

# Pyrocarbon PIP Finger Joint Replacement *(page 1 of 4)*

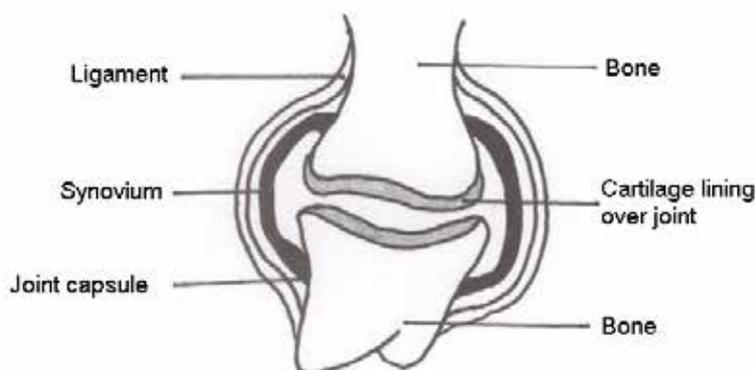
## What is Osteoarthritis (OA)?

Osteoarthritis (OA) is a condition that affects the joints in the body. The smooth surface of the joint is worn away causing the surrounding bone to grow thicker. This reduces the space between the two bone ends, which can create pain on movement. The joint often becomes quite inflamed and swollen after increased use. The painful joint makes it difficult to carry out normal activities.

To understand how osteoarthritis develops you need to know how a normal joint works. A joint is formed when two or more bone ends meet. The ends of the bones are covered by a thin layer of gristle called cartilage which cushions the joint and helps to spread the forces evenly when pressure is applied through it. The smooth, slippery cartilage surface also allows the bone ends to move freely. The joint is surrounded by a membrane (synovium) which produces a small amount of thick fluid which helps to nourish the cartilage and keep it slippery. The synovium has a tough outer layer called the capsule which stops the bones moving too much.

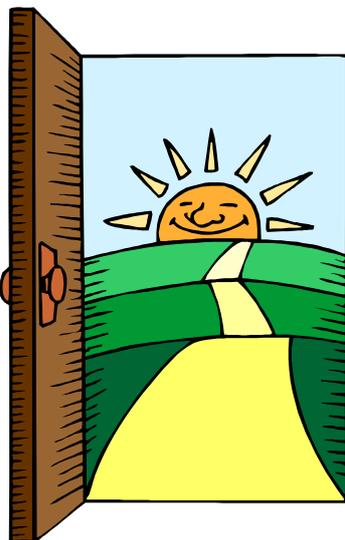
The bones are kept firmly in place on both sides of the joint by the ligaments. These are thick strong bands which run within or just outside the capsule. Together, they and the capsule prevent the bones moving too much or dislocating. The tendons are strong structures that attach the muscles to the bones on either side of the joint. They also help to keep the joint in place.

### Diagram to show a normal joint



For a joint to develop OA all or some of the cartilage must have worn away allowing bone surfaces to grind together during movement. This often feels like a 'toothache' type of pain. There may also

be inflammation, causing a sharper pain and possibly swelling and heat in the joint.



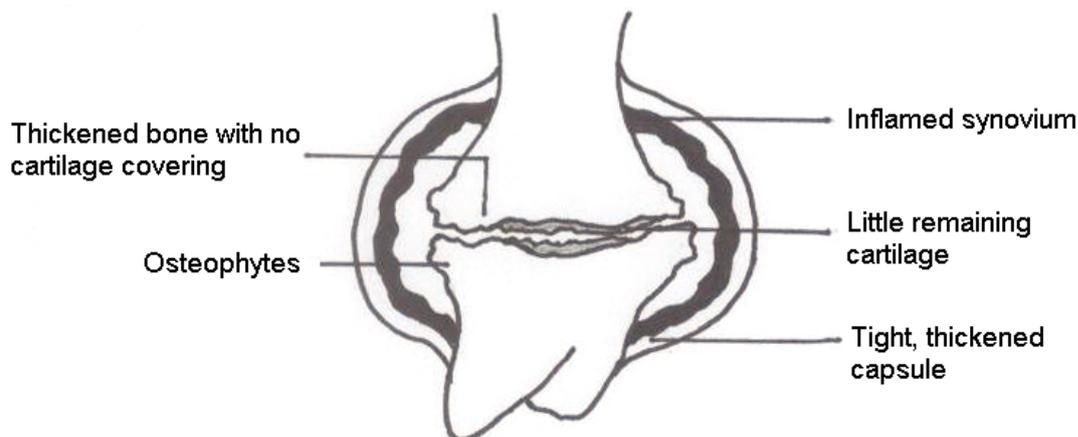
If you need your information in another language or medium (audio, large print, etc) please contact Customer Care on 0800 374 208 or send an email to: [customercare@salisbury.nhs.uk](mailto:customercare@salisbury.nhs.uk)

You are entitled to a copy of any letter we write about you. Please ask if you want one when you come to the hospital.

