

The Physical Examination

Chapter 24

The provider uses information from three major sources to aid in making a diagnosis:

- The health history,
- The physical examination, and
- Laboratory tests and diagnostic procedures.

Physical examinations are performed to obtain a picture of the health and well-being of the patient. An initial examination will provide a baseline reference for future examinations.

Medical assisting duties related to physical examinations:

A. Patient preparation: Patient preparation includes patient explanation and preparation, positioning, draping, taking vital signs, specimen collection such as urine and blood, and electrocardiogram (ECG) and

B. Room preparation: Includes assembling the appropriate instruments and equipment for the provider and ensuring patient privacy and comfort.

When patients arrive for their appointments, the medical assistant maintains a professional and caring manner and will consider confidentiality to be of utmost importance. Throughout and after the examination, the medical assistant adheres to the principles of medical asepsis and standard Precautions as required by the occupational safety and Health Administration (OSHA).

METHODS OF EXAMINATION

There are six methods used by the provider to examine the body. They include **observation or inspection, palpation, percussion, auscultation, mensuration, and manipulation**. The provider uses all in total or in part, depending on the type of examination being performed.

- **Observation or Inspection:** Observation or inspection is the process of observing the patient. The general health, posture, body movements, skin, mannerisms, and sign of diseases are noted.
- **Palpation:** Palpation is an examination of the body using touch and may be used to help verify observations. A body part or organ, a mass etc are felt for size and condition. Abdominal masses may be felt through the abdominal wall. Skin texture, moisture, and temperature can be felt. Palpation may be performed with the use of fingertips, one or both hands, or the palm of the hand. Palpation is utilized by the professional medical assistant within his or her scope of practice. Pulse is measured using palpation.



- **Percussion:** Percussion is the process of eliciting sounds from the body by tapping with either a percussion hammer or fingers and listening to it directly. The vibrations and sounds from underlying organs and cavities can be felt and heard. Using this method can determine the presence of air or solid material in the organ or cavity being checked. Healthy structures that are dense, such as the liver, produce a dull sound. Hollow structures such as the lungs should produce a hollow

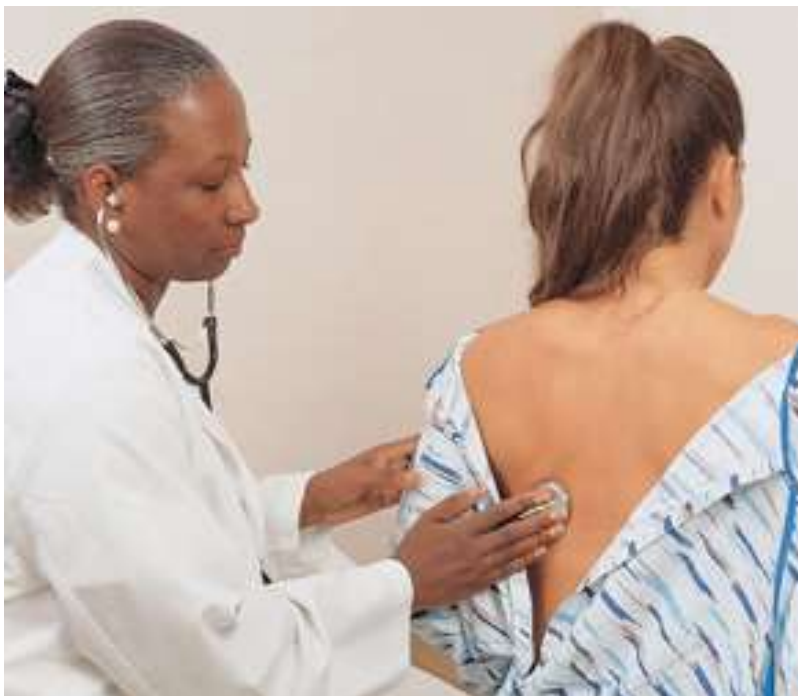
sound.

Percussion Technique



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- **Auscultation:** Auscultation is the process of listening directly to body sounds with a stethoscope. The provider listens for lung and heart sounds such as murmurs, rales, or **bruits**, which generally are abnormal sounds heard on auscultation of an organ or vessel such as a vein or an artery. The abdomen is examined for bowel sounds that include the clicks and gurgles of normal bowel activity, the sounds that occur with peristalsis.



