

## E09 PEG

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You can get more information locally from the Endoscopy Unit (9am to 5pm) on 0151 604 7095

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## What is a PEG?

A percutaneous endoscopic gastrostomy (PEG) is a procedure to insert a feeding tube through your skin and into your stomach.

## Shared decision making and informed consent

Your healthcare team have suggested a PEG. However, it is your decision to go ahead with the procedure or not. This document will give you information about the benefits and risks to help you make an informed decision.

Shared decision making happens when you decide on your treatment together with your healthcare team. Giving your 'informed consent' means choosing to go ahead with the procedure having understood the benefits, risks, alternatives and what will happen if you decide not to have it. If you have any questions that this document does not answer, it is important to ask your healthcare team.

Once all your questions have been answered and you feel ready to go ahead with the procedure, you will be asked to sign the informed consent form. This is the final step in the decision-making process. However, you can still change your mind at any point. You will be asked to confirm your consent on the day of the procedure.

## What are the benefits?

The healthcare team is concerned that you are not able to eat or drink enough safely. This is usually caused by a problem that makes it difficult for you to swallow such as a stroke (loss of brain function resulting from an interruption of the blood supply to your brain) or a growth in the wall of the pharynx (throat). These conditions increase the risk of food going down the wrong way into your lungs. This can lead to chest infections.

A PEG should allow the healthcare team to give you the nutrients and fluid you need to stay alive. They can also give you medication through the tube.

A PEG can also be used if you are able to eat and drink normally, but struggle to eat enough to stay well.

## Are there any alternatives?

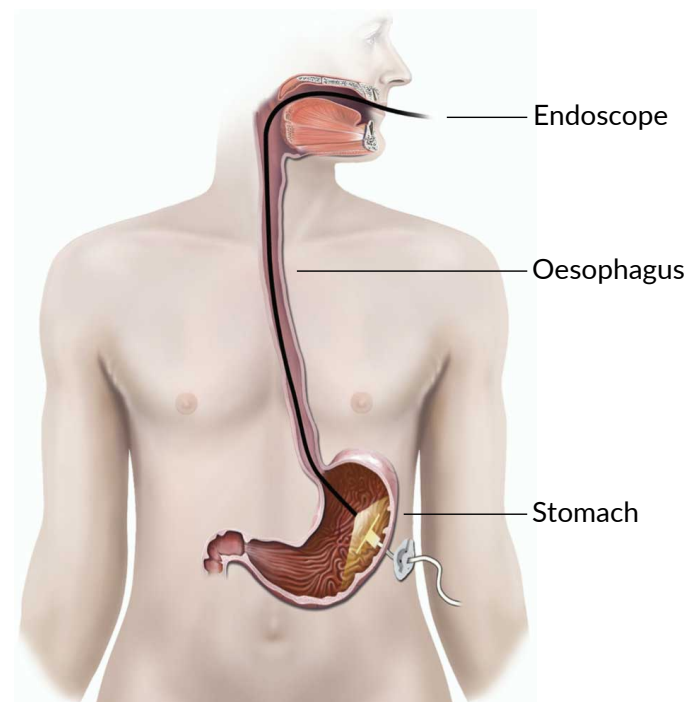
It is possible for the healthcare team to give you nutrients and fluid through a tube (nasogastric or NG tube) that is placed in your nostrils and down into your stomach. However, an NG tube is suitable only if you need help for a short time (3 to 4 weeks). Your doctor would perform checks to make sure the tube is in the right position. If you need help for longer or if there is a problem with your throat, your doctor will usually recommend a PEG.

The feeding tube can be inserted directly into your stomach by a procedure (surgical gastrostomy), but this involves an anaesthetic and has a higher risk of complications so is not commonly performed.

The tube may be guided into your stomach using x-rays. This procedure has similar benefits and risks to a PEG.

It is also possible for the healthcare team to give you nutrients and fluid directly into your bloodstream (parenteral nutrition – PN). However, PN has more possible complications and is usually recommended only if you cannot take food through your digestive system.

Your doctor will tell you why a PEG has been recommended for you.



A feeding tube in the stomach

## What will happen if I decide not to have the procedure?

Your doctor may be able to recommend another way of feeding you.

However, if a PEG is the only dependable way to give you fluid and nutrients, you may lose weight and become seriously ill.

If you decide not to have a PEG, you should discuss this carefully with your doctor.

## Before the procedure

If you take warfarin, clopidogrel or other blood-thinning medication, let the endoscopist know at least 7 days before the procedure.

Do not eat or drink in the 6 hours before the procedure, even if you are already being fed using a tube. This is to make sure your stomach is empty so the endoscopist can have a clear view of your stomach. It will also make the procedure more comfortable. If you have diabetes, let the healthcare team know as soon as possible. You will need special advice depending on the treatment you receive for your diabetes.

