

## General Surgery

# Endoscopic sleeve gastroplasty

This leaflet explains what an endoscopic sleeve gastroplasty is, how to prepare for it, and advice for afterwards. “ESG” is another name for endoscopic sleeve gastroplasty.



Stomach shape after endoscopic sleeve gastroplasty.

Image provided by kind permission of Boston Scientific 2024

## What is an endoscopic sleeve gastroplasty?

Endoscopic sleeve gastroplasty is a procedure which makes the size of your stomach smaller. It helps you feel fuller sooner by reducing the capacity. It also makes you feel more satisfied by stimulating the vagus nerve, which supports weight loss.

Your surgeon uses an endoscope (flexible tube with camera) to change your stomach into a sleeve shape. The remaining stomach function is unaltered. This procedure is **not reversible**. **This means your stomach cannot be changed back afterwards.**



### What happens during the procedure

Endoscopic sleeve gastroplasty is done under general anaesthetic (where you're asleep).

During your procedure:

- your surgeon will pass the endoscope (flexible tube with camera) through your mouth and into your stomach
- your surgeon stitches your stomach using a device attached to the endoscope
- your surgeon uses the stitches to make large folds. This makes the sleeve shape and reduces the size of your stomach by around 70%.

### Your hospital stay

You'll usually need to stay in hospital for 1 night, but this depends upon your recovery.

### Benefits of this procedure

- Your recovery time and the time you need to stay in hospital are shorter. This is because this procedure uses endoscopy and not cuts like other weight loss surgeries.
- It can help you lose around 40% of your excess weight and 20% of your total body weight if you have a healthy diet and regularly exercise.
- It can improve weight related health problems such as diabetes, high blood pressure, sleep apnoea and reflux.
- It can help you with gradual weight loss.

### Videos

#### Endoscopic Gastric Sleeve (ESG) Procedure

This is an animation of the procedure (2 minutes 41 seconds)

[www.youtube.com/watch?v=uV4BEF1YpUAh](http://www.youtube.com/watch?v=uV4BEF1YpUAh)



## Patient Information

### **A Patient's Experience**

This is a patient's experience of this procedure (1 minute 53 seconds)

[www.youtube.com/watch?v=Xg8mEOIk4fc](http://www.youtube.com/watch?v=Xg8mEOIk4fc)



### **Risks**

This is a safe procedure. But all procedures have a chance of complications. Your surgeon will explain to you the risks based on your health.

### **Complications at the time of the procedure can include:**

- fluid or food enters your airway (aspiration)
- sore throat
- air in your chest cavity (pneumothorax)
- tummy (abdominal) pain
- dehydration
- bleeding (haematoma) can happen in around 1 patient in 500
- infection of the lining of your tummy (peritonitis)
- abscess near or around your stomach
- leaking from the stitch-line in stomach (perforation)
- a break in the stitch-line
- being sick (vomiting)
- making a small hole (perforation) in your food pipe (oesophagus), stomach, bowel, or other organs is around 1 patient in 5000.
- infection in your chest or abdomen
- DVT (deep vein thrombosis) or PE (pulmonary embolism)

## Patient Information

### **Complications in the years after the procedure can include:**

- malnutrition
- narrowing of your food pipe (stricture) near the stomach
- constipation and diarrhoea
- lack of vitamins and minerals
- not losing weight
- gastro-oesophageal reflux disease (GORD)
- excess skin - removal requires surgery and there's limited NHS funding

### **Before your procedure**

It's important that you follow these instructions when preparing for your procedure. This is for your safety.

#### **Proton pump inhibitor (medicine)**

Your nurse will ask you to start taking a proton pump inhibitor **14 days before your procedure** if you do not take this already. This medicine is to reduce your stomach acid. You'll then need to continue taking this medicine for around 3 months after your procedure.

#### **Diabetes, blood thinning and hormone medicines**

Please tell us as soon as possible if you take diabetes or blood thinning medicines. We may need to change your dose. Any oestrogen hormone medicines/patches must be stopped at least 4 weeks before the procedure.

#### **Eating and drinking before your procedure**

- **For 48 hours (2 full days) before your procedure, you must have a smooth liquid only diet.** If you're taking a GLP-1 agonist medicine, the next page has your specific diet advice.
- **For 12 hours before your procedure, you must only drink small amounts of water or diluted squash. Do not drink milk.**
- **Do not drink anything after 6am on the day of your procedure.** We will give you water to sip when you come to hospital.

## Patient Information

### **Liquid only diet**

- Liquid should be thin enough for you to drink through a straw.
- Liquids must be completely smooth. This means no lumps or bits. You can use a sieve to help.
- No solid food (not even jelly or ice cream)
- Sip little and often, with an aim of at least 1.5 litres every 24 hours.

