

Gastroelectrical stimulation for gastroparesis

Information for the public

Published: 1 May 2014

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What has NICE said?

This procedure is safe enough and works well enough for use in the NHS.

What does this mean for me?

Your health professional should fully explain what is involved in having this procedure and discuss the possible benefits and risks with you, including that some patients do not get any benefit from it. They should also give you written information about possible complications, which can be serious, including the need to have the device taken out. You should also be told how to find more information about the procedure. All of this should happen before you decide whether you want to have this procedure or not.

Your healthcare team

A healthcare team experienced in managing gastrointestinal motility disorders should decide which patients should be offered this procedure, and should carry out treatment.

The condition

Gastroparesis happens when the nerve supply to the stomach becomes damaged or stops working. This means the stomach doesn't work normally, and it takes longer than usual for food to move into the intestine. The person may feel sick or have long periods of vomiting. They may also have tummy bloating or pain. In severe cases, the person can become malnourished.

Gastroparesis can affect people with type 1 diabetes, anorexia nervosa and [abdominal migraine](#). It can also affect people who have had abdominal (tummy) surgery, or can happen without an obvious reason.

Treatments can include changing diet, and taking anti-sickness drugs or drugs that help food to move through the gut. If these don't help, options include feeding tubes to bypass or relieve pressure in the gut, and surgery to widen the lower part of the stomach.

NICE has looked at using [gastroelectrical stimulation](#) as another treatment option.

[NHS Choices](#) may be a good place to find out more.

The procedure

The procedure is carried out with the patient under a general anaesthetic. It can be done through a cut in the abdomen, or using keyhole surgery. A stimulating device (similar to heart pacemaker) is put into a small pocket made under the skin of the abdomen. When the stimulating device is turned on, it sends electrical impulses to the stomach muscles that help them to work more normally. The amount of stimulation can be adjusted to suit the patient. Patients may need to go back to hospital after the procedure to adjust the device.

Benefits and risks

When NICE looked at the evidence, it decided that the procedure is safe enough and works well enough for use in the NHS. The 8 studies that NICE looked at involved a total of 1765 patients.

Generally, they showed the following benefits:

- Symptoms generally improved (including weekly vomiting frequency) in patients with diabetes, in those with gastroparesis of an unknown cause, and in those who had abdominal surgery, and patients spent less time in hospital after 1 year.
- Stomach emptying was improved after 4 hours in people with diabetes and gastroparesis without an obvious cause, but not in people who had had abdominal surgery.
- Patients' weight didn't change.
- Fewer patients needed nutritional support after having the procedure.
- Quality of life improved.

The studies showed that the risks of gastrointestinal stimulation included:

- A hole in the gut occurred after vomiting in 1 patient out of 17, 2 months after the procedure.
- The device needed to be removed in about 1 in 10 patients, for reasons including infection, blockage in the bowel, the device or its wires moving, the device wearing away through the skin, and symptoms not improving.
- The battery failed and the device had to be replaced in about 1 in 50 patients.
- Wires from the device wore away some tissue around them in fewer than 1 in 100 patients.
- The treatment didn't work in about 1 in 4 patients. Reasons included symptoms not improving, and the device malfunctioning or stopping working.

In one study, 2 out of 72 patients died after having the procedure, because of blood supply to the bowel being cut off, and heart failure.

NICE was also told about some other possible risks: pain where the device is inserted, and a feeling of pins and needles when the device is turned on.

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?

Medical terms explained

Abdominal migraine

A condition in which a person (usually a child) has repeated attacks of intense tummy pain that last 1–72 hours. In between attacks, there are no symptoms.

Gastrointestinal motility disorders

Problems caused by the muscles in the gut, which usually help move food through the gut, contracting abnormally or not working properly.

Nutritional support

Nutritional support includes the use of special nutrient-rich foods, nutritional supplements and fortified foods, as well as liquid feed given by a tube into the gut or blood.

About this information

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

ISBN: 978-1-4731-7947-9

Accreditation

