

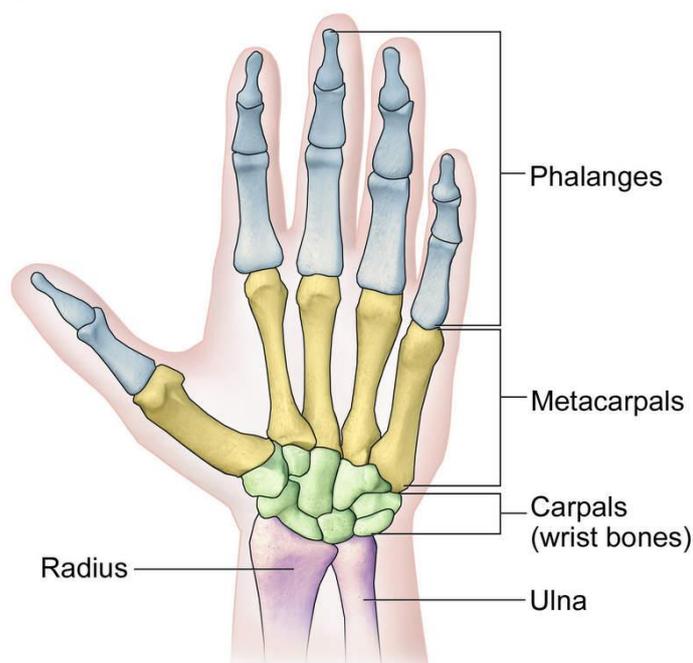


Healthshare Clinical Services Hand Booklet

Introduction

The aim of this booklet is to provide you with information that may help you understand and treat your hand problem. It has been divided up into sections that cover the various issues that can occur with hands.

There are many bones that make up the wrist and hand that are supported by soft tissues including ligaments, tendons and cartilage. They work together so that we can complete complex movements with our hands.



Hand and Wrist Bones

There are a few issues that can occur with the joints and its surrounding soft tissues. These include:

- Osteoarthritis
- Carpal tunnel syndrome
- De **Quervain's** tenosynovitis
- Trigger finger/ thumb

Osteoarthritis (OA)

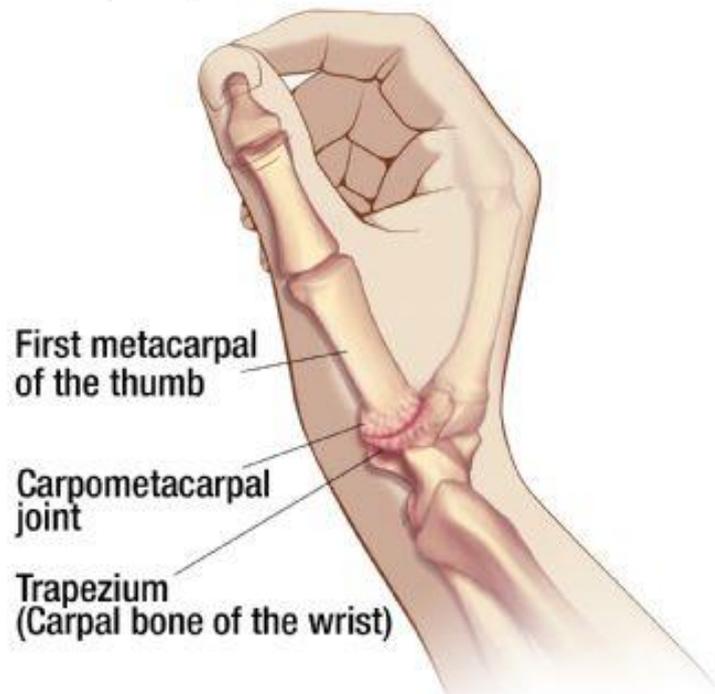
In England, around 7.3 million have sought treatment for osteoarthritis, which represents 33% of the population over 45. For hand and wrist OA, around 6% of the population have sought treatment. It often develops in people who are over 50 years of age, but it can occur at any age as a result of an injury or another joint-related condition.

The joints at the base of the thumb and the ends of the fingers are more commonly affected.

OA first affects the smooth cartilage lining of the joint, which gradually gets thinner and less smooth reducing the joint space. This can lead to swelling and pain in the joint. Over time the swelling may become a firm knobby bump caused by bony growths around the affected joint called osteophytes. These are called nodules or nodes and are most commonly found around the joints at the end of the fingers. When these nodes are fully formed the pain normally improves.

Arthritis at the base of the thumb may cause more pain and difficulty when carrying out everyday tasks so may require more treatment. Sometimes the base of the thumb joint may become unstable changing the way the thumb works.

CMC (Basal) Joint Arthritis



What are the symptoms?

