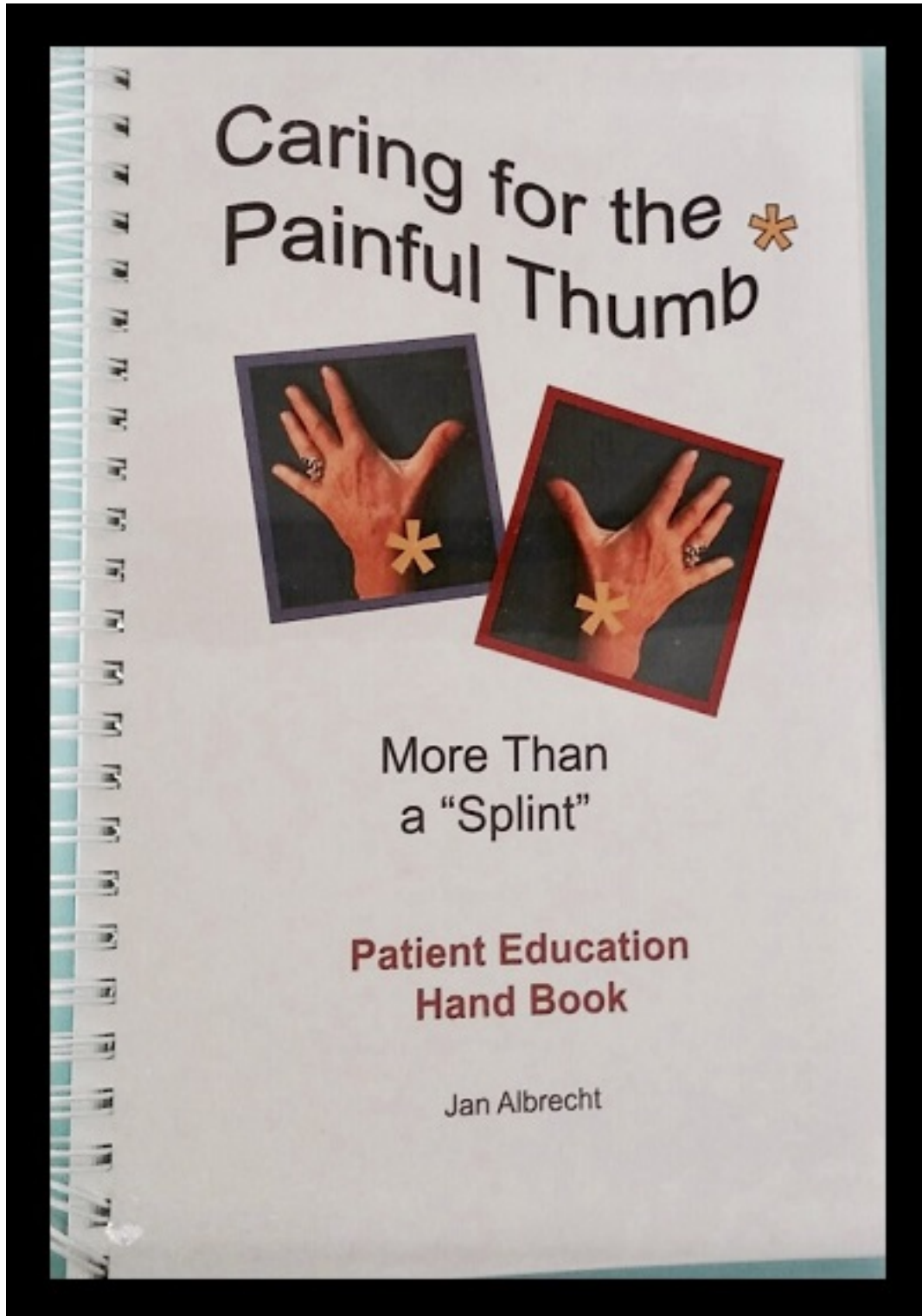
















In Loving Memory of Jan Albrecht January 10th 1935 to march 28th 2016

A portion of all proceeds will be donated to the Jan Albrecht scholarship.

