

Effective Independent
Medical Evaluations

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Dr. Wojo's Specialty

- Emergency Medicine
- Internal Medicine
- Podiatric Medicine
- Osteopathic Medicine
 - Back Pain
- Toxicology
- Occupational Medicine
 - Carpal Tunnel Syndrome, Hernias
 - Unusual Cases

IME

- Independent
 - No prior relationship
- Medical
 - Forensic, Medical, Evidence-Based
- Evaluation
 - Standard History and Physical

Characteristics Of A Quality IME

- Independent
- Medical
- Evaluation
- Things to Consider
- Reports

Characteristics Of A Quality IME :
Medical

- Not a physician-patient relationship
- Medical records and other documentation available
- Apply scientific basis
- Appropriate specialty or training

Characteristics Of A Quality IME : Evaluation

- Apply scientific principles
- Assess available information and data
 - Thorough documentation
 - Identify and explain inconsistencies
 - Validate facts
- Demonstrate functional abilities
- Seek ecological validity

Information Review

- Evaluate the history
- Assess inconsistencies
- Note surveillance
- Review health issues and lost time
- Clarify diagnosis
- Review medical treatment

Return to Work Issues

- Determine fitness for duty
- Evaluate safe return to work
- Define disability
- Utilize evidence-based medical guidelines
- Identify restrictions

Dispute Resolution

- Evaluate causation
- Second opinion
- Confirm impairment and liability

Referral Letter

- Examinee Profile, Work History, Status
- Describe case and dates
- Purpose of referral and specific questions
- Contact information for follow up
- Diagnosis
- Treatment
- Work and ADL issues
- Disability

Additional Information

- Solid facts surrounding the case
- Context of opinion requested
- Appropriate medical records.
- Radiographs
- Laboratory Studies
- Job description

Physical Examination

- Inspection
- Palpation
- Percussion
- Auscultation

Physical Exam

- Determine the correct diagnosis
- Proficiency is attained through practice
- Typical format for recording the exam includes:
 - Initial impression
 - HEENT
 - Neck
 - Thorax
 - Abdomen
 - Extremities

Head

- Facial expression
- Eye Contact
- Excessive grimacing
- Moaning
- Pain Behaviors

Eyes

- Pupillary reflexes - PERRLA
- Dilated Pupils
- Constricted Pupils
- Ptosis-Droopy eyelids
- Cross eyed
- Nystagmus-"Jumpy Eyes"
- Blood Shot

Neck

- Abnormal Vessels
- Accessory muscle use
- Tracheal position
- Lymph nodes
- Carotid pulse



Lung Auscultation

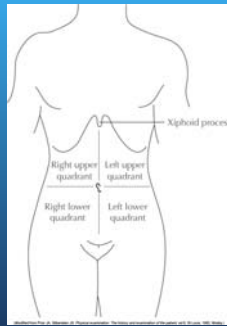
- Tracheal breath sound
- Bronchovesicular
- Vesicular
- Bronchial
- Adventitious
 - Wheeze
 - Crackles
 - Rhonchi
 - Stridor
 - Pleural friction rub

Precordium-Heart Exam

- Heart topography
- Point of maximal impulse - PMI
- Heart sounds

Abdomen

- Hepatomegaly
- Ascites



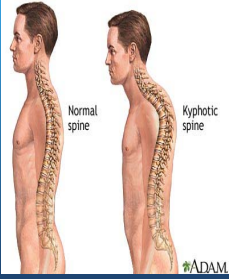
Extremities

- Clubbing
- Cyanosis
- Pedal edema
- Capillary refill
- Peripheral skin temperature

Back Exam

■ **General Inspection:**

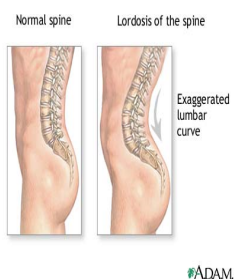
- **Kyphosis:**
 - Abnormal forward rounding of the upper back (> 40 to 45 degrees)
 - Round back or hunchback
 - Causes:
 - Developmental problems, degenerative diseases (arthritis), osteoporosis with compression fractures, trauma
 - Severe cases:
 - Can affect lungs, nerves, causing pain and other problems



