A Quick Guide to the Physical Examination (DRAFT)

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<u>Before the Physical Exam Starts</u>

1. Always sanitize before physical exam
2. Always sit/stand to the right side of the patient
3. Always introduce yourself
4. Ask patient for his or her name and what they would like to be called
5. Ask for permission to conduct exam and palpate them
6. Remember to get the patient's permission when you palpate them

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Vitals, Head and Neck (EEN) Examination

Notes:

1. Tools Needed:
   a. Stethoscope
   b. Blood pressure cuff
   c. Ophthalmoscope
   d. Penlight
   e. Otoscope

General Appearance

- **Normal report:**
  not acute distress, alert, oriented times 3 (person/place/time), normal build/height/ weight, appropriate facial expressions, well groomed, good hygiene, fluent speech, mobile, no involuntary movements

Vitals

- Respiration: checking for respiration
  - Say you are going to check the patient pulse → not to get a change in breathing
  - Do it for a minute
  - **Normal Report**:
    - **Rate: 16**
    - **Rhythm: regular**
    - **Depth: not too shallow, or too deep**
    - **Effort: quiet breathing, no signs of labored breathing**
- Pulse: can get this while checking for respiration
  - **Normal Report**:
    - **Rate: 60-100**
    - **Regular rhythm**
    - **Amplitude: brisk, 2+**
    - **Normal contour**
- BP
  - Arm on a table, arm should be at heart level
  - Cuff 1 inch above the antecubital crease
  - Feel for radial pulse → inflate cuff until you cant feel pulse, check the pressure
    - Add 30 to estimate systolic pressure
    - Wait 30 seconds (but not for exam, say you would)
  - Take the stethoscope and place it above the brachial artery and press down hard
  - Inflate the cuff to the estimated systolic pressure
  - Slowly deflate about 2-3 mmHg/second
    - Systolic pressure = first sound
    - Diastolic pressure = when sound disappears
  - If you suspect HTN: do both arms, sitting, standing, and laying down
    - **Say that you would do this IF you suspect HTN**

Tip:
Count the pulse for 15 seconds (multiply value by 4)
Then do the respiration for a minute

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- **Report the systolic/diastolic**

Head/Neck/Ear

- Eyes
  - Visual acuity→ do this first
    - 20 ft away
    - Ask what is the smallest line they can read, one eye at a time
    - If they have glasses, ask them to do it first without then with glasses
    - **Report the 20/#**
  - Visual Fields
    - Patient removes glasses
    - Patient cover one eye→ double check
    - Checking for the periphery of vision
    - Adjust your seating so you are **close** enough to the patient for all of this
    - Tell patient to look between your eyebrows or the nose
    - Tactic
      - Patient look straight ahead
      - Doc holds numbers off sides to check temporal and all that
      - Use 1,2 or 5
    - Dynamic
      - Patient looks straight ahead
      - Start behind the visual field
      - Do the come hither finger movement and slowly move forward
    - **Normal report: full visual field**
  - Extra ocular motility (CN 3,4,6) → only one with both eyes open
    - Remove glasses
    - Make a big rectangle to the boundaries of their visual field or do H test
      - Just far enough to see the eyes move
    - When patient looks down, hold eyelids up
    - Convergence
      - Start with a finger in front of patient
      - GO SLOWLY
      - Move towards the nose
    - **Normal Report: intact extra ocular movement and convergence**
  - Eyebrows
    - **Normal Report: Full, no sparseness, not missing**
  - Eyelids: Position
    - **Normal Report: No ptosis, no Swelling, no lesions, no ulceration**
  - Eyelashes – **Normal report: Normal direction**
  - Conjunctiva
    - Penlight
    - Bulbar – transparent
      - Ask them to look down, up, right, and left
    - Palpebral – Pink

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        - Ask them look down – lift upper eyelid
        - Ask them to look up – lower eyelid
        - Pale if anemic
        - Hyperemic if conjunctivitis
      - **Normal Report: bulbar is transparent and palpebral is pink, no signs of anemia or conjunctivitis**

