

# Transpupillary thermotherapy for age-related macular degeneration

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

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**Transpupillary thermotherapy for age-related macular degeneration**

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Copies of this booklet can be ordered from the NHS Response Line; telephone 0870 1555 455 and quote reference number N0572. A version in Welsh and English is also available, reference number N0573. Mae fersiwn yn Gymraeg ac yn Saesneg ar gael hefyd, rhif cyfeirnod N0573. The NICE interventional procedures guidance on which this information is based is available from the NICE website ([www.nice.org.uk](http://www.nice.org.uk)). Copies can also be obtained from the NHS Response Line, reference number N0571.

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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 transpupillary thermotherapy. 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 transpupillary thermotherapy is safe enough and works well enough for it to be used routinely for the treatment of age-related macular degeneration.

To produce this guidance, NICE has:

- looked at the results of studies on the safety of transpupillary thermotherapy 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 transpupillary thermotherapy for age-related macular degeneration

Age-related macular degeneration is an eye disorder that starts later in life and causes problems with central vision (seeing things which you are looking straight at – usually people notice difficulties with close work and seeing detail). This sight loss becomes worse over time. The part of the eye that is affected is the macula. This is a small area of the retina, which is the inside back surface of the eyeball. The macula is responsible for clear central vision.

Sometimes macular degeneration happens because of changes in the area underneath it, in what's known as the choroid layer. Problems with the blood vessels here can mean that fluid leaks into the area under the macula and causes scarring. The macula becomes damaged as a result. This type of macular degeneration is known as wet macular degeneration.

NICE has looked at the procedure known as transpupillary thermotherapy, which has been tried for patients with wet macular degeneration. It involves using a laser to heat and seal up the blood vessels that are causing the problems. The aim is to stop the macular degeneration from getting worse.

Lasers have already been used for wet macular degeneration, but the laser used in this new method has lower power and its beam is not as direct.

## How well it works

### What the studies said

The studies that looked at how well transpupillary thermotherapy worked involved quite a small number of patients. And they didn't compare what happened in these patients with what happened when transpupillary thermotherapy wasn't used. Also, the studies weren't carried out for very long, so it wasn't possible to judge how well transpupillary thermotherapy works over a long period of time.

The studies checked the patients' visual acuity, which is how clearly a person can see. In some patients who had transpupillary thermotherapy, visual acuity improved. The results ranged from 0 eyes with an improvement to one-third of treated eyes showing an improvement. But in other patients, the procedure made visual acuity worse. In one study this happened in nearly 1 in 10 treated eyes, while in another it happened in just under a half of the eyes treated.

## What the experts said

One of the experts said that because transpupillary thermotherapy is a new procedure, doctors hadn't yet agreed on the best way to do it.

## Risks and possible problems

### What the studies said

In different studies, the main problems were:

- bleeding under the macula during the 2 months after the procedure: 3 patients had this out of 49 who had transpupillary thermotherapy
- bleeding in the eye after the operation: this occurred in 3 eyes out of 66
- damage in the macula because the blood supply was blocked: 1 patient out of 77 had this.

## What the experts said

The experts said that there was a risk of damaging other areas of the eye, such as the retina, with the heat from the laser.

## What has NICE decided?

NICE has decided that, if a doctor wants to carry out transpupillary thermotherapy for age-related macular degeneration, he or she should make sure that the patient understands what is involved and that there are still uncertainties over the safety of the procedure and how well it works. There should be special arrangements in place so that the patient only agrees (consents) to the procedure after this discussion has taken place.

## Other comments from NICE

A study is being carried out at the moment on patients who have transpupillary thermotherapy that should give some helpful information. When the results from this study are known, the procedure will be looked at again.



## What the decision means for you

Your doctor may have offered you transpupillary thermotherapy for age-related macular degeneration. NICE has considered this procedure because it is relatively new. NICE has decided that there are uncertainties about the benefits and risks of transpupillary thermotherapy which you need to understand before you agree to it. Your doctor should discuss the benefits and risks with you. Some of these benefits and risks may be described above.

## 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](http://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 transpupillary thermotherapy for age-related macular degeneration is on the NICE website ([www.nice.org.uk/IPG058guidance](http://www.nice.org.uk/IPG058guidance)), or you can order a copy from the website or by telephoning the NHS Response Line on 0870 1555 455 and quoting reference number N0571. The evidence that NICE considered in developing this guidance is also available from the NICE website.

If you want more information on eye problems, a good starting point is NHS Direct, telephone 0845 4647, or NHS Direct Online ([www.nhsdirect.nhs.uk](http://www.nhsdirect.nhs.uk)).

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