

Putting It All Together

Summary Check List – All Skills

How do you perform the examination in a way that is complete, makes sense and yet is not awkward or prolonged? Is it OK to mix together different areas of the exam or should each system be explored as a block? Answering these questions and putting together a smooth exam is quite challenging. There is no single right way to do this. Any approach should:

1. Cover all aspects of the examination such that you have a reasonable chance of identifying pathology that might be present.
2. Be readily reproducible, allowing you to perform the exam the same way, all the time.
3. Keep patient gymnastics to a minimum (i.e. limit the number of times that the patient has to get up and down).
4. Link together sections which, although disconnected physiologically, are connected spatially. For example, inspection and examination of the feet for edema and peripheral arterial disease is part of the cardiovascular exam yet is described below following the exam of the abdomen.
5. Allow you to be efficient and perform the exam with an economy of movement (i.e. minimize the number of times that you pick up and put down instruments, move from one side of the patient to the other, etc.).

It will take time, thought and practice before you come up with a system that works for you. I encourage you to experiment while choreographing your own moves. It's helpful to practice the "mental aspects" of the PE by writing down the components of the exam, in the order in which you plan to perform them. If you can write it from memory, then you're a step closer to gaining mastery of this material. The approach described below keeps the movement of the examiner to a minimum, limits the frequency with which the patient has to get up and down, and is reasonably logical, thorough and efficient. There is a lot of room for flexibility.

Recognize that when caring for patients, the exam is somewhat modularized, with physicians performing selected aspects (e.g. cardiac, abdominal, pulmonary) to investigate particular symptoms. For example, evaluation of a 20 year old with knee pain after an injury would be limited to a detailed lower extremity exam, as exploring other regions (e.g. heart, lung) in this situation would be very unlikely to reveal important information. Conversely, an older person with a chief complaint of "weakness" (a concern with many possible explanations) would require a comprehensive evaluation. Knowing which examination module(s) to apply in any situation takes practice and experience, something that you will gain in the coming years.

The checklist which follows includes all elements that are part of a very comprehensive screening exam. Recognize that there are many additional maneuvers (not described here) which would be appropriate in specific clinical situations. You will learn these techniques (and the times when they should be performed) in the coming years. Pelvic, breast, male genital, rectal and detailed musculoskeletal/joint exams have been omitted.

Vital Signs:

- Wash Hands
- Ask patient to put on gown and sit
- General observation
- Measure pulse, both radial arteries
 - rate
 - rhythm
 - volume
- Measure respiratory rate
- Measure blood pressure
- Examine hands, fingers, nails

Head and Neck

- Observation face, head, neck & scalp
- Palpation lymph node, parotid and salivary gland regions
- Assess auditory acuity (crude test hearing loss)
 - If hearing loss, perform Weber & Rinne Tests 512 Hz fork (CN 8) (***special test**)
- Ear: external and internal (otoscope)
- Nose: observation, nares/mucosa (otoscope)
- Oropharynx:
 - Inspect w/light from otoscope & tongue depressor→uvula, tonsils, tongue, mucosa
 - “Ahh” to help see back of throat
 - Inspect teeth & salivary gland ducts
- Thyroid: Observation, palpation

Eye Exam, Including Ophthalmoscopy:

- Observe external eye structures – lid, sclera, pupil
- Visual acuity (hand-held card – CN2)
- Visual fields (confrontation – CN 2)
- Extra-ocular movements (CN 3, 4, 6)

Using Ophthalmoscope:

- Examine external eye structures (lids, sclera, pupil, iris, conjunctiva)
- Check pupillary response to light – direct and consensual (CN 2 & 3)
- Red reflex
- Retinal exam – identifying: Optic disc, arteries, veins, color of retina, and macular area.

