

Electrical stimulation of the lower oesophageal sphincter for treating gastro-oesophageal reflux disease

Information for the public

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What has NICE said?

There is not enough evidence to be sure about how well electrical stimulation of the lower oesophageal sphincter for gastro-oesophageal reflux disease works or how safe it is. For this reason, it should only be done as part of a research study.

What does this mean for me?

Your health professional can only offer you this procedure as part of a research study. Details of your procedure will be collected.

The condition

Gastro-oesophageal reflux disease, or GORD, is a common condition in which the stomach juices (including acid and sometimes bile) flow back up into the oesophagus (food pipe or gullet). This can cause symptoms such as heartburn, chest pain and nausea, and sometimes problems with swallowing and breathing. People with mild symptoms are advised to make lifestyle changes. If reflux persists, it can lead to damage to the lining of the oesophagus. Medication is often given to reduce the acid level in the stomach. If these don't work, or cause side effects, surgery or other procedures may be offered.

NICE has looked at using [electrical stimulation of the lower oesophageal sphincter](#) as another treatment option.

NHS Choices (www.nhs.uk) and NICE's [information for the public](#) about dyspepsia and GORD may be a good place to find out more.

The procedure

In this procedure, low-energy electrical impulses are applied to the sphincter (the ring of muscle separating the oesophagus from the stomach). The aim is to strengthen the muscle so that less reflux happens.

While the patient is under a general anaesthetic, 2 small electrodes are put into the sphincter using keyhole surgery. They are connected with a lead to a stimulator, which is placed under the skin of the abdomen and programmed wirelessly. The stimulator sends regular impulses to the sphincter to tone it up and improve its effectiveness. The patient should not feel the stimulation.

Benefits and risks

When NICE looked at the evidence, it decided that there was not enough to be sure about how well electrical stimulation of the lower oesophageal sphincter for gastro-oesophageal reflux disease (GORD) works or how safe it is. The 4 case series that NICE looked at involved a total of 69 patients.

Generally, they suggested the following benefits:

- fewer days and nights with heartburn and reflux
- fewer swallowing difficulties
- improved quality of life and increased satisfaction with treatment
- improved sleep quality
- a reduction in the medicines taken for GORD
- a reduction in inflammation of the oesophagus.

The studies showed that the risks of electrical stimulation of the lower oesophageal sphincter included:

- puncture of the small bowel in 1 patient, which was repaired and the device was removed
- pain or discomfort in up to 46% of patients
- mild or moderate difficulty in swallowing in about 10% of patients, which got better without treatment
- nausea or vomiting in up to 12% of patients
- weight loss or anorexia in about 12% of patients
- fever, superficial skin infection over the stimulator, break down of the leads (leading to device removal), and hernia repair, each in 1 patient.

NICE was also told about some other possible risks: a blood clot in a deep vein in the body and chest infection.

If you want to know more about the studies, see the [guidance](#). Ask your health professional to explain anything you don't understand.

Questions to ask your health professional

- What does the procedure involve?
- What are the benefits I might get?
- How good are my chances of getting those benefits? Could having the procedure make me feel worse?
- Are there alternative procedures?
- What are the risks of the procedure?
- Are the risks minor or serious? How likely are they to happen?
- What care will I need after the procedure?
- What happens if something goes wrong?
- What may happen if I don't have the procedure?

About this information

NICE [interventional procedures guidance](#) advises the NHS on the safety of a procedure and how well it works.

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Accreditation