  - Sclera
    - DO NOT USE PEN LIGHT → want to see jaundice
    - **Normal Report: white, non-icteric**
  - Cornea and iris
    - Patient look straight ahead
    - Oblique lighting
    - Look for opacities
    - Look at IRIS
    - **Normal Report:**
      - **Transparent cornea, no opacities**
      - **Normal iris markings**
  - Pupils
    - Done in the dark compare the eyes in the same time, shine light from below
      - Equal Size
      - Shape is round
    - Pupillary Light reflex
      - Patient looks straight ahead **FAR** to the back
      - Sit off to the side → don't want them to focus on you
      - Shine light to one eye for 2-3 seconds (pupil will dilate after)
        - Can see constriction of the lit eye
        - Try to see if the other eye constricts
      - **Normal Report: normal pupillary light reflex both direct and indirect**
  - Red reflex
    - Done in the dark again
    - Shine ophthalmoscope into the eye
    - Should see a red or an orange color
    - Do both eyes → can use same eye
    - Optic fundus
      - If doing right eye, hold it to the right side look using your right eye (and vice versa)
      - Hold ophthalmoscope at the base, tilted to medially to the patient's nose → makes them feel less awkward
      - Setting on instrument to the patient's prescriptions, example
        - Patient +3
        - Doctor -5
        - Add together = -2 for instrument
      - Patient straight ahead
      - Observe and adjust if needed
      - Should see optic discs with a big red X on it from the blood vessels
      - **Normal report:**
        - **Red reflex present**
        - **Optic discs: clear margins, orange or pink in color**

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- Ears
  - Inspection:
    - **<u>Normal Report: no asymmetry, lesions, Deformities, nodules, discharge</u>**
  - Palpation
    - Feel earlobes, move up and down
    - **<u>Normal Report: No tenderness</u>**
    - Ear infections
      - Move auricle up and down
      - Tragus – external ear infection
      - Mastoid process – middle ear
  - Auditory acuity – rub test
    - Close ears
    - Rub your fingers to next to the ears
    - **<u>Normal Report: normal auditory acuity</u>**
  - Otoscopic exam
    - Move ear pinna up then to the back then towards you to straighten ear canal
    - Look
      - Ear canal
        - **<u>Normal Report: no swelling, no narrowing, no pallor, no redness, no excessive cerumen, no lesion</u>**
      - Tympanic membrane:
        - **<u>Normal Report: TM is gray, No signs of perforation, no fluids visible, name a few structures that you see</u> –** cone of the light, ambo, pars flaccida and tensa, and malleus

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- Neck
  - Inspection
    - **<u>Normal report: no masses, no enlarged lymph nodes, trachea appears midline, no goiters, thyroid appears unremarkable</u>**
  - Palpation
    - Tracheal deviation? Should be midline
    - Lymph nodes: use a circular motion
      - Preauricular
      - Postauricular
      - Occipital
      - Tonsilar-angle of mandible
      - Submandibular middle
      - Submental
      - Cervical
        - Superficial –over STM
        - Deep – hook fingers around STM
        - Posterior – in front of trapezius
      - Supraclavicular – Between STM and clavicle
      - **<u>Normal report: non tender, not enlarged, mobile</u>**
    - Thyroid
      - Patient extends neck
      - Get tangential lighting
      - Enlarged or not?
      - Ask patient to swallow normally with water- check for movement of thyroid- not asymmetrical

Tip:
To check the deep and superficial cervical nodes, Ask the patient to tilt the head to one side. Feel for the deep on the contracted side and the superficial from the relaxed side

- Stand behind patient
- Relaxed posture
- Feel for the isthmus
- Ask patient to swallow again
- Palpate for the lobes→ cant really palpate
- **Normal Report: Not enlarged, not tender, normal consistency, no palpable nodules**

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Pulmonary Examination

Note:

1. **Ask Patient to remove shirt**
2. For females: May need to ask them to move her breast during the exam
3. Tools Needed:
    a. Stethoscope

