



# IN TOUCH

## Hand Therapy HANDout #6

### ARTHRITIS OF THE THUMB – CMC JOINT

Arthritis affecting the basal joint of the thumb (1st CMC joint) is one of the more common presentations in a hand therapy clinic.

Patients have often put up with thumb pain and weakness for some time, or have had a flare-up of the problem following an injury or episode of increased loading. Typically these patients are women over the age of 45, although not always. Usually these patients are active, have started avoiding aggravating activity and have been tolerating thumb pain for some time.

Research has shown that a load of 1kg applied to the tip of the thumb results in a 16 fold increase of pressure across the surface of the joint.

Fortunately, conservative management has much to offer. Depending upon the stage of the degenerative process and any resulting soft tissue imbalances across the joint, treatment may include a splint or support to maintain good joint dynamics, stabilisation exercises, web space stretches and pain management techniques. Often some advice regarding use of the thumb during activities at home or work, preferentially loading larger joints and avoiding poor thumb postures can be very helpful. Joint protection advice has been shown to reduce the pain of the hand arthritis.

#### Case Study: Mrs S

This 76 year old lady presented with severe thumb pain after a period of time in POP for a fractured distal radius. She was unsure if the problem had flared up due to initial fall, or if it was because her thumb had been held in an awkward adducted position for 6 weeks whilst in the cast.

It was clear on examination that her CMC joint was badly affected by osteoarthritis and this was confirmed on X-ray. A grind test to the CMC was positive, and the long term effect of muscle imbalances around the joint had resulted in hyper mobility and a tendency to hyperextend her MCP joint – the next joint in the chain. OA changes were obvious in her DIP joints of both hands.

Treatment included night time use of a firm thermoplastic splint designed to hold the MCP in a position of slight flexion and the web space gently held in abduction whilst she was asleep. She could also use this splint whilst using the thumb for more vigorous activity eg gardening, to avoid it becoming irritated.

During the day she used a soft ComfortCool type splint, again designed to hold the CMC in an anatomically better position during active movements. These splints were necessary for 4 weeks, at which stage her thumb was comfortable enough for her to perform most of the things she wanted without aggravating the pain.

She was shown an exercise programme to strengthen a weak Abductor Pollicis Longus muscle, weakness in this area results in the CMC falling into an adducted – and often painful – position. She was shown how to sustain a joint healthy 'circular pinch' position for functional activities, and eventually was able to do some pinch strengthening exercises.

If conservative management proves unsuccessful, referral for a local cortisone injection may be indicated, or for the more severe cases surgical options, such as metacarpal osteotomy or FCR sling suspension arthroplasty may be considered.

Therapists at In Touch Hand Therapy are happy to assess patients with this type of condition, provide initial conservative treatment and refer on promptly if the problems are failing to resolve satisfactorily.

*Valdes K, von der Hyde R (2012) An exercise programme for carpometacarpal osteoarthritis based on biomechanical principles. J Hand Ther 25 (3) 251-263*

*Valdes K, Marik T (2010) A systematic review of conservative interventions for osteoarthritis of the hand. J Hand Ther 23 (4) 334-351*

*Weiss S, LaStayo P, Mills A, Bramlet D (2004) Splinting the degenerative basal joint: custom-made or prefabricated neoprene. J Hand Ther 17 (4) 401-406*

