ASSISTING WITH THE PRIMARY PHYSICAL EXAMINATION

SCENARIO

Felicia Grand, a newly hired certified medical assistant (CMA, AAMA), works for Dr. Anna Kasto, who is a member of a busy multiphysician primary care practice. One of Felicia’s chief responsibilities is to assist Dr. Kasto with physical examinations. Her duties include preparing and maintaining the examination room and equipment; getting the patient ready for specific physical examinations; and gowning, draping, and positioning the patient as needed. Because Felicia will be assisting with examinations, she must become familiar with the physical examination procedure and the order in which the physician needs various pieces of medical equipment. It also is important that Felicia protect herself from possible injury by using appropriate body mechanics throughout her day in the office.

While studying this chapter, think about the following questions:

- What equipment does Felicia need to gather before the physician enters the examination room to make sure the examination goes smoothly and without interruption?
- With what examination and treatment positions should Felicia be familiar, and when should the various positions be used?
- What measures can Felicia take to protect herself from injury when lifting heavy items or assisting with the transfer of patients?

LEARNING OBJECTIVES

1. Define, spell, and pronounce the terms listed in the vocabulary.
2. Apply critical thinking skills in performing the patient assessment and patient care.
3. Describe the structural development of the human body.
4. Differentiate among the functions of the 11 body systems and the major organs and structures of each system.
5. Outline the medical assistant’s role in preparing for the physical examination.
6. Summarize the instruments and equipment the physician typically uses during a physical examination.
7. Describe the six methods of examination and give an example of each.
8. Outline the basic principles of properly gowning and draping a patient for examination.
9. Name the various positions that may be used during an examination and identify the purpose of each.
10. Position and drape a patient in six different examining positions while remaining mindful of the patient’s privacy and comfort.
11. Demonstrate proper body mechanics in transferring a patient from a chair to the examination table and back.
12. Outline the sequence of a routine physical examination.
13. Prepare for and assist in the physical examination of a patient, correctly completing each step of the procedure in the proper sequence.
14. Summarize the role of the medical assistant in the physical examination process.
15. Determine the role of patient education during the physical examination.
16. Discuss the legal and ethical implications of the physical examination.
**VOCABULARY**

- **auscultation** The act of listening to body sounds, typically with a stethoscope, to assess various organs throughout the body.
- **bruit** An abnormal sound or murmur heard on auscultation of an organ, vessel, or gland.
- **clubbing** Abnormal enlargement of the distal phalanges (fingers and toes) associated with cyanotic heart disease or advanced chronic pulmonary disease.
- **colonoscopy** A procedure in which a fiberoptic scope is used to examine the large intestine.
- **electrocardiogram** (i-lék-tró-kár-de-uh-gram) A graphic record of electrical conduction through the heart.
- **emphysema** (em-fuh-zih-muh) The pathologic accumulation of air in the alveoli, which results in alveolar destruction and overall oxygen deprivation; in the lungs, the bronchioles become plugged with mucus and lose elasticity.
- **gait** The manner or style of walking.
- **hematopoiesis** (hi-muh-tuh-poy-ih-sis) The formation and development of blood cells in the red bone marrow.
- **intracellular** A term referring to the area between cells.
- **intracellular** A term referring to the area within the cell membrane.
- **manipulation** Movement or exercising of a body part by means of an externally applied force.
- **mastication** (mas-tuh-ka-shun) Chewing.
- **murmur** An abnormal sound heard during auscultation of the heart that may or may not have a pathologic origin; it is associated with valve disease or a congenital heart defect.
- **nodules** (nah-dulz) Small lumps, lesions, or swellings that are felt when the skin is palpated.
- **palpation** The use of touch during the physical examination to assess the size, consistency, and location of certain body parts.
- **peristalsis** (per-uh-stahl-suhs) The rhythmic contraction of involuntary muscles lining the gastrointestinal tract.
- **sclera** The white part of the eye that forms the orbit.
- **transillumination** Inspection of a cavity or organ by passing light through its walls.
- **trauma** Physical injury or a wound caused by an external force or violence.
- **vasoconstriction** (va-zoh-kuh-nstrik-shun) Contraction of the muscles lining blood vessels, which narrows the lumen.

To promote health maintenance, healthcare professionals must understand the anatomy and physiology of the body, the role each part plays, how each component functions, and what happens to the body when disease occurs in body systems.

### ANATOMY AND PHYSIOLOGY

**Anatomy** is the study of how the body is shaped and structured. It encompasses a wide range of subjects, including structural development, levels of organization, relationships among microscopic parts, and the interrelationship of structure and function.

**Physiology** is the study of body functions. This field is subdivided into areas of study; some physiologists spend their entire lives studying only one function, such as how cells work or how a single organ, such as the small intestine, is interrelated in function with the stomach and the large intestine.

Separating these two sciences is almost impossible, because one continuously influences the other. Function affects structure, and structure affects function; for example, an infant can suck effortlessly because of the lack of teeth in the mouth. Once teeth appear, sucking becomes more tiring, and the child begins to chew and bite. Phenomena in structure and function affect the interrelationship of all body systems.

### Structural Development

**Cells**
The basic unit of life is the cell. Cells determine the functional and structural characteristics of the entire body. Cells are microscopic in size, have a variety of shapes, and perform a vast array of functions. It is estimated that the human body is composed of approximately 100 trillion living, functioning cells. A cell is made up of three primary parts: the plasma membrane that surrounds the cell, creating an outer covering; the **intracellular** environment, which includes the cytoplasm that contains the living material that carries on the cell's function; and the nucleus of the cell, which contains the genetic code of the cell that determines the cell's function.

### Tissues

When cells with similar structure and function are placed together, they form tissues. The study of tissues is known as histology. All of the body tissues are grouped into four types. The types of tissues distributed throughout the body and where they are located are as follows:

- **Epithelial tissue**: This type of tissue makes up the skin, glands, lining of body cavities and organs; packed closely together with little or no **intracellular** material; classified according to shape as squamous (flat), cuboidal (square), columnar (long and narrow), or transitional (varying shapes that can stretch). Epithelial cells may be arranged in a single layer of cells of the same shape, called simple epithelium, or in many layers of cells named according to the shape of the cells in the outer layer; this is called stratified epithelium.
- **Connective tissue**: This tissue supports and binds other body tissues. Types of connective tissue include collagen, bone, cartilage, adipose, ligaments, tendons, blood, and lymph. Connective tissue is the most frequently occurring tissue in the body and has the widest distribution.
- **Muscle tissue**: This tissue produces movement. It is classified as skeletal muscle (striated, voluntary), which is attached to bones and produces voluntary body movements when contracted; cardiac muscle (striated and involuntary), which forms the heart muscle wall; or smooth muscle (nonstriated and involuntary), which lines the walls of blood vessels and hollow organs and causes such actions as peristalsis and vasoconstriction.
- **Nervous tissue**: This type of tissue conducts nerve impulses between the periphery and the central nervous system. It also effects rapid communication between body structures and controls the body's functions to maintain homeostasis. Nervous tissue is made up of neurons and supportive structures called **neuroglial cells**.

### Organs

An **organ** is composed of two or more types of tissue bound together to form a more complex structure for a common purpose or function. An organ may have one or many functions; for example, the pancreas has an endocrine function because it produces the hormone insulin, and a digestive function because it produces digestive enzymes. Organs also may be part of one or several systems. For example, in the male system, the urethra is part of both the urinary and reproductive systems.

### Systems

A **body system** is composed of several organs and their associated structures. These structures work together to perform a specific function in the body. Each system has specific units in it, and each performs specific functions. Table 32-1 summarizes the body systems; their primary cells, organs, and structures; and the major functions of each.

<table>
<thead>
<tr>
<th><strong>TABLE 32-1 Organization of Body Systems</strong></th>
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<tr>
<td><strong>BODYSYSTEM</strong></td>
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<td>Blood</td>
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<td>Endocrine</td>
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<td>Integumentary</td>
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<td>Gastrointestinal</td>
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<td>Lymphatic and immune</td>
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<td>Musculoskeletal</td>
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<td>Nervous</td>
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<td>Reproductive</td>
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<td>Male: Testosterone, sperm, epididymis, vas deferens, prostate gland, testes, scrotum, penis, urethra</td>
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<td>Respiratory</td>
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<td>Sensory</td>
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<td>Urinary</td>
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**PRIMARY CARE PHYSICIAN**

Primary care physicians (PCPs) treat patients of all ages for a broad range of diseases and complaints. A PCP is qualified to provide continuing healthcare for the entire family, from birth to old age. Most health insurance programs have converted to the primary care referral system. This means that most patients are required to have a PCP as the gatekeeper in personal healthcare. Therefore, the PCP first must be contacted before the patient can be referred to specialty physicians for care.

