

Treating cataracts by implanting multifocal lenses

NICE 'HealthTech guidance' advises the NHS on when and how new procedures can be used in clinical practice.

This leaflet is about when and how implanting multifocal lenses can be used in the NHS to treat people with cataracts. It explains guidance (advice) from NICE (the National Institute for Health and Clinical Excellence).

This HealthTech guidance makes recommendations on the safety of a procedure and how well it works. An interventional procedure is a test, treatment or surgery that involves a cut or puncture of the skin, or an endoscope to look inside the body, or energy sources such as X-rays, heat or ultrasound. The guidance does not cover whether or not the NHS should fund a procedure. Decisions about funding are taken by local NHS bodies (primary care trusts and hospital trusts) after considering how well the procedure works and whether it represents value for money for the NHS.

NICE has produced this guidance because the procedure is quite new. This means that there is not a lot of information yet about how well it works, how safe it is and which patients will benefit most from it.

This leaflet is written to help people who have been offered this procedure to decide whether to agree (consent) to it or not. It does not describe cataracts or the procedure in detail – a member of your healthcare team should also give you full information and advice about these. The leaflet includes some questions you may want to ask your doctor to help you reach a decision. Some sources of further information and support are on page 6.

What has NICE said?

This procedure can be offered routinely as a treatment option for people with cataracts provided that doctors are sure that:

- the patient understands what is involved and agrees to the treatment, and
- the results of the procedure are monitored.

However, doctors should make sure that special steps are taken to explain the potential risks and benefits of the procedure, including the possibility of seeing halos of light around things at night and problems with glare at night, and that the lenses may be difficult to remove or replace. This should happen before the patient agrees (or doesn't agree) to the procedure. The patient should be given this leaflet and other written information as part of the discussion.

When deciding if this procedure is suitable for a patient, doctors should also consider any factors that make spectacles difficult for the patient to use (for example, a disability), which may make a multifocal lens beneficial.

This procedure may not be the only possible treatment for cataracts.

Your healthcare team should talk to you about whether it is suitable for you and about any other treatment options available.

Implanting multifocal lenses

The medical name for this procedure is 'implantation of multifocal (non-accommodative) intraocular lenses during cataract surgery'.

The procedure is not described in detail here – please talk to your specialist for a full description.

A cataract is a clouding of the eye's natural lens. This can lead to problems with eyesight and may eventually cause blindness.

Treatment of cataracts involves surgery to replace the clouded natural lens with an artificial, monofocal lens (which has just one strength of focus). With this type of lens the patient normally has good distance vision but needs to wear reading spectacles for close work.

This procedure involves implanting a type of artificial lens, called a multifocal intraocular lens, that can allow both near and distant objects to be focused on, potentially avoiding the need for spectacles. The surgery is performed in exactly the same way as for normal cataract surgery.

What does this mean for me?

NICE has said that this procedure is safe enough and works well enough for use in the NHS. If your doctor thinks that multifocal lenses are a suitable treatment option for you, he or she should fully explain what is involved in having the procedure and discuss the possible benefits and risks with you. In particular, you should be told that you may experience visual disturbances and that the lenses may be difficult to remove or replace. You should only be asked if you want to agree to this procedure after this discussion has taken place. You should be given written information, including this leaflet, and have the opportunity to discuss it with your doctor before making your decision.

You may want to ask the questions below

- 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 operation?
- What happens if something goes wrong?
- What may happen if I don't have the procedure?

You might decide to have this procedure, to have a different procedure, or not to have a procedure at all.

Summary of possible benefits and risks

Some of the benefits and risks seen in the studies considered by NICE are briefly described below. NICE looked at a total of eight studies on this procedure.

How well does the procedure work?

A review of 10 studies showed that patients who had a multifocal lens implanted had less need to wear spectacles after the procedure compared with those who had a monofocal lens: 68% of patients needed spectacles after the multifocal lens was implanted compared with 95% of patients who were given the monofocal lens. Two of these studies also reported that more patients were satisfied with their vision with the multifocal lens compared with those who received the monofocal lens, although a further two studies reported no difference. Two other studies also reported that patients given the multifocal lens had less need to wear spectacles compared with those given monofocal lenses.

One study reported that patients given the multifocal lens had better near vision compared with those given monofocal lenses. Another reported that more patients with the multifocal lens had better near vision and distance vision than those given the monofocal lens. In another study, half the patients who had been given a multifocal lens and who had no other problems with their eyes had good near and distance vision.

As well as looking at these studies, NICE also asked expert advisers for their views. These advisers are clinical specialists in this field of medicine. The advisers said that the success of the procedure could be assessed by spectacle independence, looking at the quality of patients' vision without spectacles, the ability to distinguish between light and dark images and quality of life.

Risks and possible problems

In the review of 10 studies, four of the studies also reported a higher rate of other visual disturbances – halo and glare – with the multifocal lens.

In a trial of 40 patients the natural capsule of the eye, which contains the new lens, had become cloudy at 1 year in 25% of patients who had a multifocal intraocular lenses fitted. In another study, which looked at 72 patients who had had multifocal lenses, 56% of eyes needed laser treatment because of problems with the capsule.

As well as looking at these studies, NICE also asked expert advisers for their views. These advisers are clinical specialists in this field of medicine. The advisers said that possible problems from this procedure include problems with middle-distance vision and visual disturbances such as halos, glare and difficulties in dim light. The advisers also said that future assessment of safety of the procedure should include an evaluation of visual disturbances and the need for lens replacement.

More information about cataracts

[NHS Direct online](#) may be a good starting point for finding out more. Your local Patient Advice and Liaison Service (PALS) may also be able to give you further advice and support.

About NICE

NICE produces guidance (advice) for the NHS about preventing, diagnosing and treating different medical conditions. The guidance is written by independent experts including healthcare professionals and people representing patients and carers. They consider how well an interventional procedure works and how safe it is, and ask the opinions of expert advisers. This guidance applies to the whole of the NHS in England, Wales, Scotland and Northern Ireland. Staff working in the NHS are expected to follow this guidance.

To find out more about NICE, its work and how it reaches decisions, see www.nice.org.uk/aboutguidance

This leaflet is about 'Implantation of multifocal (non-accommodative) intraocular lenses during cataract surgery'. This leaflet and the full guidance aimed at healthcare professionals are also available at www.nice.org.uk/HTG170

You can order printed copies of this leaflet from NICE publications (phone 0845 003 7783 or email publications@nice.org.uk and quote reference N1599).

We encourage voluntary sector organisations, NHS organisations and clinicians to use text from this booklet in their own information about this procedure.

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