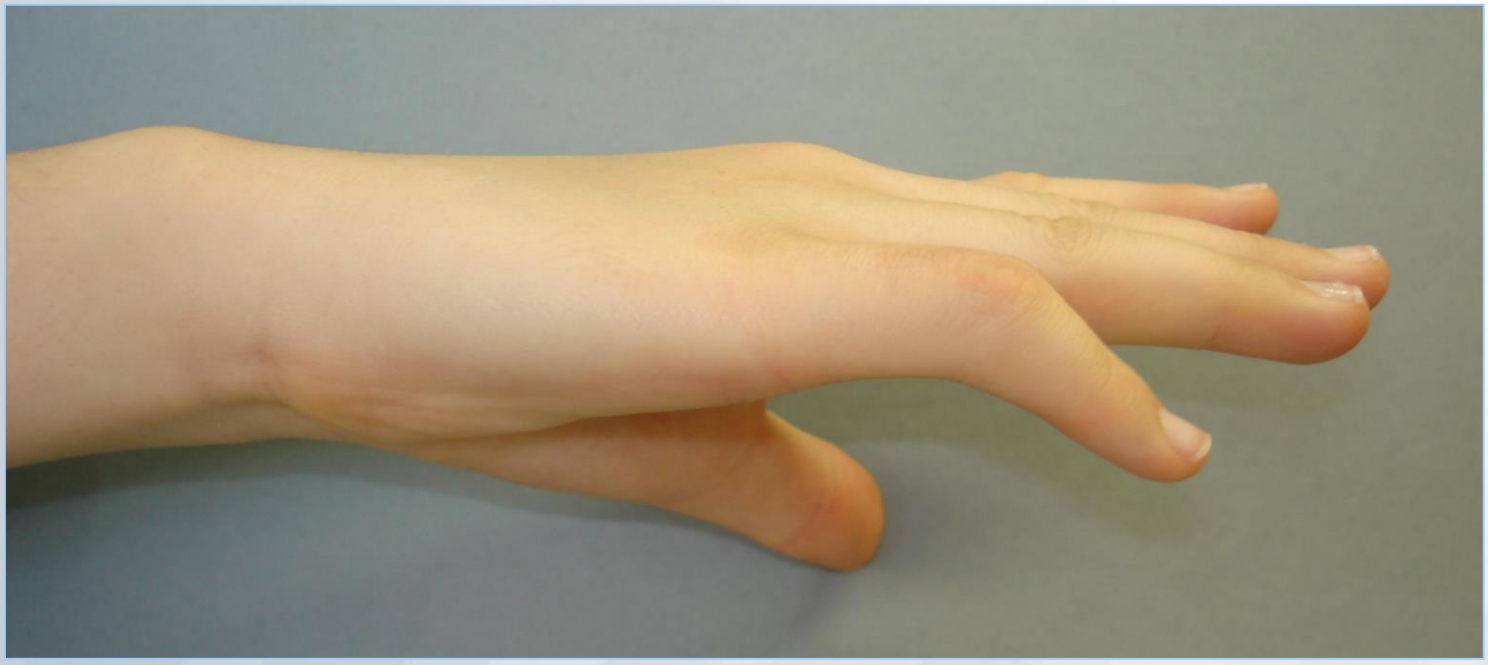
Congenital Hand Anomalies: - Camptodactyly

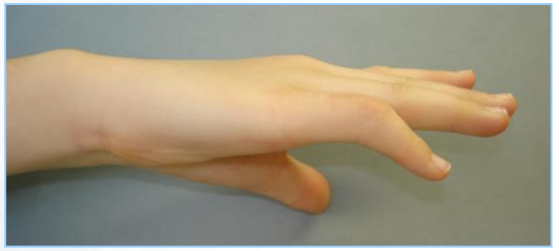


Occupational Therapy Department
The Royal Children's Hospital
Melbourne, 2014

Splinting for Congenital Hand Anomalies - General Treatment Goals

- Maximise range of motion
- Maximise functional hand use and independence in occupational performance
- Minimise secondary consequences

Camptodactyly



The Royal Children's Hospital Melbourne

What is it? Common presentation

- Non traumatic flexion deformity of PIPJ with skin shortening on the palmar surface of the finger and palm
- Most frequently seen in the little finger but sometimes seen in ring and middle fingers
- Cause unclear - varying anatomical causes leading to an imbalance between flexor and extensor muscular
- During growth, contracture progresses

Types

- Type I – infant onset
- Type II – adolescent onset, more common in girls than boys
- Type III – associated with other congenital anomalies

Camptodactyly

Goals of therapy

- Reduction of fixed flexion contracture at the PIPJ with correction of palmar tissue shortening
- Prevention of contracture development or recurrence
- Maintenance of flexion range

Surgery vs conservative management

- Surgery has limited success and can result in difficulty flexing the finger post-operatively.
- Splinting is very effective with best results achieved from early intervention.

