Elbow Exam Check-List *(Compare/assess bilaterally)*

Reflexes: *(0/4 = none, 1/4 = hyporeflexic, 2/4 = normal, 3/4 = hyperreflexic, 4/4 = clonus)*

◯ Biceps *(C5/C6)* ◯ Brachioradialis *(C5/C6)* ◯ Triceps *(C7)*

◯ UE Sensation

ELBOW

Active Range of Motion (AROM):

◯ Elbow Flexion *(140-150)* ◯ Elbow Extension *(0-10 of hyperextension)*

◯ Pronation *(85-90 = palm to floor)* ◯ Supination *(90 = palm to ceiling)*

Strength: *(0/5 = unable to contract muscle; 2/5 = isometric muscle contraction; 3/5 = contraction with movement against gravity; 4/5 contraction against slight resistance; 5/5 contraction against full resistance)*

◯ Elbow Flexion *(biceps, brachialis, brachioradialis)* ◯ Elbow Extension *(triceps, anconeus)*

◯ Wrist Flexion *(Flexor carpi ulnaris/radialis)* ◯ Wrist Extension *(Extensor carpi radialis longus/brevis, ulnaris)*

◯ Wrist Pronation *(Pronator quadratus/teres)* ◯ Wrist Supination *(supinator, biceps)*

Palpation:

◯ Medial Epicondyle *(flexor/pronator muscles)* ◯ Lateral Epicondyle *(extensor/supinator muscles)*

◯ Olecranon/Triceps insertion/Olecranon fossa ◯ Radial Head[2] *(moves with PROM pronation/supination)*

◯ Ulnar Collateral Ligament (UCL) ◯ Cubital Tunnel/Ulnar Nerve *(funny bone)* ◯ Capitellum

Special Tests:

◯ **Valgus Stress** *(arm in full extension to 10 degrees of flexion stabilize joint and place a valgus force looking for laxity and/or pain over medial elbow. Perform in both pronation and supination. Testing for UCL injury)*

◯ **Lateral Epicondylitis (Tennis Elbow) Test – Mill's**[1] *(while monitoring the lateral epicondyle and stabilizing the elbow, passively pronate the patient's forearm, flex the wrist, and extend the elbow. Pain over the lateral epicondyle can indicate lateral epicondylitis. This can also indicate radial nerve compression)*

◯ **Lateral Epicondylitis (Tennis Elbow) Test – Maudsley's**[1] *(with patient's elbow bent to 90 degrees and wrist fully pronated, examiner resists extension of the 3rd finger distal to the PIP joint. Pain over the lateral epicondyle can indicate lateral epicondylitis)*

◯ **Lateral Epicondylitis (Tennis Elbow) Test – Cozen's**[1] *(while monitoring the lateral epicondyle and stabilizing elbow, have patient clench fist with pronation, radial deviation, and extension against resistance. Pain over lateral epicondyle can indicate lateral epicondylitis)*

◯ **Medial Epicondylitis (Golfer's Elbow) Test** *(while monitoring the medial epicondyle and stabilizing the elbow, passively supinate the forearm and extend the wrist. Pain over the medial epicondyle can indicate medial epicondylitis)*

◯ **Tinel's Sign (at the elbow)** *(Tap over the ulnar nerve at the medial elbow in the cubital groove)*

◯ **Pinch Grip Test** *(have patient pinch index finger and thumb together, should be tip-to-tip. If pulp-to-pulp is done instead, may indicate anterior interosseous nerve pathology at the pronator teres muscle)*

Additional tests to consider:

◯ **Milking Manoeuver** *(arm in 90 flexion and arm supinated. While stabilizing elbow, grasp thumb under forearm and place valgus stress on UCL. Testing for UCL injury)*

◯ **Wartenburg's Sign** *(patient sits with hand resting on table. Examiner passively spreads fingers apart and asks patient to bring them together. Inability to adduct 5th digit can indicate ulnar nerve pathology)*

◯ **Pronator Teres Syndrome Test** *(patient sits with elbow flexed to 90 degrees. Examiner strongly resists pronation with elbow extension, tingling in the median nerve distribution can indicate pathology of the median nerve/anterior interosseous nerve)*

[1] https://www.ijmhr.org/ijpr.2.6/IJPR.2014.699.pdf: Mill's 100% specificity, 53% sensitivity; Cozen's 0% specificity, 84% sensitivity; Maudsley's 0% specificity, 88% sensitivity.

[2] DOs watch this area as somatic dysfunctions can be common