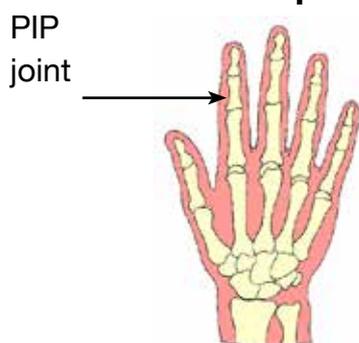
Please complete The Friends & Family Test to tell us about your experience at: [www.salisbury.nhs.uk/FriendsFamily](http://www.salisbury.nhs.uk/FriendsFamily) or download our App from the Apple App store or Google Play Store.

The evidence used in the preparation of this leaflet is available on request. Please email: [patient.information@salisbury.nhs.uk](mailto:patient.information@salisbury.nhs.uk) if you would like a reference list.

OA is a slow process that develops over many years. In most cases there are only small changes that affect only part of the joint. However, for a minority of people it can be more progressive and extensive. The bony overgrowth, called osteophytes, can form at the edges altering the shape of the joint, forcing the bones out of their normal alignment, leading to deformity.



### What is the proximal interphalangeal joint (PIP)?



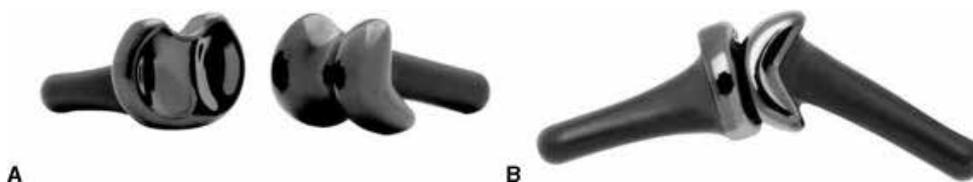
The PIP joint is the middle joint in the finger. It can be one of the main joints in the hand affected by OA causing pain particularly during pinch and grip.

### What is a joint replacement and why might I need it?

Sometimes the arthritic changes in your PIP joint can become severe enough to cause you increased pain and difficulty with using your hand. Your surgeon may discuss different surgical options with you, one of which is the Pyrocarbon PIP joint replacement.

### What is the Pyrocarbon PIP joint replacement?

The joint replacement is a two-piece joint replacement which can be seen on x-ray. Each piece is made of a special form of carbon called “pyrocarbon”. It is used to replace the middle joint in your finger. Surgery is required to implant the device. Intensive hand therapy, including the use of special splints, and exercises are needed after the procedure. The aim of the joint replacement will be to reduce your pain whilst allowing movement. It may not improve the movement that you have in your finger before the surgery. It will show up on x-ray.



A,B – Different views of the pyrocarbon PIP joint replacement

## When should a joint replacement not be used?

- Patients for whom pain is not their main problem
- In cases where there are very thin or weak bones
- If the joint is so severely damaged that the ligaments supporting it can no longer work effectively
- In patients who are not able to commit to a period of intensive hand therapy following their surgery

## What are the benefits?

There are potential benefits from having this surgery; the overall success however is different for each patient. The aims are:

- Reduced finger joint pain
- Everyday activities are easier to perform.

## What are the risks?

- Infection following surgery
- Stiffness in the PIP joint
- Fracture or dislocation of the implant.

## What is the process?

1. You will meet with your surgeon to discuss the options available to you
2. A pre-operative therapy assessment will be undertaken to help decide if this is the right option for you.
3. You will go onto the surgical waiting list
4. Surgery
5. Frequent hand therapy sessions, approximately weekly for at least 8-12 weeks after surgery. Long term follow-up reviews for 2-3 years following surgery.

## Post operative therapy plan 0 - 8 weeks (this is a guide only)

- 3-5 days after your operation dressings are removed. The hand therapist will make a special protective splint and hand exercises are started.
- Therapy sessions initially 1-2 times per week focusing on joint movement, splinting, swelling and scar management. This will progress over the 8 weeks to include strengthening and normal hand use.
- You will need to be prepared to wear a hard rigid splint for the first 8 weeks after surgery to protect the new joint. This will be reduced to a softer splint for a further 4 weeks.
- No driving for 8 weeks.
- You will be unable to use your hand for normal function for at least 8 weeks.

## What can I expect in the long term?

- Less pain in the affected finger joint
- Improved use of your hand
- You may or may not get improved movement in the joint
- You will have a semi-circular scar on the back of your finger
- The joint will be fragile and will not withstand heavy manual work or forceful stress activities. This may cause the joint replacement to break or move out of place.

Contact details \_\_\_\_\_ Occupational Therapist / Physiotherapist

Burns and Plastics Therapy Team,  
Plastic Outpatient Department,  
Salisbury District Hospital  
(01722) 336262 ex 3530