The PCP evaluates the patient's total healthcare needs, provides personal medical care within one or more fields of medicine, and refers the patient to a specialist when an advanced or serious condition warrants additional expertise. The medical assistant's clinical responsibilities in a primary care office include assisting with patients who may have problems in any of the body systems and with procedures in all age groups. With such a diversified scope of practice, the physician and medical assistant must work as a team to use their time efficiently and still provide quality, patient-centered healthcare.

**PHYSICAL EXAMINATION**

The purpose of a physical examination is to determine the patient's overall state of well-being. All major organs and body systems are checked during a physical examination. As the physician examines the entire body, he or she interprets the findings, and by the time the examination has been completed, the physician has formed an initial diagnosis of the patient's condition. Often laboratory and other diagnostic tests are ordered to supplement the physician's initial diagnosis. The results of these tests are used to refine the patient's diagnosis, to help the physician plan or revise treatment for the patient, to evaluate and maintain current drug therapy, and/or to determine the patient's progress.

**Preparing for the Physical Examination**

**Role of the Medical Assistant in the Physical Examination**

Assessment of the patient begins with the first contact in the office. Before the examination, the medical assistant has the opportunity to make sure that the patient feels comfortable during the examination process and that all the necessary medical information has been obtained. As part of patient preparation, the medical assistant should verify the patient's insurance information and document current medications and allergies. The medical assistant's duties include preparing and maintaining the examination room and equipment, preparing the patient, and assisting the physician during the physical examination.

**Room Preparation.** The medical assistant is responsible for making sure the examination room is ready for any procedure that might be performed during the physical examination. The area also should be as comfortable as possible for the patient and free of any potential dangers (Procedure 32-1). The examination room is prepared as follows:

- The area should be checked at the beginning of each day and between patients to make sure it is completely stocked with equipment and supplies and that all equipment is functioning properly. The medical assistant must understand how to take care of and operate all equipment and instruments and should refer to operation manuals supplied by manufacturers as needed.
- Expiration dates must be checked on all packages and supplies regularly, and expired materials should be discarded.
- The room should be private, well lit, and at a comfortable temperature for the patient during the physical examination.
- The area should be cleaned and disinfected daily and between patients as needed to prevent the spread of infection and to ensure patients' comfort. All potentially contaminated surfaces, including the examination table, are disinfected between patients, with an appropriate disinfectant. After cleaning the table, change the examination paper by unrolling a new piece.
- Drapes, gowns, and any other patient supplies are arranged before the patient enters the room so that they are ready for use.
- To save time, the instruments and equipment needed for the examination are prepared and arranged for easy access before the physician enters the room.
- The examination room should contain all materials required for observing Standard Precautions, including disposable gloves, a sink with an antibacterial hand-washing agent, paper towels, biohazard waste containers, sharps containers, and impervious gowns and face guards. Sharps containers are replaced when they are two-thirds full, as indicated by Standard Precautions (see Chapter 27).

**Patient Preparation.** Getting the patient ready for the examination includes taking care of paperwork before the patient enters the examination room and performing related clinical skills.

- Make sure the medical record is complete and that any needed consent forms have been signed. The medical assistant is not responsible for obtaining informed consent, but he or she should review the paperwork to make sure that informed consent forms were reviewed by the physician and that the patient signed the forms.
- Introduce yourself and address the patient by his or her preferred name, making sure to maintain respect at all times. Pay close attention to the patient's nonverbal language to make sure the patient understands what to expect.
- Verify the accuracy of the insurance information according to office policy. In most facilities, the policy is to make a copy of the patient's insurance card when the patient first enters the office or, if the patient has been to the office recently, to ask whether any of the insurance information has changed.
- Obtain specimens (e.g., urine and blood) if they have been preordered by the physician or if this practice is part of the office policy.
- Measure and record the patient's height, weight, body mass index (BMI), and vital signs.
- Conduct the initial investigation into the reason for the visit and explain the examination procedure to the patient. Be prepared to answer the patient's questions and allay any fears.
### PROCEDURE 32-1

**Prepare and Maintain the Examination and Treatment Areas**

**GOAL:** To prepare an examination room for a patient procedure, maintain equipment and supplies needed for the physical examination, and demonstrate maintenance of the room after a patient visit.

#### EQUIPMENT and SUPPLIES

- Examination table
- Patient gown
- Drape
- Stethoscope
- Ophthalmoscope
- Scale with height measurement bar
- Tongue depressor
- Cotton balls
- Examination light
- Percussion hammer
- Lubricating gel
- Examination gloves
- Sphygmomanometer
- Otoscope with disposable speculum
- Tape measure
- Gauze sponges
- Pen light
- Nasal speculum
- Tuning fork
- Biohazard container
- Laboratory request forms
- Specimen bottles/lab requisitions
- Thermometer
- Cotton-tipped applicators
- Hemoclamp supplies
- Table paper
- Spray disinfectant

#### PROCEDURAL STEPS

1. Check the examination room at the beginning of each day and between patients to make sure it is completely stocked with equipment and supplies and that the equipment functions properly.
   **PURPOSE:** The room must be ready for patient services.

2. Check all equipment and instruments to make sure they are operational; refer to manuals supplied by the manufacturers as needed.
   **PURPOSE:** To maintain the patient's safety.

3. Check expiration dates on all packages and supplies regularly and discard expired materials.
   **PURPOSE:** To maintain confidentiality and the patient's safety and comfort.

4. The room should be private, well lit, and at a comfortable temperature for the patient during the physical examination.
   **PURPOSE:** To maintain confidentiality and the patient's safety and comfort.

5. Prepare the examination room before and between patients according to acceptable medical rules of asepsis.
   **PURPOSE:** The room must be aseptically clean to prevent the spread of infection.

6. After each patient use: don disposable examination gloves, spray the table and any other contaminated surface with a disinfectant, and clean the area with disposable towels; discard waste and the gloves in an appropriate biohazard container and put clean paper on the table.

7. Sanitize your hands.
   **PURPOSE:** To ensure infection control and to prevent the transmission of pathogens from one patient to another.

8. Inventory the supplies needed after each patient visit and restock as needed.
   **PURPOSE:** The room must be maintained and ready for each examination.

- Ask the patient whether he or she needs to empty the bladder before the examination, because a full bladder may interfere with the examination and may be uncomfortable for the patient.
- Help the patient physically prepare for the examination. Explain to the patient what clothing should be removed, in what direction to put on the gown (open either to the front or to the back, depending on the type of examination), and provide a drape to ensure the patient's privacy. Offer assistance as needed.
- Assist the patient into and out of various examination positions as needed.
- Throughout this entire sequence of events, explain what is happening and consistently maintain the patient's privacy and confidentiality.
- Document patient data in the medical record, completing all forms required.

- Place the patient's medical record in the designated area for the physician, usually in a chart holder on the examination room door; make sure that no identifiable patient information is visible, in accordance with regulations established by the Health Insurance Portability and Accountability Act (HIPAA).
- Help the patient with dressing after the examination as needed.

