

# Gastroscopy, colonoscopy and wireless capsule endoscopy using Klean-Prep

## GI Endoscopy Unit Patient Information Leaflet

### Introduction

This leaflet is for people who are having a gastroscopy, colonoscopy and a wireless capsule endoscopy (WCE) with a bowel preparation called Klean-Prep. It gives information on what these procedures are, the benefits and risks, and what happens before, during and after the procedures.

### What is a gastroscopy?

It is an examination of the gullet (oesophagus), stomach and part of the small bowel (duodenum).

The instrument used to perform this procedure is called a gastroscope. This is a slim, flexible tube with a light at the tip which is passed through the mouth. The image from this instrument is transferred to a screen which allows the operator to closely inspect the lining of the gut in order to make a diagnosis.

The procedure is not painful but may be a little uncomfortable. Some patients experience a feeling of fullness and want to burp. This is mainly due to air which is passed into the oesophagus, stomach and duodenum via a channel of the gastroscop.

The air is important as it inflates the gut slightly, allowing the operator to conduct a thorough investigation. Any feelings of bloating or discomfort will quickly pass once the procedure has been completed.

## **What is a colonoscopy?**

A colonoscopy is an examination of the large bowel or colon. The instrument used to perform the procedure is called a colonoscope. This is a slim, flexible tube with a light at the tip which is passed into your rectum. The rectum is your back passage.

The image from the colonoscope is transferred to a screen. This allows the operator to view the areas of the bowel which require close inspection, to make a diagnosis.

The procedure is not usually painful but may be a little uncomfortable. Some patients experience a feeling of fullness and bloating which is mainly due to air which is passed into the bowel through a channel in the colonoscope.

The air is important as it inflates the bowel slightly, allowing the operator to inspect the bowel thoroughly. Any feelings of bloating or abdominal discomfort should quickly pass once the procedure has been completed.

## **What is a wireless capsule endoscopy (WCE)?**

A wireless capsule endoscopy (WCE) allows specialists to see pictures of your small bowel. To do this, a disposable camera is miniaturised to fit into a capsule which can be easily swallowed. It is not much larger than most treatments swallowed in a capsule form.

Once the capsule has been swallowed, it starts to transmit pictures of the lining of the bowel to a receiver strapped to the outside of your body. The capsule has its own light to allow the camera to see the bowel wall.

The tiny batteries which power the capsule are safely enclosed within it so are not harmful and last no more than eight hours. This is usually enough time for the capsule to pass right through the small bowel (duodenum, jejunum and ileum) and into the large or lower bowel (colon).

Small abnormalities can easily be seen by the capsule and transmitted by a wireless technique. Up to 65,000 pictures can be stored for later examination by a trained specialist on a special dedicated computer.

## **What are the benefits?**

Your GP or hospital doctor will have advised that you have your digestive tract inspected very carefully. The procedures are a good way to investigate symptoms such as:

- Passing blood from the back passage
- Pain in the abdominal (stomach) area
- A change in bowel habits
- Anaemia

They are also a good way to check how you are doing if you have inflammatory bowel diseases such as ulcerative colitis and Crohn's disease.

There may be other reasons why your doctor has referred you for this test. You may already have had a barium investigation in the X-ray department but these procedures are a better way of inspecting the lining of the bowel more closely.

Sometimes, it is necessary to take small tissue samples of the lining of your digestive system (biopsies). This can be undertaken during the gastroscopy and colonoscopy. The samples or biopsies are sent to the laboratory for analysis and this helps make a diagnosis.

## What are the risks?

**Gastroscopy** is a safe procedure and therefore, complications are rare. You may have some discomfort in your throat afterwards. This should settle quickly and without treatment.

**Colonoscopy** is a very safe procedure and complications are rare. Occasionally if polyps are removed, the base of the polyp may bleed. We can usually stop this quite easily. Very rarely, if we are unable to stop the bleeding, further treatment such as blood transfusion or surgery is required.

Some patients experience discomfort due to trapped wind. This usually settles quite quickly once the wind has passed.

