

Assessing motility of the gastrointestinal tract using a wireless capsule

Information for the public

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What has NICE said?

Using a wireless capsule to assess the motility of the gastrointestinal tract raises no known safety issues. However, there is not much good evidence about the benefits of this procedure, and it is not clear which patients it is most suitable for. Therefore, it should only be used if extra care is taken to explain the uncertainties and risks, and extra steps are put in place to record and review what happens.

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. In particular, they should explain the uncertainty about the evidence. You should also be told how to find more information about the procedure and given written information. You should only be asked if you want to agree to this procedure after having this discussion. Your health professional should ask you if details of your procedure can be collected.

The condition

Gastrointestinal motility is about the movements of the stomach and bowel and the passage of food and liquid through them. If motility is disturbed, you may develop symptoms. These include conditions such as gastroparesis (slow stomach emptying) and slow transit constipation (sluggish bowels). Motility disorders can sometimes be difficult to diagnose. Common tests include:

- A gastric emptying scintigraphy scan, where you eat a bland food containing a very small amount of a radioactive substance that is detected on a scan and can be timed and followed as it leaves the stomach.
- Radiopaque marker assessment, where you swallow a liquid which will show up on an X-ray, which allows your doctor to see the passage of the liquid through your digestive system.

NICE have looked at [using a wireless capsule to assess the motility of the gastrointestinal tract](#) as another option.

NHS Choices (www.nhs.uk) may be a good place to find out more.

The procedure

The aim of the wireless capsule is to measure gastrointestinal motility, including the amount of time it takes for food to pass through the different parts of the digestive system. It does this by measuring different things, such as temperature and pressure.

Before the procedure, you will need to not eat or drink for several hours. You will then eat a meal replacement before swallowing the single use capsule. While it is in the body, the capsule sends information about bowel contents, pressure, temperature and pH as it travels through the digestive system. This information is collected by a portable receiver which you wear. You can record meals, sleep and bowel movements by pushing an event button on the receiver. The capsule is passed out of the body with a bowel movement. If the capsule is not seen in the stool, then an abrupt temperature drop on the recording information confirms that it has passed out of the body.

Benefits and risks

When NICE looked at the evidence, it based its recommendations on the fact that most of the evidence came from patients with suspected motility problems. The 12 studies that NICE looked at involved a total of 745 patients.

Generally, they showed the following benefits:

- use of the wireless capsule confirmed the diagnosis in 58% of patients compared with radiopaque marker assessment or gastric emptying scintigraphy which confirmed diagnosis in 44% of patients
- in 53% of patients, use of the wireless capsule led to a new diagnosis
- between 50–69% of patients had their treatment (medicine, diet or surgery) changed after using the wireless capsule.

The studies showed that the risks included:

- abdominal pain, diarrhoea, nausea and difficulty swallowing in a small number of patients.
- the device not working, which was reported in 4% of patients
- the software not working which was reported in 7% of patients

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

