

Scleral expansion surgery for presbyopia

**Understanding NICE guidance –
information for people considering the
procedure, and for the public**

July 2004



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About this information

This information describes the guidance that the National Institute for Clinical Excellence (NICE) has issued to the NHS on a procedure called scleral expansion surgery for presbyopia. It is not a complete description of what is involved in the procedure – the patient’s healthcare team should describe it in detail.

NICE has looked at whether scleral expansion surgery is safe enough and works well enough for it to be used routinely for presbyopia.

To produce this guidance, NICE has:

- looked at the results of studies on the safety of scleral expansion surgery and how well it works
- asked experts for their opinions
- asked the views of the organisations that speak for the healthcare professionals and the patients and carers who will be affected by this guidance.

This guidance is part of NICE’s work on ‘interventional procedures’ (see ‘Further information’ on page 10).

About scleral expansion surgery for presbyopia

Presbyopia is the medical name for an eye problem that happens when people get older. The eye cannot focus so well on things that are close up. This gets worse gradually as time goes on. People who have presbyopia start to find that they have to hold books or newspapers further away from their eyes to read them, and if they concentrate on something that's quite close to their eyes, such as sewing or writing, they get a headache or feel eyestrain.

Usually, the effects of presbyopia can be overcome by the person wearing glasses, though as it gets worse, the person may need to change lenses.

Scleral expansion surgery, which is the procedure NICE has looked at, involves making small cuts in the eyeball and putting tiny bands into the eye. These bands are positioned in the white of the eye under the muscles that control the lens. The bands are supposed to stretch the area so that the lens can focus properly again.

How well it works

What the studies said

NICE was not able to find any good-quality studies that looked at how well scleral expansion surgery worked.

In one study, patients had the surgery on one eye, and the sight in this eye was then compared with the sight in the other eye for each person. The results of this study seemed to show that when people read something that was 20 cm away, they could see more clearly with the eye that had had surgery. But when they had to read something that was 30 cm or 40 cm away, there was no difference between the eyes.

In another study, there was a temporary improvement in seeing things close up in three out of eight eyes that had surgery, but within a year, this improvement had disappeared. In this same study, three patients asked to have the bands taken out because they weren't having any effect on their eyesight.

A third report looked at what happened in three people. In this case, no-one's eyesight improved after the surgery.

What the experts said

The experts thought that the results of the studies probably showed that scleral expansion surgery didn't work well. One of the experts said that the surgery was controversial because it was not based on a widely believed theory of how the eye works.

Risks and possible problems

What the studies said

In two instances, patients had to have the bands removed because either the bands had moved in the eye or there was pain and swelling in the eye.

In one study, two out of eight people had damage to the front covering of their eye. In another study that involved 29 people, one person had increased pressure within the eyeball for a short period.

What the experts said

The experts thought that the main problems were likely to be:

- bleeding within the eyeball
- the inside layer at the back of the eyeball (the retina) coming away from its normal position

- infection inside the eye
- glaucoma (a condition where the pressure inside the eyeball is high)
- scarring affecting the front covering of the eye
- thinning of the tough white layer of the eyeball (called the sclera).

What has NICE decided?

NICE has recommended that scleral expansion surgery should not be used. This is because scleral expansion surgery doesn't appear to work well enough, and there are concerns about its safety.

What the decision means for you

NICE has considered scleral expansion surgery because it is relatively new. NICE has decided that there are major uncertainties about the benefits and risks of scleral expansion surgery for presbyopia. As a result, NICE does not recommend that this surgery is carried out.

Further information

You have the right to be fully informed and to share in decision-making about the treatment you receive. You may want to discuss this guidance with the doctors and nurses looking after you.

You can visit the NICE website (www.nice.org.uk) for further information about the National Institute for Clinical Excellence and the Interventional Procedures Programme. A copy of the full guidance on scleral expansion surgery for presbyopia is on the NICE website (www.nice.org.uk/IPG070guidance), or you can order a copy from the website or by telephoning the NHS Response Line on 0870 1555 455 and quoting reference number N0628. The evidence that NICE considered in developing this guidance is also available from the NICE website.

If you want more information on eye conditions, a good starting point is NHS Direct (telephone 0845 4647) or NHS Direct Online (www.nhsdirect.nhs.uk).

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