continue this. Otherwise, halve the usual dose of short-acting or mixed insulin

On the day of the procedure

If your procedure is in the morning:

- Continue liquid diet with clear fluids such as black tea or coffee, sugar-free squash, clear soups or water up to up to 5am

If your procedure is in the afternoon:

- Drink clear fluids such as black tea or coffee, sugar free squash or water up to 10am. When you travel to and from the hospital for your procedure carry some glucose tablets or a sugary drink (eg Lucozade, non-diet cola)

What to do if you have a 'hypo'?

- If you have any symptoms of a low blood sugar such as sweating, dizziness, blurred vision or shaking please test your blood sugar if you are able to do so.

- If it is less than 4mmol/L (or if you are not able to check your blood sugar), take 4 glucose tablets or 100mls of the sugary drink (this is the same as half a standard sized can of non-diet cola) or 4-5 jelly babies. Please tell staff at the hospital that you have done this because it is possible that your endoscopy (if you are having a combined procedure) may have to be rearranged.

Remember to bring with you to hospital:

- Glucose tablets or a sugary drink
- Blood glucose testing equipment (if you usually monitor your blood glucose)
- The tablets or injections you usually take for your diabetes, and prescription if available.

The following tables will guide you on how to adjust your diabetes medication ON THE DAY of your procedure.

If you are able to check your blood sugar, you should monitor this closely (eg on waking, on arrival at the hospital, after the procedure)



What to do with your oral diabetes medications:

Tablets	If your procedure is in the morning	If your procedure is in the afternoon
Metformin	Omit your morning dose If only taken at this time, take this dose at lunchtime	Omit morning and lunchtime Take again with evening meal
Sulphonylureas Gliclazide /Gliclazide MR, Glibenclamide, Glipizide, Glimepiride	Omit your morning dose If only taken at this time, take this dose at lunchtime	Omit your morning dose
Pioglitazone	Delay until after the procedure	Delay until after procedure
Acarbose	Omit your morning dose	Omit morning and lunchtime Take again with evening meal
Meglitinide (repaglinide or nateglinide)	Omit your morning dose	Omit morning and lunchtime Take again with evening meal
DPP-IV inhibitors (Sitagliptin, Saxagliptin, Vildagliptin, Linagliptin)	Omit your morning dose If only taken at this time, take this dose at lunchtime	Omit your morning dose If only taken at this time, delay until after the procedure
Dapagliflozin	Delay until after the procedure	Delay until after the procedure

What to do with your injected medications:

Injections	If your procedure is in the morning	If your procedure is in the afternoon
Once daily insulin ONLY (type 2 diabetes) Glargine (Lantus) Levemir (Detemir) Insulatard Humulin I Insuman basal	Continue your usual dose* *see below	Halve your normal dose if taken in the morning
Twice daily mixed insulin Novomix 30 Humalog Mix 25 or 50 Humulin M3 Insuman Comb 15, 25 or 50	Halve your usual morning dose. Resume your normal insulin regimen with your next meal.	Halve the usual morning dose. Resume your normal insulin regimen with your next meal.
Twice daily - separate injections of short-acting (e.g. animal neutral, Actrapid, Humulin S, Insuman rapid, Novorapid, Humalog, Apidra) and intermediate-acting (e.g. animal isophane, Insulatard, Humulin I, Insuman Basal)	Calculate the total dose of both morning insulins and give half as intermediate-acting only in the morning. Leave the evening meal dose unchanged.	Calculate the total dose of both morning insulins and give half as intermediate acting only in the morning Leave the evening meal dose unchanged.
Three times daily mixed insulin Novomix 30 Humalog Mix 25 or 50 Humulin M3 Insuman Comb 15, 25 or 50	Halve your usual morning dose If you miss lunch do not take your lunchtime dose. Resume your normal insulin regimen with your next meal.	Halve your usual morning dose Omit lunchtime dose Resume your normal insulin regimen with your next meal.
Basal bolus regimens: Combination of once or twice daily background (basal) long acting insulin with short-acting insulin at meal times (see page 1 for insulin types)	Basal (long-acting): Continue your normal dose* Short-acting: Omit your morning dose Resume with your normal insulin regimen with your next meal *see below	Basal (long-acting): Continue your normal dose* Short acting: Omit morning dose Omit lunchtime dose. Resume your normal insulin regimen with your next meal.
Exenatide (Byetta)	Omit morning dose	Omit morning dose
Liraglutide (Victoza)	Delay until after procedure	Delay until after procedure
Lixisenatide (Lyxumia)		
Bydureon	Delay by one day if due	Delay by one day if due

*If you normally graze through the day or normally eat snacks without taking extra insulin you should reduce this insulin dose by one third (eg if on 30 units normally, take 20)

What if I have an insulin pump?

