

Patient  
Information

# Endoscopic Submucosal Dissection (ESD)

## Introduction

You have been advised to have an Endoscopic Submucosal Dissection (ESD). It is important that you read this information before your appointment so that you understand this procedure and the preparation involved.

The consultant performing the procedure will assess your suitability for this procedure. This will either be via a telephone call or a face-to-face clinic appointment.

If you are pregnant, please seek advice from your GP or referring consultant. This is very important as your procedure may be delayed if you do not get advice.

## Medication advice

If you currently take medicines containing iron, you must stop taking them 7 days before your appointment. **The procedure may be delayed if you have not stopped taking the iron medicine.**

If you have not been given medication advice and you have **diabetes** or you are taking medication than **thins your blood**, please contact the relevant Endoscopy Unit on the Medication Advice Line (answer phone). This medication will need to be stopped before the procedure. The telephone numbers are at the end of this leaflet.

If you are using an insulin pump, we would like your BM to be 7mmol/L. Please contact your local pump team if you need further advice.

## What is ESD?

ESD is an advanced endoscopic procedure to remove a lesion or polyp found in the bowel, in one piece. This is done using a knife rather than the conventional snare removal.

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The procedure will be carried out using a colonoscope. A colonoscope is a long flexible tube, about the thickness of your index finger with a bright light at the end (this is not hot) which transmits images to a screen. By looking at the screen the doctor can see the lining of the bowel and check the location of the lesion/polyp.

### **How is ESD performed?**

ESD is performed by injecting fluid into the lining on the colon. This will raise the tissue underneath the lesion/polyp making it easier and safer to remove.

The lesion/polyp is removed in one piece, using specialised instruments creating an incision around the lesion/polyp then carefully dissecting it from the deeper layers. Using heat treatment (diathermy) the blood vessels are then cauterised to stop any bleeding. You will not feel this.

For the majority of this test, you will be facing the screen but it will be necessary to ask you to roll onto your back or right side.

You will be in the department between 5 to 8 hours. The time taken for the removal of the polyp will depend on many factors.

### **Benefits and reason for ESD**

Colonic lesions/polyps are removed to stop them from becoming malignant (cancer) with the risk of spreading elsewhere in the body. Some lesions appear benign, but are still at risk of containing cancer (occult malignancy).

Removing a lesion/polyp by ESD may prevent the need for surgery, even if cancer is found in the lesion.

The tissue removed will be examined in the laboratory. This will enable an accurate and informed decision to be made about the need for any further treatment or surgery.

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### Alternative procedures

The main alternative to ESD is an Endoscopic Mucosal Resection (EMR). Although EMR can be carried out much quicker, it carries higher recurrence rates, less chance of treating without the need for further surgery and less chance of removing the polyp/lesion in one piece. The EMR procedure also removes the lesion in more than one piece which means it might be more difficult to analyse under a microscope. Follow-up checks might be necessary to make sure re-growth does not happen.

Other alternatives include open or key-hole surgery which will have longer recovery periods and greater risks.

Transanal Endoscopic Microsurgery (TEMS) can be used to remove a lesion/polyp but is normally done with a general anaesthetic.

### Risks associated with ESD

As with a colonoscopy, there is a risk of an adverse reaction to any medication given during the ESD procedure.

There is also a risk of perforation (a hole or tear) of the bowel and bleeding. Perforation happens in less than 1 in every 1,000 procedures and blood transfusions and/or surgery is needed. If surgery is needed, it will be a major operation but the risks of complications are small.

Bleeding can happen in 1 in every 500 procedures and it might be necessary to admit you to hospital for treatment.

### Preparation for your procedure

To allow a clear view during the procedure, the bowel must be cleaned using a special preparation.

You will have received your bowel preparation and full instructions on how to take it. This will also include details of what you can eat and drink before the colonoscopy.

**If you have not received the preparation or if you have any questions about it, please telephone the Medication Advice Line. The telephone number is at the end of this leaflet.**

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Please note that you can drink clear fluids while taking the preparation right up to until your appointment time. Clear fluids can be black tea, Bovril® or Oxo®, any squash except blackcurrant as it stains the bowel, apple juice or any other juice as long as it does not contain bits.

The NHS, a major contributor of carbon emissions in the UK, has recently outlined ambitious targets to achieve net zero carbon emissions by 2040. The endoscopy team in Gloucestershire have carefully considered ways of adopting more sustainable care and waste reduction.

We would appreciate your support to help make our practice 'greener' by kindly bringing the following items along to your endoscopy appointment, so that single use alternatives are not required:

- Dressing gown
- Pair of slippers
- Clean underwear to change into after the procedure
- If applicable, your own denture pot, hearing aid case(s) and/or eye glasses case
- Water bottle
- Reusable cup with lid for a complimentary hot drink after the procedure
- Bag to place your clothes in during procedure

## Intravenous sedation

The ESD procedure takes longer than a normal colonoscopy. There is a need for patients having ESD to be calm and still. This is achieved using conscious sedation.

Due to the highly technical and precise nature of ESD, we do not recommend patients having this procedure without sedation.

