Physical Assessment
General Assessment
General Assessment
Remember to use all your senses.
Successful assessment requires critical thinking.
When using the stethoscope, remember the diaphragm is for high-pitched sounds, the bell for low-pitched sounds.
General Survey
General impression as well as baseline data such as vital signs, height and weight.
Prepare the Patient
Introduce yourself.
Remember, patients may be worried you will find something and may feel the assessment is an invasion of privacy.
Explain what you’re planning to do and why.
Maintain professionalism.
  Can use appropriate humor.
Did I mention hand hygiene?
Pulse Pointers
Don’t use your thumb.
Don’t use a lot of pressure over carotids and never palpate both carotids at same time.
If pulse irregular, is it regularly irregular?
Auscultate apical while palpating radial.
Pulse Amplitude
Absent
Weak or thready
Normal
Bounding
Respirations
Depth and rhythm
Use of accessory muscles
Physical Assessment Techniques
Inspection
Palpation
Percussion
Auscultation
Palpation
Percussion
Direct and Indirect
Auscultation
Remember intensity and location.
Hold diaphragm firmly, bell lightly.
If a lot of hair, wet with washcloth.
Don’t auscultate over a gown.
Integumentary
Hair, nails and skin provide a window for viewing changes taking place inside the body.
First look at overall appearance.
Look for color changes: bruising, cyanosis, pallor, erythema, hypo or hyperpigmentation.
In dark skinned people, look at conjunctivae, palms, soles, buccal mucosa and tongue for cyanosis.
For jaundice, look at sclera and hard palate.
For pallor, sclera, conjunctivae, buccal mucosa, tongue, lips nail beds, palms and soles.
Petechiae, lighter areas of pigment.
Palpate for rashes.
Cyanosis
Skin Turgor
Adult: forearm or sternal area.
Infant: abdomen
Remember, aging causes decrease in skin turgor and elasticity.
Skin Turgor
Check temperature
Look for lesions
Hair
Distribution, quantity, texture, color.
Patterns of hair loss and growth.
Nails
Color, shape, thickness, consistency and contour.
Circulation: <3 seconds for capillary refill.
Angle at nail base. Normal < 180 degrees.
Thick and strong?
Clubbing
Pressure Ulcer Stage I
Stage II
Stage III
Stage IV
Neurologic System
Neuro Assessment Order
Highest level to lowest level
  Mental status and speech
  Cranial nerve function
  Sensory function
  Motor function
  Reflexes
Mental Status
LOC
  Alert, lethargic, stuporous, comatose
Appearance and behavior
Speech
Cognitive function
Constructional ability (ability to perform simple tasks)
Cranial Nerves
I olfactory
II optic -visual acuity
III oculomotor
IV trochlear } test these
V abducent 3 together
  (eye movements)
VI trigeminal-sensation to corneas &nasal & oral mucosa, chewing.
VII facial - taste anterior tongue, muscles to smile, raise eyebrows.
VIII acoustic - hearing and equilibrium
IX glossopharyngeal & X vagus together - swallowing & voice quality
XI spinal accessory – sternocleidomastoid and trapezius (shrug shoulders)
XII hypoglossal – tongue movement

Assessing Sensory Function
Pain & light touch
Advanced practice
  - vibration, position and discrimination

Motor Function
Muscle tone (resistance to passive stretching, passive ROM)
Muscle strength (gait and motor activities)
Cerebellum
Romberg - Stand with feet together, arms at sides, then close eyes. Test is positive if pt falls to one side.

Deep Tendon Reflexes
0 absent impulses
+1 diminished
+2 normal
+3 increased (may be normal)
+4 hyperactive
  - Biceps
  - Brachioradialis
  - Triceps
  - Patellar
  - Achilles

Eyes
Inspection
Exophthalmos
Tearing / dryness
Conjunctiva (pull down lower lid, pull up upper)
Corneas (use penlight both sides and straight on)
Exophthalmus & Ptosis
PERRLA
Remember, pupils should constrict with accommodation.
Pupils should be ¼ size of iris in normal room light

Assess For
Discharge
Pain
Periorbital edema
Ptosis
Ears, Nose and throat
Inspect Ears
Position and symmetry
  - Remember, ear deformities may include renal problems.
  - Low set ears may be part of congenital syndrome.