The healthcare team will carry out a number of checks to make sure you have the procedure you came in for. You can help by confirming to the endoscopist (the person doing the PEG) and the healthcare team your name and the procedure you are having.

## What does the procedure involve?

The endoscopist may offer you a sedative and painkiller to help you relax. They will give it to you through a small needle in your arm or the back of your hand. You will be able to ask and answer questions but you will feel relaxed. You may not be aware of or remember the procedure. The healthcare team can give you more information about this.

Once you have removed any false teeth or plates, they may spray your throat with some local anaesthetic and ask you to swallow it. This can taste unpleasant.

The endoscopist will ask you to lie on your left side and will place a plastic mouthpiece in your mouth.

The healthcare team will monitor your oxygen levels and heart rate using a finger or toe clip. If you need oxygen, they will give it to you through a mask or small tube under your nostrils.

If you are awake during the procedure and at any time you want it to stop, let the endoscopist know. The endoscopist will end the procedure as soon as it is safe to do so.

A PEG usually takes 15 to 20 minutes. It involves placing a flexible telescope (endoscope) into the back of your throat and down into your stomach. The endoscopist will use the endoscope to guide them while they insert the feeding tube.

The endoscopist may ask you to swallow when the endoscope is in your throat. This will help the endoscope to pass easily into your oesophagus (gullet) and down into your stomach. The endoscope will be used to blow air into your stomach to improve the view and to expand your stomach so that it presses against your abdominal wall.

The endoscopist will inject local anaesthetic into the area on your abdomen where they plan to insert the tube. This stings for a moment but will make the area numb, allowing the endoscopist to insert the tube into your stomach without causing too much discomfort.

They will press on your stomach to help them make sure that they insert the tube in the right position. The endoscopist may need to use a special device to attach your stomach to your abdominal wall.

The endoscopist will make a small cut on your abdominal wall so they can insert a hollow needle into your stomach. The endoscopist will pass a fine wire through the needle and into your stomach. They will use the endoscope to get hold of the end of the wire and will remove the endoscope, bringing the wire out of your mouth.

The endoscopist will attach the feeding tube to the wire and use the wire to pull the tube down into your stomach. They will use the needle as a guide while they bring the wire and tube out of your stomach and through the hole in your abdominal wall (exit site). The endoscopist will remove the needle to leave one end of the feeding tube in your stomach with about 8 to 10 centimetres of tube outside of your abdomen.

The tube has a bolster (cross-piece or internal flange) that sits inside your stomach and helps to prevent the tube from coming out. Over the next few months your stomach and abdominal wall will join together.

The procedure is not usually painful but you may feel bloated because of the air blown into your stomach.

## Can I be sent to sleep for the procedure?

In rare cases the procedure can be performed with you asleep under a general anaesthetic or deep sedation. However, most centres do not offer this. If this an option for you, the healthcare team will talk to you about this before your procedure date.

General anaesthetic is given through the cannula, or as a mixture of anaesthetic gas that you breathe through a tube that passes into your airways. This means you will be unaware of the procedure.

A general anaesthetic has a higher risk of complications than other forms of medication. The healthcare team can give you more information about these. You may also need to wait longer for your procedure.

Most patients manage well without a general anaesthetic.

## What complications can happen?

The healthcare team are trained to reduce the risk of complications.

Any risk rates given are taken from studies of people who have had this procedure. Your healthcare team may be able to tell you if the risk of a complication is higher or lower for you.

Some complications may be serious and can even be life threatening.

You should ask your healthcare team if there is anything you do not understand.

The possible complications of a PEG are listed below.

### Early complications

- Bleeding during or after the procedure. This can usually be stopped by using the tube to put pressure on your wound.

- Damage to teeth or bridgework. The endoscopist will place a plastic mouthpiece in your mouth to help protect your teeth. Let the endoscopist know if you have any loose teeth.
- Allergic reaction to the equipment, materials or medication. The healthcare team are trained to detect and treat any reactions that might happen. Let the endoscopist know if you have any allergies or if you have reacted to any medication, tests or dressings in the past.
- Breathing difficulties or heart irregularities, as a result of reacting to the sedative or inhaling secretions such as saliva. To help prevent this, your oxygen levels will be monitored and a suction device will be used to clear any secretions from your mouth.
- Making a hole in your oesophagus or stomach (perforation). You will need further treatment which may include surgery.
- Infection. Any infection is usually mild and affects only the area around the exit site (risk: 1 in 10). However, the tissues of your abdomen can get infected (risk: 1 in 1,000). Your doctor may give you antibiotics to reduce this risk. It is possible to get an infection from the equipment used, or if bacteria enter your blood. The equipment is disinfected so the risk is low but let the endoscopist know if you have a heart abnormality or a weak immune system. You may need treatment with antibiotics. Let your doctor know if you get a high temperature or feel unwell.
- Damage to your liver or intestine, if your liver or intestine is stuck close to your stomach as a result of previous surgery (risk: less than 1 in 500). This can be life-threatening.
- Inflammation of the lining of your abdomen (peritonitis), if some air or bowel contents leak into your abdominal cavity. Peritonitis can usually be treated with antibiotics and settles within 2 to 3 days. It may delay the time until the healthcare team can feed you using the tube.
- PEG tube falling out before your stomach properly joins to your abdominal wall. This is