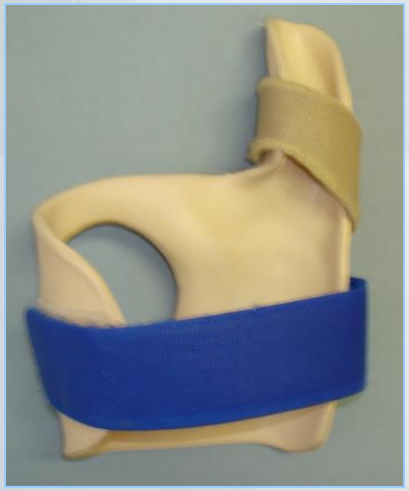
Camptodactyly

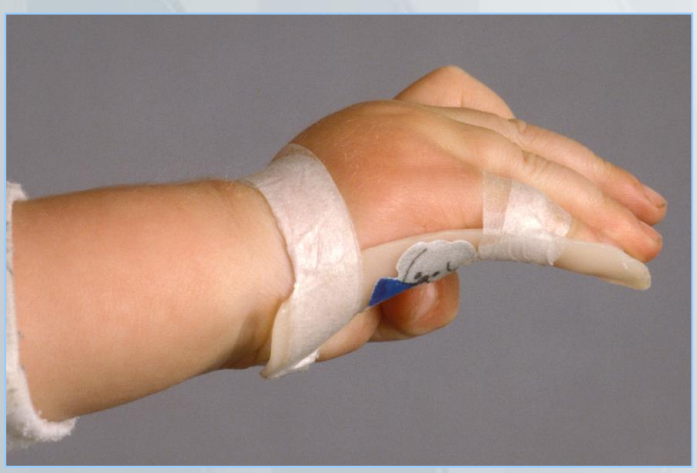
Treatment Protocol

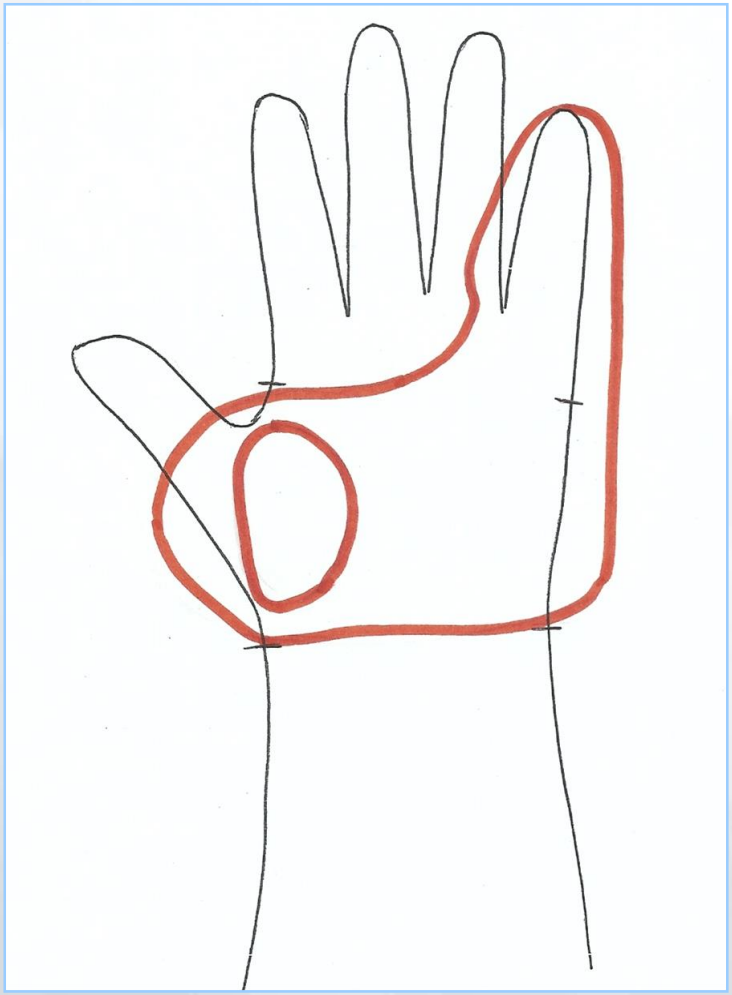
- Severity and response rate of contracture guides the splinting regime/hours of required splinting. This may vary from 8-20 hours and may be adjusted throughout therapy process.
- Ongoing splinting at night is required to consolidate and maintain the range of extension while growing.
- At times of reduced or slower growth it may be possible to cease splinting until early signs of recurrence indicate a need to resume splinting.
- Exercises/therapeutic play ideas to maintain ROM and strengthen intrinsic and extrinsic extension are to be prescribed as indicated

Camptodactyly

Treatment Protocol – splint design







Camptodactyly

Treatment Protocol – splint design

- Hand-based to ensure that the palmar skin is lengthened and the PIPJ is extended while avoiding hyperextension at the MCPJ and DIPJ
- Ensure unaffected fingers, thumb and wrist are not included in the splint and are therefore free to move.
- Secure finger/s with either velcro or paper tape at the distal end of the proximal phalanx.
  - Tape prevents the splint from shifting and is more difficult for young children to remove than Velcro is. Adolescents may find Velcro easier to manage independently.

Camptodactyly

Therapeutic play:

- Open shut them
- Twinkle, twinkle little star
- Grasping blocks & larger items such as balls
- Playdoh / putty games
- Musical instruments: piano, hand drums
- Weight bearing

Occupational Therapy Department
The Royal Children's Hospital
Flemington Road
Parkville 3052
Phone (03) 9345 9300

With thanks to Tanya Cole, Josie Duncan and Rose Biggins