The symptoms can vary between people, but the most common include pain on gripping activities and twisting actions such as when cooking or gardening. The pain may come and go at first, but it may progress to be painful when resting the hands too. Some people may experience stiffness in the joints, especially in the morning and some may feel they cannot bend or straighten the finger and thumb as much as they once could or feel that their hands are weaker.

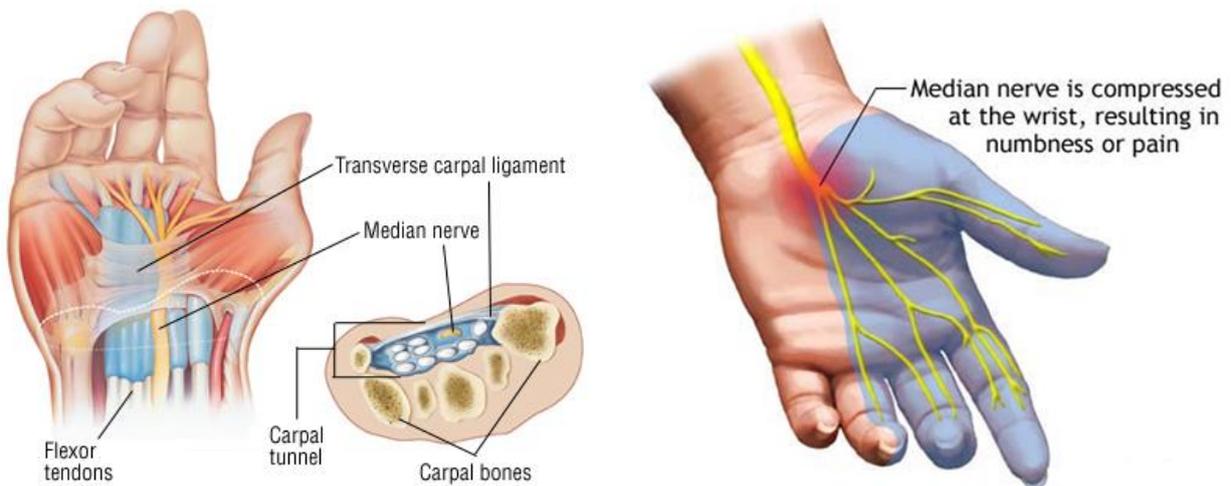
What can be done to help?

There are many options in the treatment of OA including:

- Activity modification – looking at what tasks cause pain in the day and considering how you could do this differently to use the bigger joints and muscles of your arms ie larger grips and handles, electric bottle and can opener, spring back scissors, etc
- Pacing the activities that cause pain – more regular breaks or resting from the task for a while
- Exercise – gently exercising the joints through their full motion and maintaining the strength of the hands
- Splinting and supports – to use whilst performing activities or sometimes at night
- Heat or ice – to help reduced pain and swelling
- Physiotherapy – as well as the above other techniques such as acupuncture and manual therapy may help
- Injections – this can help reduce pain if it is severe although these may only offer short term relief
- Surgery – only often considered for severe OA that affects the base of the thumb and the wrist

Carpal Tunnel Syndrome

The carpal tunnel is an area in the wrist which contains tendons, nerves, blood vessels, bones, and ligaments. Carpal tunnel syndrome is a condition caused by compression of the median nerve through the tunnel. This nerve controls some of the muscles that move thumb and carries messages to the brain about the feelings in your thumb and fingers.



Carpal Tunnel Syndrome is three times more common in women than men possibly due to the carpal tunnel itself being smaller in women. It often develops in the dominant hand but can effect both. People who have diabetes or other metabolic disorders that directly affect the body's nerves can be more susceptible to the condition. It usually only occurs in adults and can present in pregnancy if swelling is present in the hands.

What are the symptoms?

The symptoms usually start gradually and build up over time and often there is no known reason for the onset of the symptoms. Carpal tunnel syndrome is characterised by aching, pins and needles or numbness into the thumb, index finger and middle finger. It will normally come and go but can often be much worse at night.

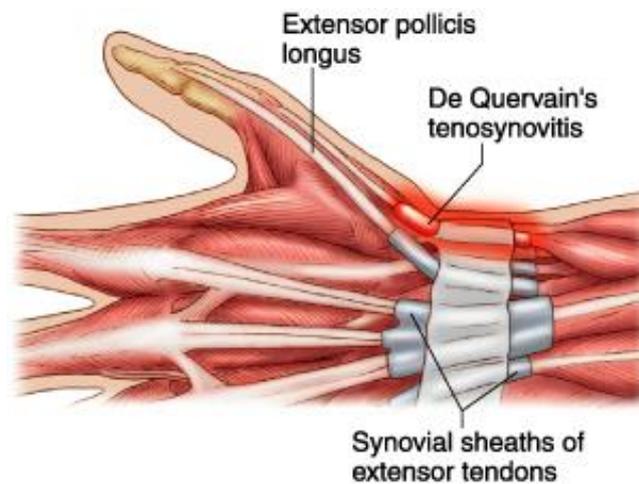
It can be irritated through the day with work tasks that include repeated wrist movement especially into sustained flexion (bending). If the problem has gone on for a long time then sometimes patients will have some weakness and wasting away (atrophy) of the muscles at the base of the thumb at which point people often report difficulty with buttons or dropping things.