Very rarely, a tear or perforation of the bowel or oesophagus can occur which could require admission to hospital for observation and an operation to repair it. If this happens, you may need to have a blood transfusion.

For the **wireless capsule endoscopy**, if you have not passed the wireless capsule after three weeks, it may be necessary to take an X-ray of your stomach area. The risk of this happening is very small. It happens in up to two out of every 100 patients who have bleeding from the bowel, and in up to five out of every 100 patients who have Crohn's disease.

If the capsule cannot pass freely through your bowel, it is not dangerous. However, this may indicate that you have a narrowing (stricture) of the small bowel. You may need surgery to identify and treat this.

## What are the alternatives?

A barium enema is sometimes used instead of a colonoscopy. This is performed in the X-ray department. For this test, the bowel is filled with a solution containing barium metal which sticks to the lining of the bowel and shows up as white on X-ray.

A barium X-ray is sometimes used instead of a gastroscopy and colonoscopy. During a barium meal, you have to drink white liquid containing metal called barium. Barium sticks to the lining of your gullet, stomach, duodenum and colon. These parts of your body show up as white on X-rays and can be viewed to see if there is anything unusual.

X-ray procedures such as barium follow through, small bowel enemas and angiography are not always very effective. Long endoscopes can be passed into the small bowel (enteroscopy). This is often uncomfortable and unhelpful as only about a third of the small bowel can be seen this way.

It is not possible to take biopsies during these examinations. Therefore, sometimes it is necessary to perform a gastroscopy or colonoscopy after having a barium test in order for tissue samples to be taken to diagnose the problem.

You should discuss the option of having a barium test with your GP or the doctor who has referred you. He/she will advise you and organise the appropriate investigation.

## What preparation will I need?

You should stop eating foods which contain fibre **three days before** your procedures. Fibre cannot be digested and adds bulk to your stools. Your bowel needs to be completely empty to ensure your procedure goes well.

### **Foods to avoid include:**

- Whole grain breads, pasta, nuts and seeds.
- Fruit, fruit peel, dried fruit and fruit containing seeds.
- Vegetables with skins, for example, peas, broad beans and sweetcorn.
- Vegetables that have stalks, for example, broccoli, cauliflower and cabbage.
- Tough, coarse meat.
- Fruit juices containing fruit pulp.

## What do I have to do?

### The day before your tests:

From 2pm the day before, you must restrict your diet to clear liquids only and you should not eat any food. From 8pm the night before, you must also stop drinking fluids. You must not eat or drink anything for 12 hours before your test.

**You will have been sent a laxative treatment called Klean-Prep. You need to take this to clear your bowel of food residue so that we can obtain clear images of your bowel.**

### Instructions for taking Klean-Prep

#### The day before your tests:

**The day before your examinations** you need to do the following:

**2pm** – From 2pm have clear fluids only. This includes drinks such as water, squash (not blackcurrant as it stains the bowel), black tea/coffee and clear soup.

**4pm** – Fill a jug with one litre (or 1¾ pints) of water (not chilled). Empty the contents of one Klean-Prep sachet into it and stir until the powder is completely dissolved and the solution is clear. Drink one glass full of the drink from the jug about every 15 minutes until you have drunk it all. This should take about an hour.

**5pm** – Make up the next sachet of Klean-Prep. Drink this one over the next hour. Then have a break for an hour.

**7pm** – Make up the third sachet of Klean-Prep and drink as before.

**8pm** – Make up the fourth sachet of Klean-Prep and drink as before.

**10pm** – If you are ready, go to bed.

**The day of your examinations**, do not eat or drink **anything** until after your examinations.

Some patients say that they feel sick when taking Klean-Prep. If you are affected by this:

- Try having a break, then taking the Klean-Prep solution in sips.
- Try drinking the Klean-Prep solution through a straw.
- Add different flavours such as flavoured squash but please do not use blackcurrant squash as this can stain the bowel.
- Suck mint-flavoured sweets between drinks.

If you get a headache, drink lots of clear drinks and take paracetamol if necessary.