**Assisting the Physician.** The medical assistant should be prepared to help the physician complete the physical examination as comprehensively and efficiently as possible. You have already prepared the room, so all equipment and supplies are available and in good working order; you also have prepared the patient by gathering the needed information and measuring and recording vital signs. During the examination, the physician may expect the medical assistant to do the following:
supplies and Instruments Needed for the Physical Examination

The instruments typically used during the physical examination are shown in Figure 32-1. They enable the physician to see, feel, inspect, and listen to parts of the body. All equipment must be in good working order, properly disinfected, and readily available for the physician’s use during the examination. The instruments most frequently used for a physical examination are described in the following paragraphs. Physical examinations typically are performed from the head to the feet; the instruments are listed in the order in which the physician typically would request them.

ophthalmoscope. An ophthalmoscope is used to inspect the inner structures of the eye. It consists of a stainless-steel handle containing batteries and an attached head, which has a light, magnifying lens, and an opening through which the eye is viewed. Examination rooms usually are equipped with wall-mounted electrical units for the ophthalmoscope and otoscope, a dispenser for disposable speculums, and a wall-mounted sphygmomanometer.

tongue depressor. A tongue depressor is a flat, wooden blade used to hold down the tongue when the throat is examined.

otoscope. An otoscope is used to examine the external auditory canal and tympanic membrane. It has a stainless-steel handle containing batteries or is part of a wall-mounted electrical unit. The head of the otoscope has a light that is focused through a magnifying lens and should be covered with disposable ear speculum. The light also may be used to illuminate the nasal passages and throat.

nasal speculum. A nasal speculum is a stainless-steel instrument used to inspect the lining of the nose, nasal membranes, and internal septum (Figure 32-2). When the handles of the nasal speculum are squeezed, the tips spread apart to dilate the nostrils, allowing the physician to visualize the internal aspects. An otoscope with a special attachment may also be used for nasal visualization.

tuning fork. Tuning forks are aluminum fork-shaped instruments that consist of a handle and two prongs (Figure 32-3, A). The prongs produce a humming sound when the physician strikes them against his or her hand. Tuning forks are available in different sizes, and each size produces a different pitch level. A tuning fork is used to check the patient’s auditory acuity (Figure 32-3, B) and to test bone vibration (Figure 32-3, C). This aluminum instrument consists of a handle and two prongs that produce a humming sound when the physician strikes the prongs against his or her hand.
**Tape Measure.** A tape measure is a flexible ribbon ruler usually printed in inches and feet on one side and in centimeters and meters on the opposite side. Measurements may be used to assess length and head circumference in infants, wound size, and so on.

![Figure 32-2: Nasal speculum.](image)

**Stethoscope.** A stethoscope is a listening device used when certain areas of the body are auscultated, particularly the heart and lungs. This instrument is available in many shapes and sizes. All have two earpieces that are connected to flexible rubber or vinyl tubing (Figure 32-4). At the distal end of the tubing is a diaphragm or bell (many have both), which, when placed securely on the patient’s skin, enables the physician to hear internal body sounds.

**Reflex Hammer.** A reflex hammer is sometimes called a percussion hammer. This stainless-steel instrument has a hard rubber head that is used to strike the tendons of the knee and elbow to test the neurologic reflexes.

**Gloves.** Disposable examination gloves protect the healthcare worker and the patient from microorganisms. According to Standard Precautions, gloves must be worn whenever the potential exists for contact with any body fluid, broken skin or wounds, or contaminated items.

**Additional Supplies.** Gauze squares, cotton balls, cotton-tipped applicators, specimen containers, hemoccult packets, Pap smear supplies for female patients, lubricating jelly for vaginal and rectal examinations, and laboratory request forms should be easily accessible during the examination.

![Figure 32-3: A, Tuning forks. B, Sound vibration test. C, Bone vibration test.](image)
Assisting with the Physical Examination

Methods of Examination

Examinations are performed as both a routine confirmation of the absence of illness and a means of diagnosing disease. Health-care providers use six methods to examine the human body. All six are part of a complete physical examination.

Inspection. During inspection, the examiner uses observation to detect significant physical features or objective data. This method of examination ranges from focusing on the patient’s general appearance (the general state of health, including posture, mannerisms, and grooming) to more detailed observations, including body contour, gait, symmetry, visible injuries and deformities, tremors, rashes, and color changes.

Palpation. In palpation the examiner uses the sense of touch (Figure 32-5, A). A part of the body is felt with the hand to determine its condition or the condition of an underlying organ. Palpation may involve touching the skin or a firmer exploration of the abdomen for underlying masses. This technique involves a wide range of perceptions: temperature, vibration, consistency, form, size, rigidity, elasticity, moisture, texture, position, and contour. Palpation is performed with one hand, both hands (bimanual), one finger (digital), the fingertips, or the palmar aspect of the hand. A pelvic examination is done bimanually, whereas an anal examination is performed digitally. Do not
confuse palpation with palpitation, which is a throbbing pulsation felt in the chest.

**Percussion.** Percussion involves tapping or striking the body, usually with the fingers or a small hammer, to elicit sounds or vibratory sensations. Percussion aids determination of the position, size, and density of an underlying organ or cavity. The effect of percussion is both heard and felt by the examiner; it is helpful in determining the amount of air or solid matter in an underlying organ or cavity. The two basic methods of percussion are direct percussion and indirect percussion. Direct (immediate) percussion is performed by striking the body with a finger. With indirect (mediate) percussion, which is used more frequently, the physician places his or her hand on the area and then strikes the placed hand with a finger of the other hand (Figure 32-5, B). Both a sound and a sense of vibration are evident. The examiner quantifies the sound in terms of pitch, quality, duration, and resonance.

**Auscultation.** Auscultation the physician uses a stethoscope to listen to sounds arising from the body (not the sound produced by the physician, as in percussion, but sounds that originate within the patient’s body). Auscultation is a difficult method of examination, because the physician must distinguish between a normal and an abnormal sound (Figure 32-5, C). It is particularly useful for evaluating sounds originating in the lungs, heart, and abdomen, such as a murmur, a bruit, and bowel sounds.

**Mensuration.** Mensuration is the process of measuring. Measurements that are recorded include the patient’s height and weight, the length and diameter of an extremity, the extent of flexion or extension of an extremity, the size of the uterus during pregnancy, the size and depth of a wound, or the pressure of a grip. Measurements are taken with a flexible tape measure, a circular wound measurement device (Figure 32-6), or a specialized piece of equipment (e.g., a goniometer, which is used to measure joint angles) and usually are recorded in centimeters.

**Manipulation.** Manipulation is the passive movement of a joint to determine the range of extension or flexion of a part of the body. Manipulation may or may not be grouped with palpation. It usually is considered separate from the four standard methods of examination (inspection, palpation, percussion, and auscultation) and is grouped with mensuration, especially by an orthopedist or a neurologist. Insurance and industrial reports often request this information in detail. For example, a patient involved in a work-related accident that caused joint damage may have to perform assisted range-of-motion (ROM) exercises to the joint, with subsequent measurements of joint flexion and extension.

**Positioning and Draping the Patient for the Physical Examination**

Various patient positions are used to facilitate a physical examination. The medical assistant instructs the patient about and assists the patient into these positions, ensuring as much ease and modesty as possible, and helps the patient maintain the position during the examination with as little discomfort as possible. Do not place a patient into a position that is uncomfortable or that compromises the patient’s privacy until it is necessary to complete that part of the examination. Never leave the patient’s side if he or she is in a position that could result in a fall.

Draping the patient with an examination sheet protects the individual from embarrassment and keeps the patient warm. However, the sheet must be positioned so that it allows complete visibility for the examiner and does not interfere with the examination. During the general examination, each part of the body is exposed one portion at a time. For gynecologic and rectal examinations, the sheet is positioned on the diagonal across the patient, or in a diamond shape, to provide maximum comfort for the patient while allowing the physician to perform the examination (Procedure 32-3, Figure 2).

A number of positions are used for medical examinations.

**Fowler’s Position.** In Fowler’s position, the patient sits on the examination table with the head of the table elevated 90 degrees or simply sits at the edge of the table. This position is useful for examinations and treatments of the head, neck, and chest and for patients with orthopnea who have difficulty breathing while lying down. Drape placement varies, depending on the type of physical examination done and the need to maintain the patient’s privacy (Procedure 32-2, Figure 1).

**Semi-Fowler’s Position.** The semi-Fowler’s position is a modification of Fowler’s position. The head of the table is positioned at a 45-degree angle instead of at a full 90-degree angle. This position is useful for postoperative examinations, for patients with breathing disorders, and for patients who have an elevated temperature or are suffering from head trauma or pain (Procedure 32-2, Figure 2). The drape and/or gown should cover the entire patient from the nipple line down.

**Supine (Horizontal Recumbent) Position.** In the supine position, the patient lies flat with the face upward and the lower legs
PROCEDURE 32-2

Prepare the Patient for and Assist with Routine and Specialty Examinations: the Fowler’s and Semi-Fowler’s Positions

GOAL: To position and drape the patient for examinations of the head, neck, and chest or for patients who have difficulty breathing when lying flat.