What can be done to help?

There is not one single cure for carpal tunnel syndrome but a combination of the following approaches will often greatly help:

- Wrist support – wearing a wrist splint that stops your wrist from bending in the night can often help if your symptoms wake you up
- Activity modification – Reducing or changing the way you do activities that normally bring the symptoms on
- Exercises – gentle stretches that help to keep the wrist joint from becoming too stiff and maintain good nerve mobility
- Physiotherapy – as well as the above other techniques such as acupuncture and manual therapy may help
- Your GP may prescribe some medication such as non-steroidal anti-inflammatory tablets (NSAIDs) like Ibuprofen or Naproxen
- Injections – these can help reduce the inflammation and ease symptoms. For carpal tunnel syndrome these will normally be done under ultrasound guidance
- Surgery, known as carpal tunnel decompression, can help if your symptoms do not get better with the above treatment

De Quervain's Tenosynovitis



This is a painful condition affecting the tendons on the thumb side of your wrist. The tendons that become inflamed extend the thumb away from the hand and these are used on gripping and lifting activities. Pain can start as a result of increased stress to the tendon for example during activities such as lifting young children into car seats, lifting heavy grocery bags by the loops, gardening and playing racket sports. This is a condition common amongst mothers with young babies.

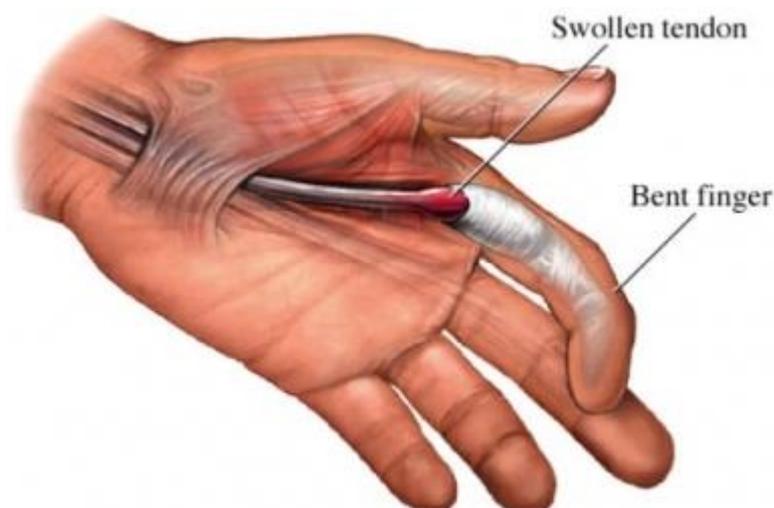
What are the symptoms?

It typically causes pain and tenderness at the side of the wrist beneath the base of the thumb. Pain increases on gripping and the hand may feel weaker. Sometimes there is swelling and redness in the area.

What can be done to help?

- Pain relief – Your GP may prescribe non-steroidal anti-inflammatory tablets (NSAIDS) or topical ibuprofen gel
- Activity modification/ Rest – try to avoid activities that irritate the condition to allow the inflammation to settle
- Thumb support – to keep the thumb from moving can help rest the tendons
- Cold pack – 10 minutes over the painful area
- Exercise – gentle movement and strengthening of the thumb tendons and surrounding area
- Physiotherapy – as well as the above other techniques such as acupuncture, taping and manual therapy may help
- Injection – this can help if the pain is severe and does not get better with the above options
- Antibiotics – if you have had a cut in the area which has resulted in pain
- Surgery – to release sheath around the tendon. This is rarely necessary and usually reserved for persisting symptoms

Trigger Finger/ Thumb (Stenosing tenosynovitis)



The tendons that help the fingers to bend travel through a series of tunnels made of soft tissue to keep them in place. The tendon can become swollen, making it more difficult to slide through the tunnels. This can result in a **'locking' of the finger in a bent position when using the hand**. It is not fully understood why this happens, but is more common in people that have other conditions such as Diabetes, Rheumatoid arthritis, Underactive thyroid, Gout and carpal tunnel syndrome. It is most common in people over 40 years old.

What are the symptoms?

Pain and difficulty straightening the finger or thumb from a flexed position, which may be worse in the morning. Sometimes it may need assistance to straighten again. There is often pain and swelling over the base of the affecting finger or thumb on the palm side of the hand.