### **Examples of liquids**

- water, sugar-free squash, milk, tea, and coffee
- smooth soups
- meal replacement drinks, such as Slimfast, Huel, Exante, Complan
- yogurt or smoothies mixed with milk to make into a liquid, **with no bits**

### **GLP-1 receptor agonists**

If you're taking a GLP-1 agonist medicine you'll need to follow the above diet for 3 days, before following the 12 hours before your procedure. This is because these medicines cause slow emptying of your stomach:

- dulaglutide (Trulicity)
- exenatide (Byetta, Bydureon BCise)
- liraglutide (Victoza)
- lixisenatide (Lyxumia)
- tirzapatide (Mounjaro)
- semaglutide (Ozempic)

### **CPAP (Continuous Positive Airway Pressure)**

Please bring your CPAP machine to hospital if you use one.

### **When you come to hospital**

Hospital staff will give you:

- a hospital gown to wear
- anti-embolism stockings to help prevent blood clots in your legs

## Patient Information

### **What to expect in the operating theatre**

When we take you to the operating theatre, the team there will be:

- your surgeon
- your anaesthetist
- operating department practitioners
- nurses

To monitor your health, the team will:

- place a small needle in your arm for the drip
- put a cuff around your arm to check your blood pressure
- attach ECG leads to monitor your heart
- put a pulse oximeter on your finger - this device measures the oxygen in your blood

We may give you oxygen before the anaesthetic helps you go to sleep.

### **After your procedure**

**It's very important you're not sick after the procedure as this could tear the stitches. Please tell the nurse if you feel sick. We'll give you medicines to help.**

You'll wake up and move to your bed. You might wake up feeling sleepy. We'll then take you to the recovery room. You'll have an oxygen mask on to help you breathe.

You'll have a small, plastic tube (cannula) in your arm. This might be attached to a bag of fluid called a drip. This gives you fluid until you're well enough to drink.

When you're in the recovery room, a nurse will check your pulse and blood pressure. We'll then take you to a hospital ward when you're well enough.

Your tummy may be swollen. You may get cramp pains from the gas used in the procedure. Getting up and moving about, painkillers and antispasmodic medicines can help.

## Patient Information

Your nurse will give you a blood thinning injection once a day in hospital. This helps prevent blood clots in your legs. You'll continue these injections for 4 weeks after your procedure.

Following the use of the ESG procedure using the OverStitch endoscopic device MRIs can be undertaken if conditions are met. This information will be provided to you and your GP after the procedure.

### Going home

You'll recover in the ward until you're ready to go home. A friend or family member must go home with you. Most people leave hospital after 1 night, but you may need longer.

We recommend you have an adult with you for 2 to 3 days when you go home. Do not expect to feel like your usual self immediately after leaving hospital.

### Diet after your procedure

You'll begin a texture progression diet after your procedure. This helps you get back to a regular diet. It also reduces the risk of complications and protect your stitches. It's important to prepare for this before your procedure. You can plan what to eat and drink as well as any batch cooking.

#### The 4 stages of this diet are:

- **Stage 1** – Liquid diet (week 1, 2 and 3)
- **Stage 2** – Pureed diet (week 4, 5)
- **Stage 3** – Soft (week 6,7)
- **Stage 4** – Return to a normal healthy diet (week 8 onwards)

#### When you start this diet, it's very important that you:

- only drink in small amounts
- do not drink when you feel full
- stop eating or drinking as soon as you feel full
- avoid rice and bread - try crackers instead

## Patient Information

You may find that you need to stay at a diet stage longer than expected. If you have pain or are sick (vomiting) when you move to a new stage, please move back a stage for a few days. You may need to do this because you're not ready to move to the next stage.

We'll give you a patient information leaflet that explains this diet in more detail. It has advice to help you with the stages.

### **Drinking after your procedure**

Drinking the right amount of fluid after this procedure is very important. Please drink around 2 litres every day.

You may need more drinks in warm weather, when you're exercising, or if you sweat a lot.

#### **You can drink:**

- water
- still, sugar free flavoured water
- tea and coffee (milk and sweetener to taste, no sugar)
- squash that is "no added sugar"

#### **Do not drink:**

- fizzy pop and diet fizzy pop
- fresh fruit juice
- fizzy alcoholic drinks such as lager, cider, sparkling wine, fizzy mixers
- drinks with added sugar such as tea, coffee, high juice
- drinks with high levels of caffeine such as energy drinks

Please drink in between meals and not with meals. This is because drinking with meals may cause you discomfort and reduce the amount of food you will be able to eat.