Clinical Evaluation

■ **General Inspection:**

- **Movement and Posture:**
 - Poor posture (standing, sitting, bending)
- **Lordotic Curve:**
 - Reduction:
 - Muscle spasm
 - Hamstring tightness
 - Increased:
 - Hip flexor tightness
 - Abdominal weakness



Clinical Evaluation

- **General Inspection:**
 - **Standing Posture:**
 - Lateral shift in trunk and pelvis
 - Nerve root impingement (lateral shift ↓ pressure)
 - **Erector Spinae Muscle Tone:**
 - Unilateral hypertrophy or atrophy

Clinical Evaluation

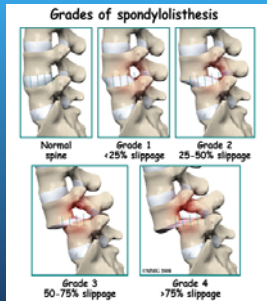
- **Palpation: Thoracic Spine**
 - Spinous Processes
 - Supraspinous Ligaments:
 - Fills space between the spinous processes
 - Costovertebral Junction:
 - Articulation between ribs and thoracic vertebrae
 - Only palpable on slender individuals
 - Trapezius:
 - Origin to insertion
 - Rhomboids and levator scapulae lie deep to middle/upper traps
 - Paravertebral Muscles
 - Scapular Muscles

Clinical Evaluation

- **Spondylolisthesis:**
 - Forward slippage of a vertebrae on the one below it
 - L4 and L5 / L5 and S1
 - Affects 5-6% of males, 2-3% of females
 - Causes:
 - Strenuous physical activity (weightlifting, gymnastics, football)
 - Types:
 - Developmental:
 - May exist at birth, or may develop during childhood (generally not noticed until later in childhood/adult life)
 - Acquired:
 - Degeneration: caused by the daily stresses that are put on spine (i.e. carrying heavy items, physical sports)
 - Connections between the vertebrae weaken
 - Single or repeated force

Clinical Evaluation

- **Spondylolisthesis:**
 - **Grade 1:**
 - 25% of vertebral body has slipped forward
 - **Grade 2:**
 - 50%
 - **Grade 3:**
 - 75%
 - **Grade 4:**
 - 100%
 - **Grade 5:**
 - Vertebral body completely fallen off (i.e., spondyloptosis)



Clinical Evaluation

- **Palpation: Sacrum and Pelvis**
 - Median sacral crests
 - Iliac crests:
 - Palpate laterally from PSIS to find iliac crests and anteriorly to locate ASIS (level of symmetry)
 - Posterior superior iliac spine
 - Gluteals
 - Ischial tuberosity
 - Greater trochanter
 - Sciatic nerve:
 - Place thumb on ischial tuberosity and 3rd finger on the PSIS. 2nd finger will fall into sciatic notch (nerve most superficial as it passes by ischial tuberosity)
 - Pubic symphysis

Clinical Evaluation

- **Active Range of Motion:**
 - **Flexion and Extension:**
 - Measured with patient standing
 - Distance from the fingertips to the floor can be measured (accuracy affected by tightness of hamstrings and calf muscles and scapular protraction)
 - Gravity assists with movement
 - More accurate than hook-lying position
 - Abdominal muscles have to overcome weight of the trunk

Clinical Evaluation

- **Active Range of Motion:**
 - **Lateral Bending:**
 - Patient standing (feet shoulder width apart and the hand opposite the direction of the movement resting on the ilium)
 - Patient bends trunk laterally (attempt to touch fingertips to the ground)
 - Distance between the ground and fingertips is measured
 - **Rotation:**
 - Patient is sitting position (stabilizes pelvis and lower extremity)
 - Patient rotates shoulder girdles and spinal column

Clinical Evaluation

■ **Passive Range of Motion:**

- **Flexion:**
 - Patient in hook-lying position
 - Examiner brings the knees to the chest by lifting under the knees and thighs and flexing the hip and thoracic spine
- **Extension:**
 - Patient prone (hands flat on table at shoulder level - push-up position)
 - Patient extends arms, lifting the torso (hips and legs remain of table)
- **Rotation:**
 - Patient in hook-lying position
 - Patient's pelvis and legs are rotated to bring lateral portion of the knee towards the table (shoulders remain flat)

The Neurological Examination

Six Subsets of the Neuro Exam

- ⊙ Mental Status
- ⊙ Cranial nerves
- ⊙ Motor
- ⊙ Coordination
- ⊙ Sensory
- ⊙ Gait

What are we checking and how?

