

### **Sample Shoulder and Neck Telehealth Examination Sample**

**Static Observations:** Ensure appropriate exposure of neck, shoulder girdle, and upper back.

- Anterior view
  - Cervical spine: Posture (rotation or lateral flexion),
  - Shoulder girdles and trunk: Shoulder girdle symmetry, step-off deformities, chest/rib cage deformities (pectus carinatum/excavatum, barrel chest), swelling, muscle bulk, atrophy
- Lateral view
  - Cervical and thoracic spine: Posture (forward head posture, flexion/extension), spinal curvatures
  - Shoulder girdles: Scapular protraction/retraction, humeral head positioning (ideally < 1/3 humeral head is anterior to acromion)
- Posterior view
  - Cervical and thoracic spine: Posture (rotation or lateral flexion), scoliotic curves
  - Shoulder girdles: scapular position (medial border or inferior angle winging, abduction/adduction, upward/downward rotation)

### **Palpation**

- Self-palpation of spinous processes, clavicles, AC joints, subacromial space

**Range of Motion** (\*can be measured with goniometer on screen)

- Cervical AROM
  - Anterior view: Lateral flexion\* and rotation
  - Lateral view: Flexion/extension\* and rotation
  - Posterior view: Lateral flexion\* and rotation
- Thoracic AROM
  - Lateral view: Flexion/extension
- Shoulder AROM
  - Anterior view: Abduction\*, horizontal adduction, external rotation in neutral and 90deg abduction, internal rotation in neutral and 90deg abduction
  - Lateral view: Flexion/extension\*, external rotation in neutral and 90deg abduction\*, internal rotation in neutral and 90deg abduction\*
  - Posterior view: Scapulohumeral rhythm during flexion/abduction, hands behind head (functional abduction/external rotation), hands behind back (functional extension/internal rotation)

Muscle Testing: Isometrics and special tests of muscle performance

- Cervical
  - Craniocervical flexion test (assess deep neck flexor isolation, may use biofeedback from blood pressure cuff if available)
  - Deep neck flexor endurance test
- Shoulder
  - Isometric strength testing utilizing a wall or doorway: internal and external rotation in neutral and in 90deg of abduction, abduction, flexion, extension
  - Subscapularis: Belly press, lift off
  - Supraspinatus: Self-resisted empty or full can

Provocative Special Tests

- Cervical
  - Spurling's test with or without added compression by patient: cervical radiculopathy
- Shoulder
  - Impingement: Neer's, Hawkins-Kennedy
  - Acromioclavicular joint: Cross-over test
  - Labral: Self-resisted O'Brien test
  - Bicipital tendon: Self-resisted Speed's test or Yergason's test

Neurological Testing

- Upper quarter segmental neurological exam
  - Challenging to perform with objectivity – can ask patient to check own dermatomes and self-resisted myotomes or muscle strength testing utilizing weights if available. Most patients will not be able to perform upper limb tendon reflexes independently.
- Modified upper limb tension tests (ULTT)
  - Active ULTT2A performed in standing: Median nerve entrapment/neuropathy/neuritis
  - Active ULTT2B performed in standing: Radial nerve entrapment/neuropathy/neuritis
  - Active ULTT3 performed in standing: Ulnar nerve entrapment/neuropathy/neuritis
    - Reverse finger goggles
- Elbow flexion test: ulnar nerve entrapment/neuropathy
- Roo's test: thoracic outlet syndrome
- Central neurological tests
  - Rapid alternating movements
  - Self-performed Babinski, Hoffman's test, or ankle clonus
  - Grip and release test: normally a patient can make a fist and release 20 times in 10 seconds while myelopathic patients may struggle to do this.

Reference: Includes additional considerations, instructions, photos, and videos for lumbar spine, sacroiliac joint, hip, knee, and ankle musculoskeletal examinations

1. Laskowski ER, Johnson SE, Shelerud RA, Lee JA, Rabatin AE, Driscoll SW, Moore BJ, Wainberg MC, Terzic CM. The Telemedicine Musculoskeletal Examination. Mayo Clin Proc. 2020 Aug;95(8):1715-1731. doi: 10.1016/j.mayocp.2020.05.026. Erratum in: Mayo Clin Proc. 2020 Oct;95(10):2299. PMID: 32753146; PMCID: PMC7395661.