



Pharyngeal pouch surgery

QUICK FACTS

- Can affect people who are 70 years old and older. Affects one person in 100,000 per year.
- Males are affected more than females. Three males are affected for every two females affected.
- Symptoms include: difficulty swallowing, coughing after eating, regurgitation of food, chest infections.
- Abnormal cells may be present in the pouch. This can affect one person out of 200 people who have a pouch.
- Pouches can be left alone if small and not causing problems. Most operations to treat pouches can be performed through the mouth. Some pouches may need an operation through a cut in the neck.
- An important complication to know about is mediastinitis. This is an infection inside your chest between the heart and the lungs. This is rare, but very serious if it occurs.

ABOUT THE CONDITION

What is a pharyngeal pouch?

A pharyngeal pouch, also known as Zenker's diverticulum, is a sac or pocket which can develop between the lower part of the throat (pharynx) and the upper part of the gullet or food pipe (oesophagus). It is a rare condition.

This condition is diagnosed on a barium swallow scan. This is an x-ray taken while swallowing a dye which coats the lining of the throat and food pipe.

What can cause a pharyngeal pouch?

The cause of a pharyngeal pouch is not clear, but it tends to form in an area of natural weakness in the muscle of the lower throat. It may develop due to muscle spasm and poor coordination of the muscles at the entrance of the food pipe. In some patients, there may also be a link between acid reflux and a pharyngeal pouch forming.

What symptoms may I have?

A very small pouch may not cause any symptoms, or it may create the occasional sensation of food sticking in the lower part of the throat. These symptoms can be monitored by your GP. If they get worse, your GP will refer you to an ENT specialist.

If the pharyngeal pouch gets larger, it starts to collect food within it, putting pressure on the entrance to the food pipe and making it difficult to swallow. This is called dysphagia, which is the commonest symptom. Severe swallowing difficulty may cause weight loss. Your surgeon may want to run some tests to exclude other causes of weight loss.

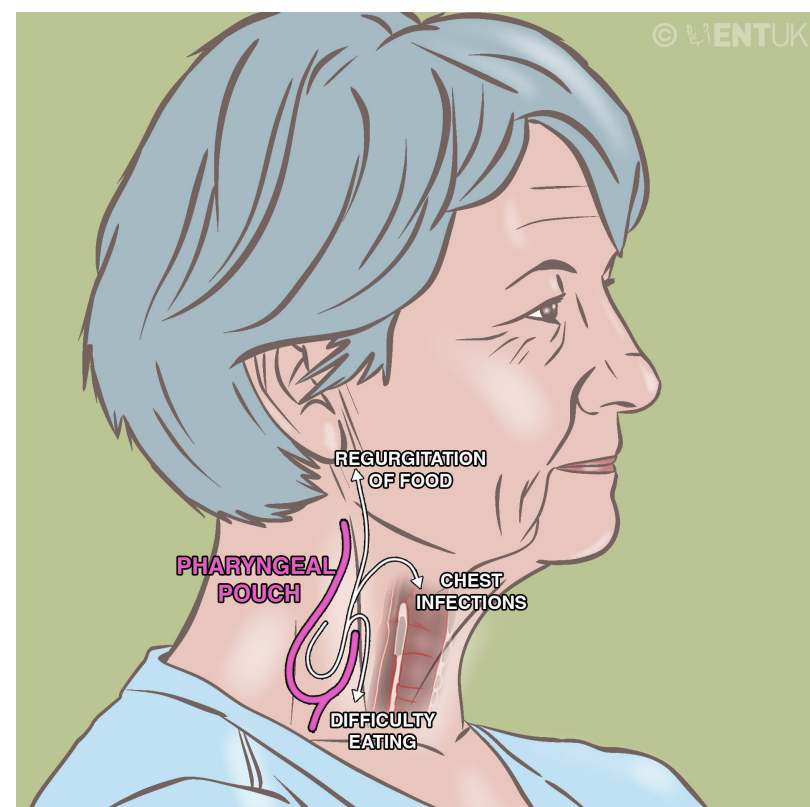


Figure 1. An illustration of the position of a pharyngeal pouch and what symptoms it may cause.

Most people with this condition will sometimes bring back up undigested food which has been sitting in the pouch. A chronic cough and choking sensation may be a symptom of small amounts of liquid and food, which have been sitting in the pouch, spilling into the windpipe (trachea). Less frequently, this can also cause recurrent chest infections. In these situations, your surgeon will discuss whether surgery is appropriate for you.

ABOUT THE OPERATION: BENEFITS AND ALTERNATIVES

What is the benefit of having surgery?

The aim of surgery on a pharyngeal pouch is to make it easier to swallow food. You may have been losing weight if you have not been able to eat enough. If food spilling out of the pouch and into your windpipe has caused a lot of chest infections, operating will prevent these.

