

# CONGENITAL HAND DEFORMITIES

Hand deformities are present in about 1% of live births. The most common are poly-dactyly, syndactyly and campto-dactyly. These names are derived from Ancient Greek. **Dactylos** means finger and the prefix describes what is wrong. Some children have complex deformities with more than one problem. More common examples are sym-brachy-dactyly (fingers are short and joined) and acro-syn-dactyly (fingers are joined and the bones of each are fused at the tip). Many deformities are unique and cannot be given a single name.

Many deformities are isolated problems but occasionally they may be the most obvious manifestation of a generalized syndrome. Most are unexpected and unexplained occurrences (sporadic) but some have a genetic basis and are therefore inherited. Where indicated, genetic counselling will be arranged for the family.

acro-	topmost
brachy-	short
campto-	curving
clino-	sloping
macro-	large
poly-	many
sym-	joined
syn-	



There are many types of hand deformity, which have been classified as follows:-

- |     |                            |                            |
|-----|----------------------------|----------------------------|
| I   | Failure of formation       | Transverse<br>Longitudinal |
| II  | Failure of differentiation |                            |
| III | Duplication                |                            |
| IV  | Overgrowth                 |                            |
| V   | Undergrowth                |                            |
| VI  | Constriction ring syndrome |                            |
| VII | Generalized abnormalities  |                            |

Functional requirements are minimal Precedes onset of hand "image" Precedes social awareness Lessens family stress Growth effects <b>Early</b> <b>SURGERY</b> <b>Late</b> Tissue size Anaesthetic ease Associated anomalies Cooperation with therapy Personal decision making
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Most require surgical correction but not all. Some require only splinting (e.g. campto-dactyly). Others can be treated by splinting and surgery later in childhood if still needed (e.g. clino-dactyly). The specific management of some will be covered separately.

When surgery is required, it is often our preference to correct most problems soon after the age of 6 months. This is both to spare children from teasing and to allow for best function of the hands. However, a number of factors have to be considered both to ensure the best result as well as safety. The children must be big enough for the anaesthetic to be as safe as possible. Early correction allows for normal development of hand function. It also prevents the development of permanent deformities due to the effects of growth. The children are still young enough not to remember the operation. However, there may be situations when surgery is better deferred.