

## **Treating double vision by implanting an opaque artificial lens**

*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 an opaque artificial lens can be used in the NHS to treat people with double vision for which all other treatments have failed. This is called intractable double vision. 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 intractable double vision 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.



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### What has NICE said?

This procedure can be offered as a treatment option for people with double vision when all other treatments have failed, provided doctors are sure that:

- the patient understands what is involved and agrees to the treatment
- the patient understands that removal of the eye's natural lens is permanent, and that if the artificial lens needs to be removed there is a risk of damage to the eye
- the results of the procedure are monitored.

### Treating double vision by implanting an opaque artificial lens

The medical name for this procedure is 'implantation of an opaque intraocular lens for intractable double vision'.

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

Double vision is seeing two images of a single object instead of one. When this is caused by both eyes pointing in different directions it is known as binocular double vision.

Treatments for binocular double vision include spectacles, injection of botulinum toxin into the eye muscles and eye muscle surgery. If these treatments do not work, the vision in one eye can be blocked by wearing a patch over the eye or on the spectacles, using spectacles with special filters or wearing an opaque contact lens. These methods usually only work temporarily.

The procedure used to implant an artificial lens is similar to a cataract operation. The patient is given either local or general anaesthesia. The natural lens is removed and replaced with the artificial opaque lens. Sometimes the natural lens is left in place and a special tinted artificial lens, known as an iris claw lens, is attached to the iris.

## 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 implantation of an opaque artificial lens is a suitable treatment option for you, he or she should still make sure you understand the benefits and risks before asking you to agree to it. In particular, your doctor should make sure you understand that removal of the natural lens of the eye is permanent and that there is a risk of damage to the eye if the implanted lens needs to be removed.

## 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 my eyesight 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?

## **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 five studies on this procedure.

### **How well does the procedure work?**

In a study with 12 patients, average vision score after implantation of an opaque artificial lens was 92 out of 100 on a scale measuring visual function where 0 was maximum disability and 100 was no disability. These patients rated their average satisfaction with the procedure as 3.4 on a scale of 0 (unhappy) to 4 (very satisfied). One patient in this study continued to have double vision but was later treated successfully without further surgery. In a study with 6 patients, all had an improvement in double vision when they were checked 14 months after implantation of an opaque artificial lens. A study with 2 patients also reported an improvement in double vision after the procedure. A study that followed up 1 patient for 14 years reported that double vision had gone away completely after the procedure and the patient continued to have good 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 aims of the procedure are to lessen or stop the double vision without causing discomfort to the eye.

### **Risks and possible problems**

In the study with 12 patients, one lens broke while being implanted, but a replacement lens was successfully fitted 6 months later. In the study with 6 patients, the implanted lens moved from its original position in 1 patient but this did not affect the patient's satisfaction with the procedure.

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 permanently blocking the vision in one eye is a concern because of the risk of a sight-threatening condition developing in the other eye. The advisers also said that if the eye with the opaque lens becomes diseased, the signs of disease may be hidden by the lens. They said that other possible problems are movement of the implanted lens, pressure in the eye caused by a build-up of fluid and, if an iris claw lens is used, a risk of damage to the natural lens.

### More information about double vision

NHS Choices ([www.nhs.uk](http://www.nhs.uk)) may be a good place to find out more. Your local patient advice and liaison service (usually known as PALS) may also be able to give you further information 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](http://www.nice.org.uk/aboutguidance)*

*This leaflet is about 'implantation of an opaque intraocular lens for intractable double vision'. This leaflet and the full guidance aimed at healthcare professionals are available at [www.nice.org.uk/HTG185](http://www.nice.org.uk/HTG185)*

*You can order printed copies of this leaflet from NICE publications (phone 0845 003 7783 or email [publications@nice.org.uk](mailto:publications@nice.org.uk) and quote reference N1834 for the standard print version and N1843 for the large print version). The NICE website has a facility called Browsealoud which gives you the option to access our guidance via a screen reader service. The software allows your computer to read aloud our website content. Click on the Browsealoud logo on the NICE website to access it.*

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

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