EQUIPMENT and SUPPLIES
- Examination table
- Table paper
- Patient gown
- Drape
- Spray disinfectant
- Examination gloves

PROCEDURAL STEPS

1. Prepare the examination room according to acceptable medical rules of asepsis.
   PURPOSE: The room must be aseptically clean to prevent the spread of infection.
2. Sanitize your hands.
   PURPOSE: To ensure infection control.
3. Greet and identify the patient, introduce yourself, and determine whether the patient understands the procedure. If the patient does not explain what to expect.
   PURPOSE: To promote the patient’s understanding and cooperation during the examination.
4. Give the patient a gown. Explain the clothing that must be removed for the particular examination being done and whether the gown should open in the front or the back. Provide assistance as needed. Give the patient privacy while changing. Knock on the examination room door before re-entering to make sure the patient has completed undressing and gowning.
5. For Fowler’s position, either elevate the head of the bed 90 degrees or instruct the patient to sit at the end of the table (Figure 1). Extend the foot rest as needed for patient comfort. The patient may be more comfortable in the semi-Fowler’s position. In this modification of Fowler’s position, the head of the table is elevated 45 degrees. The semi-Fowler’s position may be used for postoperative follow-up or for patients with fever, head injury, or pain. It also is a comfortable, supportive position for patients with breathing disorders (Figure 2).
6. Drape the patient according to the type of examination and the required patient exposure.
   PURPOSE: Draping the patient provides warmth and privacy while giving the physician access to the examination site.
7. After the examination has been completed, assist the patient as needed to get off the table and get dressed.
8. Clean and disinfect the examination room according to Standard Precautions. Roll clean paper over the table.
   PURPOSE: To ensure infection control and to prevent the transmission of pathogens from one patient to another.
9. Sanitize your hands.
10. Follow up with the physician’s orders regarding scheduling of diagnostic studies, collection of specimens, and/or scheduling of future appointments.
PROCEDURE 32-3

Prepare the Patient for and Assist with Routine and Specialty Examinations: the Horizontal Recumbent and Dorsal Recumbent Positions

GOAL: To position and drape the patient for examinations of the abdomen, heart, and breasts in the horizontal recumbent (supine) position and the rectal, vaginal, and perineal areas in the dorsal recumbent position.

EQUIPMENT and SUPPLIES
- Examination table
- Table paper
- Patient gown
- Drape
- Spray disinfectant
- Examination gloves

PROCEDURAL STEPS

1. Prepare the examination room according to acceptable medical rules of asepsis.  
   PURPOSE: The room must be aseptically clean to prevent the spread of infection.
2. Sanitize your hands.  
   PURPOSE: To ensure infection control.
3. Greet and identify the patient, introduce yourself, and determine whether the patient understands the procedure. If the patient does not explain what to expect.  
   PURPOSE: To promote the patient's understanding and cooperation during the examination.
4. Give the patient a gown. Explain the clothing that must be removed for the particular examination being done and whether the gown open in the front or the back. Provide assistance as needed. For the horizontal recumbent position, the gown should be open in the front. Give the patient privacy while changing. Knock on the examination room door before re-entering to make sure the patient has completed undressing and gowning.
5. Do not place the patient in these positions until the physician is ready for that part of the examination.  
   PURPOSE: To ensure the patient's privacy, comfort, and modesty.
6. Pull out the table extension that supports the patient's legs. For the horizontal recumbent (supine) position, help the patient lie flat on the table with the face upward (Figure 1). For the dorsal recumbent position, have the patient lie flat on the back and flex the knees so the feet are flat on the table (Figure 2). If needed, help the patient move down toward the foot of the table for the examination.
7. Drape the patient from nipple line to feet in the supine position, and diagonally with the point of the drape between the feet for the dorsal recumbent position.

POURPOSE: Draping the patient provides warmth and privacy while giving the physician access to the examination site.
8. After the examination has been completed, assist the patient as needed to get off the table and get dressed.
9. Clean and disinfect the examination room according to Standard Precautions. Roll clean paper over the table.
   PURPOSE: To ensure infection control and to prevent the transmission of pathogens from one patient to another.
10. Sanitize your hands.
11. Follow up with the physician's orders regarding scheduling of diagnostic studies, collection of specimens, and/or scheduling of future appointments.

FIGURE 1

Dorsal Recumbent Position. In the dorsal recumbent position, the patient lies face upward, with the weight distributed primarily to the surface of the back. This is accomplished by flexing the knees so that the feet are flat on the table. This position relieves muscle tension in the abdomen and may be used for examination.
and/or inspection of the rectal, vaginal, and perineal areas or it may be used if the patient experiences back discomfort when lying supine. This position can be used for digital examinations of the vagina and rectum, but it is not used if an instrument such as a speculum is needed. To ensure the patient's privacy, it is important to keep the patient completely draped, with the drape in a diamond shape, until the physician is present (Procedure 32-3, Figure 2).

**Lithotomy Position.** The patient should not be placed in the lithotomy position until the physician is in the examination room and is ready for this part of the examination. Place the patient on his or her back with the knees sharply flexed and the arms at the sides or folded over the chest; have the patient slide the buttocks down to the bottom edge of the table. Support the feet in stirrups placed wide apart and somewhat away from the table with the stirrup arms extended to match the length of the patient's legs. If the heels are too close to the buttocks, the possibility of leg cramps increases and it is more difficult for the patient to relax the abdominal muscles. Make sure the stirrups are locked in place. Place a drape diagonally over the patient's abdomen and knees. The drape should be large enough to cover the breasts if the patient is not wearing a gown. The drape must also be long enough to cover the knees and touch the ankles and wide enough to prevent the sides of the thighs from being exposed. The physician lifts the drape away from the pubic area when the examination begins (Procedure 32-4, Figure 1). The lithotomy position is used primarily for vaginal examinations that require the use of a speculum and for Pap smears.

**Sims' Position.** Sims' position is sometimes called the lateral position. The patient is placed on the left side; the left arm and shoulder are drawn back behind the body so that the body's weight is predominantly on the chest. The right arm is flexed upward for support. The left leg is slightly flexed, and the buttocks are pulled to the edge of the table. The right leg is sharply flexed upward. The drape extends diagonally from under the arms to below the knees. The physician can raise a small portion of the sheet from the back of the patient to expose the rectum sufficiently. The remaining portion of the sheet covers the patient's chest area and thighs. This position is used for rectal examinations, instillation of rectal medications, and some perineal and pelvic examinations (Procedure 32-5, Figure 1).

**Prone Position.** In the prone position, the patient lies face down on the table on the ventral surface of the body. This is the opposite of the supine position and is another of the recumbent positions. The drape should cover from the middle of the back to below the knees, with the gown opening in the back. On a female patient, the drape should extend high enough to cover the breasts if the patient is to be turned over to the dorsal recumbent position during the examination (Procedure 32-6, Figure 1). This position is used for examinations of the back and for certain surgical procedures.

**Knee-Chest Position.** For the knee-chest position, the patient rests on the knees and the chest with the head turned to one side. The arms can be placed under the head for support and comfort, or they can be bent and placed at the sides of the table near the head. The thighs are perpendicular to the table and slightly separated. The buttocks extend up into the air, and the back should be straight. The patient needs assistance to do the knee-chest position correctly. Most patients have difficulty maintaining this position, so they should not be placed into it until it is required. The medical assistant must remain next to the patient for assistance and support the entire time the knee-chest position is needed. If the correct knee-chest position cannot be obtained, the patient may have to be placed in a knee-elbow position. This position puts less strain on the patient and is easier to maintain. These positions are used for proctologic examinations and sigmoid, rectal, and occasionally vaginal examinations. The patient's gown should open in the back, and a fenestrated (opening) drape or a single sheet should be draped diagonally over the patient's back at the sacral area (Procedure 32-7, Figure 1).

**Trendelenburg’s Position.** Trendelenburg’s position is rarely used in the ambulatory care setting, but it may be needed if a patient has severe hypotension or is going into shock. This position can be achieved only if the examination table separates so that the head can be tilted lower than the legs (Figure 32-7).

### CRITICAL THINKING APPLICATION 32-2
Determine the correct patient position and method of gowning and draping for the following examinations:
- Insertion of a rectal suppository
- Annual Papanicolaou (Pap) smear
- Examination of the back
- Patient with dyspnea
- Breast examination

### PRINCIPLES OF BODY MECHANICS
Proper body mechanics should be used consistently throughout the work environment when sitting or standing, lifting or carrying objects, pushing or pulling, or transferring patients. Without consistent application of correct anatomic alignment, injuries, especially lower back injuries, easily occur.

