

Endoscopic thoracic sympathectomy for blushing

Information for the public

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What has NICE said?

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

But doctors should make sure patients understand:

- the risk of serious complications
- that a very common side effect of the procedure is to start sweating a lot, which can be distressing
- some people regret having the procedure, especially because of the sweating
- sometimes the procedure doesn't work.

Because of the risk of side effects, only patients with very severe blushing that is seriously affecting their everyday life, and which hasn't responded to other treatments, should consider having this procedure.

Only doctors trained and experienced in operating in the chest cavity using an [endoscope](#) should carry out treatment. There should also be the right staff and equipment to deal with any complications.

More research on this procedure is needed, to try to predict who is most likely to benefit and how side effects might be avoided.

What does this mean for me?

Your doctor 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 risks listed above. You should also be told how to find more information about the procedure.

Your doctor may ask you if details of your procedure can be collected.

Other comments from NICE

NICE said that there are different ways to do this procedure and this may affect how well it works and how safe it is. NICE heard from some people who said they were very distressed because of the side effects of this procedure.

The condition

Blushing is when the face reddens. This is usually because of strong emotions like embarrassment or stress, which trigger a rush of blood into the skin on the face. In some people, blushing can be severe and frequent and affect their everyday life.

Medication can be used to treat blushing. If someone blushes because they are anxious, behavioural therapy can help. If neither of these work, surgery on the nerves that cause the blushing is an option. The surgery may be done as [open surgery](#) or using an [endoscope](#). Endoscopic surgery is now usually preferred because there is less scarring and recovery is quicker than with [open surgery](#).

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

NICE has looked at using endoscopic thoracic sympathectomy as a treatment option. Click on to the next page to find out more.

The procedure

The aim of the procedure is to stop the patient blushing so much by cutting off the nerve signals that trigger blushing.

The patient is usually given a general anaesthetic. Small cuts are made in the armpit to open a space between the ribs into the chest then the lung is partly deflated. An [endoscope](#) and surgical instruments are inserted into the chest cavity and parts of the nerves responsible for blushing, which lie alongside the spinal column, are either cut or clamped. The instruments are removed, the lung reinflated and the cuts closed. The procedure is then repeated on the other side of the body.

Benefits and risks

The evidence that NICE looked at showed that the procedure benefited many people. So although there was evidence of risks, NICE decided that the procedure was safe enough and worked well enough to be used on the NHS. The 10 studies that NICE looked at included about 2500 patients who had blushing, excessive sweating or both.

Generally, they showed the following benefits:

- significantly less blushing more than 2 years after the operation
- 'much better' quality of life in 37 out of 59 patients in one study, 'some improvement' in 9, and 'no change' in 5
- satisfaction rates of 74% after 15 years and 85% after 8 months in 2 studies.

Four patients whose symptoms came back had the operation again with 'good results'.

The studies showed that the risks of the procedure included:

- severe sweating described as incapacitating, intolerable, or hardly tolerable by some patients – 190 patients (with blushing, excessive sweating or both) in a study of 1700 regretted having the procedure 15 years later because of this
- a type of nerve damage called [Horner's syndrome](#) – this happened in a very small number of patients

- air in the chest cavity, which needed a chest tube
- worse symptoms and worse quality of life.

In one study 9 patients died after having the procedure – although the study didn't report what they were being treated for or the total number of patients being treated. Five died because of internal bleeding, 3 because of problems with the anaesthetic, and 1 had a stroke.

Some other problems reported in the studies were: bleeding, blood or other bodily fluids leaking into the chest cavity, pulmonary embolism, and nerve damage.

NICE was also told about some other possible risks: harlequin face, long-term pain, wound infection, an air bubble becoming trapped in a blood vessel, and blood flow to the arm being blocked.

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

Endoscope

A thin flexible tube with a camera on the end.

Harlequin face

A condition that means people blush on only one side of their face.

Horner's syndrome

A rare condition that affects the nerves on one side of the face. Among other symptoms, the upper eyelid droops, the eye appears sunken and its pupil becomes small, and the affected side of the face doesn't sweat as much.

Open surgery

Open surgery is the traditional type of surgery in which a long cut is made for the surgeon to insert instruments and look at what they are doing. This is unlike keyhole (laparoscopic) or endoscopic surgery, in which very small cuts are made.

Pulmonary embolism

A blockage in the pulmonary artery, which is the blood vessel that carries blood from the heart to the lungs.

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