- Inspect patient sitting up
    - Signs of distress:
        - **Normal report: patient does not seem to be distressed, symmetrical chest, no scars, no lesions**
    - Thorax
        - Look at Shape
        - AP diameter
        - **Normal Report:**
            - **Thorax is symmetrical, no visible deformities**
            - **AP diameter is about ½ the lateral diameter**
    - Respiratory pattern
        - Pretend to get their pulse, do this for a minute
        - **Normal Report:**
            - **Rate: 14-20**
            - **Rhythm: regular**
            - **Depth: not too shallow, or too deep**
            - **Effort: quiet breathing, no signs of labored breathing**
              no use of accessory muscles (SCM and scalene), no flared nostrils or pursed lips, no signs of distress, no retractions
    - Tracheal deviation
        - **Normal report: Upon INSPECTION, Trachea appears to be in midline**
        - Asses by putting finger over the sternal notch, then put 1 finger lateral on each side
        - **Normal Report: Upon PALPATION, trachea is confirmed to be midline**
    - Cyanosis
        - Central: check buccal mucosa
        - Peripheral: everywhere else, nail beds, toes
        - In darker individuals- skin gets lighter
        - **Normal Report: No signs of central or peripheral cyanosis**
    - Nails for clubbing
        - Bring nail beds together to see Schamroth's window
        - Positive if patient has the window
        - **Normal Report: Positive for Schmroth's window or No clubbing of nails**

- Posterior chest: sitting up → cross hands over chest and leaned a bit forward head down
    - Palpation
        - Posterior chest wall tenderness
            - Press around the chest and the back
            - Ask the patient if they have any pain when you touch
            - Can feel for any non visible chest deformities
            - **Normal Report: No tenderness or palpable deformities on the posterior chest wall**
        - Chest expansion from the posterior

- Both hands at the level of the 10th rib
- Thumbs lined in the middle and push a little skin out
- Ask the patient to breath deeply
- See where your hands move→ should be symmetrical
- **Normal Report: Symmetrical posterior chest expansion**

- Percussion
  - Percuss in 7 regions/side, alternate between left and right side
    - **Normal Report: Upon percussion, the posterior chest wall is resonant**
  - Diaphragmatic excursion normal is 4-6 cm
    - Should do to both left and right sides
    - Patient inhales deeply
      - Percuss down the back (should be resonant sound) until you hear a dull area
      - Mark the area between the last resonant sound and the dull sound
    - Patient exhaled deeply
      - Percuss up the back from the inhaled marked area until you hear resonant sound
      - Mark the area between the last dull sound and the resonant sound
    - Compare the area→ should be between 4-6 cm
    - **Normal Report: Diaphragmatic excursion is # cm, within the normal range, and it is symmetrical**

If muscular person- more pressure needed on DIP for percussion

7 Regions:
- 5 down the center
- 1 mid- scapular region, lower back
- 1 mid axillary region

Normally, do diaphragmatic excursion on left and right sides, BUT on test, just say you would do it to both sides to compare

- Auscultation
  - Ask patient to take deep breaths through the mouth every time you place the stethoscope on his/her back
  - Remember to alternate between left and right sides
  - **Normal Report: Upon auscultation, patient exhibits normal vesicular breath sounds, no adventitious sounds (i.e. wheezing, crackles, rhonchi)**

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- Anterior chest: Patient is lying down
  - Side notes
    - DO NOT FORGET TO ASSES THE APICIES (which is above the clavicles)
    - Female patients: ask them to hold their breasts
  - Palpate
    - Anterior chest wall Tenderness
      - **Normal Report: No tenderness or deformities on the anterior chest wall**
  - Percuss
    - Percuss in 6 regions/side, alternate between left and right side
      - **Normal Report: Upon percussion, the posterior chest wall is resonant**
    - Diaphragmatic excursion
      - **Maybe say that you would do it anteriorly but for the purposes of this exam you will omit it**
  - Auscultate
    - **Normal Report: Upon auscultation, patient exhibits normal vesicular breath sounds, no adventitious sounds (i.e. wheezing, crackles, rhonchi)**