Proper body alignment begins with good posture. Maintaining posture requires a combination of muscle efforts. Good posture keeps the spine balanced and aligned while a person is sitting or standing. A person in good body alignment can
CHAPTER 32 Assisting with the Primary Physical Examination

PROCEDURE 32-4

Prepare the Patient for and Assist with Routine and Specialty Examinations: the Lithotomy Position

**GOAL:** To position and drape the patient primarily for vaginal and pelvic examinations and Pap smears.

**EQUIPMENT and SUPPLIES**
- Examination table
- Table paper
- Patient gown
- Drape
- Spray disinfectant
- Examination gloves

**PROCEDURAL STEPS**

1. Prepare the examination room according to acceptable medical rules of asepsis.
   **PURPOSE:** The room must be aseptically clean to prevent the spread of infection.
2. Sanitize your hands.
   **PURPOSE:** To ensure infection control.
3. Greet and identify the patient, introduce yourself, and determine whether the patient understands the procedure. If the patient does not, explain what to expect.
   **PURPOSE:** To promote the patient’s understanding and cooperation during the examination.
4. Give the patient a gown. Instruct the patient to undress from the waist down with the gown open in the back. If the physician also will be doing a breast examination, the patient should undress completely and put on the gown so that it opens in the front. Provide assistance as needed. Give the patient privacy while changing. Knock on the examination room door before re-entering to make sure the patient has completed undressing and gowning.
5. Do not place the patient in this position until the physician is ready for that part of the examination.
   **PURPOSE:** To promote the patient’s privacy, comfort, and safety.
6. Pull out the table extension that supports the patient’s legs and help the patient lie face upward on the table. Pull out the stirrups, adjust their extension length for the patient’s comfort, and lock them in place.
7. Reinsert the table extension and have the patient move toward the foot of the table with her buttocks on the bottom table edge. Gently place the patient’s legs in the stirrups, checking for comfort. Some offices may stock cloth or paper stirrup covers to protect the patient and make the position more comfortable. The patient’s arms can be placed alongside the body or across the chest (Figure 1).
8. Drape the patient diagonally with the point of the drape between the feet. The drape should be large enough to cover the patient from the nipple line to the ankles and wide enough so the patient’s thighs are not exposed.
   **PURPOSE:** To provide warmth and privacy for the patient while giving the physician access to the examination site.
9. After the examination has been completed, assist the patient as needed to get off the table and get dressed.
10. Clean and disinfect the examination room according to Standard Precautions. Roll clean paper over the table.
   **PURPOSE:** To ensure infection control and to prevent the transmission of pathogens from one patient to another.
11. Sanitize your hands.
12. Follow up with the physician’s orders regarding scheduling of diagnostic studies, collection of specimens, and/or scheduling of future appointments.

![FIGURE 1](image)

maintain balance without undue strain on the musculoskeletal system.

When reaching for an object, avoid twisting or turning; instead, move the feet to face the object needed. This prevents undue strain on the lumbar region. Do not cross the legs while sitting, because it interferes with circulation to the legs and feet. When sitting, keep the popliteal area (behind the knees) free of the edge of the chair. Pressure in this area interferes with circulation and may damage nerves behind the knees. Do a mental check of your posture regularly. Hold the head erect, the face forward and the chin slightly up, the abdominal muscles con-}

tracted up and n, the shoulders relaxed and back, the feet pointed forward and slightly apart, and the weight evenly distributed to both legs, with the knees slightly bent. Always be on the alert for poor body mechanics that may cause injuries (Figures 32-8 and 32-9).

**Transferring a Patient**

Frequently patients need assistance in moving from a chair to the examination table or back again. Patients can be transferred in multiple ways, but all should focus on correct body mechanics. If the patient is in a wheelchair, move the chair close to the
PROCEDURE 32-5

Prepare the Patient for and Assist with Routine and Specialty Examinations: the Sims’ Position

GOAL: To position and drape the patient for examinations of the rectum, instillation of rectal medications, perineal examinations, and some pelvic examinations.

EQUIPMENT and SUPPLIES

- Examination table
- Patient gown
- Table paper
- Drape
- Spray disinfectant
- Examination gloves

PROCEDURAL STEPS

1. Prepare the examination room according to acceptable medical rules of asepsis. 
   PURPOSE: The room must be aseptically clean to prevent the spread of infection.

2. Sanitize your hands. 
   PURPOSE: To ensure infection control.

3. Greet and identify the patient, introduce yourself, and determine whether the patient understands the procedure. If the patient does not, explain what to expect. 
   PURPOSE: To promote the patient’s understanding and cooperation during the examination.

4. Give the patient a gown and explain the clothing that must be removed for the particular examination being done. Tell the patient the gown should open in the back. Provide assistance as needed. Give the patient privacy while changing. Knock on the examination room door before re-entering to make sure the patient has completed undressing and gowning. 

5. Do not place the patient in this position until the physician is ready for that part of the examination. 
   PURPOSE: To promote the patient’s privacy, comfort, and safety.

6. Help the patient turn onto the left side; the left arm and shoulder should be drawn back behind the body so that the patient is tilted onto the chest. Flex the right arm upward for support, slightly flex the left leg, and sharply flex the right leg upward. Help the patient move the buttocks to the side edge of the table (Figure 1). 

7. Drape the patient diagonally in a diamond shape, with the point of the diamond dropping below the buttocks. Make sure the drape is large enough to prevent exposure of the patient. 
   PURPOSE: Draping the patient provides warmth and privacy while giving the physician access to the examination site.

8. After the examination has been completed, assist the patient as needed to get off the table and get dressed. 

9. Clean and disinfect the examination room according to Standard Precautions. Roll clean paper over the table. 
   PURPOSE: To ensure infection control and prevent the transmission of pathogens from one patient to another.

10. Sanitize your hands.

11. Follow up with the physician’s orders regarding scheduling of diagnostic studies, collection of specimens, and/or scheduling of future appointments.

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FIGURE 1

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examination table, lock the wheels, and lift the foot rests of the wheelchair out of the way (Figure 32-10). Explain the procedure to the patient and ask for his or her assistance.

If one side of the patient is stronger than the other, always provide support on the strong side. Place a step stool in front of the wheelchair next to the side of the examination table. Support the patient close to your body on the strong side, with one hand under the axillary region and the other either grasping the patient’s hand or holding the forearm. When bending, always bend at the knees and maintain the back’s three natural curves, allowing the leg muscles to help in lifting. Give the patient a signal and lift as the patient assists. Anchor the step stool with one foot, and help the patient step up onto the stool with the strong leg, then pivot (Figure 32-11). Ease the patient down onto the table, bending your knees while keeping your back aligned. Make sure the patient is comfortable and safely positioned on the table (Figure 32-12). You may need to remain with the patient until the examination has been completed to ensure the patient’s safety. If the physician prefers that the patient be in a supine position, place one arm across the patient’s shoulders and the other under the knees and smoothly lower the patient’s upper body to the table while raising the legs. Use the same pivoting techniques with proper body mechanics to help transfer the patient from the examination table back to the locked wheelchair. If the patient must hold onto you, have the person hold your waist or shoulders, not your neck.
PROCEDECE 32-6

Prepare the Patient for and Assist with Routine and Specialty Examinations: the Prone Position

**GOAL:** To position and drape the patient for examinations of the back and certain surgical procedures.

**EQUIPMENT and SUPPLIES**
- Examination table
- Patient gown
- Table paper
- Drape
- Spray disinfectant
- Examination gloves

**PROCEDURAL STEPS**

1. Prepare the examination room according to acceptable medical rules of asepsis.
   **PURPOSE:** The room must be aseptically clean to prevent the spread of infection.
2. Sanitize your hands.
   **PURPOSE:** To ensure infection control.
3. Greet and identify the patient, introduce yourself, and determine whether the patient understands the procedure. If the patient does not, explain what to expect.
   **PURPOSE:** To promote the patient's understanding and cooperation during the examination.
4. Give the patient a gown and explain the clothing that must be removed for the particular examination being done. Tell the patient the gown should open in the back. Provide assistance as needed. Give the patient privacy while changing. Knock on the examination room door before re-entering to make sure the patient has completed undressing and gowning.
5. Do not place the patient in this position until the physician is ready for that part of the examination.
   **PURPOSE:** To promote the patient's privacy, comfort, and safety.
6. Pull out the table extension and help the patient lie down on his or her stomach (Figure 1).

7. Drape the patient over any exposed area that is not included in the examination. For female patients, the drape should be large enough to cover from the breasts to the feet so that the patient is not exposed accidentally if she is asked to roll over.
   **PURPOSE:** Draping the patient provides warmth and privacy while giving the physician access to the examination site.
8. After the examination has been completed, assist the patient as needed to get off the table and get dressed.
9. Clean and disinfect the examination room according to Standard Precautions. Roll clean paper over the table.
   **PURPOSE:** To ensure infection control and to prevent the transmission of pathogens from one patient to another.
10. Sanitize your hands.
11. Follow up with the physician's orders regarding scheduling of diagnostic studies, collection of specimens, and/or scheduling of future appointments.

