How to Approach the Hand
Thomas J. Fischer, M.D.

Outline of Presentation

• Intro to hand surgery
• The orthopaedic timeline
• Illustrative case presentation, x-ray and anatomy
• Standard hand nomenclature
• The inventory of the hand
• The pediatric hand

What is a HAND SURGEON?
The Hand is a collection of moving parts.
Strikes Tree Sledding Into Butler Bowl

And they are attached to even more moving parts.

...if you can understand the anatomy.

You can identify the injury. X-rays and surface anatomy are the same shapes, reflections of light and shadow.
Role of the Examiner

- All Patients
  - Diagnosis
    - History
    - Physical Exam
    - Tests
  - Treatment
    - Non-Operative
    - Operative
    - Functional Aftercare
  - Outcome, Disposition, Education, Prevention
Common nomenclature
• Distal phalanx
• Middle phalanx
• Proximal phalanx
• Metacarpal
• Carpal
• Radius
• Ulna
Anatomy of the Hand

Definitions – terms

- Metacarpal (M)
- Metacarpophalangeal joint (MP, MCP)
- Proximal Phalanx (P₁)
- Proximal Interphalangeal Joint (PIP)
- Middle Phalanx (P₂)
- Distal Interphalangeal Joint (DIP)
- Distal Phalanx (P₃)
- Motors
  - Extrinsics
  - Intrinsic
  - Flexors
  - Extensors

Joints of the Hand

- DIP: Distal Interphalangeal joint
- PIP: Proximal Interphalangeal joint
- MCP: Metacarpophalangeal joint
- CMC: Carpometacarpal joint

DIP Joint
Joints of the Wrist

- Radiocarpal
- Midcarpal
- Radiolunar
The Hand

Feb Fest, Butler Univ COPHS/ IAPA
Examination - Inventory

- Skin
- Vascular
- Nerve
- Tendon-Muscle
- Ligament-Bone
Examination - Inventory

- Skin
- Vascular
- Nerve
- Tendon-Muscle
- Ligament-Bone

Arteries/Veins

- Pallor
- Congestion
Soft Tissues

- Tendons – flexor
- Tendons – extensor
- Ligaments
  - Radial collateral
  - Ulnar collateral
  - Interosseous
  - Radiocarpal
  - Intercarpal
  - Volar plate

- Tendons – flexor
- Tendons – extensor
- Ligaments
  - Radial collateral
  - Ulnar collateral
  - Interosseous
  - Radiocarpal
  - Intercarpal
  - Volar plate
Soft Tissues

- Tendons – flexor
- Tendons – extensor

Ligaments
- Radial collateral
- Ulnar collateral
- Interosseous
- Radiocarpal
- Intercarpal
- Volar plate
BIBLIOGRAPHY