



Techniques of Physical Examination

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Objective



- Demonstrate how and when to perform these four techniques.
- Describe the four major techniques (inspection, palpation, percussion and auscultation) used to perform a physical examination.
- Identify the instruments and it uses.

Tips to improve physical assessment skill

- Keep a physical assessment text on the unit and refer to it as needed.
- Review the system you least understand.
- Listen taps or watch videos.
- Differentiate b/n normal and abnormal findings.
- Compare your assessment findings with the patient hx and PE conducted by the physician.
- Request validation of any clinical finding you do not understand.
- Pay attention during physicians round.

Inspection

- It is concentrated watching.
- Always comes first.
- Compare the right and left sides of the body.
- The two sides are nearly symmetrical.
- Require good lighting (natural), adequate exposure, and occasional use of certain instruments (e.g. ophthalmoscope, otoscope, penlight to enlarge your view e.t.c.)
- Observe for color, size, location, texture, symmetry, odors, and sounds.

Palpation

- Follows and often confirms points you noted during inspection.
- Applies your sense of touch to assess texture (rough Vs smooth), consistency (hard Vs soft), presence of tenderness and pain, presence of lumps or mass , rigidity, crepitations, moistness, dryness, temp., organ location and size, shape, position, pulse, & motility.

Cont...d

- There are three types of palpation (light, deep, bimanual).
- Different parts of hand is used during palpation;
 - Base of fingers (metacarpophalangeal joints) or ulnar surface of hand to detect vibration (thrills, fremitus) (CVS, chest, abdomen).

Cont...d

- The dorsa (back) of hands and fingers is best for determining temperature b/c the skin is thin and highly innervated area.
- A grasping action of the fingers used to detect the position, shape, and consistency of an organ or mass.
- Finger tips best for fine tactile discrimination such as skin texture, swelling , pulsatility, and determine the presence of lumps.

Cont...d

- Techniques of palpation;
 - Should be slow and systematic. A person stiffen when touched suddenly.
 - Warm your hand by kneading them.
 - Palpate tender areas last.
 - Start with light palpation to detect surface characteristics and accustom the person to be touched .
 - Then perform deeper palpation through deep breathing.
 - Bimanual palpation requires the use of both your hands to capture certain organs such as kidney, uterus.

Percussion

- Tapping the person's skin with short & sharp strokes in order to assess the underlying structure.
- Keep other fingers (2nd , 4th ,5th) off body part, strike on the body part with middle finger of the dominant hand.
- Flex wrist quickly (not forearm).
- The stroke yield a palpable vibration and characteristics sound that show the location, size, and tensity of the underlying organ.

Cont...d

- Use of percussion;
 - Mapping out the location and size of an organ by exploring where the percussion note change b/n the borders of an organ and its neighbors.
 - Signaling the density (air, fluid, or solid) of structure.
 - Detecting an abnormal mass if it is fairly superficial (5-7cm). A deeper mass would give no change with percussion.
 - Eliciting pain/ tenderness if the underlying structure is inflamed, as with sinus area or over the kidney.
 - Eliciting a deep tendon reflex, using percussion hammer.

Cont...d

- Methods of percussion;
 - Direct-the striking finger/hand directly contacts the body wall as in infant thorax or adult's sinus areas and children.
 - Indirect percussion-the striking hand makes contact on the stationary hand fixed on the person skin (if in chest-not on bone, but intercostal space).

Cont...d

- To perform indirect percussion place the middle finger (other finger and palm off body surface-muffles the tone) of the non-dominant hand over the area being examined. It is used more often in adults and involves both hands.
- Blunt (fist) percussion causes the tissue to vibrate instead of producing sound. Kidney and liver to evaluate tenderness.

Cont...d

- Characteristics of normal percussion notes;
 - Resonant: over normal lung.
 - Hyperresonant: normal over child lung area, abnormal in adults over lungs (emphysema).
 - Tympany: over air filled (stomach or intestine).
 - Dull: relatively dense organ (liver, spleen, heart).
 - Flat: when no air is present (over thigh, muscles, bone, or over tumor).

Auscultation

- It is listening to sounds produced by the body such as heart, blood vessel, lung and abdomen.
- Choose an adequate stethoscope with length about 30 to 35 cm and about 0.3cm internal lumen diameter, with diaphragm and bell.
- Diaphragm is used mostly, b/c it is flat edge is best for high pitched sounds (breath, bowel, normal heart sound).

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- Hold the diaphragm firmly against the person's skin firm enough to leave a slight ring after ward.
- The bell end piece has a deep hollow cuplike shape, which is best for the soft low pitched sound such as extra heart sound, bruits of stenotic arteries, heart murmurs, and venous hums.
- 1st you must learn to wide range of normal sounds and then you can easily distinguish the abnormal sounds and extra sounds.

Cont...d

- Production of sound-all sounds results from vibration of some structure. Percussing over a body structure causes vibrations that produce characteristic wave and are heard as percussion notes.
 - Amplitude (intensity): a loud or soft sound. The louder the sound, the greater amplitude. Loudness depends on the force of blow and the structures ability to vibrate.

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- Pitch (frequency): the number of vibration per second, written as “CPS-cycle per second”. More rapid vibration produce a high pitched tone and slower vibrations yield a low pitched tone
- Duration: the length of time the notes linger.

Remember:

- Always inspect, palpate, & percuss then auscultate, except in the abdominal examination.
- Auscultate bowel sounds and percuss the abdomen prior to palpation to avoid alterations in bowel sounds.
- Use each technique to compare symmetrical sides of the body and organs.

Equipments

- Equipments needed for health assessment (should be available every where).
 - Tongue depressor, flash light or pen light needlereflex, sharp objects (sterile needle), lubricant, nasal speculum, sharp objective, clean glove, sphygmomanometer, skin marking pen, tuning fork, bivalve vaginal speculum, cotton ball, scope (oto, ophthalmoscope, stethoscope).