Cardiovascular Examination

Notes:

1. **Ask patient to remove shirt**
2. For females: May need to ask them to move her breast
3. *****Patient is in Reclining position at 30-45 degree angle*** ← Hella important**
4. Tools Needed:
   a. Stethoscope
   b. Penlight

- Carotid artery
  - Inspection
    - Look at neck for pulsations → may need lighting
    - Carotid
      - Medial to SCM → generally not visible
      - Patient is looking straight
    - *Jugular (Not yet important for 2nd semester)*
      - *Between the sternal and clavicular heads of the SCM → visible*
    - **Normal Report: Carotid artery is not visible**
  - Palpation
    - Palpate carotid, one at a time
    - DON'T PRESS TOO HIGH→ want to avoid carotid baroreceptors
    - Examine the pulse
    - **Normal Report:**
      - **Rate: 60-100 bpm**
      - **Rhythm: Regular**
      - **Amplitude: 2+ or brisk**
  - Auscultation
    - Listen for bruits
    - Use the bell of the stethoscope
    - **Normal Report: No presence of bruits**

Listen to pulse for 15 seconds and multiply by 4 UNLESS The pulse is irregular = do for a full minute

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- The Precordium
  - Inspection
    - Look for
      - Apical impulse→ 5th intercostal space, mid clavicular line
        - May need tangential lighting
      - Symmetry of chest
      - Any other visible pulsations
    - **Normal Report: No abnormal pulsations, bilaterally symmetrical chest, no bulging. Comment if you see the apical beat** → its okay if you don't
  - Palpation
    - Palpate 3 area: Base of heart, Tricuspid by left sternal border, and Apex
      - **Normal report: No palpable thrill**
    - Palpate Aortic and pulmonic
      - **Normal report: no abnormal pulsations**
    - Feel for the apical impulse

5 heart areas of interest

1. Right 2nd interspace: Aortic area
2. Left 2nd interspace: Pulmonary area
3. *Epigastric: subxiphoid "Erb's Point"*
4. Left sternal border: right ventricular area
5. Apex: Left ventricular area

        - If not palpable in the supine position, ask the patient to roll to the left lateral decubitus position
        - Hard to feel if patient has a thick chest
        - **Normal report:**
            - **Location: 5th intercostal space**
            - **Amplitude: 2+ or brisk**
            - **Duration: less than 2/3 systole**
            - **Diameter: approximately 2-3cm**
    - Auscultation of various areas
        - Go through once using the diaphragm for high pitch sounds (s1, s2)
        - Go through a second time using the bell for low pitched sounds (s3, s4) → not normal to hear
        - How to tell if S1 or S2
            - Based on location
                - S1 usually louder at the apex than S2
                - S2 usually louder at the base than S1
            - Compare sound to carotid pulse
                - Place stethoscope on heart and hand on carotid
                - S1 heard just before carotid upstroke
                - S2 follows the carotid upstroke
        - **Normal Report:**
            - **2nd heart sound is crisp**
            - **1st sound is louder apex, 2nd heart sound is louder at the base**
            - **Physiological splitting heard over the pulmonic area**
            - **No additional heart sounds or murmurs heard**

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- Palpate other pulses
    - Examine bilaterally at the same time
        - Radial
        - Dorsalis pedis
        - Posterior tibialis pulse- posterior to medial malleolus
    - **Normal Report:**
        - **Rate: 60-100**
        - **Regular rhythm**
        - **Amplitude: brisk, 2+**
        - **Normal contour**
        - **Delays: no delays present**

Abdominal Examination

Note:
1. ***<u>*** Patient is supine with knees bent to relax anterior abdominal wall, with a pillow ***</u>***

(Occasionally sitting → just for percussing the kidney)

Note	
Other systems	Abdomen
1. Inspection	1. Inspection
2. Percussion	2. Auscultation
3. Auscultation	3. Percussion
4. Palpation	4. Palpation