### On the day of the tests:

- Do not take any medication on the morning of the tests. You will be able to take it after the procedure, if necessary, so please bring it with you.
- The wireless capsule endoscopy test will start in the morning at around 8am. The gastroscopy and colonoscopy will either be later in the morning or early afternoon. If you are booked in for the afternoon list, you can go home with the equipment for the WCE attached and return in the afternoon for your further tests.
- Please make sure you arrive at the GI Unit, 1<sup>st</sup> Floor, West Wing, Russells Hall Hospital at 8am.
- Please wear loose two-piece clothing to allow easy access to your stomach area.

### Information for patients who have a stoma

As you have had some of your bowel removed by surgery, it is unlikely that you will need all of the bowel preparation.

Please prepare the drinks as explained in the instructions.

Once you start to pass **clear fluid** from your stoma, you will not need to drink any more Klean-Prep.

## What other preparation will I need?

- Please bring with you a note of any medication you are currently taking, and contact details of the person who will be collecting you after your procedures.
- Please do not bring valuables into the hospital and remove your jewellery before coming to your appointment. You can wear your wedding ring.
- As you may be sedated for the gastroscopy and colonoscopy procedures:
  - You will need to arrange for a responsible adult to take you home afterwards, either by car or taxi. You will not be able to go home on public transport.
  - Someone should stay with you overnight.
  - You cannot, by law, be in charge of a motor vehicle or moving machinery for 24 hours afterwards.
  - The medication (Midazolam) we give some patients before the gastroscopy and colonoscopy relaxes and makes you comfortable. However, it may affect your memory for up to 24 hours afterwards. You may not remember information given to you by the endoscopist but we will give you a report to take home.
  - The effect of the sedation (Midazolam) may be prolonged by other medication you are taking. We will discuss this with you when you come for the procedures.

Some patients may prefer to have the procedures without using sedation (Midazolam). In this case, you can have the colonoscopy using Equanox to relieve any discomfort. You can have the gastroscopy with Xylocaine, a local anaesthetic spray, to numb your throat during the procedure.

## What is Equanox®?

It is a mixture of 50 per cent nitrous oxide and 50 per cent oxygen. You may know it as 'gas and air'.

## Why is it used?

Equanox is given for the relief of short term pain and discomfort. It is used in hospitals and in the community for various treatments. This may include dressing changes, particularly patients with burns, or patients with injuries such as broken bones or dislocated joints after having accidents.

It can also be used to relieve discomfort during examinations or procedures such as flexible sigmoidoscopy as it is safe and quick to use and has few side effects.

## Who can have Equanox?

It is available to all people who need it. However, we cannot give Equanox to people who have the following medical conditions:

- Severe emphysema (a lung disease)
- A recent chest injury
- Pneumonia
- Recent keyhole surgery
- A blockage in the bowel (this will be assessed by your healthcare professional)
- A recent head injury
- A middle ear blockage or infection
- Recent ear surgery
- Abdominal distension
- People who are physically incapable of holding the equipment
- People who have recently undertaken an underwater dive
- People taking some medications as these could increase the effects of Equanox
- People who are intoxicated with alcohol (drunk) as this could increase the effects of Equanox

## How is Equanox used?

Nursing staff will show you how to use the equipment. We will give you a mouthpiece which you will need to hold between your lips. You will need to take in deep breaths to inhale the Equanox. You will hold the handset yourself so that you can use it when you need it.

Equanox may make you feel drowsy for a short time and you may lose your hold on the handset. When you feel less drowsy, you can continue to use the Equanox, if you still need it, until your procedure has been completed.

## Are there any side effects, risks or complications of using Equanox?

When used appropriately and correctly, Equanox is very safe.

Its effect will rapidly pass and you will be able to go home half an hour after your procedure, providing all is well. If you have driven to the hospital for your appointment, you will not be allowed to drive until at least half an hour has passed and the nursing staff are happy for you to go home.

Some patients have reported feelings of nausea (feeling sick), dizziness, disorientation, a dry mouth and light headedness after using Equanox. In these cases, you may need to stay for longer in the unit recovery area until all your symptoms have settled and you have returned to your normal self.