Mental Status

- **What?**
 - Level of alertness, awareness
 - Degree of interaction
 - Orientation
 - Following commands
 - Older children: naming objects, simple calculations, extinction, neglect, fund of knowledge
 - Difference from baseline

Language, Speech

- Language
 - comprehension
 - spontaneous, fluent
 - appropriate content
 - other things you can check: repetition, naming objects, reading, writing
- Speech
 - prosody
 - volume
 - rate
 - dysarthria

Cranial Nerves

- CN 1: Olfactory... yeah, we don't check that either
- CN 2: Optic
 - Visual acuity
 - Visual fields
 - Fundus
- CN 3: Oculomotor
 - Pupil reactivity to light (direct and consensual) and accommodation
 - Extraocular eye movements (superior, medial and inferior recti; inferior oblique)
- CN 4: Trochlear
 - Extraocular eye movements (superior oblique)
- CN 5: Trigeminal
 - Muscles of mastication
 - Facial sensation (V1, 2, 3 divisions)
- CN 6: Abducens
 - Extraocular eye movements (lateral rectus)

Cranial Nerves, continued

- CN 7: Facial
 - Facial muscles
 - Taste (anterior 2/3)
- CN 8: Vestibulocochlear
 - Hearing
 - Vestibular function
- CN 9: Glossopharyngeal
 - Taste (posterior 1/3)
 - Uvula
- CN 10: Vagus
 - Phonation
 - Palate elevation
- CN 11: Spinal accessory
 - Head turn
 - Shoulder shrug
- CN 12: Hypoglossal
 - Tongue protrusion

Reflexes

- Grading system
 - 0: absent
 - 1+: hyporeflexic
 - 2+: normal
 - 3+: brisk, without clonus
 - 4+: brisk, with clonus
- More pathologic descriptors: crossed, spreading
- Where to check
- Clonus
 - Sustained
 - Unsustained
- Other reflexes: pectoral, grasp, suck, moro, jaw jerk
- Plantar response

Sensory

- How and what part of the nervous system are we checking?
 - Light touch
 - Pinprick
 - Temperature
 - Vibration
 - Joint position sense
- Checking a level
- Romberg- correct positioning!

Cerebellar


- Ataxia
 - Axial
 - Appendicular
- Finger-nose-finger
- Heel-knee-shin
- Rapid alternating movements

Gait

- Casual
- Toe
- Heel
- Tandem
- What are those last 3 testing?

**The Neurological Examination
Motor Examination**

Strength



**The Neurological Examination
Motor Examination**

Strength

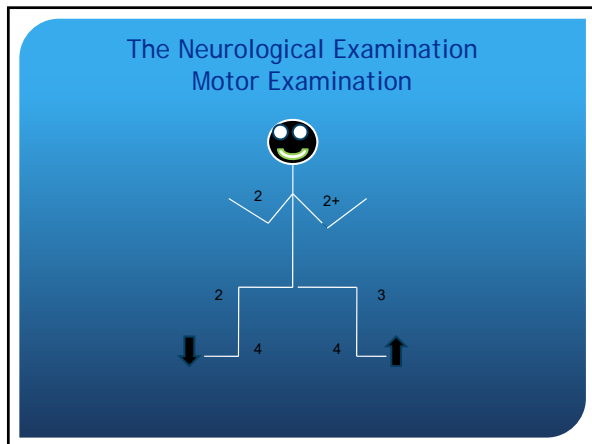
Medical Research Council Scale

- 5/5 = Full Strength
- 4/5 = Weakness with Resistance
- 3/5 = Can Overcome Gravity Only
- 2/5 = Can Move Limb without Gravity
- 1/5 = Can Activate Muscle without Moving Limb
- 0/5 = Cannot Activate Muscle

The Neurological Examination Motor Examination

	Upper Motor Neuron	Lower Motor Neuron
Strength	↓	↓
Tone	↑ Spasticity	↓ Hypotonia
DTR's	↑ Brisk DTR's	↓ Diminished or Absent DTR's
Plantar Responses	↑ Upgoing Toes	↓ Downgoing Toes
Atrophy/Fasciculations	None	+/-