![FIGURE 1](image)

**SAFE LIFTING TECHNIQUES**
- Always get help if the load is too heavy.
- Maintain correct body alignment with the legs spread apart for a broad base of support.
- Do not reach for items. Clear barriers out of the way and get as close as possible to what needs to be lifted.
- Bend at the knees with the feet shoulder width apart and keep the back straight. Use the major muscle groups of the arms and legs to help lift a heavy item rather than the weaker ones of the back (see Figure 32-8).
- When carrying a heavy item, keep the weight as close to the body as possible (see Figure 32-9).

**EXAMINATION SEQUENCE**

The physical examination sequence is fairly standard; however, variations may occur, depending on the physician's specialty, the medical necessity for the examination, and the physician's preference. Patients are more cooperative and less anxious if they understand what is expected of them; therefore, you should start...
PROCEDURE 32-7

Prepare the Patient for and Assist with Routine and Specialty Examinations: the Knee-Chest Position

GOAL: To position and drape the patient for examinations of the back and rectum and for certain surgical procedures.

EQUIPMENT and SUPPLIES
- Examination table
- Table paper
- Patient gown
- Drape
- Spray disinfectant
- Examination gloves

PROCEDURAL STEPS

1. Prepare the examination room according to acceptable medical rules of asepsis.
   PURPOSE: The room must be aseptically clean to prevent the spread of infection.
2. Sanitize your hands.
   PURPOSE: To ensure infection control.
3. Greet and identify the patient, introduce yourself, and determine whether the patient understands the procedure. If the patient does not, explain what to expect.
   PURPOSE: To promote the patient’s understanding and cooperation during the examination.
4. Give the patient a gown and explain the clothing that must be removed for the particular examination being done. Tell the patient that the gown should open in the back. Provide assistance as needed. Give the patient privacy while changing. Knock on the examination room door before re-entering to make sure the patient has completed undressing and gowning.
5. Do not place the patient in this position until the physician is ready for that part of the examination.
   PURPOSE: To promote the patient’s privacy, comfort, and safety.
6. Pull out the table extension if necessary. Help the patient lie down on his or her back and then turn over into the prone position. Ask the patient to move up onto the knees, spread the knees apart, and lean forward onto the head so that the buttocks are raised. Tell the patient to keep the back straight and turn the face to either side. The patient should rest his or her weight on the chest and shoulders (Figure 1).
7. If the patient has difficulty maintaining this position, an alternative is to place weight on bent elbows with the head off of the table.
8. Drape the patient diagonally so that the point of the drape is on the table between the legs.
   PURPOSE: Draping the patient provides warmth and privacy while giving the physician access to the examination site.
9. After the examination has been completed, assist the patient as needed to get off the table and get dressed.
10. Clean and disinfect the examination room according to Standard Precautions. Roll clean paper over the table.
   PURPOSE: To ensure infection control and to prevent the transmission of pathogens from one patient to another.
11. Sanitize your hands.
12. Follow up with the physician’s orders regarding scheduling of diagnostic studies, collection of specimens, and/or scheduling of future appointments.

by giving the patient a brief explanation of the examination process. Assemble all the supplies and instruments needed for the examination before the physician enters the room. As the physician proceeds with the examination, make sure the patient remains unexposed by adjusting the drape and gown as needed. In every examination, the medical assistant assists the physician by handing him or her the correct instruments and supplies needed.

Having a female assistant in the room during the examination of a female patient can help prevent lawsuits. If the physician is male, a female medical assistant must remain with a female patient throughout the examination unless the physician excuses the medical assistant from the room.

When the physician begins the examination, the medical assistant should keep conversation to a minimum and remain inconspicuous. The examination usually starts with the patient seated on the examining table in Fowler’s position. If the physician uses reflected light, the light source should be behind the patient’s right shoulder. If illuminated instruments are used, the standard overhead lights are sufficient. Take care not to shine a light directly into the patient’s eyes; this can be done by turning on lights while they are directed
away from the patient and carefully moving the light toward the area.

**Presenting Appearance (General Appearance)**

The physician starts the physical examination by observing the patient's appearance. Either *presenting appearance* or *general appearance* may be used on the medical record. These terms note whether the patient appears well and in good health (e.g., the patient appears disoriented or in distress; well nourished or undernourished; and answers questions with ease or confusion).

The patient's gait often provides important information. The patient may limp, walk with the feet wide apart, have a shuffle step, or have difficulty maintaining his or her balance. In addition to gait, all the patient's body movements are observed for possible muscle actions the physician deems unusual. Posture also is checked for indications of pain, stiffness, or difficulty with limb movement. If the medical assistant notes any of these observations or the patient reports any complaints, these should be recorded in the patient's medical record with the vital signs before the physician begins the examination.

**Nutrition and Stature**

The medical assistant measures the patient's height and weight before the examination begins, and these are recorded in the patient record along with the BMI. During the examination the physician notes the body build and proportions. Any gross (immediately obvious) deformities are recorded. Sometimes abnormalities in height or body proportion may be caused by hormonal imbalances.
Speech
Speech may reveal a pathologic condition. Some basic speech defects include aphonia, the inability to speak because of a loss of the voice, which is commonly seen with severe laryngitis or overuse of the voice; aphasia, the loss of expression by speech or writing because of an injury or disease of the brain; and dysphasia, a lack of coordination and failure to arrange words in proper order, usually caused by a brain lesion. With motor aphasia, the patient knows what he or she wants to say but cannot use muscles properly to speak, perhaps because of slurred or incoherent speech that might occur after a cerebrovascular accident (CVA). In sensory aphasia, the patient pronounces words easily but uses them inaccurately, as in jumbled speech.

Breath Odors
Breath odors may or may not be diagnostic, although they often are associated with poor oral hygiene or dental care. Acidosis produces a strong odor of acetone, which is sweet and fruity and may result from diabetes mellitus, starvation, or renal disease. A musty odor usually is associated with liver disease, and the odor of ammonia may be noted in cases of uremia.

Skin
The condition of the skin can be a good reflection of the patient’s nutritional status and hydration level. If dehydration is suspected, skin turgor is checked by pinching the skin on the posterior surface of the hands. The tissue is observed to see how quickly it returns to the normal location. A delay indicates a decrease in tissue fluid, confirming the diagnosis of dehydration. Extreme dryness, scaling, extended time for wound healing, or frequent breaks in the skin may indicate systemic disease.

Fingernails and toenails often give some indication of a person’s health. Brittle, grooved, or lined nails may indicate either local infection or systemic disease. Clubbing of the fingertips is
associated with some congenital heart or lung diseases. Spooning of the nail is seen in some patients with severe iron-deficiency anemia. Beau's lines appear after an acute illness but grow out and disappear. The PCP may refer a patient with skin disorders to a dermatologist for diagnosis and treatment.

### Head

Once the physician makes the overall observations of the patient's general condition, the physical examination typically begins with the head and face and moves downward to the feet. The face reflects the patient's state and tells the physician a great deal about how the patient handles stress and illness. The skull, scalp, and face are palpated for size, shape, and symmetry. The distribution or the lack of hair and the hair texture may indicate hormonal changes. Excessive hair, especially facial hair in females, indicates a hormonal imbalance. As the head is palpated, the physician assesses possible nodules, masses, or signs of trauma.

### Eyes

The pupils are checked for reaction by shining a light into one eye at a time. If the pupils constrict equally and smoothly to a light stimulus, the physician documents “PERRLA” (which means the pupils are equal, round, respond to light, and adjust and focus on objects). The sclera is checked for color, which ranges from white to pale yellow. If the eye is inflamed, it will be evident in the sclera. A sclera with a yellow tone indicates liver disease. The movements of the eyes are tested by having the patient follow the physician's finger. If eye movement is within average range, the note “extraocular movement (EOM) intact” is written. The physician uses the ophthalmoscope to examine the interior of the eye, including the retina and the intraocular vessels. Some diseases, such as diabetes mellitus or hypertension, damage the blood vessels of the retina.