## What is Xylocaine?

It is a local anaesthetic spray which numbs the throat during the procedure.

## What are the benefits of not having sedation?

- You will be able to co-operate during the examination.
- You will remember information given to you by the doctor, nurse and endoscopist.
- You will be able to return home or go back to work immediately.
- You will not need to be accompanied or have anyone stay with you overnight

- You will be able to drive and operate machinery straight after the procedure.
- There is no likelihood of interference from other drugs you may be taking.

**You should not have any food or drink for twelve hours before your appointment time.**

## **What about my medication?**

You should take your usual tablets as normal but **do not take** iron tablets, and stool-bulking medication such as:

- Fybogel
- Regularan
- Loperamide
- Lomotil
- Codeine phosphate – if you are taking this medication frequently, or have been taking it for a long period of time, please seek advice from your GP or pharmacist before stopping it suddenly

If you usually take any of the medications listed, you should **stop taking them ten days before your appointment.**

## **Anticoagulants**

If you are taking medication that thins the blood, such as **warfarin, aspirin, clopidogrel or rivaroxaban**, you should be advised on whether to continue or stop taking the medication before the procedure. If not, please contact the GI Unit for advice on 01384 456111 ext. 2731 (8am to 6pm, Monday to Friday).

## Medication for diabetes

If you have diabetes and need advice on how to manage your condition while you are taking the bowel preparation, you should contact the GI Unit as soon as you get your appointment. We will send you an advice leaflet.

Please check your blood glucose level regularly while you are taking your bowel preparation, and before you leave the house to have the procedure.

## What happens when I get to the hospital?

Once you have reported to the GI Unit admissions desk, an endoscopy nurse will take you through to the unit. They will:

- Write down your medical history and any other relevant information.
- Explain the procedure to you and then ask if you are willing to sign a consent form (please see section 'Consent').
- The nurses will then go and input your information onto the wireless capsule computer. When they return, they will bring the equipment for the WCE.
- The nurse will:
  - fix the capsule belt around your waist, ensuring it is comfortable for you to sit and stand.
  - put the pod and bag over your shoulder and attach them.
  - switch on the capsule and ask you to swallow it with a glass of water.
  - check that the capsule has entered your stomach. We may be able to show that this has happened using a special real time scanner and you will be able to see actual pictures of the lining of your stomach and bowel.
- The nurse will then ask you to take a seat in the waiting area.

- After 15 minutes, the nurse will call you back through to look on the equipment to see if the capsule has entered your small bowel.

If it has not, the nurse will ask you to have a short walk around the hospital for 15 minutes.

After this, if the capsule has still not entered your small bowel, you may need a cannula so we can give you a medication called metoclopramide. A cannula is a small, thin tube, used to give medicine straight into a vein (blood vessel).

- Once the capsule has entered your small bowel, you will be able to go and return to the unit later on in the day for your gastroscopy and colonoscopy. Please come back 30 minutes before your appointment time to ensure all the paperwork is completed before your procedures.
- On returning for your gastroscopy and colonoscopy, a nurse will check your blood pressure and pulse. You will then be shown to a changing room as you will need to wear a patient procedure gown. If you have a lightweight dressing gown and slippers, you are welcome to bring them with you.

You will keep your belongings with you throughout your stay in the department. Once you are changed, we will show you to a waiting area. You may be joined by other patients of the same sex as you.

## **Who will be treating me?**

A specially trained nurse will carry out your wireless capsule endoscopy. The gastroscopy and colonoscopy will be carried out by a trained endoscopist. Within the GI Unit we have fully trained consultants, surgeons and nurse practitioners.