What can be done to help?

- Pain relief – Your GP may prescribe non-steroidal anti-inflammatory tablets (NSAIDS) or topical ibuprofen gel
- Activity modification/ Rest – try to avoid activities that irritate the condition to allow the inflammation to settle
- Cold pack – 10 minutes over the painful area
- Massage over the palm where it looks swollen or feels like a lump
- Exercise – gentle movement of the joints above and below the painful section
- Physiotherapy – as well as the above advice and sometimes specialist splinting may be helpful
- Injection – this can help if the pain is severe and does not get better with the above options. Most people will have a steroid injection for the symptoms to resolve
- Surgery – to release sheath around the tendon. This is rarely necessary and usually reserved for persisting symptoms ie up to x 3 steroid injections have not helped

Exercises for Hand Conditions

Your therapist will advise you regarding the exercises which are more appropriate for the condition.

Movement exercises

Make an 'o' shape touching the tip of the thumb to each finger. Repeat 10 times. 3 times a day.



Stretching exercises

Hold these for 20-30 seconds. Repeat 5 times. 3 times a day.



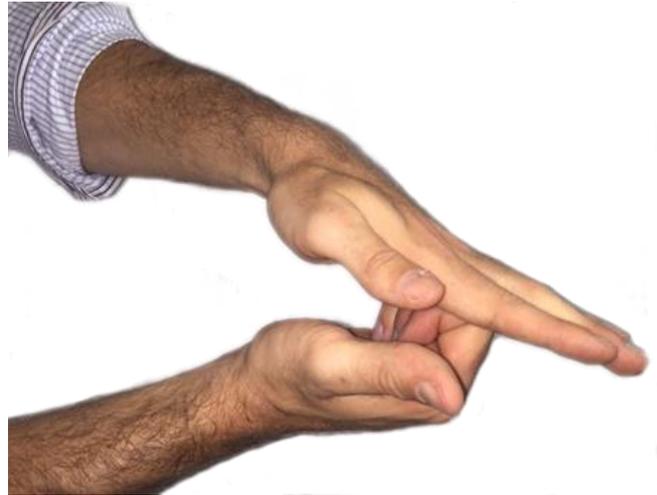
Fold your thumb into hand and wrap your fingers around it, move the wrist towards the little finger slowly and back up. Hold for 10 seconds. Repeat 5 times. 3 times a day.



Exercises for Hand Conditions

Strengthening exercises

Use your other hand to resist the movement. Hold each one for 5- 10 seconds. Repeat 5 times. 3 times a day.



Exercises for Hand Conditions

Strengthening exercises

Wrap the band around your hand securely, resting your forearm on a table, move the hand up and down slowly. Repeat 10 times. 2 times a day.

a. With your palm facing down



b. With your palm facing up



c. Moving towards your little finger



d. Moving towards your thumb



Exercises for Hand Conditions

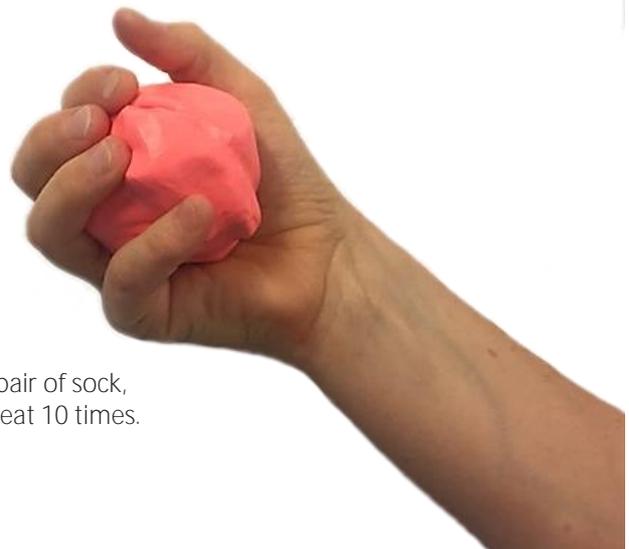
Strengthening exercises



Use your other hand to resist the movement. Hold each one for 5- 10 seconds. Repeat 5 times. 2 times a day.



Push your fingers and thumb apart against the resistance of the band. Repeat 10 times. 2 times a day.



Using a queasy ball or even a rolled up pair of sock, grip slowly and hold for 5 seconds. Repeat 10 times. 2 times a day.

Exercises for Hand Conditions

Tendon gliding exercises

Keep your finger straight and slowly bend then to make and fist. Repeat 10 times. 3 times a day.



Keep your fingers at a right angle from your hand as shown in picture below. Then slowly make a fist. Repeat 10 times. 3 times a day.



Exercises for Hand Conditions

Nerve gliding exercises

Your therapist will describe and demonstrate this exercises and also will let you know the frequency.



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