- **Mensuration:** The mensuration method of examination uses the process of measuring. The measurements of height and weight, the length of a limb, and the amount of flexion and extension of an extremity are all forms of mensuration. Measurements of chest and infant head circumference are also forms of mensuration.

Mensuration Method of Physical Examination



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Pearson's Comprehensive Medical Assisting: Administrative and Clinical Competencies, 2/e
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- **Manipulation:** Manipulation checks the amount of flexion and extension of a joint by applying forceful passive movement on the joint. Range of motion of some joints may be checked using this method. The Chiropractors generally use this method.



POSITIONING AND DRAPING

Physical examinations require patients to be placed in various positions. The major reason for positioning the patient is to examine of a particular or selected area of the body easily and more efficiently.

Proper draping to protect modesty, pre-embarrassment, and provide comfort from chills is essential. The major role of the medical assistant in draping the patient is to provide privacy to the patient. If patients are capable of help themselves (disrobe themselves) medical assistant should leave the room while patients undress and put gown. If patients are disoriented or extremely ill or confused, the medical assistant must stay in the room; patient privacy can be provided by discretely removing clothing and covering patient quickly as possible.

In order to understand the cultural diversity that might be present with the patients, it is important to ask appropriate questions as they pertain to undressing for the physical exam. When the patient is a child, encourage the parent's participation whenever appropriate. Respect a child's right to privacy by offering a gown or drape. Older adults will need assistance with undressing and draping. Ensure patient safety at all times.



Seated position
Anterior and posterior head and chest



High Fowler's position
Examination of the head, neck, and upper body



Semi-Fowler's position
Post-surgical exams; patients with breathing difficulties or lower back injuries



Supine position
Examination of the anterior or ventral surface of the body; some x-rays



Prone position
Back exams; certain types of surgery. Not used for patients with breathing problems, women in late-term pregnancies, or the elderly



Sims' position
Rectal, perineal, and pelvic exams; rectal temperatures; enemas



Trendelenburg position
Shock or low blood pressure; abdominal surgery



Knee-chest position
Proctologic, rectal, and vaginal exams; sigmoidoscopy procedures

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Examination Positions

A number of positions may be required of patients during the physical examination.

➤ **Supine (Horizontal Recumbent)**

Description: The patient is lying flat on his/her back facing up

When used: Used for examination of the anterior surface of the body from head to toe. For any elderly patient this position is appropriate for physical examination prepared by the medical assistant.



➤ **Dorsal Recumbent.**

Description: Patients lie on their back (dorsal) face up, legs separated, knees flexed with feet flat on the table. This is the most comfortable position for patients with back and abdominal problems.

When used: For rectal, genital, head, neck, and chest examinations, as well as abdominal palpation. It can also be used for urinary catheterization. The patient is covered with a drape that is diamond shaped. one edge of the diamond can be lifted to examine the genitalia without exposing the rest of the body.



➤ **Lithotomy.**

Description: Patients are assisted to lie on their back similar to the dorsal re- cumbent position except the buttocks should be as close to the bottom edge of the table as possible, and feet are placed in stirrups attached to the foot of the table. Patients with special needs, such as older adults and those physically challenged, as with severe arthritis, may not be able to assume this position. If this is the case, assist patient into the sims' position or modified dorsal position

When used: The lithotomy position is used for genital and pelvic examinations; it can also be used for urinary catheterization. The sigmoidoscopy, proctoscopy, or pelvic exam can be done in this position for these patients. The patient is covered with a drape that is diamond shaped.



➤ **Fowler's.**

Description: Patients sit in a position with the back of the examination table raised to either 45 degrees (semi-Fowler's) or 90 degrees (high-fowler's). Legs rest flat on the table.

When used: For patients having cardiovascular or respiratory problems to facilitate their breathing, and for examination of the upper body and head. Sitting in a fowler position at the end of the exam table is the most appropriate position when instructing a patient to prepare for a general physical examination.



➤ **Proctologic (Knee-Chest).**

Description: This position requires the use of a proctologic examination table. The patient is instructed to undress from the waist down and to kneel on the knee board of the table. The patient then bends at the hips and rests the chest on the table. A triangular, diamond-shaped, or fenestrated drape covers the patient from the shoulders to the knees.