# What happens during the gastroscopy and colonoscopy?

- The nurse who will be taking care of you during your procedures will collect you from the waiting area and take you to the endoscopy room.
- In the endoscopy room, we will ask you to lie on the examination trolley.
- You will need to lie on your left hand side with your knees bent. You will be covered at all times.
- The nurse will place a cannula (small plastic tube) in your arm or hand if you are having sedation (Midazolam) and pain relief (pethidine).
- If you are having sedation, you will receive oxygen through a small tube which will be placed just inside your nose. This is a normal part of the procedure.
- If you having throat spray, the nurse will spray the back of your throat for you. If you are having Equanox, the nurse will show you how to use the mouthpiece so you can use this when you want to.
- Nurses looking after you will monitor your pulse and oxygen levels throughout the procedures.
- The gastroscopy is performed first, followed by the colonoscopy.
- If polyps are detected during the procedures, the endoscopist will remove them using a special instrument which is passed down a channel in the scope.
- When polyps are found, they must be removed to prevent progression to cancer. Once removed, we send the polyps to the laboratory for analysis to assist with the diagnosis and subsequent treatment.
- The endoscopist will take biopsies of the lining of the oesophagus, stomach and part of the small bowel (duodenum) and bowel in a similar way. This should not hurt.

- Once both procedures are completed, we will take you through to the recovery area on a trolley.

## **Will I need to stay in hospital?**

Usually, you only need to come in for the day when having a gastroscopy and colonoscopy. However, if you have bleeding, perforation (damage to your bowel) or suffer severe effects from the sedation, you may need to stay overnight in hospital for observation.

## **What happens after the test is over?**

After the procedure, we will take you into our recovery area where nurses will monitor you until you have recovered. We will give you aftercare information before you leave the department.

If the capsule has been seen during your colonoscopy, we will disconnect the wireless capsule equipment before you go home. If the capsule has not been seen, you can go home with the equipment still attached. You will need to remove the equipment at home at 9pm.

You can return the equipment the following day so the nurses can download the video for the consultant to read at a later date.

## **When will I get my results?**

The endoscopist will tell you the results of your gastroscopy and colonoscopy before you go home and give you an endoscopy report.

If we have taken biopsies or polyps, we will send them to the laboratory to be analysed. The results of this may take several days to process.

Your consultant may write to you with the results of the biopsies and polyps, or send you an outpatient clinic appointment in the post to receive them. Alternatively, you may need to make an appointment with your GP to receive the results. We will tell you if you need to do this before you leave hospital.

The consultant will read the capsule video and contact you with the results. This normally takes three to four weeks.

## Should I ask questions?

We want you to be fully informed at all times so you should always ask any questions you may have. The person you ask will do her/his best to answer your questions. If they do not know, they will find someone else who is able to discuss any concerns you may have.

## Is there anything I should tell people?

If there is any procedure you **do not** want to happen, you should tell the people who are treating you. It is important for them to know about any illnesses or allergies which you have suffered from in the past.

Remember to tell the team about anything that concerns you or anything which may affect your general health.

## Consent

You will need to give your consent before the doctor or health professional examines or treats you.

As part of your treatment some kind of photographic record may be made; for example, clinical photographs or video recordings. You will be told if this is likely to happen.

The photographs or recordings will be kept with your medical notes and will be held in confidence as part of your medical record. This means that they will normally be seen only by those involved in providing you with care, or those who need to check the quality of care you have received.

The use of photographs is extremely important for other NHS work such as teaching or medical research. However, we will not use yours in a way that allows your identity to be recognised without your permission.

We will ask you to sign a consent form once the procedure has been discussed with you. Health professionals must ensure that you know enough about the procedure beforehand, and that you are fully aware of the benefits and the risks of the procedure.

Once the consent form is completed, we will give you a copy to keep. If you later change your mind, you can withdraw your consent after signing.

If you have any questions, or if there is anything you do not understand about this leaflet, please contact:

GI Unit on 01384 456111 ext. 2731 (8am to 6pm, Monday to Friday)

Russells Hall Hospital switchboard number: 01384 456111

**This leaflet can be downloaded or printed from:**

<http://dgft.nhs.uk/services-and-wards/gastroenterology/>

If you have any feedback on this patient information leaflet, please email [dgft.patient.information@nhs.net](mailto:dgft.patient.information@nhs.net)

**This leaflet can be made available in large print, audio version and in other languages, please call 0800 073 0510.**

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