To facilitate the physical examination for common musculoskeletal ailments, this guide has been prepared for you. An efficient and thorough examination can be performed and documented with this general flow and format:

1) **Inspection**: landmarks, asymmetry, bony deformity, atrophy, skin changes, etc
2) **Palpation**: soft tissue/bony prominences, tenderness, warmth, edema/effusion, etc
3) **Range of Motion**: all planes (noting pain or limitations in passive and active ROM)
4) **Neurovascular**: include motor, sensory, reflexes, pulses (save most neurologic exam detail for spine exams)
5) **Special tests**: specific for each joint region

Here is an abbreviated list of some Special Tests by musculoskeletal region:

(see Appendix for Figures of selected tests)

**Neck Special tests:**

**Spurling’s** (+ if referred dermatomal pain with neck extension, rotation, and axial load)

**Lhermitte’s sign** (+ if neuropathic/lancinating sensation runs down spine or limbs with neck flexion)

**Hoffman’s Reflex** (signals corticospinal tract/UMN lesion)
=> hold wrist and middle finger in passive extension, quick flexion force is then applied to distal phalanx of the middle finger.
=> Positive test: flexion of thumb (+/- flexion of index finger)

**Shoulder Special tests:**

**Hawkins** - + if shoulder pain with passive shoulder flexion and internal rotation - suggests subacromial impingement syndrome

**Yocum’s** - + suggests subacromial impingement syndrome

**Empty can** - + if pain or weakness when downward force applied to shoulder held in flexion, partial abduction, and internal rotation (thumbs down) - suggests rotator cuff pathology (esp. supraspinatus)

**Drop arm test** – + if, from fully abducted position, patient unable to slowly lower arm to side (arm drops) - rare, but + suggests complete tear or major rotator cuff pathology
Subscapular Lift-off test - + if patient unable to internally rotate from the starting position with hand behind lower back

Speed’s - + if resisted shoulder flexion (with elbow in extension) reproduces anterior shoulder pain, suggests biceps tendon pathology

Scapular winging – suggests peri-scapular weakness

Sulcus sign - + if downward force on arm held in neutral, relaxed position causes a gap or “sulcus” to form below acromion; suggests either hyperlaxity or instability (i.e. ligament tear)

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**Elbow Special testing:**

Elbow ligament instability (varus/valgus/anterior/posterior)
Tennis elbow (lateral epicondyle pain on resisted wrist extension and passive wrist flexion): (see Cozen’s, Mill’s, Maudsley’s tests )
Golfer’s elbow (medial epicondyle pain on resisted wrist flexion and passive wrist extension)
Tinel’s at elbow for cubital tunnel (percussion of Ulnar nerve refers dysesthesias)

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**Wrist/Hand Special testing:**

Tinel’s for carpal tunnel - + if tapping on median nerve reproduces symptoms
Phalen’s for carpal tunnel - + if symptoms reproduced with prolonged wrist flexion
Carpal tunnel compression test - + if symptoms reproduced with direct prolonged compression across Median nerve at wrist (examiner uses thumbs to press on carpal tunnel)
Snuff box tenderness (for suspected Carpal bone/Scaphoid fracture)
Finkelstein’s Test for De Quervain’s tenosynovitis

Observe for:
Trigger finger, Dupuytren contracture
Bouchard, Heberden’s nodes
Classic OA/RA changes

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**L-Spine Special testing:**

SLR (straight leg raise AKA Lasegue’s sign); can perform w/ ankle dorsiflexion as well
Crossed Straight leg raise – less sensitive/more specific than SLR
Slump test (seated straight leg raise) – more sensitive and specific than SLR
Leg length discrepancy – measure ASIS to ipsilateral medial malleolus and compare
Facet loading test - hyperextend and laterally rotate lumbar spine to compress facet joints
**Hip Special Testing:**

Acetabular grind/compression test – downward pressure into hip joint; + if pain, suggests OA
Thomas test – check for hip flexion contracture by starting in supine position with hips flexed
toward chest. If unable to lower a leg (1 at a time) completely flat to the table, suspect tight hip flexor muscles (e.g. iliopsoas).
FABER’s (flex, abd, ext rot) for hip or SI joint pathology depending upon pain location
Ober’s: test for Tight Iliotibial Band/TFL muscle
Piriformis stretch test
Trendelenberg sign for weak hip abductor (+ if hip drop contralateral to weak gluteal muscles)
Greater Trochanteric bursa tenderness to palpation (often concurrent with IT Band pain syndrome)

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**Knee Special Testing:**

Patellar grind, compression for patellofemoral syndrome – + if direct downward compression on
patella recreates pain
Varus/valgus stress test for LCL/MCL laxity – can be tested in extension and 30⁰ flexion
Pes Anserine bursa palpation
Lachman’s test for ACL laxity/tear. Pull tibia anteriorly with knee at 20-30 degrees flexion.
Ant/Post drawer test to assess ACL/PCL integrity. Force tibia anteriorly/posteriorly with knee at
90 degrees flexion. +if significant tibial movement, especially if greater than asymptomatic side
Posterior Sag Sign for PCL laxity/tear. + if tibia sags posteriorly when patient is positioned
supine with feet on table in knee/hip flexed position.
Thessaly Test of meniscus— stand on leg with knee flexed slightly, then rotate about the
knee (e.g. like swiveling on a fixed leg with pivot point at the knee); + if pain or locking/clicking
sensation at the joint line on medial or lateral side = high likelihood of meniscal pathology.
Medial/lateral joint line Tenderness to Palpation (TTP)

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**Ankle/Foot Special Testing:**

Thompson’s test for Achilles tendon integrity – + if absence of plantarflexion with squeezing of
calf muscles - implies significant Achilles tear unable to passively plantarflex foot
Pes planus/cavus (fixed/ flexible)
Tinel’s sign for Tarsal tunnel syndrome - + if tapping posterior to medial malleolus recreates
pain down plantar foot in Tibial (medial and lateral plantar nerve branches) distribution
Metatarsal head medial/lateral compression (squeeze) test for Morton’s neuroma
Talar tilt test – no hard endpoint with ankle inversion implies ligamentous laxity or disruption
Anterior drawer test - + if foot translates forward upon anteriorly directed force of calcaneus at
the ankle joint. Laxity implies torn Anterior TaloFibular Ligament (ATFL) – lateral ankle sprain.

*Observe shoe wear patterns and typical RA and gout deformities
**APPENDIX**

**CERVICAL/ NEURO**

Spurling’s (Compression) Test

- Relative contraindications: patient with possible C-spine instability (RA, spinal mets, myelopathy)

Hoffman’s Reflex

**SHOULDER**

Hawkin’s (AKA Hawkins-Kennedy)

Empty Can

Speed’s

Scapular Winging

Sulcus Sign
ELBOW
  Cozen’s (Tennis Elbow)
  Tinel’s (Ulnar Neurop @ Ulnar Groove)

WRIST / HAND
  Tinel’s
  Phalen’s
  Carpal Compression
  Finkelstein Test
**BACK / HIP**

- Straight Leg Raise
- Slump Test

**FABER (Patrick’s) Test**

**Ober’s**

**Acetabular grind**

**KNEE**

- Anterior / Posterior Drawer
- Lachman (only 20 deg flexion)
Valgus (force inward at knee) / Varus (out at knee)

ANKLE / FOOT

Thompson Test

Tinel’s at Ankle

Talar Tilt

Squeeze/compression Test (Morton’s Neuroma)