Pulmonary

Observation and Inspection

- General observation of breathing, note if using accessory muscles/general respiratory effort
- Note shape of chest and spine

Palpation

- Assess chest excursion
- Assess tactile fremitus (***special test**)

Percussion

- Percuss posterior lung fields, top to bottom→comparing side to side
- Identify amount of diaphragmatic descent with Inhalation (***special test**)
- Percuss right antero-lateral chest (middle lobe) and anterior lobes (bilateral)

Auscultation

- Listen w/diaphragm to posterior lung fields, top to bottom→comparing left w/right
- Listen to right middle lobe area
- Listen to anterior lung fields
- Listen over trachea
- Assess for egophany (***special test**)

Cardiovascular:

- Drape appropriately
- Examiner stands on right side of patient’s body
- Patient lying w/head of table elevated ~ 30°

Observation & Palpation

- Inspect precordium – visible PMI, other contours
- Palpation of RV and LV (heaves, thrills); Determination of PMI

Auscultation

- S1 and S2 in 4 valvular areas w/diaphragm; note rate, rhythm
- Try to identify physiologic splitting S2
- Assess for murmurs, characterize if present
- Assess for extra heart sounds (S3, S4) w/bell over LV

Carotid artery

- Palpation
- Auscultation

Internal Jugular Vein

- Measure jugular venous pressure

Abdomen

- Lay patient flat. Drape appropriately – allowing exposure of abdomen but not rest of body

Observe & inspect abdomen

- Shape, scars, color, symmetry, protrusions

Auscultation

- Listen w/diaphragm to 4 quadrants
- Note quantity and quality of bowel sounds
- Listen for bruits centrally & over renal arteries

(*special test)

Percussion

- Percuss all quadrants
- Percuss liver span
- Percuss area of spleen, stomach

Palpation

- Palpate all quadrants superficially
- Palpate all deeply
- Try to identify liver edge (w/inspiration)
- Palpate region of spleen
- Palpate area of aorta (*special test)

Lower Extremities (continuation of C/V)

Assess femoral area (you don't have to do this on fellow students)

- Palpation for nodes
 - Palpate femoral pulse
 - Auscultation femoral artery (for bruits)
- (*special test)

Assess knees (non-mechanical exam)

- color, swelling
- palpate popliteal artery pulse

Assess ankles/feet:

- Color
- Temperature
- Check cap refill
- Check for edema

Pulses

- Dorsalis pedis artery
- Posterior tibial artery

Neuro

- Higher Cognitive Function
 - level of consciousness,
 - Orientation to time, place, person and situation
 - attention – subtract 7 from 100

- memory- 3 objects (cat, number 7 and table) repeat immediately and after 5 minutes

- Abstract thinking- similarity and difference between orange and ball.

□ Mental Status Exam

- Mood- as described by patient
- Affect- observed by examiner could be congruent or incongruent to described mood,
- Speech- rate, tone, production,
- Thought process- linear, goal directed or circumstantial, tangential, disorganized,
- Thought content- delusions, suicidal or homicidal ideations/intent/plan,
- Insight- good, partial, poor,
- Judgment- what would you do if you found a sealed, addressed, stamped envelope on the ground?

□ Cranial Nerves – A few covered (above) in Eye and Head/Neck sections. Described 1 thru 12 here:

- CN 1 – assess smell
- CN 2 – visual acuity, visual fields
- CN 2 & 3 pupillary response to light
- CN 3, 4, & 6 – extra-ocular movements
- CN 5 sensory & motor face; corneal reflex (sensory 5, motor 7) – (Describe only)
- CN7 – facial expression; smile, puff cheeks, close eyes against resistance
- CN8 – hearing assessment
If hearing loss, Webber and Rinne as per H&N section (*special test)
- CN 9 & 10 – gag, palate rise
- CN 11 – neck turn/shoulder shrug
- CN12 – tongue movement

□ Motor testing (patient seated):

- muscle bulk of major groups (see below)
- tone of major groups (see below)
- strength of major groups – shoulders, elbows, wrists, hand, hips, knees, ankle

- Sensory testing - in distal lower extremities:
 - pain
 - light touch
 - proprioception
 - vibration – 128 Hz tuning fork
- Reflexes
 - biceps
 - brachioradialis
 - triceps
 - patellar
 - achilles
 - Babinski assessment
- Coordination (finger→nose, heel→shin, rapid alternating finger movements, hand supination ↔pronation,)
- Gait, Romberg
- Wash Hands

***Special test** denotes a maneuver that would only be done in selected circumstances - based on the patient's symptoms and clinical presentation.