- **Ask patient if he/she has any pain in the abdomen, if there is, please point to it**
    - This area will be the last place to be auscultated, palpated, and percussed.
- Inspection
    - Skin – Scars, Discoloration (jaundice), Blood vessels, masses, rashes, bruises, hematomas
    - Umbilicus – presence/absence of discharge
    - Contour and Symmetry
        - Flat – normal in adults
        - Scaphoid
        - Protuberant/distended→ 5 F's before cancer: Fat, Fluids, Feces, Flatus, Fetus
            - Globular → normal in kids, fat in adults
    - Movements
        - Pulsations, peristalsis
    - **Normal report: Contour – flat/scaphoid/protuberant/distended, no skin lesions, scars, no visible venous patterns, no hematomas, umbilicus is clean/no discharge/no erythema, no obvious masses, no visible pulsations, no visible peristalsis**

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- Auscultation→ 4 quadrants
    - Use your hands to warm up the stethoscope
    - **I would listen to all 4 quadrants for a minute each but for the exam, is it okay for me to listen 1 or 2 quadrants for 30 seconds?**
    - Use diaphragm
        - Hyperactive or hypoactive (absent)
        - Bowel sounds normal 5-35 per minute
        - **Normal Report: Normal active bowel sounds, give an estimate**
    - Use bell for Bruits
        - Abdominal aorta — half way between umbilicus and xiphoid process
        - Renal artery (2)
        - Iliac artery (2) — 1 in below umbilicus and 2-3 cm to the right or left
        - Femoral artery (2) — Midline of the inguinal ligament
            - **Mention you would listen to the femoral and how you would do it**
            - Put stethoscope over pants if you are asked to do so
        - **Normal Report: No presence of bruits**
- Percussion
    - ALL quadrants
        - **Normal Report: Tympanitic in all four quadrants**
- Palpation – *Lightly* and *Deeply* in all 4 quadrants
    - Light pressure = one hand
    - Deep pressure = Use both hands – one for pressure and the other for feeling
    - Examine

- Tenderness → direct tenderness = when you feel deep
- Rebound tenderness – was there pain when you quickly removed your hands?
- Guarding (voluntary/involuntary)
  - Distract patient and feel
- Mass/tumor

ASK about ANY PAIN caused by palpation

- **<u>Normal Report: Upon palpation, no masses, tenderness (rebound if you did the rebound test), guarding in all 4 quadrants</u>**

- Special tests
  - Liver
    - Percussion
      - Start at the level of the ASIS in the midclavicular line → don't know if the liver is enlarged (hence why you start low)
      - Percuss until tympanitic becomes dull – use pen to mark above your finger
      - Continue percussing upwards until dull sound becomes resonant – use pen to mark above your finger
      - **<u>Normal report: liver is between 6-12 cm</u>**
    - Palpation
      - Classic technique
        - Hand behind the right bottom ribs on the subcostal area, press first, then ask the patient to breath in, lift your hand a little to liver will
        - Use side of index finger
        - Edges and surface of liver
      - Hooking technique = inferior edge, fingers wrap under the rib
        - Take a deep breath then exhale
      - **<u>Normal Report: if you don't feel it, say you don't, if you do- it would smooth edge, non nodular</u>**
  - Spleen
    - Percussion
      - Stay on the patient's right side and reach over to the left anterior axillary line at the lowest intercostal space (around 6th rib)
      - Ask patient to breath in, percuss. Exhale, percuss the same place
      - Compare to inhaled to exhaled:
        - Tympanitic to tympanitic = normal
        - To dull = enlarged
      - **<u>Normal Report: Tympanitic sound in inspiration and expiration so spleen is not enlarged, will recheck with palpation</u>**
    - Palpation
      - Stand to the right side of patient
      - Ask patient towards you, hand behind the last few ribs, push with the other hand from the umbilicus towards location of liver→ should not feel anything
      - **<u>Normal Report: Upon Palpation, spleen is not felt, no splenomegaly</u>**
  - Kidneys - Palpate
    - Hand below the last rib, hand *parallel* to patients body lower than the liver
    - Press with both hands. Ask patient to breathe in, then exhale
    - Feel anything = abnormal → unless it's a hella thin person
    - DO BOTH SIDES → stand on the left side of the patient
    - **<u>Normal Report: Kidney not palpable, no tenderness</u>**