- ### The Neurological Examination Motor Examination
- DTR's
- 0/4 = Absent
 - 1-2/4 = Normal Range
 - 3/4 = Pathologically Brisk
 - 4/4 = Clonus




The Neurological Examination Motor Examination

Involuntary Movements

- Hyperkinetic Movements
 - Chorea
 - Athetosis
 - Tics
 - Myoclonus
- Bradykinetic Movements
 - Parkinsonism (Bradykinesia, Rigidity, Postural Instability, Resting Tremor)
 - Dystonia

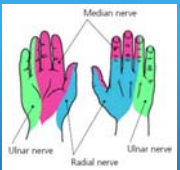
Numbness



Median Nerve

CARPAL TUNNEL SYNDROME

Clinical Features

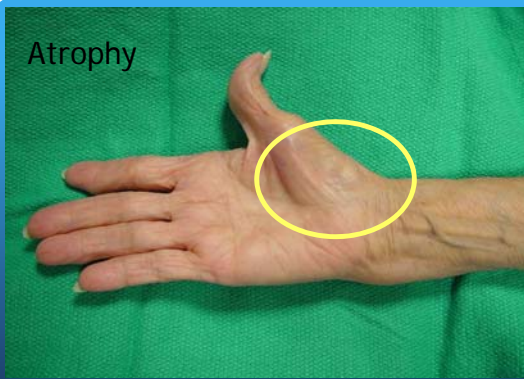


- Pain
- Numbness
- Tingling
- Symptoms are usually worse at night and can awaken patients from sleep.
- To relieve the symptoms, patients often “flick” their wrist as if shaking down a thermometer (**click sign**).

Clinical Features

- Pain and paresthasias may radiate to the forearm, elbow, and shoulder.
- Decreased grip strength may result in loss of dexterity, and thenar muscle atrophy may develop if the syndrome is severe.

Atrophy



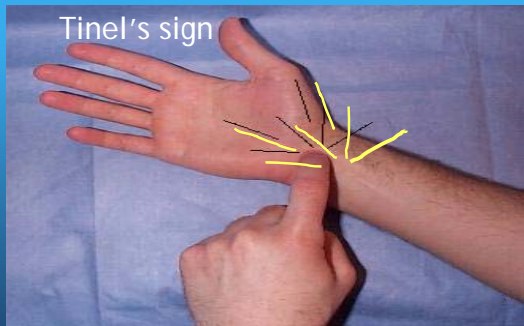
Physical examination

- Phalen's maneuver
- Tinel's sign
- weak thumb abduction.
- two-point discrimination

Phalen's maneuver



Tinel's sign

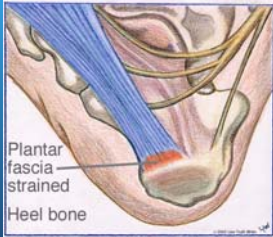


Plantar Fasciitis



- Inflammation and pain of the plantar fascia, usually at its insertion at the plantar medial tubercle of the calcaneous
- Becomes chronic in 5-10% of all patients
- Is not necessarily associated with a heel spur
- Over 90% resolve with conservative treatment

Plantar Fasciitis Symptoms



- Weight-bearing pain on arising
- Pain subsides, returns with activity
- Footwear related to pain?

Plantar Fasciitis Risk Factors



- Weight gain
- Equinus deformity
- Poor shoegear
- Biomechanical abnormalities
- Work Surface

Plantar Fasciitis Diagnosis



- Pain on palpation
- Antalgic gait
- Pes planus
- X-ray
- Ultrasound

Characteristics Of A Quality IME : Reports

- Thoroughly document history and exam
- Organized
- Understandable
- Logic trail
- Distribution
- Timeliness of completion

Causation

- Evaluation of mechanism of injury
- Are injuries consistent with mechanism?
- Is disability consistent with the accident?
- What is the secondary gain?

Treatment

- Reasonable and customary?
- Excessive?
- Duplicative?
- Testing reasonable?
- End of healing consistent with evidence based medical literature?

IME Report

- Clear diagnosis
- Clear treatment plan
- Return to Work status
- Consistency
- Neutral language
- Objective clinical findings
- Clear conclusions on diagnosis, treatment, causation, work capacity

Questions?