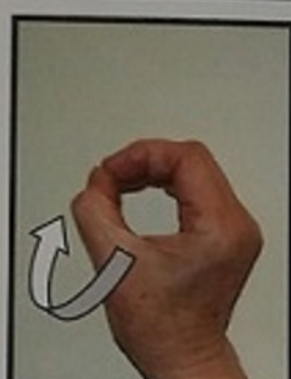
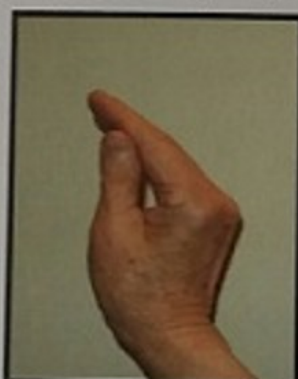
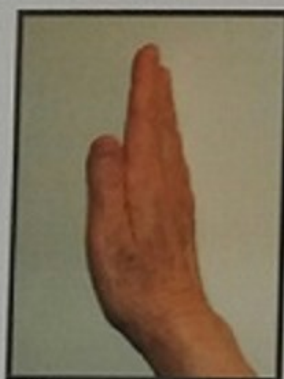


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The Way The Thumb Works

- The **human thumb** is very special.
- **40 - 60%** of hand use depends upon a normal, healthy thumb.
- It is so **valuable** that if a thumb is lost, surgeons may replace it with a toe!
- The thumb can touch each **finger tip**.



- As the human thumb moves **over** from side pinch to tip pinch, it appears to **rotate**.
- This ability allows the thumb to do many things.



- Its pinch can be **delicate**, and its grip can be **powerful**.
- The thumb needs to be both **flexible** and **stable**.

Anatomy: Bones, Joints, Ligaments.....



3 Thumb Joints

IP – Inter Phalangeal
End joint
A "simple "hinge" joint

MP – Metacarpal Phalangeal
Middle joint
A "loose hinge" joint

CMC - Carpal Meta Carpal
Base joint
A "universal" joint
allows the thumb to move
in and out, forward and back.

Trapezium ○

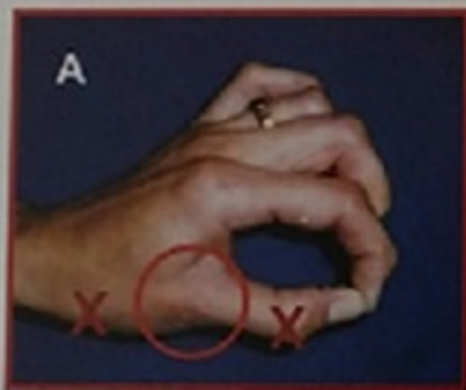
The carpal (wrist) bone
that supports the thumb.

- The **CMC** joint is protected by a "girdle" of **ligaments**.
The **Beak ligament** * on the palm side holds the thumb
as it twists on the trapezium.
- The **Dorsal Radial ligament** □ prevents the thumb
from slipping off the carpal bone and forming a "lump".
- Other longer ligaments control movement at the **CMC**.
- The IP and MP joints are protected by **collateral liga-
ments** on the sides and **volar plates** on the palm side.
- Bone ends are covered with **cartilage**. Movement and
good thumb posture keeps the cartilage healthy.

Why Do Thumbs Get Painful? Is it this?

Ligament Laxity

- Some people naturally have loose (lax) ligaments and may enjoy showing off their "double joints"! The joints are *not* double. They are just very flexible and unstable.
- Later on, thumbs can become painful when ligaments remain stretched and joints begin to slip:



Type A
The *middle joint* collapses.
The end joint and the base joint become unstable. **X**



Type B
The *end joint* collapses.
The middle joint and the base joint become unstable.

Ligament Laxity
can cause *instability*.

Instability can cause
deformity.

