

# Advanced Endoscopic Resection of Polyps in the Large Bowel

**This leaflet has two sections: The first section explains the procedure and techniques for endoscopic removal of polyps in the large bowel, including the benefits, risks and any alternatives and what you can expect when you come to hospital. The second section details the instructions on how to prepare for this test including when to stop eating, how to cleanse your bowel, what tablets you may need to stop and the contact information for the Endoscopy Unit. It is important to read both sections to ensure that you are fully prepared for the procedure.**

**If you have any further questions, please speak to a doctor or nurse caring for you.**

## **Section One:**

### **Introduction**

This leaflet aims to help you understand more about the techniques used to remove large polyps, areas of abnormality or early cancer involving the lining of the gut.

The two main techniques are known as Endoscopic Mucosal Resection (EMR) and Endoscopic Submucosal Dissection (ESD).

We hope the information presented here will answer some of the questions that you or those who care for you may have. This leaflet is not meant to replace the consultation between you and your medical team but aims to help you understand more about what is discussed.

## **What is a polyp?**

A polyp is a growth that can develop on the lining of the bowel. If left to grow, polyps can sometimes turn cancerous. By removing polyps your risk of developing bowel cancer is greatly reduced.

## **What are EMR and ESD?**

EMR and ESD are two different techniques for removal of polyps or early cancers from the lining of the intestinal wall through a colonoscope, thereby avoiding the need for surgery. These procedures are primarily used for treatment (by removing polyps), but can also be used for diagnosis by removing and retrieving tissue that can be analysed. If an early cancer is thought to be present within a polyp, ESD can help to determine if the cancer involves deeper layers of the digestive tract, which can then help guide treatment decisions.

## **What do EMR and ESD involve?**

In both techniques, an endoscope is passed into the bowel to find the polyp seen during your previous test. You may feel discomfort as if you want to go to the toilet and short lasting cramps can occur. A small amount of fluid is injected under the polyp to lift it away from muscle beneath it, thus creating a safe field to remove it. You will not feel the polyp being removed.

In EMR – a wire loop is passed down the endoscope and placed over the polyp. A small amount of electrical current (diathermy) will be passed through the wire loop to cut the polyp while cauterising (sealing) its blood supply. If the polyp is large, these steps may need to be repeated until the polyp is completely removed.

In ESD - special equipment is used to cut around and underneath the polyp or area of concern. It allows for the removal of the abnormal tissue in one piece.

The advantage of ESD over EMR is that it removes deeper layers of tissue which can provide a greater degree of confidence that cancer cells (if present) have been fully removed. However, the ESD procedure usually takes longer to perform than an EMR and has a higher rate of complications.

**It is necessary for sedation to be used in this procedure.**

***Please remember to arrange for someone to accompany you home and to look after you overnight. Public transport is not recommended post procedure, it is preferable for your escort to drive or organise a taxi home. Also, please bring an overnight bag with you in case you require admission to the hospital following your procedure.***

### **During your EMR or ESD**

The EMR or ESD procedure can take longer than a standard colonoscopy. This can vary depending on the size and position of the polyp / abnormal area but can take up to several hours. An injection of a painkiller and a sedative injection will usually be offered at the start of the procedure to help make you feel more relaxed and comfortable but does not put you to sleep.

### **What are the risks of EMR and ESD?**

The risks of EMR and ESD are smaller than the risks of surgery. Although uncommon, the main risks are:

- **Perforation** – This means making a hole through the wall of the digestive tract. With EMR, this can occur about once in every 100 patients and, with ESD, this can occur about once in every 50 patients. Sometimes perforations can be treated at the time of the endoscopy usually combined with a short course of antibiotics, but occasionally an emergency operation is required.
- **Bleeding** – Minor bleeding is seen commonly during and rarely after, EMR or ESD procedures and is most often able to be identified and

treated at the time of endoscopy. Bleeding can occur up to 14 days after the procedure and usually settles on its own. About once in every 100 patients, bleeding is more significant and may require a blood transfusion or a further endoscopy to assess and treat the site of bleeding. Very rarely, an emergency operation may be required to stop it.

- **Incomplete polyp removal** – Sometimes, it is not possible for the endoscopist to remove the entire polyp for technical reasons. If this happens, further endoscopic resection or an operation might be planned at a later date.
- **Narrowing of the large intestine** - Removing large rectal lesions can lead to scarring that narrows the large bowel. It may lead to difficulty in opening the bowels and may require further treatment. This is a very rare complication and is usually amenable to medicine to soften the stool or stretching of the area if required through the endoscope (colorectal dilatation).