Look for drainage (otorrhea)
Low Set Ears
Mouth and Throat
Inspect lips (lesions, color changes)
Inspect oral mucosa, gums, tongue
Inspect uvula (say AHH)
Palpate for lymph nodes
Check for dysphagia

Lymph Nodes
Nose
Check for: epistaxis, flaring, stuffiness, discharge, patency

Breasts
Inspection
Be sensitive and provide privacy.
Skin should be smooth, undimpled, and same color as rest of skin.
Asymmetry in size may be normal (usually L>R)
Check for nipple inversion (normal if not new finding)
Reach arms up and also hands on hips positions for inspection.

Palpation
Hands behind head.
Use pads of fingers and compress gently.
Check consistency (know where pt is in cycle).
Compare and contrast.
Don’t forget the axilla.
Evidence by Rembrandt?

Gastrointestinal
Inspection
Divide the abdomen into 4 quadrants through the umbilicus, epigastric, umbilical, and suprapubic.
Observe for color, symmetry, bumps, bulges, lesions, scars, rashes, masses.
Note shape and contour, and any pulsations.

Auscultate
Use diaphragm of stethoscope.
Turn off suction if has NGT.
May have to listed up to 5 minutes for bowel sounds to appear. (normal hypo or hyperactive).
Use bell for vascular sounds.

Percussion
Remember to auscultate first!
Don’t palpate if you suspect aneurysm or if pt has transplanted organ.
Listen for tympani (air filled) or dullness (organ).

Measuring the Liver
Palpation
Light and deep
If rigid, don’t palpate.
Light Palpation
Deep Palpation
Palpating Spleen
Checking for Ascites
Don’t Forget Perianal Area
Inspect for Lesions

Genitourinary
Female
Inspect for abnormalities, discharge, lesions.
Percuss over kidneys.
Make sure patient empties bladder first.
Palpating for Kidneys
Inspect External Genitalia
Make sure you’ve got the gloves!
Spread labia and locate urethral meatus.
Look for discharge or ulcerations.
Look at distribution of pubic hair.
External Genitalia
Male Genitalia
Inspect skin for lesions, discharge etc.
Examine penis first.
Next, scrotum and testicles.
Then palpate all of the above.
Palpate Kidneys
Palpate Penis
Palpate Testicles
Musculoskeletal Assessment
Go head to toe.
Easier to do with neuro assessment.
Note size and shape of joints etc.
Inspect and palpate.
Watch pt go through active ROM.
If unable, do passive ROM.
Never force any movement.
Watch the walk!
Check TMJ.
Then neck, including ROM.
Next is spine.
Spine
Spine should increase by at least 2” when pt bends over. Can measure with measuring tape.
Palpate spinal processes.
Kyphosis
Lordosis
Scoliosis
Shoulders and Elbows
Assess rotation, internal and external as well as flexion and extension.
Next test abduction and adduction.
Wrists and Hands
Rotation as well as flexion and extension.
Make a fist.
Carpal Tunnel Phalen ‘s Sign
Positive if Pain
Hips and Knees
Remember to test flexion, extension, internal and external rotation, abduction, adduction.
Assessing Muscles
Check tone for rigidity or flaccidity.
5/5 normal (ROM full resistance)
4/5 good (ROM moderate resistance)
3/5 fair (ROM gravity only)
2/5 poor (PROM)
1/5 trace (muscle contraction w/o movement)
0/5 zero (no muscle contraction)

Biceps Strength
Triceps Strength
Plantar Flexion
Dorsiflexion
Test strength of wrist, fingers and thumb the same way.
Don’t forget leg strength.

Cardiovascular
Assessing the Heart
Inspection: first general appearance and color.
Then, look at the chest (pulsations, symmetry, retractions).
Look for PMI. (usually 5th ics or just medial to mcl).
Landmarks
Palpation
Use a gentle touch so you won’t obliterate pulsations.
Percussion
Only useful to determine cardiac borders.
Auscultation
Check in 3 positions: supine with HOB elevated 30 to 45 degrees.
Use diaphragm to go in one direction, come back using bell.
Sites for Heart Sounds
Heart Sounds
Aortic area S2 loudest. Best heard at the base of the heart. Known as “dub”. If pulmonic valve closes later than aortic valve during inspiration you’ll hear a split S2.
S1 loudest in mitral area. Best heard at apex. Corresponds to closure of mitral and tricuspid. “lub” sound. May be split if mitral valve closes before tricuspid.
S1 and S2
http://www.youtube.com/ v/2aO0HKIP3vi
S3
Normal sound in children and young adults.
Ventricular gallop when heard in adults.
Best heard at apex, pt lying on L side.
Ken-tuck-y
S4
Adventitious sound called atrial gallop.
Best heard tricuspid or mitral areas with pt on L side.
May hear in elderly, or those with hypertension, aortic stenosis or history of MI
Ten-nes-see
S3 and S4

