

# Artificial trapeziometacarpal joint replacement for end-stage osteoarthritis

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

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**Artificial trapeziometacarpal joint replacement for end-stage osteoarthritis**

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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 artificial trapeziometacarpal joint replacement for end-stage osteoarthritis. The trapeziometacarpal joint is at the base of the thumb. This information 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 artificial trapeziometacarpal joint replacement is safe enough and works well enough for it to be used routinely for the treatment of end-stage osteoarthritis (that is osteoarthritis that’s very severe and which isn’t helped by other treatments).

To produce this guidance, NICE has:

- looked at the results of studies on the safety of artificial trapeziometacarpal joint replacement 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 artificial trapeziometacarpal joint replacement for end-stage osteoarthritis

Osteoarthritis happens when the cartilage that covers the ends of the bones in a joint becomes worn or damaged so that the joint becomes painful and inflamed. The treatments include anti-inflammatory medicines, painkillers and steroid injections. When the arthritis is severe, the joint is sometimes removed. Sometimes the 'gap' is replaced with tissue taken from another part of the body. Alternatively, the two bones that are left are joined together using metal wires or screws – this is called joint fusion or arthrodesis.

The person is usually given a general anaesthetic and the blood supply to the arm and hand is closed off temporarily. An opening is made in the hand at the position of the joint. The tendons are gently pulled aside, and the arthritic joint at the base of the thumb is removed. An artificial joint is put in its place. A splint is put on the fingers so that they are supported while the hand heals.

## How well it works

### What the studies said

One study that NICE looked at compared the new procedure with the artificial joint with an operation that involved removing the joint and replacing it with some of the patient's own tendon tissue. The numbers of people who were satisfied with the results of the operation were roughly the same in the two groups (those who had the artificial joint and those who had the tendon replacement). The average reduction in pain after the operation was also similar in the two groups.

In another study, people who'd had the artificial joint put in said they had less pain a year later than people who'd had another type of operation to remove the arthritic joint. In general, people with the artificial joints were able to do some everyday tasks more easily than the people who'd had the other operation (for example, they could carry a milk bottle more easily, and take off the handbrake of a car more easily). But in this study, both groups of patients were equally satisfied with the results of the operation they had, regardless of which one it was.

Another study showed that patients had the most benefit from the artificial joint 5 years after the operation (in the study, checks were made on the patients for an average of 16 years).

Finally, in another study that checked on patients an average of 6<sup>1</sup>/<sub>2</sub> years after the operation, 22 out of 25 patients said they had less pain after the operation than they had before it.

### **What the experts said**

The experts said that the long-term benefits of artificial joints for osteoarthritis need to be weighed up against the long-term benefits of the well-known operations such as removal of the joint and joint fusion.

### **Risks and possible problems**

#### **What the studies said**

In the studies, some patients needed to have the artificial joints removed. The reasons for this were that the joint became partly or fully dislocated, or the artificial joints fractured, or because of infection, pain, stiffness, or inflammation caused by the silicone in the artificial joint. In one study, one out of five joints had to be removed, though the numbers were lower in other studies. In another study, 13 out of 79 artificial joints had become loose in the years after the operation (on average, patients had check-ups for 6 years after the procedure). Two studies reported that a small number of patients developed a condition

called reflex sympathetic dystrophy, where the thumb became painful, swollen and abnormally sensitive after the procedure (in one study, this happened in 2 out of 58 patients, and in another it happened in 1 patient out of 25).

### **What the experts said**

The experts said that the main possible problems were infection, stiffness, nerve injury, and inflammation caused by silicone in the artificial joint. They said it was also possible that the replacement joint wouldn't work properly.

### **What has NICE decided?**

NICE has considered the evidence on artificial trapeziometacarpal joint replacement for severe osteoarthritis. It has recommended that when doctors use it for people with severe ('end-stage') osteoarthritis, they should be sure that:

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

NICE has pointed out that new types of artificial joint are being developed. It has encouraged doctors to send information about their



experience with the type of joint they use to a central store of information so that people can see how well the different joints work over a long period of time.

## What the decision means for you

Your doctor may have offered you artificial trapeziometacarpal joint replacement. NICE has considered this procedure because it is relatively new. NICE has decided that the procedure is safe enough and works well enough for use in the NHS. Nonetheless, you should understand the benefits and risks of artificial trapeziometacarpal joint replacement before you agree to it. Your doctor should discuss the benefits and risks with you. Some of these may be described above.

NICE has also encouraged doctors to collect information about the different types of artificial joint that are used. This information will be held confidentially and will not include patients' names. The information will be used only to see how well the joints last and whether there are any problems in the long term. If you decide to have an artificial joint put in, you may be asked to agree to your details being entered into an electronic database for this purpose. A clinician looking after you will fully explain the purpose of collecting the data and what details will be held. You will be asked to sign a consent form. If you

do not agree to the details being entered into an electronic database, you will still be allowed to have the procedure.

## 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 artificial trapeziometacarpal joint replacement for end-stage osteoarthritis is on the NICE website ([www.nice.org.uk/IPG111guidance](http://www.nice.org.uk/IPG111guidance)), or you can order a copy from the website or by telephoning the Department of Health Publications Order Line on 0870 1555 455 and quoting reference number N0810. The evidence that NICE considered in developing this guidance is also available from the NICE website.

If you want more information on osteoarthritis, 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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