It is an uncomfortable position to get into, even with assistance, and it is difficult to maintain. The medical assistant should wait for the physician to be in the room if the patient needs to be positioned in this position.

When used: The position has been used for proctologic examinations and sigmoidoscopy procedures; however, the proctologic table has made the position unnecessary.

Knee-Chest Position





Fig: Proctologic Table

➤ **Prone.**

Description: The patient is instructed to lie face down on the table with head turned to side; arms may be placed above the head or along the side of the body. The drape must cover from the mid-chest area to the legs.

When used: This position may be used for examining the posterior aspect of the body, including the back or spine and legs.



➤ **Sims' (lateral).**

Description: The patient is instructed to lie on the left side; the left arm and shoulder may be drawn back behind the body. The left knee is slightly flexed to support the body, and the right knee is flexed sharply. A small pillow is provided for placement under the patient's head. A pillow may also be placed between the patient's legs if it will not interfere with the examination being performed. The drape should be large enough to cover the patient from the shoulders to the knees (triangle or diamond shape to expose rectum).

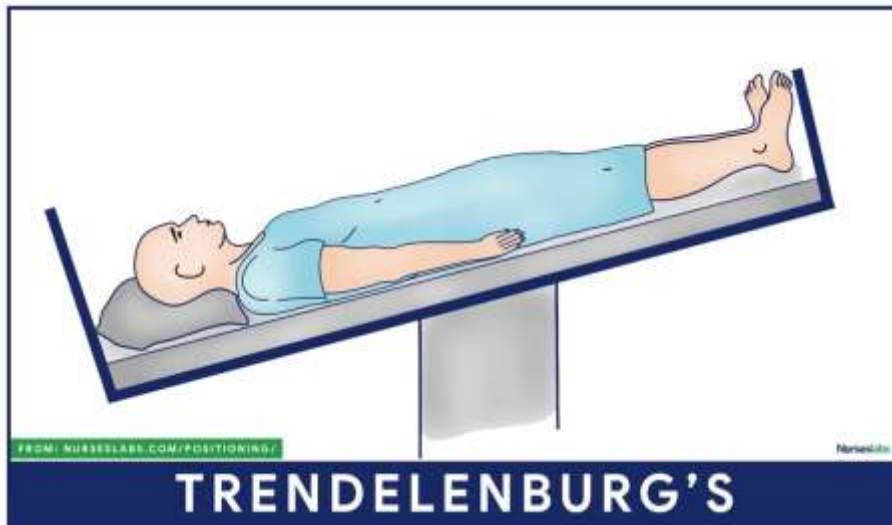
When used: This position may be used for vaginal or rectal examination, for obtaining a rectal temperature, for sigmoidoscopy, or for administering an enema.



➤ **Trendelenburg:**

Description: The head of the table should tilt downward toward the floor and the feet should point upward toward the ceiling

When used: This position can be used for two reasons. **The first** is to aid a person who is in shock. By lowering the head and elevating the legs, blood flow from the major vessels in the lower extremities will, by gravity, flow upward toward the brain and major organs. This may help to increase blood pressure enough to sustain the patient until taken to the emergency department. **The other reason** for the Trendelenburg position is to elevate and incline the legs so that the abdomen and pelvic organs are pushed up toward the chest by gravity, making visibility and maneuverability easier for the provider doing either abdominal or pelvic surgery.



EQUIPMENT AND SUPPLIES FOR THE PHYSICAL EXAMINATION

- Equipment and supplies used for physical examinations should be properly cleaned and ready for the provider's use. The most important action for the medical assistant when assisting the physician with a complete physical examination is to place preferred instruments in easy access and sequence for physician use.
- Urine, blood samples, and an EGG may be performed, (if requested by the provider).
- Patient data can be documented immediately using the computer to electronically record all of the information (vital signs, height and weight, known allergies, any medications the patient is taking).