### Ears

The ears are examined with an otoscope. The external ear is checked first for inflammation of the external auditory canal or for ear wax (cerumen). The tympanic membrane (eardrum) is examined and should appear pearly gray. Scars on the eardrum frequently are the result of earlier, chronic ear infections or perforations. The color of the eardrum is important to the diagnosis, because it may indicate fluids such as blood or pus behind the eardrum in the middle ear. The patient may be asked to swallow several times to allow observation of movement of the tympanic membrane, which occurs because of pressure changes in the eustachian tube. The eustachian tube equalizes air pressure between the middle ear and the throat. The ability of the tympanic membrane to move is crucial to the hearing process.

### Nose and Sinuses

The mucosa of the nasal cavity is examined for color and texture. The sinuses cannot be seen, but the frontal and maxillary sinuses may be examined by firm palpation over the area and by transillumination. When disorders in the eyes, ears, nose, and throat are observed, and the physician believes that the condition warrants the attention of a specialist, the patient is referred to an ophthalmologist or an otolaryngologist (ear, nose, and throat specialist).

### Mouth and Throat

The mouth, or oral cavity, usually is thought of in terms of oral hygiene and dental care. Dental hygiene includes the condition of the teeth, how the patient cares for the teeth and gums, and whether the teeth of the upper and lower jaws meet properly (occlude) for chewing. Healthy gums are pale pink, glossy, and smooth and do not bleed when pressure from a tongue depressor is applied. The palate tonsils usually are visible. The physician may use a tongue depressor and a piece of gauze to grasp the tongue to examine it carefully. The floor of the mouth is examined by both inspection and palpation for enlarged lymph nodes, salivary gland function, and ulcerations. The inside of the cheeks and the gum line are also examined for any abnormal marks or color.

### Neck

The neck is examined for ROM by having the patient move the head in various directions. The thyroid gland is given special attention for symmetry, size, and texture. The physician manually palpates the thyroid area, and the patient is asked to swallow several times. The carotid artery is palpated and auscultated for possible bruits. The lymph nodes are palpated. Lymphadenopathy (enlargement of the lymph nodes) occurs if the patient has an infection of the face, head, or neck.

### Reflexes

The patient's reflexes are checked with the patient in the high Fowler's and supine positions. While the patient is sitting, the biceps are checked with the patient's arm flexed and supported by the examiner. The knee jerk (patellar reflex) and the ankle jerk (Achilles reflex) are checked using tapetum (a tapping or percussing movement) with either the fingers or the reflex hammer. The plantar reflexes (Babinski and Chaddock reflexes) are tested with the patient in either an upright or supine position.

### Chest

While the patient is still in the sitting position, the chest, heart, and lungs are examined. The chest is examined for symmetric expansion. A tape measure may be used, especially if variation exists between the upper and lower chest expansion. A patient with a history of emphysema may have a barrel-shaped chest. The physician may use percussion to determine the density of lung tissues.

With the stethoscope to the patient's back, the examiner auscultates lung sounds. The patient is asked to take deep, regular breaths. This may produce slight dizziness, but the patient should be assured that it is only the result of the deep respirations and will rapidly pass. The physician notes the types of respirations and the presence of lung sounds in all lobes.

Because considerable concentration is required to interpret heart sounds, the physician must have complete silence when listening to the patient's heart. The heart is examined with a stethoscope from both the anterior and posterior approaches to the patient. Further examination may include auscultation on the left lateral side. In patients with heart disease, the physician may spend an extended period of time listening to heart sounds. If chest or heart abnormalities are found, the physician typically
orders further diagnostic tests, including blood analysis, x-ray evaluation, and an ECG. Once the results of these studies have been analyzed, the physician may refer the patient to a cardiologist for treatment of a heart condition or a pneumologist or respiratory care specialist for treatment of a breathing disorder.

Abdomen

For the abdominal part of the examination, the patient is lowered to the dorsal recumbent position and the drape is lowered to the pubic hair line. The gown is raised to just under the breasts. The physician stands to the patient's right side if at all possible. The patient's arms may be placed at the side, or the hands may be crossed over the chest or under the head. Relaxation of the abdominal muscles is absolutely essential for the abdominal examination. To assist in this and to promote patient comfort, a small pillow can be placed under the head and knees. The physician auscultates the abdomen in all quadrants to confirm the presence of complete bowel sounds and palpates the abdomen for any abnormalities. The physician also may use percussion to determine the density, position, and size of underlying abdominal organs.

Breast and Testicles

A careful breast examination is part of the physical examination for every female, regardless of whether she is symptomatic. The breasts are examined both visually and by palpation with the patient in a high Fowler's position and then again in the supine position. Breast cancer is the most common malignancy in women, and early detection is the key to successful treatment. This is a good opportunity to discuss and reinforce the consistent use of monthly self-breast examination (SBE) (the technique is presented in Chapter 41). For male patients who have reached puberty or are 15 years of age or older the physician will perform a testicular examination. This is an important self-examination for all males to perform each month, because testicular carcinoma is a major health risk (the technique is presented in Chapter 40).

Rectum

The rectal examination usually follows the abdominal examination or may be part of the examination of the male or female genitalia. Preserving the patient's comfort and dignity are vital. For this part of the examination, the physician needs examination gloves and lubricating jelly. The examination light should be directed at the perineal area during the examination.

Hemoccult test specimens are often collected at the time of the digital rectal examination. If this is a procedure the physician performs, be sure to include the necessary collection folder with the examination equipment. Patients diagnosed with gastrointestinal (GI) disorders may be referred to a gastroenterologist (see Chapter 39). Procedure 32-8 presents the steps for assisting with the physical examination.

Role of the Medical Assistant

The physical examination establishes a baseline from which a patient's healthcare needs are determined. The examination should never be considered routine. Each patient's needs are special, and the medical assistant must be prepared to assist when needed. Throughout the procedure the medical assistant must treat the patient with respect and guard the individual's privacy as much as possible.

The primary role of the medical assistant is to have the room, equipment, and supplies stocked and ready; the patient prepared, with vital signs, height, weight, and BMI measured and recorded; documentation completed regarding the patient's chief complaint or reported data; and the patient properly gowned and in position for the examination. During the examination the medical assistant should be prepared to hand the physician needed equipment or to assist in any other way necessary. After the examination has been completed, the medical assistant should assist the patient as needed; complete any diagnostic procedures ordered by the physician; assist in the patient's discharge; answer the patient's questions or complete patient education; and disinfect and restock the room in preparation for the next patient.

Critical Thinking Application 32-3

Alice Greenbaum, a 68-year-old patient of Dr. Kost, is scheduled for an annual physical examination, including a breast check and Pap smear. Mrs. Greenbaum appears anxious about the examination and asks Felicia whether the gynecologic examination is necessary. How should Felicia answer this patient? What might be helpful in easing the patient's fears and preparing her for the examination?

Closing Comments

Patient Education

The physical examination process is an excellent time for the medical assistant to assess the need for patient education. This assessment should be performed to identify the best way to meet the patient's needs. When identifying these needs, consider the following:

- The information the patient needs to know
- How to convey the information so that the patient understands it
- How the patient will use the information
- Whether any community resources are available that might help the patient understand and learn more about health problems or treatment protocols

Develop a plan to teach the patient. Think about the different modalities available, such as pamphlets, pictures, DVDs, demonstrations, and community resources. The more interesting the information, the more fun it is to teach the patient and the more enjoyment the patient will get out of learning. Many facilities keep patient education files that contain handouts on a wide range of health issues. The medical assistant should always review teaching plans with the physician and follow the physician's direction in patient education.
PROCEDURE 32-8

Prepare the Patient for and Assist with Routine and Specialty Examinations: the Physical Examination

**GOAL:** To aid the physician in the examination of a patient by preparing the patient and the necessary equipment and ensuring the patient's safety and comfort during the examination.

**EQUIPMENT and SUPPLIES**

- Sphygmomanometer
- Patient gown
- Suction device
- Patient charts
- Blood pressure cuff
- Penlight
- Scale with height measurement bar
- Nasal speculum
- Tuning fork
- Tongue depressor
- Biohazard container
- Cotton balls
- Examination light
- Laboratory request form
- Percussion hammer
- Specimen bottles and laboratory requisitions
- Lubricating gel
- Examination gloves
- Patient gown
- Ophthalmoscope
- Drapes
- Otoscope with disposable speculum
- Thermometer
- Cotton-tipped applicators
- Tape measure
- Hemocult supplies
- Spray disinfectant
- Table paper
- Obtain a resting electrocardiogram (ECG) if ordered (see Chapter 49).

**PURPOSE:** To obtain all specimens and perform all tests as ordered by the physician before the physical examination.

8. Hand the patient a gown and drape. Instruct the patient about clothes that should be removed for the examination and whether the gown should open in the front or back. Help the patient with undressing as needed (most patients prefer to undress in privacy). Knock on the door before re-entering the room to protect the patient's privacy.