### **What happens if the endoscopist does not think that EMR / ESD is possible?**

Even if you have been scheduled for an EMR or ESD procedure, the endoscopist may (after careful assessment of the polyp) determine that it is not safe or possible, to proceed with the polyp removal. If this is the case, the doctor will discuss whether you need to have an operation or an alternative procedure to remove the polyp or abnormal area.

### **Are there other options?**

Yes. There are two other options:

1. Do nothing – leave the polyp or abnormal lesion alone. However, the risk is that larger polyps are at greater risk of turning cancerous if they are left to grow.
2. Remove the polyp or abnormal area by having a surgical operation to remove the section of bowel in which the polyp is located. This carries the risk of general anaesthetic and wound infection and will

leave a scar on the abdomen. Sometimes surgery can require the formation of a stoma (which results in a bag on your abdomen), although this may only be temporary. If you are considering an operation, further details will be provided by the surgeon undertaking it, who will discuss the risks and benefits in greater detail with you.

**It is very important that you now read section two of this leaflet, How to prepare for your EMR/ESD.**

## Section Two:

# How to prepare for EMR/ESD in your bowel

This section explains more about how to prepare for this test, including when to stop eating, how to cleanse your bowel and what tablets you may need to stop.

It is very important that no food or milk is consumed in the 24 hour period prior to your examination. Please read the fasting and laxative instructions overleaf.

## How can I prepare for my procedure?

- A clear view of the colon is required for this examination to be successful and so your bowel must be as empty as possible. You will have been prescribed either Citrafleet or Moviprep which are laxatives designed to clear your bowel of stool. Please read the instructions below carefully.
- If you are diabetic or taking Warfarin, or blood thinning medications such as Apixaban, Rivaroxaban, Dabigatran, Clopidogrel, Ticagrelor or Prasugrel please contact us on the phone numbers below under **Contact us**.
- Take other medications as normal, except iron tablets or stool bulking laxatives such as Fybogel or Movicol which should be stopped one week before your examination.
- If you are taking the contraceptive pill, please take additional precautions for one week following the bowel preparation.
- Please do not take oral medications one hour before or one hour after taking the bowel preparation.
- Please bring a list of your regular medications and bring any inhalers or sprays with you.

- If you object to receiving blood products, we need to know in advance so please contact us on the numbers below under **Contact us**.

### Colonoscopy dietary and laxative preparation

Please follow the instructions overleaf. **Failure to comply with the laxative preparation may lead to cancellation of your procedure for safety reasons.**

### Three days before the procedure – Start low fibre diet

It is important to reduce the amount of fibre you eat **before taking the bowel preparation**. This means avoiding cereals, wholemeal bread, salads, fruits or any food containing nuts or seeds. **You must stop eating 24 hours before your appointment.**

Please see overleaf for a guide on what foods you can eat and what you need to avoid:

**Important: You need to stop eating 24 hours before your appointment.**

<b>You can eat/drink (up to 24 hours before):</b>	<b>Do not eat/drink:</b>
<input type="checkbox"/> Lean beef, lamb, ham, veal, pork or chicken <input type="checkbox"/> Fish, shellfish <input type="checkbox"/> White rice, noodles or white pasta <input type="checkbox"/> Peeled potatoes; boiled, baked or mashed <input type="checkbox"/> Cornflakes, Rice Krispies, <b>No Bran</b>	<input type="checkbox"/> Fruit (fresh, dried or canned) <input type="checkbox"/> Brown rice and brown pasta <input type="checkbox"/> Vegetables <input type="checkbox"/> Roasted/deep fried chips <input type="checkbox"/> High fibre cereals and Porridge <input type="checkbox"/> Pulses or lentils <input type="checkbox"/> High fibre, Wholemeal and Multigrain bread <input type="checkbox"/> Jam/Marmalade

<input type="checkbox"/> Eggs <input type="checkbox"/> White bread or toast, honey, marmite <input type="checkbox"/> Rich Tea or other plain biscuits <input type="checkbox"/> Butter, Milk, Cheese, Cream, <input type="checkbox"/> Yoghurt, Ice-cream <input type="checkbox"/> Soya and tofu <input type="checkbox"/> Gravy made from stock cubes (plain or corn flour can be used to thicken) <input type="checkbox"/> Sugar or sweetener <input type="checkbox"/> Jelly; green or yellow <input type="checkbox"/> Tea, coffee, water, fizzy drinks, fruit juice	<input type="checkbox"/> Nuts and seeds <input type="checkbox"/> Crisps <input type="checkbox"/> Red or blackcurrant jelly <input type="checkbox"/> Red/blackcurrant cordial or fruit juice
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### **The day before the procedure - Start fasting**

**DO NOT EAT FOOD FOR 24 HOURS BEFORE THE TEST.** (Please check your appointment time to see when to stop eating). During this time, take only *clear fluid* e.g. water, herbal tea, black tea or coffee (can have sugar but no milk), lemonade, sports drinks, orange squash. You may have clear soup (broth) or yellow / green jelly. You can continue clear fluids up until two hours before the examination.