****Quick Reference Guide: (p. 618): Instruments and supplies needed for physical examination**





Fig : Otoscope and Ophthalmoscope



Fig: Nasal Speculum



Fig: Vaginal Speculum



Fig: Percussion Hammer



Fig: Tuning Forks

BASIC COMPONENTS OF A PHYSICAL EXAMINATION

Patient Appearance

- General appearance and actions are noted as the patient is received by the medical assistant and during the patient history. Skin color is checked and general grooming, ease of conversation, and answers to questions are noted. Some patients may appear to you to be unclean in their appearance, have an unpleasant body odor, have poor hygiene, or otherwise appear to be different from your culture. The medical assistant should be alert to a patient with abnormal skin color, confusion or disorientation, or difficulty in movement.
- The following aspects of the patient's health are evaluated by the provider through the method of physical examination known as observation.
- **Gait:** Gait pertains to the manner or style of walking. The patient may have a limp, walk with feet wide apart, appear to be dragging one leg, or have difficulty maintaining balance. The provider observes the patient's gait by instructing the patient to walk on a designated straight line or across the room, and an abnormal gait can indicate a disease process or health problem associated with poor neurologic functioning.
- **Stature:** The height of the patient is measured. The provider looks for height, trunk, and limb proportion.
- **Posture:** Because normal posture is erect with the head held up, a patient in pain may exhibit postural differences. The spine might be in a fixed position, or there may be limited motion in an extremity. Abnormalities can include kyphosis (humpback), which may be seen in older adult patients, particularly women with osteoporosis; lordosis, abnormal curvature of the lumbar area; and scoliosis, curvature of the upper spine.
- **Body Movements:** Body movements may be either voluntary or involuntary. Tremors are a form of involuntary movement that may be seen in the mouth, fingers, hands, arms, and legs of a patient. Tremors can indicate a neurologic health problem.
- **Speech:** Quality and regularity of speech is often one of the first aspects that the provider notices during a physical exam. Abnormalities include **aphonia**, a loss of voice usually because of laryngitis, but which may have other causes; **aphasia**, the inability to express oneself through speech or writing, which may indicate brain injury or disease; and **dysphasia**, an inability to use appropriate speech patterns, such as using words in the wrong order. This may indicate a brain lesion or disorder.
- **Breath Odors:** Breath odors may be detected when speaking with the patient or when obtaining vital signs. A sweet fruity odor may indicate acidosis. This may result from diabetes mellitus, starvation, or renal disease. A musty odor may indicate liver disease, and an ammonia odor may indicate uremia. Poor oral hygiene results in gingivitis (gum disease), caries (cavities), tooth loss, and foul, breath odors.
- **Weight:** Various published charts contain guidelines for normal weight established by height and age. Overweight and underweight are defined as being above or below the published charts. Edema, which is excessive accumulation of fluids in the body tissues, causes weight gain.

Skin and Appendages

Skin problems include abnormal skin color such as redness, pallor, cyanosis, jaundice, and vitiligo.

- **Pallor** is defined as lack of color/no color or paleness often seen with anemia;
- **Cyanosis** is a slightly blue or gray discoloration of the skin, often seen in patients with respiratory or cardiac problems;
- **Jaundice** is a yellowing of the skin, often caused by obstructed bile ducts or liver disease; and
- **Vitiligo** is characterized by white patches on the skin, observed against normal pigmentation.

Other skin conditions are lesions, ulcers, bruises, and cancer.

Infections, either local or systemic, may be observed in nails that are brittle, grooved, or lined. The appearance of the fingertips can be indicators of disorders as seen in clubbing, which may indicate congenital heart disease, and spooning, which may be seen in severe iron deficiency anemias.

Abnormal hair distribution, as in facial hair on a female patient, may indicate hormonal changes

THE PHYSICAL EXAMINATION SEQUENCE

- A sequence is followed for a physical examination, although provider preference and the patient's chief complaint can produce a variation to the sequence.
- The physical examination begins with the medical assistant taking and recording the patient's vital signs, height, and weight, and testing visual acuity as well as auditory ability when appropriate.
- Additional laboratory procedures, such as urinalysis and blood analysis or EGG may be performed as directed by the provider before the physical examination.
- The patient is then told what to expect during the examination. The medical assistant should be explicit as to what clothing is to be removed and what can be left on. The medical assistant may leave the room while the patient undresses unless the patient asks for help or is unable to manage alone. It is appropriate to knock before reentering the room.
- It is customary for the medical assistant to remain in the room when the provider is examining a patient for the patient's comfort, to assist the provider, and as a deterrent to potential lawsuits.
- The medical assistant places the instruments for the examination on the counter or Mayo stand, according to provider preference, but usually in order of use.
- When the patient is comfortably positioned on the examination table, inform the provider that the patient is ready. Normally the physical examination starts at the head and proceeds downward.

