

# Keyhole surgery using radiofrequency chondroplasty to remove small defects in knee cartilage

Information for the public

Published: 1 June 2014

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## What has NICE said?

This procedure is safe enough and works well enough for use in the NHS. More research on the long-term effects of this procedure would be helpful. NICE is asking health professionals to record how any patients taking part in research are chosen, and the type of damage treated.

### What does this mean for me?

Your health professional should fully explain what is involved in having keyhole surgery using [radiofrequency chondroplasty](#), and discuss the possible benefits and risks with you. You should also be told how to find more information about the procedure. All of this should happen before you decide whether you want to have this procedure or not. Your health professional may ask you if details of your procedure can be collected if you are

taking part in a study.

### Other comments from NICE

NICE said that there was only enough evidence to look at the effects of the procedure on small defects in [articular cartilage](#) in the knee, mainly caused by trauma, in younger patients. NICE said there was not enough evidence to look at the effects on more extensive cartilage damage in older patients with [osteoarthritis](#).

## Your healthcare team

This procedure should only be done by health professionals with special training in keyhole surgery using [radiofrequency ablation](#), and they should take particular care to avoid burn injuries.

## The condition

The cartilage over the ends of bones in the knee ([articular cartilage](#)) can be damaged by trauma, leading to small defects (called discrete chondral defects). These defects can cause the joint to become painful, swollen and difficult to move. The condition is usually chronic and can lead to [osteoarthritis](#).

Treatment options depend on the size and site of the defects. They include non-steroidal anti-inflammatory drugs, corticosteroid injections or hyaluronic acid injections to relieve pain and inflammation. Physiotherapy and exercise may also be used to help improve knee function and mobility.

NICE has looked at [keyhole surgery using radiofrequency chondroplasty](#) as another treatment option.

[NHS Choices](#) may be a good place to find out more.

## The procedure

Radiofrequency chondroplasty for small defects in knee cartilage aims to reduce damage to the knee joint. It uses heat to smooth out the rough edges of any defects.

The procedure is usually done with the patient under a general anaesthetic and by keyhole surgery. A long, thin, tube-shaped instrument with a camera on the end is inserted through small cuts around the knee. Using a video monitor to see what they're doing, the surgeon then introduces a radiofrequency probe and uses this to heat and smooth any defects and rough edges in the cartilage.

## Benefits and risks

When NICE looked at the evidence, it decided that, although limited, it shows short-term benefits, and there are no major safety concerns. So NICE decided that the procedure was safe enough and worked well enough to be used on the NHS. The 8 studies that NICE looked at involved a total of 347 patients.

Some of the studies showed the following benefits compared with another surgical procedure. Patients who had radiofrequency chondroplasty:

- were able to return to work about 5 days earlier
- needed fewer non-steroidal anti-inflammatory drugs
- had less pain and other symptoms
- were more able to carry out everyday activities and take part in sports
- had a better quality of life.

A small study that looked at healing found that, in more than half of patients, defects had completely or partially healed, and in about a third there was no worsening. In a few patients, there was progressive damage to the cartilage after the procedure.

The risks of [radiofrequency chondroplasty](#) included:

- one report of secondary burns when the equipment was used wrongly
- a type of bone damage called [osteonecrosis](#) in 2 out of 50 people
- detachment of part of the radiofrequency probe within the knee in 7 patients.

If you want to know more about the studies see the [guidance](#). Ask your health professional to explain anything you don't understand.

# Questions to ask your health professional

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

## Medical terms explained

### **Articular cartilage**

Tough, smooth, elastic tissue that covers the end of the bones that form joints. It helps bones to move smoothly over one another and acts as a shock absorber.

### **Osteoarthritis**

A condition that occurs when the cartilage covering the end of the bones in a joint becomes worn or damaged so that the joint becomes painful and inflamed.

### **Osteonecrosis**

A type of bone damage in which bone dies due to poor blood supply.

### **Radiofrequency ablation**

Using heat energy to remove unwanted tissue.

## About this information

NICE [interventional procedures guidance](#) advises the NHS on the safety of a procedure and how well it works.

ISBN: 978-1-4731-7945-5

## Accreditation

