

## BASIC DATA

### **PATIENT EVALUATION, ASSESSMENT, AND MANAGEMENT**

#### **History and Physical Examination, Documentation**

- Obtain a complete history, including history of present illness, comorbid conditions, social and family history
- Perform a complete physical examination including:
  - ✓ Head & Neck (inspection, funduscopic)
  - ✓ Chest (including detection of pulmonary or pleural abnormalities)
  - ✓ Cardiovascular system
  - ✓ Peripheral vascular system
  - ✓ Abdomen
  - ✓ Neurologic system
  - ✓ Extremities

#### **PHYSICAL EXAMINATION**

The foundation of the MKS exam involves three things: LOOKing at a joint/limb, FEELing the joint/limb and MOVEing the joint/limb. LOOK, FEEL, MOVE: that's all there is! So, if you remember nothing else in examining the spine, upper and lower limbs, you'll hit the high points if you:

- 1) Examine VISUALLY for:

Muscle wasting	Scars	Open Wounds
Asymmetry	Obvious Deformity	Gait
Redness		
  
- 2) PALPATE for:

Local bony/tendinous areas for tenderness
Swelling
Warmth
  
- 3) MOVE:

First, ask the patient to move actively, document range.
Then, you move the joint/limb passively, document range.
Examine the joint/limb for stability.

#### **Shoulder Exam:**

In a nutshell, shoulder pain may be caused by arthritis, instability (recurrent dislocation or the feeling that the shoulder will dislocate) or rotator cuff disease. So, you should always (but not exclusively):

LOOK: -for deltoid, supraspinatus wasting  
-for old surgical scars

FEEL: -the A.C. joint

MOVE: -to examine for instability  
-to examine for impingement

#### **Elbow Exam:**

The most common elbow problems you will see are the lateral and medial "tennis elbow":

LOOK: -for steroid atrophy, at the site of the poorly placed injection

FEEL: -1 cm distal and slightly anterior to the bony prominence of the lateral epicondyle.  
-also feel the medial elbow, the epicondyle and the flexor sponator origin.

MOVE: -to make sure that the patient can move from 30° flexion to 130° flexion (the functional area).

#### **Wrist Exam:**

The wrist is exceedingly complex. You should be able to identify surface landmarks (bony, usually) and palpate them for tender points as an indication for underlying pathology.

LOOK: -for obvious deformity, such as in R.A.  
-for localized swelling, redness

FEEL: -ulnar styloid: Clue: TFCC injury  
-radial styloid: 1<sup>st</sup> dorsal compartment (de Quervains) tenosynovitis  
-snuffbox scaphoid fracture  
-lunate exactly ½ way between radial and ulnar styloids  
-triquetrum (the round bone immediately distal to the ulnar styloid): Clue: L-T tear  
-pisiform, hook of hamate bony prominence in proximal ulnar palm: Clue: P-T arthritis, hamate fracture

*Wrist exam, continued*

- MOVE: -flexion, extension, radial + ulnar deviation  
-provocative test: ask about the WATSON test for scapholunate instability

**Hand Exam:**

Also, exceedingly complex, the hand has a lot packed into a small space. Examination should be focused based on history: pain, numbness, tingling, weakness, deformity, and functional loss all point to specific diagnoses. In any hand exam, you should:

- LOOK: -muscle wasting: thenars, interossei  
-deformity of fingers, fixed or correctable, dynamic, boutonniere, swan neck  
-nails: Always check: Clue: re: psoriasis, liver disease, nutrition, etc.

- FEEL: -local tenderness  
-sensory exam: 2 point discrimination for each digital nerve static points longitudinally oriented, look for differences:  
a) between digital nerves of the same finger  
b) between fingers in the same hand  
c) between the same finger on R+L hands  
-check for sudomotor activity (i.e. sweating)  
-check for provocative signs of median or ulnar nerve irritation  
-median: Phalen, median N compression, percussion for Tinels  
-ulnar: elbow flexion, ulnar H compression, percussion for Tinels  
-for crepitus: tendinitis  
-1<sup>st</sup> dorsal compartment  
-flexor tendons  
-extensor  
-for triggering/clicking – trigger finger  
-for base of thumb pain – arthritis  
-for a compressible ‘bump’ that transilluminates – ganglion

- MOVE: -get a comparison between hands of the MCP, PIP and DIP ranges, both active and passive  
-more important than the actual values, are the trends:  
? improving  
? deteriorating

**Hip Exam:**

Remember “hip” pain can be felt in the groin, buttock or thigh; these sites of pain may also be referred from the lumbar spine.

- LOOK: -at the gait, for an antalgic or Trendelenburg  
-Trendelenburg test  
-abductor wasting, scars

- FEEL: -for greater trochanteric tenderness (bursitis)

- MOVE: -active, THEN passive  
-look for the hip going into external rotation when it is flexed (sign of arthritis)

**Do not forget to measure real (from the ASIS) and apparent (from the umbilicus) leg lengths.**

Questions: If your/someone’s RIGHT hip is arthritic and painful, to which side will the trunk shift on walking? Upon standing unsupported on the RIGHT LEG? Which hand will hold the cane? Why?

**Knee Exam:**

In the acute setting, the knee may be swollen and painful. Often aspiration (STERILE!!) and some intra-articular lidocaine will allow for a comfortable examination.