****Table 24-1 gives a detailed review of the components of the physical examination.**

- **Head :** The patient is in a sitting position for this examination. The face is checked for puffiness, especially around the eyes. Facial skin is checked for **scleroderma**, a tight and atrophied skin. The hair and scalp are checked. The head and neck are palpated for lumps and swelling.
- **Eyes :** The pupils of the eyes are checked for light and accommodation. A tonometer may be used to measure the intraocular eye pressure of patients older than 35 years. Normal eye pressure is 13 to 22 mm Hg. An increase above normal will be found in glaucoma. The provider uses an ophthalmoscope to view the blood vessels of the retina. The provider notes whether pupils are equal and react to light and accommodation (abbreviated as PERRLA). Pupils that do not constrict and return to normal equally may indicate a problem in the brain. The sclera and conjunctiva are examined for any abnormalities. Any discolorations, redness, discharge, or lesions are noted. A Snellen chart is utilized to assess visual acuity
- **Ears :** An otoscope is used by the provider to examine the ears. The external ear is checked for redness in the ear canal and buildup of cerumen. A healthy tympanic membrane has a pearly gray appearance. A red appearance to the tympanic membrane may indicate infection in the middle ear, known as otitis media. Vertigo (dizziness) may indicate that the patient has an inner ear infection (labyrinthitis). Tinnitus (ringing in the ears) may indicate inner ear problems. Other symptoms of ear problems include pain, discharge, and deafness. The **tuning fork** is used in testing the sensations of hearing, including bone conduction and air conduction
- **Nose :** The nasal cavity is visualized by the provider with the use of a nasal speculum and flashlight. Discharge from the nose may indicate a postnasal drip in which the sinuses may be draining into the nose and throat. Other abnormalities may include obstruction because of a deviated septum. Polyps and ulcerations may be found in the nasal cavity.
- **Mouth and Throat :** The provider uses a **tongue blade** or **depressor** and a light source. The teeth and gums are checked for dental hygiene such as caries and the gums are checked for signs of **pyorrhea** (discharge of pus from the gums around the teeth). If the tonsils are present, they are checked for signs of infection, such as redness or white pockets of pus.
- **Neck :** The provider palpates the neck, looking for swollen lymph nodes. The thyroid gland is palpated anteriorly and posteriorly for size, symmetry, and texture.
- **Chest :** The symmetry of the chest is observed, both anteriorly and posteriorly. Chest measurement may have been performed before the examination. The provider may listen for abnormal lung sounds with a stethoscope. The provider may examine the lungs by percussion. Heart sounds will be auscultated both anteriorly and posteriorly.
- **Breast:** The provider examines the breast for masses, any abnormal discharge from nipple or any skin changes over the breasts. Female patients should be instructed on the procedure for performing monthly breast self-examination. Maintain as much patient modesty as possible by carefully draping and giving emotional support.

- **Abdomen:** The patient is placed in a dorsal recumbent or supine position with the arms at the sides for examination of the abdomen. The provider normally stands on the right side of the patient while performing this part of the examination. The female patient wears a gown open in the front that can be pulled to the sides while still covering the breasts. The abdomen is examined by palpation, percussion, and auscultation.
- **Genitals :**
Female Genitals and Male Genitals: Care must be taken to protect all patients' modesty and privacy. The patient is placed in the lithotomy position. The provider examines both the external genitalia and the reproductive organs.
- **Rectum**
- The provider may examine the rectum as a part of the male and female genitals examination. The patient may be placed in the Sims' position. The provider performs a manual examination. The prostate gland is examined by digital rectal palpation. A lubricated rectal speculum may then be inserted for visual examination. Because this is uncomfortable for the patient, emotional support is important. The provider can visualize the rectum for bleeding, fissures, polyps, or other lesions.
- **Reflexes:** The patient's reflexes in both the supine and sitting positions are observed by the provider. A percussion hammer is used. While sitting with the arm flexed, the elbow is lightly tapped to elicit movement from the biceps. The patellar or knee-jerk reflex is tested by tapping the area just below the patella at the knee. The Achilles reflex or ankle-jerk is tested by tapping the Achilles tendon.

*****Procedure 24-1 outlines the steps in assisting with the physical examination.***