### **How to take your bowel preparation**

The section below explains how to take the bowel preparation. There are two types of bowel preparation, Citrafleet and Moviprep. Please follow the instructions for the bowel preparation provided to you and the timings of when to take it according to your appointment time.

### **If taking Citrafleet sachets:**

**PLEASE DRINK 2-3 LITRES OF CLEAR FLUID DURING THE FASTING PERIOD.**

(For morning and afternoon appointments)

#### **Day before the procedure:**

##### **At 4pm**

Drink one sachet of Citrafleet (mix with a glass of water). The drink may fizz. Drink a full glass of water after drinking the Citrafleet. It can start to work within as little as 30 minutes but can take up to five hours to work. Please drink plenty of *clear fluids* throughout the afternoon and evening as above.

#### **Day of the procedure:**

##### **At 6am (or earlier if required)**

Drink the second sachet of Citrafleet, even if you think the first one has already worked.

Please drink a further 500mls to a litre of *clear fluid* up to two hours before the colonoscopy.

For afternoon appointments you can take the second sachet at 9am.

**You must stop drinking two hours prior to the procedure.**

### **If taking Moviprep sachets:**

**Please follow the instructions according to your appointment time.**

### **FOR MORNING APPOINTMENTS:**

#### **Day before the procedure**

##### **At 12 noon**

Make up your first jug of Moviprep by mixing both sachets A and B in a litre of water. Stir the solution until clear. Drink a glassful every 15-30 minutes until it is finished. Keep the rest of the mixture in the fridge as it

tastes better when it is cold. It is also important to drink an additional 500ml of clear fluid during the evening.

### **At 6pm**

Repeat as above with the remaining sachets, A and B and drink a glass every half an hour until 7pm. Keep the remaining 2 glasses of preparation in the fridge for the following morning.

### **Day of the procedure**

#### **At 6am** (or earlier if required)

Drink the remaining two glasses of bowel preparation and a further two glasses of clear fluid.

**You must stop drinking two hours prior to the procedure.**

## **FOR AFTERNOON APPOINTMENTS:**

### **Day before the procedure**

#### **At 4pm**

Make up your first jug of Moviprep by mixing both sachets A and B in a litre of water.

Stir the solution until clear. Drink a glassful every 15-30 minutes until it is finished. Keep the rest of the mixture in the fridge as it tastes better when it is cold. It is also important to drink an additional 500ml of clear fluid during the evening.

### **Day of the procedure**

#### **At 9am**

Make up your second litre of Moviprep repeating the steps above and drink it over 1-2 hours, drinking a glassful every 15-30 minutes until it is finished. Following this please drink an extra 500mls of clear fluid.

**You must stop drinking two hours prior to the procedure.**

## What if my bowel preparation hasn't worked for hours after taking the laxative?

**Please be patient.** We anticipate that the laxative will work within a few hours as outlined in the manufacturer's guidelines, but this can sometimes take a little longer depending on your age, diet, if you have diabetes and whether you suffer from constipation. If by the morning of your appointment you have had no result, please contact us for advice. Once it does start working please stay close to a toilet as sometimes no warning may be given.

## What If the laxative makes me feel sick or nauseated?

Occasionally, nausea may be experienced. If this happens stop drinking the preparation for 15 minutes and then start again, slowly at first. If you experience nausea or vomiting go to your local pharmacy and ask for anti-sickness tablets. Contact the Endoscopy Department on the phone numbers of Page 10 of this leaflet, if your symptoms persist.

## Advice for diabetic patients

The bowel preparation can upset your diabetes temporarily. For further advice about your diabetes, please contact us on the phone numbers below under **Contact us**. Alternatively you may wish to contact your diabetic nurse.

## Tips on bowel preparation

Apply barrier cream to your anal area as repeated bowel actions can make you sore. If you feel uncomfortable, stop temporarily, keep moving about and you should feel better. If you do not like the taste, drinking it through a straw can help. No alcohol should be drunk the day before or on the day of your examination.

