CHAPTER 7

Wrist and Hand
Learning Objectives

- Describe the bones, joints, and muscles contributing to purposeful movement of the wrist and hand.

- Identify the primary purposeful movements of the wrist and hand within the context of occupational performance.

- Develop competency in goniometry and manual muscle testing (MMT) as clinical assessment techniques for the wrist and hand.
Learning Objectives

- Explain the connection between somatosensory input and motor output, including the impact of sensorimotor deficits on occupational performance.

- Use clinical reasoning to identify limitations of the wrist and hand that may affect occupational performance.
Key Concepts

- boutonniere deformity
- carpal tunnel syndrome (CTS)
- claw hand
- composite grasp
- cylindrical grasp
- dart thrower’s motion
- de Quervain’s tenosynovitis
- Dupuytren’s contracture
- extensor tendon injury
- extrinsic muscle
- flexor tendon injury
- hand of benediction
- hook grasp
- intrinsic minus
Key Concepts

- intrinsic muscle
- intrinsic plus
- lateral (key) pinch
- palmar arch
- spherical grasp
- swan-neck deformity
- tenodesis
- three-jaw chuck pinch
- tip pinch
- trigger finger
- wrist drop
Wrist and Hand: Instruments of Precision

The wrist and hand give us fine motor control and purposeful dexterity to interact with our external environment.
Osteology: Bones of the Wrist and Hand

- Distal radius
- Distal ulna
- Carpals
- Metacarpals
- Phalanges

7.2 Bones and bony landmarks of the wrist and hand
Distal Radius and Ulna

Bony landmarks:
- Radial styloid
- Ulnar styloid

Lister’s tubercle:
- Small and rounded
- Dorsal distal radius
- Pulley for extensor pollicis longus tendon
Carpals

Proximal carpal row:
- Scaphoid
- Lunate
- Triquetrum
- Pisiform

Distal carpal row:
- Trapezium
- Trapezoid
- Capitate
- Hamate
Carpals

Bony Landmarks

*Pisiform*

*Scaphoid*

*Hook of the hamate*

*Anatomical snuffbox*

7.5 Anterior bony landmarks