Murmurs
Heard when structural defects cause turbulent blood flow.
Best position is pt sitting up and leaning forward. Can also try pt on L side.
Can be crescendo (increasing intensity) or decrescendo murmurs (decreasing intensity).
Mitral stenosis: rumbling murmur
Mitral insufficiency: blowing murmur
Tricuspid stenosis: low, rumbling murmur
Tricuspid insufficiency: high pitched, blowing murmur.
Murmurs of vascular origin are bruits.
Gr I barely audible
Gr II audible but quiet and soft
Gr III moderately loud, no thrill
Gr IV loud with thrill
Gr V very loud with thrill
Gr VI Heard w/o stethoscope touching chest
Vascular System Inspection
Arms equal size?
Legs symmetrical?
Note skin color and body hair distribution, edema
Head to toe, starting with neck vessels.
   Carotid should have brisk pulsation that doesn’t decrease when pt upright.
   Jugular has softer, undulating pulse that changes in response to position, breathing and
pulsation.
To check jugular venous pulse, pt is supine with HOB elevated 30-45 degrees. Turn pt head away from
you. Highest pulse should be no more than 1 ½ “ above sternal notch.
Palpation
Feel temp of skin, capillary refill (nl <3 seconds).
Palpate for edema, and pulses.
Compare pulses.
Not both carotids at same time!
Palpate arterial pulses: carotid, brachial, radial, femoral, popliteal, posterior tibial, dorsalis pedis.
Auscultation
Start with bell. Follow palpation sequence.
Should not hear sounds over arteries.
Abnormal sounds are hums or bruits.
Check upper abdomen for abnormal pulsations of an abdominal aortic aneurysm.
Other Reminders
Palpitations are a conscious awareness of one’s heartbeat, in the precordium, throat or neck.
Fatigue can be a nonspecific symptom of cardiovascular disease.
Cyanosis, pallor, cool skin may indicate poor cardiac output and tissue perfusion.
Swelling, edema may indicate heart failure or venous insufficiency. May also result from varicosities or
thrombophlebitis.
Arterial insufficiency: decreased pulses, cool, pale and shiny skin with loss of hair on legs, nails thick and
ridged.
Arterial Insufficiency
Chronic venous insufficiency: ulcerations around ankles.
Respiratory
Inspection
General demeanor of the pt: anxious? Uncomfortable?
Examine chest and back, comparing sides. Look for symmetry. Diameter of chest from front to back should be about ½ the width.

Count respirations (while pretending to take pulse).

Watch for paradoxical or uneven movement of the chest wall.

Watch for accessory muscle use (may be normal in some athletes).

Don’t forget tongue and mucous membranes for cyanosis, fingers for clubbing.

Landmarks

Palpation

Palpate for tenderness, alignment, bulging, retractions, crepitus. Check skin temperature, turgor and moisture.

Palpating

Tactile Frémitus

Palpable vibrations caused by transmission of air through bronchopulmonary system.

Decreased where pleural fluid collects.

Increased normally over large bronchial tubes and abnormally over areas filled with fluid or exudate.

Pt fold arms across chest.

Place palms on both sides of back.

Pt says “99”.

Look for greater or lesser vibrations.

Percussion

Auscultation

Same as percussion sites.

Listen to full inspiration and expiration.

If chest hair, may mat down with washcloth.

Normal Sounds

Tracheal (inhalation & exhalation)

Bronchial (exhalation)

Bronchovesicular (inhalation or exhalation)

Vesicular (prolonged during inhalation & shortened during exhalation)

Other Findings

Barrel Chest/Pigeon Chest/Funnel Chest

Abnormal Respiratory Patterns

Hyperpnea – may indicate hypoxia or hypoglycemia

Kussmaul’s – metabolic acidosis especially diabetic ketoacidosis

Cheyne-Stokes – heart failure, kidney failure, CNS damage (normal during sleep of children and elderly).

Biot’s – ominous sign of severe CNS damage

Crackles-fine or coarse

Wheezees (high pitched, exhalation)

Rhonchi (low-pitched, snoring & rattling mainly on exhalation)

Stridor (high pitched on inspiration)

Pleural friction rub (low pitched grating sound on inhalation and exhalation.

Abnormal Breath Sounds

<iframe width="425" height="349" src="http://www.youtube.com/embed/xHmYiD8vfow" frameborder="0" allowfullscreen></iframe>