

# **Elbow, Wrist and Hand Upper & Lower Quarter Neurological Screen**

## **Elbow**

### **Palpations:**

- Medial epicondyle
- Lateral epicondyle
- Ulna
- Olecranon process
- Radius
- Radial Head
- Biceps brachii
- Triceps brachii
- Brachioradialis
- Flexor-pronator wad
- Extensor wad

### **Range of Motion:**

- Elbow flexion (145-155)
- Elbow extension (-5-0)
- Pronation (90)
- Supination (90)

### **Stress Tests:**

- Valgus (Ulnar Collateral Ligament)
- Varus (Radial Collateral Ligament)
- Lateral epicondylitis test (“Tennis Elbow” Test)
- Tinel’s Sign (Ulnar Nerve)

## **Wrist and Hand**

### **Palpations:**

- Carpals
- Scaphoid
- Metacarpals
- Phalanges
- Ulnar Styloid Process
- Distal Radius and Styloid Process
- Lister's Tubercle
- Thenar Compartment
- Hypothenar Compartment

### **Range of Motion:**

- Wrist Flexion (80-90 degrees)
- Wrist Extension (75-85 degrees)
- Ulnar Deviation (35 degrees)
- Radial Deviation (20 degrees)

### **Stress Tests:**

- Wrist Valgus (Ulnar Collateral Ligament)
- Wrist Varus (Radial Collateral Ligament)
- Wrist Glide Tests (Radial, Ulnar, Superior, Inferior)
- Valgus and Varus for Interphalangeal Joints and Collateral Ligaments of fingers
- Phalen's Test (Carpal Tunnel Syndrome)
- Finkelstein's Test (DeQuervain's Syndrome)
- Tinel's Sign (Median Nerve)

## Upper Quarter Neurological Screen

### Dermatomes

- C1 – Forehead
- C2 – Back of head
- C3 – Lateral neck
- C4 – Superior Shoulder, Trapezius
- C5 – Lateral Arm
- C6 – Lateral Forearm, thumb and index finger
- C7 – Middle of Forearm and middle finger
- C8 – Medial Forearm and 4<sup>th</sup> and 5<sup>th</sup> digits
- T1 - Medial elbow

### Myotomes

- C1 – Cervical Flexion
- C2 – Cervical Extension
- C3 – Lateral cervical flexion
- C4 – Shoulder elevation
- C5 – Shoulder Abduction
- C6 – Elbow Flexion
- C7 – Elbow Extension
- C8 – Finger Flexion
- T1 – Finger Ab/Aduction; Intrinsic muscles of fingers

## Lower Quarter Neurological Screen

### Dermatomes

- L1 – Anterior hip
- L2 – Anterior thigh
- L3 – Anterior thigh & knee
- L4 – Medial leg
- L5 – Anterior/lateral leg
- S1 – Lateral leg, foot & toes
- S2 – Posterior/lateral leg

### Myotomes

- L1 – Hip flexion
- L2 – Hip flexion
- L3 – Knee extension
- L4 – Ankle dorsiflexion
- L5 – Hallux extension
- S1 – Plantar flexion
- S2 – none