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Most cases will be performed using conventional conscious sedation. The sedation will be given into a vein in your hand or arm. This will make you drowsy or sleepy and relaxed, but not unconscious. You will be in a state called conscious sedation. This means that, although drowsy, you will still hear what is said to you and therefore will be able to follow simple instructions during the procedure. You will be able to breathe normally during the procedure.

Sedation also makes it unlikely that you will remember anything about the procedure.

While you are sedated, we will check your breathing and heart rate so that any changes will be recorded and dealt with accordingly. For this reason, you will be connected by a finger probe to a pulse oximeter which will measure your oxygen levels and heart rate during the procedure. Your blood pressure will also be recorded.

Please note that after having sedation you should not drive, drink alcohol, operate heavy machinery or sign any legally binding documents for 24 hours.

You will need someone to accompany you home and a responsible person to stay with you for 24 hours. If this cannot be arranged for the appointment date given, please ring the appointment team to reschedule your appointment. The telephone number is at the end of this leaflet.

### Entonox<sup>®</sup>

If suitable for you, Entonox<sup>®</sup> (gas and air) is available during the procedure. This will help to control any discomfort.

If you have experienced or suffered with any of the following within the last 12 weeks, Entonox<sup>®</sup> will not be suitable for you.

- Pneumothorax
- Air embolism
- Emphysema/COPD
- Recent ear/eye surgery
- Head injury with impaired consciousness
- Bowel obstruction
- Scuba diving
- Decompression sickness

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### After the procedure

After the ESD procedure is completed, the nurse caring for you during the test will take you from the endoscopy room to the recovery area. Your pulse and blood pressure will be monitored as needed. This is called the recovery period.

You may feel a little bloated or have some discomfort in your lower abdomen. This is normal and it should start to ease by the time you are discharged.

You will need to stay in hospital for about 2 to 4 hours after the procedure depending on how you recover from the sedation given.

Normally you will see the person who performed your procedure before going home. Occasionally, this is not possible so a nurse will discuss how the procedure went and give you a copy of the report before you are discharged. As you will have had sedation, it is a good idea to have someone with you at this discussion as many people find that they forget what has been said to them. You will be given written advice and a copy of the procedure report to take home. A copy of the report will also be sent to your GP.

If a sample (biopsy or polyp) has been taken, the result will take up to 5 weeks to process.

Normally after a larger polyp resection, the endoscopist will arrange a telephone follow-up consultation either relayed to you on the day of the procedure or when the results of the histology (biopsy) come back.

### Going home

After having sedation, it is essential that someone takes you home and that there is a responsible adult to stay with you for 24 hours.

You may go home by taxi or public transport but you must have someone to accompany you on the journey.

For this period of time, you **must not**:

- Drive a car, motorbike or ride a bicycle
- Drink alcohol
- Operate machinery or do anything requiring skill or judgment
- Make important decisions or sign any legal documents

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An advice sheet including this information will be given to you before you leave the department; this is your discharge letter.

## Travelling

After having a lesion/polyp removed from your bowel, there is a risk of delayed bleeding. If the polyp is large or there are lots to be taken away it is important to let your endoscopist know if you intend to travel (especially long-haul flights) in the days following this treatment.

## Concerns

Gloucestershire Hospitals NHS Foundation Trust is an Endoscopy Training Centre. We regularly have registrars and clinical endoscopists working on the unit. If you have any concerns or issues with this, please discuss with the admission nurse.

## Results

Please contact your GP or consultant directly for your test results as these are not disclosed to Endoscopy.

## Contact information

### Appointment enquiries

Tel: 0300 422 6350

Tel: 0300 422 6351

Monday to Sunday, 8:30am to 4:00pm

### Medication Advice Line (answer machine)

If you have any questions relating to your medication, please leave a message and a member of staff will return your call:

### Cheltenham General Hospital

Tel: 0300 422 3370

Monday to Friday, 8:00am to 6:00pm

### Gloucestershire Royal Hospital

Tel: 0300 422 8232

Monday to Friday, 8:00am to 6:00pm

Saturday and Sunday, 9:00am to 12:00 midday





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**Resources:**
**National Library of Medicine**

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4593923/>  
<https://pubmed.ncbi.nlm.nih.gov/34377006/>

**The Leeds Teaching Hospitals NHS Trust**

<https://www.leedsth.nhs.uk/a-z-of-services/endoscopy/about-your-procedure/therapeutic-endoscopy-and-colonoscopy/polyp-removal/endoscopic-submucosal-dissection-esd/>

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## Making a choice

### Shared Decision Making

If you are asked to make a choice, you may have lots of questions that you want to ask. You may also want to talk over your options with your family or friends. It can help to write a list of the questions you want answered and take it to your appointment.



### Ask 3 Questions

To begin with, try to make sure you get the answers to three key questions if you are asked to make a choice about your healthcare.

1. What are my options?
2. What are the pros and cons of each option for me?
3. How do I get support to help me make a decision that is right for me?

These resources have been adapted with kind permission from the MAGIC Programme, supported by the Health Foundation

\* Ask 3 Questions is based on Shepherd HL, et al. Three questions that patients can ask to improve the quality of information physicians give about treatment options: A cross-over trial. Patient Education and Counselling, 2011;84: 379-85



<https://aqua.nhs.uk/resources/shared-decision-making-case-studies/>