What is pharyngeal pouch repair surgery?

Patients with symptoms may require surgery. There are two main ways of treating pouches. **Endoscopic surgery** is the commonest and least risky approach, and **open surgery**, which is slightly riskier and requires a longer hospital stay. Both operations are performed under a general anaesthetic, so the patient is asleep.

An endoscope (a rigid metal tube) is passed through the mouth into the throat until it reaches the pouch. The wall between the pouch and the food pipe is stapled and cut using a special stapler, which releases the tight muscle. This is called **endoscopic pharyngeal pouch stapling**. You usually can go home on the same day as this procedure.

A laser may be used as well as or instead of a stapler. This may be used to divide the muscle of the pouch. This is called an **endoscopic laser cricopharyngeal myotomy**. After this operation, the patient needs to be kept in hospital for an average of two to five days and fed with a feeding tube. An x-ray is needed to make sure that the food pipe has healed. As with all lasers, there is a risk of fire.

To help manage symptoms from smaller pouches, some specialists may offer **Botox injections**, in which a muscle relaxant is injected into the tight throat muscle. Another option is **balloon dilatation**, in which a small balloon is expanded to stretch the muscle.

Are there any alternative treatments?

Flexible endoscopic pharyngeal pouch repair

This approach has not been adequately evaluated in the UK for patient safety and is not offered by any otolaryngologist at present.

Open pharyngeal pouch repair

Around one in ten patients are unable to have endoscopic pharyngeal pouch repair. This may be because they cannot open their mouths wide enough, or their neck is too stiff to allow the endoscope to reach the pouch. Sometimes, the pouch is too big for this operation to be done through the mouth. In these situations, the surgeon will advise that open pharyngeal pouch repair is needed. The surgeon will first try to perform this operation using an endoscope, but if they cannot reach the pouch, may recommend that you have open pharyngeal pouch repair during the same anaesthetic. This is a longer procedure and needs a longer stay in hospital. You may wish to be woken up and have a think about whether you want to have the open procedure.

An open approach involves making a cut through the skin on the side of the neck. The neck is opened, the pouch is found and removed, and the tight muscle is released. The food pipe is then repaired and the wound stitched closed. If your general health is not very good you may not be fit enough to have this operation.

What will happen if I do not have the operation?

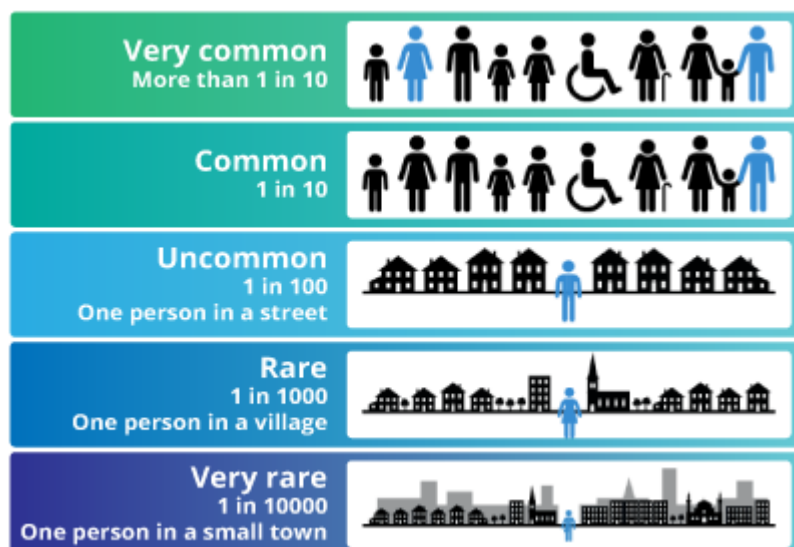
You will continue to have symptoms. You may get chest infections that keep coming back. If you become unable to swallow anything, you may require other methods of feeding, such as a feeding tube in the stomach.

WHAT ARE THE RISKS?

Are there any risks to this operation?

All operations have an intended benefit but also have risks.

Risks are grouped into the following categories:



Most patients make a quick recovery, and the risk of difficulties is low. Potential problems include the following:

- **Damage to the lips and teeth:** Because the endoscope is a rigid metal tube, it can put some pressure on the teeth, lips, gums and tongue. For patients with large or loose teeth or those with caps or crowns, there is a small risk of damage (2% to 5%). The risk is greater if patients have a small mouth or cannot open their mouth very wide.
- **Sore throat:** The operation involves cutting some muscles in your throat, so this area may be sore for a little while. Taking painkillers regularly should ease the pain.
- **Infection:** The risk of infection to the area is low (1% to 2%). You will not routinely be prescribed a course of antibiotics after this operation.
- **Bleeding:** The risk of bleeding is low (less than 1%). If there is bleeding, you may see fresh blood in your saliva. It is very rare that a patient has to come back to the operating theatre to stop the bleeding.
- **Throat or food pipe tear:** Tearing can occur due to the position of the pouch. The wall of the pouch can also be very thin. The risk is the same whether an endoscopic stapler or a laser is used. The risk is small (just over 2%), but if a tear does occur, it can be very serious. A course of antibiotics will be required. You will need to be fed through a feeding tube and observed in hospital for an average of five to seven days. Most small tears heal on their own, but large tears may require further operations.
- **Chest problems:** If there is a throat or food pipe tear, patients may experience inflammation and infection of the tissues surrounding the food pipe. This is called mediastinitis and is a rare but very serious complication. Patients will require treatment with antibiotics and a longer stay in hospital. Rarely, patients may be transferred to the cardiothoracic unit for repair of the food pipe tear.
- **Swallowing difficulties:** These are not uncommon during the first few days as the tissues heal. If these symptoms persist, it may mean that the base of the pouch (which is often left to reduce the chance of a food pipe tear) is still large enough to cause problems. Or it could mean that the pouch has re-formed, or that there is excessive scar tissue in the area.

- **Possible problems of open pouch repair:** The risk of infecting the tissues around the food pipe is higher (just over 1%) during open pouch repair than with an endoscope or laser (less than 1%). A connection between the skin and the deeper tissues (called a fistula) is common and can affect just over one in ten people who have open surgery. Fistulas usually heal. The nerve to the voice box (called the laryngeal nerve) can also be bruised or damaged, as it lies right next to the pouch (just over 12%). This may cause a weak or hoarse voice.
- **General anaesthetic:** The operation is performed under general anaesthetic. Problems can include blood clots in the legs (called deep vein thrombosis) or lungs (called pulmonary embolism), heart attack, chest infection, stroke, and death. These complications are all rare. However, some patients have other medical conditions that make them more likely and increase the risks of a general anaesthetic. The pre-assessment team and anaesthetist will explain what occurs during a general anaesthetic and the associated risks that are relevant to you. [This link](#) summarises the common events and risks of a general anaesthetic.

WHAT HAPPENS AFTER MY OPERATION?

What happens after the operation?

After the operation, you will be moved to the recovery area. When your anaesthetic has worn off, you will be taken back to the ward.

When can I eat after this surgery?

Some surgeons will advise you not to eat or drink for a few hours (sometimes until the next day). You will be fed through a nasogastric feeding tube for one or two days. This is a thin tube inserted through your nostril and down into your stomach. You may be given fluid through a vein. For open pharyngeal pouch surgery, most surgeons place feeding tubes until the lining has healed. If you had an endoscopic repair, you would eat on the same day.

When your surgeon is satisfied there is no risk of leakage, liquids and food will be gradually introduced. You may need a swallow test, where an x-ray is taken while you swallow a dye that coats the lining of the throat and food pipe. This will show us if the food pipe has healed. If it has, you will gradually be able to eat soft foods and drink fluids again. To allow the area to heal properly, it is recommended to have a day or two of liquids, followed by a few days of soft food, while slowly adding more solid food. It normally takes around a week before the soreness goes and patients can eat most things. A dietician will usually see you to give you advice.

Will I have a drain in my neck?

If you have an open approach, you will have a neck drain. This is removed once the surgeon is satisfied with the wound's progress. The nursing staff will monitor your neck and drain overnight.

How long will I stay in the hospital?

You will be discharged once your surgeon is satisfied that there is no leak, that your throat is comfortable and that you are managing enough liquids and food by mouth.

After an endoscopic pharyngeal pouch operation, patients are either discharged on the same day or stay overnight for 24 hours. After open pharyngeal pouch surgery, the length of stay is longer, usually between five and seven days.

If for any reason, there is a problem following surgery, then you might need to stay in hospital for longer.

What is the recovery period?

We recommend a couple of weeks to recover from this surgery.

Will the pharyngeal pouch come back?

All techniques used to treat a pharyngeal pouch carry a small risk of the symptoms coming back (roughly one out of ten). Some techniques, such as Botox injection and expanding a balloon to stretch the muscle, may be linked to symptoms coming back more often.

Most surgeons will judge whether surgery was successful by what the patient says about changes in swallowing, weight gain and chest infections. They do not tend to re-scan patients after surgery to check for any remaining signs of pharyngeal pouch. They will only investigate further if a patient still shows symptoms, or if their symptoms get worse. Most surgeons performing pharyngeal pouch surgery will be collecting information and auditing their results.

Will I have a follow-up appointment?

You will be advised by your surgical team.

Disclaimer: *This publication is designed for the information of patients. Whilst every effort has been made to ensure accuracy, the information contained may not be comprehensive and patients should not act upon it without seeking professional advice.*

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