serious. Do not try to put the tube back. Call an ambulance or go immediately to your nearest Emergency department.

- Chest infection. The risk is higher if you already have problems swallowing and you need a sedative or the local anaesthetic spray. A chest infection can also be caused by reflux, where some of the food from the tube travels up into your oesophagus.
- Death (risk: 5 in 100). The risk is less the fitter you are. The risk will increase if any other complications, such as a chest infection, happen following the PEG.

## Late complications

- Tissue granulation around the exit site, where moist tissue, dark pink or red in colour, develops around the tube as your body tries to heal your wound. A small amount is normal but a lot of granulation tissue can cause pain and make it difficult to care for the PEG tube. Follow your doctor's advice about using silver nitrate to treat the tissue.
- Blocked PEG tube. This can happen at any time but usually happens after a number of months as the tube deteriorates. You may need another PEG to replace the tube.
- Buried internal bolster. The bolster can sometimes get attached to the lining of your stomach. It is important to follow the advice from the healthcare team to help prevent this from happening.
- Leaking from the exit site, if over time the hole in your stomach gets larger than the tube. Sometimes the healthcare team will need to remove the tube for up to a few days to allow the hole to get smaller.

## What happens after the procedure?

### In hospital

After the procedure you will be transferred to the recovery area and then to the ward.

If you were given a sedative, you will usually recover in about an hour but this depends on how much sedative you were given.

You may feel a bit bloated for a few hours but this will pass. You will usually have a tight feeling in the area where the feeding tube is. This settles within 1 to 2 days.

You (or your carer) will usually be trained by a specialist nurse or dietician who will show you how to feed yourself using the tube. It is important to follow the advice you are given to prevent infection and the tube becoming blocked.

Depending on how much support you need, you may not be able to look after yourself at home and may need to go to a care home. The healthcare team will support you.

## Returning to normal activities

If you had sedation and go home the next day:

- A responsible adult should take you home in a car or taxi and stay with you for at least 24 hours.
- Be near a telephone in case of an emergency.
- Do not drive, operate machinery or do any potentially dangerous activities (this includes cooking) for at least 24 hours and not until you have fully recovered feeling, movement and co-ordination.
- Do not sign legal documents or drink alcohol for at least 24 hours.

If you have a lot of pain when feeding, or if you have bleeding or leaking from the exit site within 3 days of having the feeding tube, it is important that you stop feeding and contact the healthcare team.

Depending on the problem that made it difficult for you to swallow, you should be able to return to your normal activities after 1 to 2 weeks. If you swim, use a waterproof dressing.

If you have any problems with the PEG tube or exit site, contact the healthcare team. In an emergency, call an ambulance or go immediately to your nearest emergency department.

Do not drive a car or ride a bike until you can control your vehicle, including in an emergency, and always check your insurance policy and with the healthcare team.

## Lifestyle changes

If you smoke, stopping smoking will improve your long-term health.

Regular exercise should improve your long-term health. Before you start exercising, ask the healthcare team or your GP for advice.

## The future

The healthcare team will monitor you closely. Your doctor will advise you on how long you need to have the tube. This will depend on the problem that made it difficult for you to swallow. If you no longer need the tube, your doctor will discuss this with you.

Once the PEG tube is removed, the hole in your stomach may leak for a few days but then usually heals by itself. If the hole does not heal properly, contents of your stomach can leak onto your skin (gastrocutaneous fistula). This is more likely if the PEG tube has been in place for longer than 8 months. You may need a procedure.

## Summary

A PEG is usually a safe and effective way of allowing you to get the nutrients and fluid you need to stay alive. However, complications can happen. You need to know about them to help you make an informed decision about the procedure. Knowing about them will also help to detect and treat any problems early.

Keep this information document. Use it to help you if you need to talk to the healthcare team.

Some information, such as risk and complication statistics, is taken from global studies and/or databases. Please ask your surgeon or doctor for more information about the risks that are specific to you, and they may be able to tell you about any other suitable treatments options.

This document is intended for information purposes only and should not replace advice that your relevant healthcare team would give you.

## Acknowledgements

### Reviewer

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## Illustrator

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