Medlion Solutions

- Abdominal aorta
  - Level between xiphoid and umbilicus and to the left of midline
  - Ask patient to inhale and exhale, when person exhales, follow stomach down and press
  - Place your hands to the sides of the umbilicus to determine width – breathing i
  - **<u>Normal Report: Aorta palpable, slightly left of the epigastric area, approximately 1-2 cm in diameter</u>**

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Musculoskeletal Examination

Note:
1. **Ask patient about any history of trauma**
2. Tools Needed: None

- TMJ
  - Inspection
    - **Normal Report:**
      - **No swelling, erythema, atrophy, deformities, skin changes**
      - **"For the sake of time, I will refer to these as SEADS in the rest of the exam"**
  - Palpation: press pre-auricular area to the tragus
    - **Normal Report: No tenderness, effusion, nodules, warmth, or crepitus**
  - Range of motion
    - Open and close mouth
    - Protrusion and retraction
    - Lateral movement
    - **Normal Report: Patient exhibits full range of motion**
- Cervical spine
  - Inspection: ask patient to bend neck to chest
    - Spinous process if midline
    - Paravertebral muscles symmetrical
    - **Normal Report: No sign of SEADS**
  - Palpation
    - Spinous process to the 1st visible one
    - Paravertebral
    - Trapezius
    - SCM
      - Ask patient to tilt head to one side = palpate the flexed SCM
      - Feel for lymph nodes
    - **Normal Report: No tenderness, effusion, nodules, warmth, or crepitus**
  - Range of motion
    - Flexion: "chin to your chest"
    - Extension: "look at the ceiling"
    - Rotation: "Look over each shoulder"
      - Stabilize shoulder → just hold it
    - Lateral bending: "ear to your shoulder"
    - **Normal Report: Patient exhibits full range of motion**
- Shoulder
  - Inspection
    - **Normal Report: No sign of SEADS**
  - Palpation
    - Glenohumeral joint
    - Acromioclavicular joint → follow clavicle until you feel a groove
    - Sternoclavicular joint → follow clavicle to rounded eminence

Inspection:
BOTH SIDES compare symmetry

SEADS
Swelling: loss of Boney process
Erythema
Atrophy
Deformities
Skin changes
*****Say what it means once, then use "SEADS" during the rest of the exam*****

Palpation: TEN Warm Crepes
T-tenderness
E-effusion
N-nodules
Warmth
Crepitus

ALWAYS ask patient if there's tenderness upon palpation

Range of motion: varies per joint

Compare **Palpation** and **ROM** to opposite side → in the exam, just say you would do the opposite side to compare

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        - Muscles: Deltoids, subscapular, pectoral
        - **<u>Normal Report: No tenderness, effusion, nodules, warmth, or crepitus</u>**
    - Range of motion: ask patient to stand
        - Flexion – raise both arms above the head
        - Extension-- stretch arms behind back
        - Abduction – raise arms laterally above head
          →palms down until shoulder level, then palms up to above head
        - Adduction– swing arms across front of body
        - Internal Rotation –Put hand behind back and touch shoulder blade
        - External Rotation– Put hand behind neck
        - **<u>Normal Report: Patient exhibits full range of motion</u>**
- Elbow
    - Inspection
        - Carrying angle: person is standing with arms at the side
          Axis is the arm, how much does the forearm deviate from that axis
            - Cubitus Vulgus = greater than 15º
            - Cubital Varus = less than 15º
            - Normal = about 15º
        - Olecranon process
        - **<u>Normal Report:</u>**
            - **<u>No sign of SEADS</u>**
            - **<u>Carrying angle</u>**
    - Palpation
        - Olecranon process → medial and lateral groove on the sides
        - Medial epicondyle
        - Lateral epicondyle
        - Extensor surface of forearm
        - **<u>Normal Report: No tenderness, effusion, nodules, warmth, or crepitus</u>**
    - Range of motion
        - Flexion/extension:
          Bend your elbows until you can touch your shoulders then place your arms back down
        - Pronation/supination:
          With the patient's arms at sides and elbows flexed, ask the patient to turn his/her palms up and down
        - **<u>Normal Report: Patient exhibits full range of motion</u>**
- Wrist and Hand
    - Inspection
        - **<u>Normal Report: No sign of SEADS</u>**
    - Palpation
        - Radiocarpal joint → for Colles or smiths fracture
        - Thenar
        - Hypothenar
        - Anatomical snuff box→ check for scaphoid fracture
        - DIP
        - PIP
        - **<u>Normal Report: No tenderness, effusion, nodules, warmth, or crepitus</u>**