- LOOK: -for swelling, scars, redness  
-for valgus (knock-knees) or varus (bow-leg) alignment with the patient standing  
-patellar tracking

- FEEL: -the bones  
-the ligaments  
:MCL origin, midsubstance insertion  
:LCL origin, midsubstance insertion

:joint lines: arthritis, meniscal tears

*Knee exam, continued*

:patellar stability (put it laterally to see if symptoms reproduced)

:”Apprehension Test”

:the ACL: drawer test

:Lachmann

:Pivot shift

:the PCL: quadriceps active test

MOVE: -passive + active ranges

-stability test (see ACL, PCL above)

MCL: check for valgus instability/pain in: full extension (if unstable, MCL + ACL)

: 30° flexion (if unstable, MCL only)

LCL: check for varus pain/instability

Structures to focus upon:

MCL: extension

30 degrees flexion

LCL: extension

examine the peroneal nerve

ACL: Lachmann

anterior drawer

pivot shift

PCL: posterior sag

posterior drawer

quadriceps active test

Medial meniscus: medial joint line tenderness

Lateral meniscus: lateral joint line tenderness

Patellar tendon: active extension  
tenderness

Quadriceps tendon: active extension  
tenderness

Muscles around the knee: gastrocnemius  
medial hamstrings  
lateral hamstrings

Neurovascular structures: popliteal artery  
peroneal nerve

distal pulses: posterial tibial  
dorsalis pedis

**Foot and Ankle Exam:**

Sprains on the later (+medial) sides, and fractures are common ankle injuries. The foot like the hand is exceedingly complex.

If you have a desire to study foot exam in depth, see me or Dr. Jeff Johnson.

LOOK: -for obvious deformity, either in the acute (ankle fracture/dislocation) or chronic setting (i.e. bunions: hallux valgus, bunionettes, claw toes, hammer toes, calluses, corns)

FEEL: -for local areas of tenderness. For the non-foot surgeon (and maybe foot surgeon, too) this is the best way to pinpoint the problem. For example, heel pain may be planter fasciitis, a tendon-insertion enthesopathy, a calcaneus stress fracture, a tarsel-tunnel syndrome, a plantar fat pad disruption, etc., etc. Precise tenderness localization is the best tool for diagnosis.

MOVE: -range of ankle flexion, extension, inversion, eversion  
-toe range of motion: especially the hallux (big toe) MTP joint

Additional notes:

Joints: Tibiotalar (the ankle joint)

Subtalar (inversion and eversion)

Midtarsal (also inversion and eversion...)

Tendons: Medial: Tibialis posterior

Flexor digitorum longus

Lateral:	Peronei	Flexor hallucis longus
Anterior:		Tibialis anterior
		Extensor digitorum longus
		Extensor hallucis longus
Posterior:		Achilles tendon

Neurovascular structures:	Posterior tibial pulse
	Dorsalis pedis pulse
	Nerves: Deep peroneal
	Superficial peroneal
	Calcaneal
	Sural
	Medial plantar
	Lateral plantar
	Saphenous

Ligaments: Anterior talofibular  
Middle talofibular  
Posterior talofibular  
Anterior inferior tibiofibular

**Spine Exam:**

Try to keep it simple, but remember to keep a lookout for warning signs: numbness in the perianal/genital area; incontinence, leg weakness/inability to walk; systemic signs: blood in the stool/urine, weight loss, fever, chills.

It's not always "just another low back pain": it could be (and this list is by no means all-inclusive)

- a central disc herniation with cauda equina syndrome
- infected disc (discitis) or vertebral osteomyelitis (diabetics, immunosuppressed, TB, etc.)
- metastatic prostate or breast carcinoma
- an abnormal aortic aneurysm
- pancreatitis/an ulcer
- myocardial infarction

This list is by no means exclusive, and serves only to highlight the structures that should be examined in both the emergent and office settings with patients having complaints of knee or ankle pain. Dr. Matava will cover things in greater detail in his talk.

With knee history, a helpful mnemonic is "C L I P S": (i.e. Clicking, Locking, Instability, Pain and Swelling). Taking a history of pain (anywhere in the body) is also easy to remember with the mnemonic; "P Q R S T": (i.e. Pain location, Quality, Radiation, Severity and Timing).

Finally, one last word on the presentation of cases for review by the attending or the Chief in the clinic: **KEEP IT SHORT AND SIMPLE**. Practice getting all the information imparted within the **FIRST SENTENCE**. Get age, sex, chief complaint, salient features of the chief complaint and important medical factors influencing diagnosis and/or decision making in the **FIRST SENTENCE**. That way, you do not lose anybody's interest, and the problem is clarified. And one last thing: always, always, always inquire about the following **EIGHT** things after taking the history of the chief complaint:

Medical History	Allergies	Smoking	Family History
Surgical History	Medications	Drinking	Sickle cell status

That way, nothing important on past medical history is missed.

- Obtain a focused history and physical examination in an outpatient setting
- Assess preoperative risk factors and comorbid conditions (Med Hx, Surg Hx, smoking, ETOH, Meds, Allergy, Sickle Cell status, Family Hx)
- Produce a written history and physical, including differential diagnosis, assessment and plan of therapy.
- For inpatients, write a daily progress assessment and detect changes in health status
- Write routine orders for vital signs, diet, activity, sleep, sedation, pain management, constipation, urinary retention
- Write notes in SOAP format
- Maintain a legally correct medical record