- Maintain your usual basal rate, and only give boluses if you need to correct for a significantly elevated reading.
- If you have any concerns about hypoglycaemia, you can use a temporary basal rate that is 80% of your usual rate.
- You can contact your diabetes specialist nurse, or practice nurse or general practitioner for personalised advice.

After the procedure

How do I manage my diabetes after the procedure?

- After your procedure you can drink when you feel able to.
- Once you are eating and drinking you should resume taking your diabetes medications as normal.
- Your blood glucose levels may be higher than usual for a day or so.
- When you get home, if you feel nauseated or vomit and are unable to eat, please refer to the 'What should I do if I am unwell?' section below.
- If you do not improve quickly, and usually attend the hospital for diabetes care, please telephone the Diabetes Team on 01225 824198 during office hours Monday to Friday. If they do not answer, leave a message and contact your GP practice.
- Outside these hours please contact your GP practice or out of hours service.
- If you usually see your GP about your diabetes please phone your GP practice.

What should you do if you are unwell?

- NEVER stop taking your insulin or tablets – illness usually increases your body's need for insulin
- TEST your blood glucose level every 2 hours, day and night
- TEST your urine for ketones every time you go to the toilet or your blood ketones every 2 hours if you have type 1 diabetes and have the equipment to do this
- DRINK at least 100 mls water/sugar free fluid every hour – you must drink at least 2.5 litres per day during illness (approximately 5 pints)
- REST and avoid strenuous exercise as this may increase your blood glucose level during illness
- 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:
 - 400 mls milk
 - 200 mls carton fruit juice
 - 150-200 mls non-diet fizzy drink
 - 1 scoop ice cream

When should you call the Diabetes Specialist Nurses or your GP?

- CONTINUOUS diarrhoea and vomiting, and / or high fever
- UNABLE to keep down food for 4 hours or more
- HIGH blood glucose levels with symptoms of illness (above 15 mmol/L - you may need more insulin)
- KETONES in type 1 diabetes at ++2 or +++3 in your urine or 1.5 mmol/L blood ketones or more - you may need more insulin. In this case, contact the person who normally looks after your diabetes immediately.
- OUTSIDE NORMAL WORKING HOURS consult the local out of hours service or go to your local hospital A&E department.

Who should I call if I have endoscopy related questions?

- You are welcome to discuss your questions with our endoscopy nurses, on a weekday between 09.00 and 17.00; phone 01225 821425 or 01225 821788 and ask to speak to a registered nurse.

Who should I call if I have diabetes related questions?

- If you usually attend the hospital for diabetes care, and have diabetes related questions please telephone your diabetes specialist nurse or the Diabetes Team at the RUH on 01225 824198 during office hours Monday to Friday.
- If you usually attend the general practitioner for diabetes care, and have diabetes related questions please telephone your general practitioner.

Who should I call if I have urgent questions outside normal working hours or illness related questions?

- Consult the local out of hours GP service for urgent queries or illness or go to your local hospital A&E department.

Am I prepared for my endoscopic procedure?

- Write down your medication plan for the 2 days before, the procedure day, and the day after your endoscopic procedure. Sedation can affect your thinking, so it may be helpful to write your plan in the table below.
- If you are unclear you can contact your diabetes specialist nurse, practice nurse, the endoscopy department or general practitioner for personalised advice.
- If you are not sure we know about your diabetes, heart failure or kidney failure phone 01225 821425 or 01225 821788 and ask to speak to a registered nurse.

Date	Medication regime
2 days before: / /	
1 day before: / /	
Procedure: / /	
Day after procedure: / /	