## On arrival at the endoscopy unit

- A nurse will check your details, including medications and allergies
- The test will be explained again and you will be asked to sign a consent form.

- You will be asked to change into a gown.

### **Asking for your consent**

It is important that you feel involved in decisions about your care. You will be asked to sign a consent form to say that you agree to have the treatment and understand what it involves. You can withdraw your consent at any time, even if you have said 'yes' previously. If you would like more details about our consent process, please ask for a copy of our policy.

### **After your procedure**

You will be able to rest in the recovery room until the immediate effects of the sedation have worn off. Most patients can go home the same day, provided they are feeling well, are accompanied home by a family member or friend and have a responsible adult staying with them for that day and overnight.

Sometimes, for example if the polyp was very large, or your procedure was prolonged, or if you live a long way away from the hospital, the consultant might advise that you stay in hospital overnight as a precaution. Please be aware that you will be required to be admitted to the hospital overnight after your procedure if you are not able to be accompanied home. You **MUST** make us aware if this is likely to be the case well in advance of your procedure, so that the necessary arrangements can be made. Avoid air travel for one week following the procedure. However, if it is absolutely necessary, please consult the airline and your insurance company.

### **What should I look out for after the procedure?**

Immediately after the procedure, you may experience trapped wind. This usually passes over the next 24 hours. It can be eased with peppermint capsules or peppermint tea. Occasionally you can feel faint or sick. This usually passes during your recovery period in the

endoscopy unit. If you develop any of the symptoms listed below after you have left the endoscopy department, please seek medical advice immediately by attending the nearest Accident and Emergency Department (A&D). Please take with you a copy of your endoscopy report. Please also inform the Advanced Endoscopic Therapy Nurse **(Monday to Friday, 9am to 5pm)** on the numbers below under **Contact us.**

The symptoms to look out for include:

- Fever
- Chills
- Bowel motions containing large amounts of blood or clots
- Abdominal pain
- Shortness of breath
- Fainting

### **Will I have a follow-up appointment?**

The tissue that has been removed will be sent for analysis. It usually takes from one to three weeks for the tissue to be analysed and reported. If further action is required based on the analysis of the tissue obtained, we will contact you with the next steps.

A repeat follow-up procedure is usually required to assess the area where the polyp / abnormal tissue was removed and this will be documented on your endoscopy report. An appointment will be sent out to you accordingly but if you do not receive this within the expected timeframe, please contact the Endoscopy Department on the phone numbers below.

## Where do I go?

St George's Hospital, Blackshaw Road, London, SW17 0QT. Please go to the Endoscopy Unit, First floor, St James' Wing.

## Is there parking at the hospital?

At St George's Hospital, the car park entrance is located on Blackshaw Road.

## Contact us

If you wish to discuss the EMR or ESD procedure with someone or if you have any further questions, please contact:

Advanced Endoscopic Therapy Nurses  
Endoscopy Department, St James Wing  
St George's Hospital  
Telephone: 020 8725 1682 / 4311  
Monday to Friday, 9am to 5pm

Endoscopy Department  
St George's Hospital  
Telephone: 020 8725 1913 / 1491  
Monday to Friday, 9am to 5pm

**For more information leaflets on conditions, procedures, treatments and services offered at our hospitals, please visit [www.stgeorges.nhs.uk](http://www.stgeorges.nhs.uk)**

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## Additional services

### Patient Advice and Liaison Service (PALS)

PALS can offer you on-the-spot advice and information when you have comments or concerns about our services or the care you have received. You can visit the PALS office between 9.30am and 4.30pm,

Monday to Friday in the main corridor between Grosvenor and Lanesborough wings (near the lift foyer).

**Tel:** 020 8725 2453 **Email:** [pals@stgeorges.nhs.uk](mailto:pals@stgeorges.nhs.uk)

### **NHS Choices**

NHS Choices provides online information and guidance on all aspects of health and healthcare, to help you make decisions about your health.

**Web:** [www.nhs.uk](http://www.nhs.uk)

### **NHS 111**

You can call 111 when you need medical help fast but it's not a 999 emergency. NHS 111 is available 24 hours a day, 365 days a year. Calls are free from landlines and mobile phones.

**Tel:** 111

### **AccessAble**

You can download accessibility guides for all of our services by searching 'St George's Hospital' on the AccessAble website ([www.accessable.co.uk](http://www.accessable.co.uk)). The guides are designed to ensure everyone – including those with accessibility needs – can access our hospital and community sites with confidence.



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