**We recommend that you leave a gap of at least 30 minutes between your last bite of food and having a drink.**

Signs that you're not drinking enough are:

- thirst, dry mouth or lips
- tiredness

## Patient Information

- headache and brain fog
- dry skin
- constipation
- dark coloured or smelly urine
- urinating less
- urinary tract infection

## Alcohol

We recommend that you **do not drink alcohol** after this procedure. This is because alcohol is absorbed more quickly and can cause alcohol dependency. Alcohol is also high in calories and takes up space in your stomach which could be used for food.

## Physical activity and exercise

### In hospital

**We'll support you to get out of bed and walk around while you're in hospital. This helps reduce:**

- pain and swelling in your tummy
- risk of blood clots
- risk of chest infection

Please wear the anti-embolism stockings that we give you until your movement is back to normal.

### When you go home

It's important to move as much as you're able to when you first go home as this helps relieve your tummy pain. We recommend gentle exercise to help your recovery and avoid complications.

You must move around and walk at regular intervals to reduce the chance of complications, such as DVT (deep vein thrombosis).

### Lifelong

Your ability to exercise will improve after your procedure. Please take regular exercise such as brisk walking or swimming when you can.

## Patient Information

Improving your physical activity:

- helps you manage weight
- reduces muscle wasting
- helps your joint and limb health
- improves heart and blood vessel health
- reduces risk of diabetes, high blood pressure, heart disease, some cancers and osteoporosis
- supports mental wellbeing

We recommend 150 minutes of moderate activity each week. For some people this may sound like a lot. But you can greatly benefit from increasing your physical activity.

The NHS website has information on exercises for different levels of activity [www.nhs.uk/live-well/exercise](http://www.nhs.uk/live-well/exercise)

**Remember that everyone is different. You'll get the most benefit when you move at a pace that feels right and choose activities you enjoy.**

## Common questions

### When will your procedure be?

We will send you a letter with the date of your procedure and information on where to go in the hospital.

### Is this a new procedure?

This is a new procedure. Our team are experienced professionals who have trained to do this procedure.

This procedure follows NICE interventional procedure guidance IPG783. NICE is the “National Institute for Health and Care Excellence.”

### What medicines will you take home?

We'll give you pain relief medicines in the first few days, such as paracetamol, codeine phosphate and Buscopan. It's important that you take these to help your recovery.

## Patient Information

We'll also give you medicines for:

- sickness (antiemetics)
- constipation (laxatives)
- acid reflux (antacids)
- blood clots (blood thinning injection).

Please follow the instructions and always read the medicine information leaflets. Please keep taking your own medicines unless your doctor or nurse tells you not to.

You may be given instructions about diabetic medicines and multi-vitamins and minerals.

### **When can you return to usual activities, such as work?**

Most people return to their usual activities and return to work **around 2 to 3 weeks after this procedure**. But this will depend on your job. We will give you a sick note before you go home. Your GP can then provide more sick notes if you need them.

### **When can you drive?**

**You cannot drive for at least 2 days after your procedure.** Before you start driving again, you'll need to feel confident that you can perform an emergency stop safely.

### **When are your check-ups after leaving hospital?**

- You'll have a virtual appointment with your bariatric nurse in 7 to 10 days.
- You will be offered an appointment at 4 weeks if you require it.
- You'll have an appointment with your nurse/surgeon at 8 to 10 weeks.
- You'll have an appointment to see your dietitian at around 12 weeks.
- Have diabetic specialist nurse appointments as you need to.

## Patient Information

### What if you have problems after your procedure?

Please go to the Emergency Department at UHCW if you have any of these problems while you're at home:

- severe tummy pain (this can be the first sign of serious complications in the first week)
- you keep being sick (severe vomiting), more than twice in one day
- high temperature (fever) of 39C or higher
- tummy swelling
- bleeding
- not wanting to drink even though you're thirsty
- passing less urine than usual

Please contact your GP practice if you have these problems after your procedure:

- infection
- constipation or diarrhoea

### Contact phone numbers

If you have any questions, please phone:

- **nurses** on **024 7696 6188**
- **dietitians** on **024 7696 6161**

The Trust has access to interpreting and translation services. If you need this information in another language or format, please contact 024 7696 6188 and we will do our best to meet your needs.

The Trust operates a smoke free policy.

#### Did we get it right?

We would like you to tell us what you think about our services.

This helps us make further improvements and recognise members of staff who provide a good service.

Have your say. Scan the QR code or visit:

[www.uhcw.nhs.uk/feedback](http://www.uhcw.nhs.uk/feedback)



#### Document History

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