Supracondylar Humerus Fracture Types

**Type I:** Non-Displaced Fracture & NO Vascular Compromise

**Type II:** Displaced With Intact Posterior Cortex – Call Transfer Center

**Type III:** Displaced With Disrupted Posterior Cortex - Call Transfer Center And Transport To SR Or ECH ED

**Assessment Of Fractures**
- Remove All Dressings & Visualize Area
- Assess For Displacement
- Neuro Vascular Status (PNV)
- Soft Tissue Swelling
- Soft Tissue Envelope

Prompt Evaluation Should Occur As Indicated By Patient Condition

**Indicators For Emergent Surgical Intervention**
- Soft Tissue Envelope Disruption
- Disvascular Hand

**Neuro Vascular Checks**
- Capillary Refill In Hand/Fingers And Intact Radial Ulnar Pulse
- Normal Sensation And Motor Function In Median, Radial, And Ulnar Nerve Distribution

(see Motor Function Pictures)

**Discharge Criteria**
- Neuro Vascular Status Intact
- Soft Tissue Swelling Not Impeding NV Status
- Comfortable On Oral Pain Medications

**Vascular Consult**

If The Patient Is At SR And The Ortho Attending Determines There Is A Need For A Vascular Consult:

- Notify The ED Trauma Physician And The Covering Orthopedic Attending For ECH
- Transfer The Patient To ECH
- All Communication Should Be Orthopedic Attending To Orthopedic Attending

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# Management of an Isolated Supracondylar Humerus Fracture

**Type I: Non-Displaced Fracture & NO Vascular Compromise**
- ED Cast Placement
- Splint Management
- Pain Management
- Provide Sling

**Type II: Displaced With Intact Posterior Cortex**
- Consider Closed Reduction With Sedation
- Splint In ED/UC
- Check NV Status
- Pain Management
- Provide Sling

**Type III: Displaced With Disrupted Posterior Cortex With Concern For Vascular Status**
- Provide Sling
- Pain Management
- Assess Vascular Status
- Stabilize For Pain Management
- Apply Splint

### First Disposition From ED/UC
- **Type I:** Home
- **Type II:** ED/UC Home If Appropriate
- **Type III:** Admit For Closed Reduction & Percutaneous Pinning (CRPP) If Same Day Surgery UC Transfer To Hospital
- **Type III:** Admit For CRPP For Emergent Surgery

### Surgical & Post Op Care
- **Type I:** None
- **Type II:** Initiate CRPP Order Set
- **Type III:** Initiate CRPP Order Set
- **Type III:** Initiate CRPP Order Set

### Discharge Criteria
- **Type I:** Neurovascular Status Intact
- **Type I:** Pain Controlled With Oral Pain Medication
- **Type I:** ED Case Management Referral Ordered
- **Type II:** NeuroVascular Status Intact
- **Type II:** Soft Tissue Swelling Not Impeding NV Status
- **Type II:** Comfortable On Oral Pain Medications
- **Type II:** ED Case Management Referral Ordered
- **Type III:** Neurovascular Status Intact
- **Type III:** Soft Tissue Swelling Not Impeding NV Status
- **Type III:** Comfortable On Oral Pain Medications
- **Type III:** Neurovascular Status Intact
- **Type III:** Soft Tissue Swelling Not Impeding NV Status
- **Type III:** Comfortable On Oral Pain Medications

### Education
- **Type I:** Importance Of Follow-up With Orthopedic Physician
- **Type I:** Cast Care
- **Type I:** Fracture Care
- **Type I:** Medication Administration
- **Type I:** Splint Teaching Sheet
- **Type II:** Importance Of Follow-up With Orthopedic Physician
- **Type II:** Cast Care
- **Type II:** Fracture Care
- **Type II:** Medication Administration
- **Type II:** Compartment Syndrome
- **Type III:** Importance Of Follow-up With Orthopedic Physician
- **Type III:** Cast Care
- **Type III:** Fracture Care
- **Type III:** Medication Administration
- **Type III:** Compartment Syndrome

### Discharge Instructions Follow-up
- **Type I:** Follow-up With Ortho In 5-7 Days
- **Type I:** Provide Pediatric Orthopedic Surgeon Resource List (Blue Sheet)
- **Type I:** Pain Management – Provide Prescription On Discharge
- **Type I:** ED Case Management As Appropriate
- **Type II:** Follow-up In 5-7 Days After Injury With Ortho Surgeon Or Per Ortho Surgeon
- **Type II:** Provide Pediatric Orthopedic Surgeon Resource List If Appropriate
- **Type II:** Pain Management
- **Type II:** ED Case Management
- **Type III:** Follow-up Per Orthopedic Surgeon
- **Type III:** Pain Management
- **Type III:** Follow-up Per Orthopedic Surgeon
- **Type III:** Pain Management

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**MOTOR ASSESSMENT**

- "Spread your fingers like a flower"
  Assesses radial & ulnar nerves

- Claw your hands like a bear"
  Assesses radial nerve

- Thumbs up like you’re cool”
  Assesses radial nerve

- “Then bend it in the middle”
  Assesses anterior interosseous branch of median nerve

- “Make a fist”
  Assesses median nerve

**SENSATION ASSESSMENT**

- Assess ability to feel light touch
- Grade as normal or decreased
- Assess sensation to index finger (median nerve), pinky finger (ulnar nerve) and mid hand between thumb and index finger (radial nerve)

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