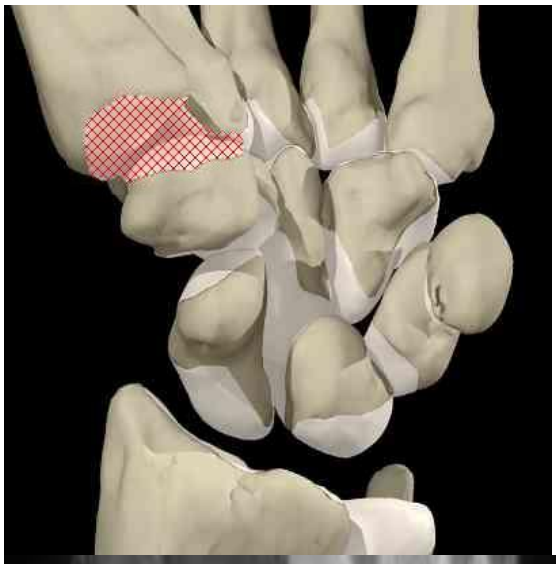
Osteoarthritis - Thumb

What is Osteoarthritis?

Osteoarthritis (OA) is the most common form of arthritis. It is a progressive, degenerative condition affecting the smooth cartilage that normally protects the ends of the bone. This cartilage slowly becomes damaged and worn causing inflammation and pain.



What causes Osteoarthritis of the Thumb?

- Following an injury to the joint such as a bone break which can damage the cartilage or cause the bones to line up improperly (malalignment).
- Repetitive stress or sustained compression of the thumb for example, writing and gripping.
- Endocrine disorders: e.g. People with diabetes may be prone to osteoarthritis.
- Inflammatory joint diseases: This category would include infected joints, chronic gout and rheumatoid arthritis.
- Metabolic: Diseases causing errors of metabolism may cause osteoarthritis.

Who Gets Osteoarthritis?

Primary OA develops most commonly in people over 50 in joints that were previously healthy.

Secondary OA develops in people younger than primary OA, normally after injury or in joints that were previously abnormal.

What are the signs and symptoms?

Pain and tenderness felt at the base of the thumb.
Pain and weakness using the thumb under compression, for example, during pinching and gripping activities.
Loss of movement, especially extension of the thumb.
Pain on a special compression/ grind test.

What will physiotherapy consist of?

The following treatment options may be employed:

Massage encompasses a variety of techniques and is given with sufficient pressure through the superficial tissue to reach the deep lying structures. It is used to increase blood flow, decrease swelling, reduce muscle spasm and promote normal tissue repair.

Mobilisation is a manual technique where the joint and soft tissues are gently moved by the physiotherapist to restore normal range, lubricate joint surfaces, and relieve pain.

Ultrasonic Therapy transmits sound waves through the tissues stimulating the body's chemical reactions and therefore healing process, just as shaking a test tube in the laboratory speeds up a chemical reaction. It reduces tissue spasm, accelerates the healing process and results in pain relief.

Interferential Therapy introduces a small electrical current into the tissues and can be used at varying frequencies for differing treatment effects. E.g. pain relief, muscle or nerve stimulation, promoting blood flow and reducing swelling/inflammation.

Advice regarding lifestyle will be given in order for the balance between rest and activity to be applied.

Other treatments that may be used

Laser Therapy emits beams of light into the tissues of the body, stimulating chemical reactions and having a similar effect to ultrasound though using light energy instead of sound energy.

Acupuncture is an oriental technique of introducing needles into the skin to increase or decrease energy flow to promote pain relief and healing.

Injection Therapy is a specialist procedure, which needs the consent of your G.P. Your physiotherapist might recommend an injection before "hands on" physiotherapy is commenced. A non-harmful steroid and local anaesthetic are injected directly into the injured structure. It has a dramatic effect on removing inflammation and promoting healing.

Splintage and Bracing involves wearing a wrist/ thumb splint in order to protect the thumb from any unwanted stress or damage. Another medical professional may have already provided this. If appropriate, your physiotherapist can order one for you.

What should the patient do to help their condition?

Lifestyle changes – keep active but balance rest with activity. Even when having a "good day" do not be tempted to over do it, likewise on a "bad day" keep active within pain limits. Generally avoid activities that aggravate your condition. You may need to wear your brace in order to protect your thumb during particular aggravating activities.

Apply an ice pack – for a maximum of 20 minutes. Do this in acute injuries where there is swelling, inflammation and pain. A bag of frozen peas wrapped in a damp cloth works well because it moulds to the shape of the thumb. Ensure that the skin does not change colour (the sign of an ice burn).

