

# COMMON NON TRAUMATIC HAND CONDITIONS IN CHILDREN

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## Trigger Thumb

The child presents with a thumb which is usually 'stuck' or flexed at the IP (distal) joint of the thumb. This is commonly noticed between 1 and 4 years old. The cause is not traumatic but it may be noticed by parents after a trauma. If you feel under the MCP joint on the palmar side you can usually feel a lump. This is known as 'Notta's nodule' and represents tendon swelling.



The cause is a mismatch in size between the tendon and the A1 pulley under which it runs.

This is the commonest non traumatic hand condition in children. It is bilateral in 15% so check the other thumb!

## Treatment

We nearly always start with non operative treatment, especially if the child is under 3 years or if it has been noticed for less than 6 months. At least 30% of trigger thumbs may resolve especially if the fixed flexion is less than 30 degrees. The parents can be encouraged to do gentle stretching exercises. A visit to the hand therapist can help with these. The hand therapist may give splints but generally splinting is difficult to maintain in this age group! If the trigger thumb is resistant or very flexed then we consider it unlikely to resolve. A small surgical day stay procedure is performed. Via a very small cut on the volar side of the thumb, the A1 pulley is released. dissolving seiches are used and a small soft cast is placed on the hand for a week. Risks, including recurrence are very low.

## Clasped thumb

In this case the child presents with thumbs flexed at the MCP joints. The condition is usually bilateral. It is sometimes familial so a family history is worth taking. Often it is isolated but can occur in some syndromes. The condition is often noted when the child is a few months old. At birth children do tend to clasp the thumbs into the palms but by a few months should have good active opening of the thumb.



## Treatment

The mainstay of treatment is splinting. It is very important to begin this as soon as possible. Splinting in the first year of life is incredibly effective at resolving the condition and preventing the need for further surgery. Splints are

not useful over the age of 2 years. The patients would be sent immediately to the Hand Therapist and for Specialist review. The hand therapist will often make small soft balls to put in the palms to keep the thumbs open as the hands are so tiny that any other splint is difficult to make. Exact splinting regimes are worked out on a case by case basis by therapist and specialist. Sometimes surgery is required to correct the deformity either due to severity or late treatment.

## Camptodactyly

Greek for 'bent finger'. Presents with a flexed posture of the PIPJ and extended MCPJ usually on the ulnar sided digit(s). Most common in the little finger. the patients can present in infancy or in the period of peak growth velocity in adolescence.



The cause is an underlying anatomical difference (imbalance) in the small muscle and tendons in the hand.

## Treatment

There is no perfect treatment for camptodactyly as we cannot correct perfectly the underlying anatomical difference. However the condition can be considerably improved by splinting during critical time periods. Splinting is most important at 0-2 years and should be started as soon as possible. When camptodactyly appears in adolescents, again splinting especially at night through the period of peak growth velocity will really improve outcome. Surgery is sometimes done for patients who can comply with splinting and meet other surgical criteria. Referral to a Specialist and Hand Therapist are both required.

## Clinodactyly

'Curved finger' is curving inward of the little finger. Usually bilateral and sometimes familial. the condition is caused by an abnormally growing middle phalanx of the little finger. While



this condition usually causes no functional problem, some patients do not like the cosmetic appearance.

Surgery is not required per se but if the patient wishes the finger to be straight it can be straightened in a relatively simple surgery. They may wish to discuss the condition with a specialist.