    - Range of motion
        - Hyperextension: Palms down, point fingers together towards ceiling
        - Flexion: Palms down, point fingers together towards floor

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        - Medial (Radial) and Lateral (Ulnar) deviation:
          Palms down, bring fingers together toward (adduction) and away (abduction) from midline
        - **Normal Report: Patient exhibits full range of motion**
- Thoraco-lumbar Spine
    - Inspection→ ask patient to bend at the hips
        - Check for Scoliosis standing behind the patient
        - Check for Kyphosis standing to the side of the patient
        - Shoulders and scapula for symmetry and height
        - Symmetry of ileac crests and gluteal folds
        - **Normal Report: No sign of SEADS**
    - Palpation: standing or bent over→ palpate to the sacral area
        - Spinous process
        - Paravertebral muscles
        - **Normal Report: No tenderness, effusion, nodules, warmth, or crepitus**
    - Range of motion: **ALWAYS STABILIZE THE HIPS → HOLD IT BRO if you can handle it…**
        - Flexion: Touch your toes
        - Extension: Bend as far back as you can
        - Rotation: Twist to the Left and to the Right
        - Lateral Bending: Bend to the side from the waist, left and right
        - **Normal Report: Patient exhibits full range of motion**
- Knee
    - Check for the gait and observe for limping
    - Inspection
        - **Normal Report: No sign of SEADS**

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    - Palpation
        - Feel for patellar and at the same time feel for the popliteal space
        - Tibiofemoral joint is lateral to patellar joint
        - Point where tibia and femur become acute angles = location of lateral and medial collateral ligaments
        - **Normal Report: No tenderness, effusion, nodules, warmth, or crepitus**
    - Range of motion
        - Flexion/Extension: standing
        - Rotation: Whilst sitting, swing lower leg toward and away from midline
        - **Normal Report: Patient exhibits full range of motion**
    - **Strength test*** (banez)—review tis**
- Ankle and Feet
    - Inspection
        - Flat feet
        - **Normal Report: No sign of SEADS or flat feet**
    - Palpation
        - Hold the foot in one hand and feel for the Achilles tendon with the other hand
        - Follow the tibia down to feel for the tibiotalar joint
        - Distal and proximal toes
        - **Normal Report: No tenderness, effusion, nodules, warmth, or crepitus**
    - Range of motion
        - Flexion and extension of toes
        - Flexion: Point foot towards floor (Plantar-flexion)
        - Extension: Point foot towards ceiling (Dorsi-flexion)
        - Abduction: Point your toes outward

- Adduction: Point your toes inward
- Inversion: Bend heel inwards
- Eversion: Bend heel outwards
- **Normal Report: Patient exhibits full range of motion**

Meditor Solutions

Neurological Examination

Note:

1. Tools Needed:
   a. Reflex hammer
   b. Broken Q tips
   c. Kleenex

- CN V: Trigeminal Nerve
  - Palpate temporal and masseter muscles ask to clench
    - **Normal Report: Normal motor functions of the temporal and masseter muscles**
  - Sensation: Sharp/Dull→ ask if sharp or dull sensation
    - Poke both sides of the face in the 3 regions of the trigeminal
    - Can use broken end of Q tip for sharp, cotton side for dull
    - **Normal Report: Normal touch and pain sensations bilaterally**
  - Light Touch
    - Use 2 Q tips – the cotton side
    - Gently stroke the 3 regions of the trigeminal
    - Ask if the patient feels the same sensation on both sides
    - **Normal Report: Normal light touch sensation bilaterally**
- CN VII: Facial Nerve
  - Inspection: symmetry, incl. nasolabial folds, mouth drooping
    - **Normal Report: symmetrical, no flattening of nasolabial folds. No droop**
  - Raise eyebrows
  - Squeeze eyes shut
  - Smile
  - Puff out cheeks
  - **Normal Report: Fully functional facial nerve**
- CN XI: Spinal Accessory Nerve
  - Trapezius: shrug shoulders against resistance
  - SCM: Turn Head to side against resistance
  - **Normal Report:**
- CN XII: Hypoglossal Nerve→ tongue exercises
  - Stick tongue out and move side to side
  - **Normal Report:**

Meditor Solutions

- Motor Assessment: **Strength test always against resistance**
  - Elbow
    - Inspection
    - Tone: Normal muscle tone
    - Flexion and extension
  - Wrist
    - Inspection
    - Tone: Normal muscle tone
    - Extension
      - Ask patient to make a fist and bend wrist backwards
  - Grip
    - Cross your fingers & ask patient to grip it tight
  - Knee

Throughout the Motor Assessment

1. **Inspect** for atrophy, tremor, and fasciculations throughout motor assessment
   - **Normal Report: No atrophy, tremor, and fasciculations**
2. **Check Tone:**
   Patient is relaxed, move the joint and feel for the tone of the surrounding muscles
   - **Normal Report: Normal muscle tone**
3. **Muscle strength**
   - **Normal Report: 5 out of 5**

        - Inspection
        - Check Tone
        - Extension and flexion
    - Ankle
        - Inspect
        - Tone
        - Dorsiflexion and plantar flexion
- Coordination/Fine Motor Skills/Sensory
    - Touch finger to thumb → opposition
        - **NORMAL REPORT: Normal rapid alternating movements**
    - Touch nose to examiner's finger
        - Eyes open test
            - Hold a finger out
            - Ask patient to touch his/her nose then touch your finger
                - Make sure they are extending his/her arm
            - Move your finger and repeat
        - Eyes closed test
            - Hold a finger out
            - Ask patient to touch that finger – make sure they are extending his/her arm
            - Patient closes eyes, points arm to the ceiling, and tries to touch your finger
        - **NORMAL REPORT: Normal point to point movements**
    - Romberg test – patient is standing with feet together
        - Eyes open – tests cerebellar
        - Eyes closed – tests proprioception
        - **NORMAL REPORT: Negative Romberg test**
    - Pronator drift
        - Arms held out pronated
        - Ask patient to close eyes → if one falls = bad
        - **NORMAL REPORT: Negative Pronator drift**
    - Sensory assessment→ Touch and pain
        - Sensations
            - Touch – use cotton part of Q tip → make it wispy
            - Pain – use broken part of Q tip
        - Areas
            - Shoulders
            - Medial lateral aspects of forearm
            - Little fingers
            - Thumbs
            - Front of thighs
            - Lateral and medial aspects of calves
            - Little toes
        - **NORMAL REPORT: Normal touch and pain sensations bilaterally**

Meditor Solutions

- Reflexes: **NORMAL REPORT: Brisk, symmetrical, 2+**
    - Biceps
        - Patient is relaxed and sitting
        - Place your thumb on the biceps tendon
        - Hit your hammer on your thumb
    - Triceps

> If you can't elicit a response, then ask the patient to clench their teeth for at least 10 seconds and then strike

        - Elevate the patient elbow at 90º angle
        - Patient basically has a dead arm
        - Strike above the olecranon process
    - Patellar
    - Achilles
        - Hold the person's foot up
        - Use back of hammer (i.e. not the handle)
        - Strike behind the ankle
    - Plantar – Babinski Reflex
        - Use sharp end of hammer to stroke up the foot then curve medially
        - Should curl in
        - **Normal Report: Negative Babinski Reflex**

Meditor Solutions