Non-steroidal anti-inflammatory drugs/ Ibuprofen - NSAIDs should be considered only for patients who do not obtain adequate pain relief with paracetamol. Take according to the directions on the packet, up to the maximum daily dose. It is not suitable for people who have a history of stomach ulcers, or for some people with asthma. If in doubt, ask your pharmacist for advice.

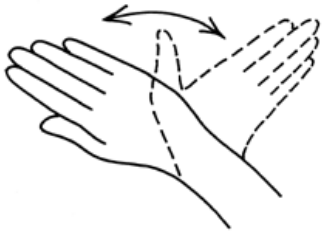
Glucosamine and Chondroitin - Glucosamine is believed to play a role in cartilage formation and repair. Chondroitin sulphate is part of a large protein molecule that gives cartilage elasticity. These are very popular and it is believed that they play a role in producing and maintaining new cartilage.

Exercise programme –Your physiotherapist will instruct you as to which of the following exercises to begin with, when to add the others, as well as how to progress the exercises.

1. Thumb circles.

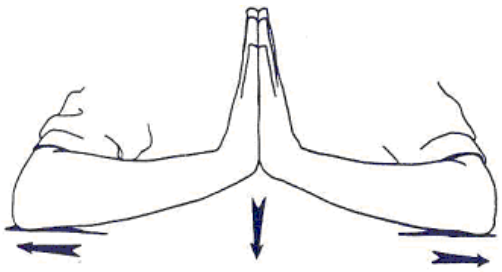
2. Thumb Stretch

2. Hand deviations.



1: Make a fist and then straighten your thumb. Perform 10 small circles.
2: Stretch your thumb as shown above until resistance is felt. Hold for 20-30 seconds. Repeat 5 times.
3: With your hand flat and fingers extended, slowly deviate your hand to the left and then to the right. This movement should be performed within a pain free-range of movement. Repeat 10 times.

4. Flexor stretch 1.

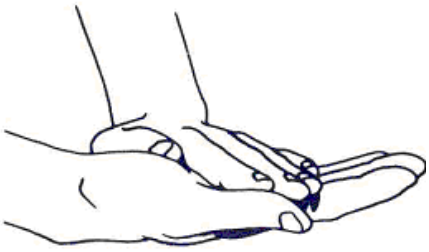


5. Flexor stretch 2.

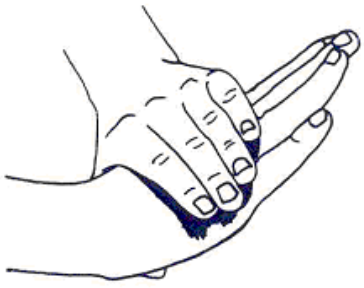
6. Extensor stretch.

4 & 5: With your arm straight and your palm facing down, gently but firmly pull them backward toward your body until you feel a stretch over the inside of the elbow and underside of the forearm. Hold for 20-30 seconds. Repeat at least three times a day.
6: Extensor stretch - With your arm straight and your palm facing down, grasp the top part of your fingers and gently but firmly pull them back toward your body until you feel a stretch over the outside of the elbow and back of the forearm. Hold for 20-30 seconds.

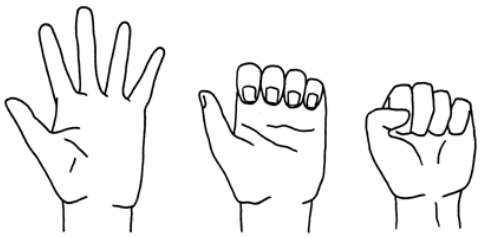
7. Flexion strengthening.



8. Extension strengthening.



9. Grip strength.



7 & 8: Slowly push the hand upward using the opposite hand as resistance. Do not let any movement occur and gradually increase the pressure until you are pressing as hard as you can without pain then slowly release. Perform 5-10 times and at least three times per day with the palm facing both upward and downward.
9: Slowly move your hand into the grip position and repeat 10 times. If this is pain-free then progress to squeezing a towel or different sized balls, gradually increasing the grip until you are squeezing as hard as you can without pain then slowly release. Repeat 5-10 times and at least three times per day.

What if physiotherapy does not help or resolve my condition?

It is very rare that physiotherapy does not give great benefit or help you to manage your symptoms effectively. In these cases a cortisone injection may be appropriate and in very extreme cases surgery is a possible option. These options can be discussed with your therapist if appropriate.