**PURPOSE:** To assist the patient in preparing for the examination and to safeguard the patient’s privacy, comfort, and safety.

9. Assist the patient as needed in sitting at the foot of the examination table; place the drape over the patient’s lap and legs. If the patient is elderly, confused, or feeling faint or dizzy do not leave him or her alone.

**PURPOSE:** To provide for the patient’s warmth and privacy and to prevent a fall or injury.

10. Place the patient’s medical record in the designated area or inform the physician that the patient is ready. Be careful to place information showing the person’s identity out of sight to protect the patient’s privacy.

11. Assist during the examination by handing the physician each instrument as it is needed and by positioning and draping the patient.

12. When the physician has completed the examination, allow the patient to rest for a moment, then help the patient from the table. Assist with dressing, if necessary. Use proper body mechanics if assistance in transfer is needed.

**PURPOSE:** To ensure the patient’s stability and safety and to protect yourself from injury.

13. Return to the patient and ask whether he or she has any questions. Give the patient any final instructions, and schedule tests as ordered by the physician and/or the next appointment.

**PURPOSE:** To clarify instructions, eliminate any misunderstandings, and allow the patient to discuss any concerns. If the patient’s misunderstandings or concerns are beyond your scope of experience or skill, arrange for the physician to speak with the patient again.

14. Put on gloves and dispose of used supplies and linens in designated biohazard waste containers. Clean surfaces with disinfectant. Disinfect all equipment.

**PURPOSE:** To prevent cross-contamination with any potential infectious materials.

15. Remove the gloves, discard them in the biohazard waste container, and sanitize your hands.

**PURPOSE:** To ensure infection control.

16. Replace used supplies and prepare the room for the next patient.
Legal and Ethical Issues

The medical assistant must recognize that a legal and ethical contract exists between the patient and the physician. As the physician’s employee, the medical assistant is part of that contract. Information gained during the physical examination is confidential and must remain that way. The medical assistant must uphold ethical responsibilities as written in the Code of Ethics of the American Association of Medical Assistants (AAMA): to render service, respect confidential information, and uphold the honor and high principles of the profession.

SUMMARY OF SCENARIO

As a new medical assistant, Felicia has a great deal of responsibility when it comes to assisting with physical examinations. She must prepare the room for the particular examination ordered and prepare and care for the patient during the procedure. Preparing the room includes making sure appropriate supplies and equipment are readily available and planning for the patient’s privacy during the examination. Each examination is different, just as each patient has his or her own set of needs. Felicia helps the patient into a variety of positions, depending on the examination, and properly gowns and drapes the patient to safeguard privacy. Felicia is responsible for making sure the examination runs smoothly for the physician and for supporting the patient throughout the process. To protect herself against injury, Felicia uses proper posture and body alignment, remembering to bend at the knees and use her arm and leg muscles, rather than her back, to lift heavy items.

She always asks for help if a load is too heavy, and she pushes a heavy item rather than lifting it.

SUMMARY OF LEARNING OBJECTIVES

1. Define, spell, and pronounce the terms listed in the vocabulary. Spelling and pronouncing medical terms correctly bolster the medical assistant’s credibility. Knowing the definitions of these terms promotes confidence in communication with patients and co-workers.

2. Apply critical thinking skills in performing the patient assessment and patient care. Completing the Critical Thinking Application exercises throughout the chapter can help the student medical assistant become more adept at critical analysis of real-life situations.

3. Describe the structural development of the human body. The human body is made up of trillions of microscopic cells that determine the functional and structural characteristics of the entire body. A cell is made up of three primary parts: the plasma membrane, the cytoplasm, and the nucleus. When cells with similar structures and functions combine, tissues are formed. The body has four types of tissue: epithelial, connective, muscular, and nervous tissue. A combination of two or more types of tissues creates an organ, and a number of organs joined together form a body system.

4. Differentiate among the functions of the 11 body systems and the major organs and structures of each system.

A body system is composed of several organs and their associated structures. These structures work together to perform a specific function in the body. Each of the body’s 11 systems has specific units within it, and each performs specific functions. Table 32-1 summarizes the body systems, their primary cells, organs, and structures, and the major functions of each.

5. Outline the medical assistant’s role in preparing for the physical examination. Before the examination, the medical assistant has the opportunity to interact with the patient to ensure that he or she feels comfortable during the examination process and that all the necessary medical information has been obtained. The medical assistant’s duties include preparing and maintaining the examination room and equipment; preparing the patient by conducting the initial interview and measuring vital signs; assisting the physician with positioning and draping; and providing instruments and supplies as needed during the physical examination.

6. Summarize the instruments and equipment the physician typically uses during a physical examination. Instruments and supplies typically used in a physical examination include a nasal speculum, ophthalmoscope, otoscope, tongue depressor, reflex
hammer, various tuning forks, stethoscope, sphymomanometer, thermometer, examination gloves, tape measure, scale, examination light, disposable gloves, biohazard container, specimen bottles, laboratory requisitions, hemocult test supplies, patient gown, drapes, and lubricating gel.

7. Describe the six methods of examination and give an example of each.
   The examiner uses observation to detect significant physical features, such as the patient's general appearance. With palpation, the sense of touch is used to feel the brachial pulse before a blood pressure reading is taken. Percussion involves tapping or striking the body to elicit sounds or vibratory sensations, such as in percussion of the chest to detect fluid in the lungs. A stethoscope is used to auscultate or listen to the lungs and heart. Manuʃuration is the process of measuring the patient's height and weight. Manipulation is the passive, assisted movement of a joint to determine the range of extension or flexion.

8. Outline the basic principles of properly gowning and dраЬing a patient for examination.
   The patient should be instructed on whether to wear the gown open in the front or open in the back, depending on the type of examination to be done. Dropping requires constant attention to maintaining the patient's privacy throughout the examination while assisting the physician with exposure of the area being examined. The general rule is to cover all exposed body parts until the patient is in the examination when the physician must evaluate that particular area.

9. Name the various positions that may be used during an examination and identify the purpose of each.
   The position assumed by the patient during the examination depends on the part of the body to be examined or the procedure to be done. Possible patient positions include the sitting positions of Fowler's position, in which the patient sits straight up, and semi-Fowler's position, in which the patient's torso is elevated 45 degrees; the dorsal recumbent position, in which the patient lies on the back with the legs bent; the supine position, in which the patient lies flat on the back; the lithotomy position, in which the patient's buttocks are at the bottom of the table and the legs are positioned in stirrups; the prone position, in which the patient lies on the stomach; the Sims' position, in which the patient lies on the left side with the limbs flexed so that the weight of the body is tilted forward; and the knee-chest position, in which the patient is on the knees with the buttocks elevated and the weight of the body tilted downward toward the chest (see Procedures 32-2 through 32-7). Trendelenburg's position, in which the patient's head is lower than the legs, is not typically used in the ambulatory care setting.

10. Position and dраЬ a patient in six different examining positions while remaining mindful of the patient's privacy and comfort.
    Procedures 32-2 through 32-7 outline the steps for positioning and draping patients.

11. Demonstrate proper body mechanics in transferring a patient from a chair to the examination table and back.
    Good body mechanics principles include maintaining balanced posture, bending the knees while maintaining the back's three natural curves, and using leg muscles to help lift. Move the wheelchair close to the examination table, lock the wheels, and lift the foot rests of the wheel-

   chair out of the way. Provide patient support close to your body on the patient's strong side. Place a step stool in front of the wheelchair next to the side of the examination table, and with one hand under the axillary region and the other grasping the patient, anchor the step stool with one foot and help the patient step up onto the stool with the strong leg; then help the patient pivot into a sitting position on the table.

12. Outline the sequence of a routine physical examination.
    The examination sequence depends on the type of examination and the physician's preference. The physician typically begins the examination by noting the patient's general health appearance, nutrition status, speech, breath odor, skin condition, and reflexes. The physician then begins the physical examination, starting at the head and working down through the body to the rectum. Any abnormalities are noted and may be further investigated with diagnostic tools after the examination has been completed.

13. Prepare for and assist in the physical examination of a patient, correctly completing each step of the procedure in the proper sequence.
    Prepare the examination room and the patient; complete the initial patient interview and measure and record vital signs; gather the needed equipment and place it in the order of use; gown and drape the patient as needed; provide patient instruction and check for understanding throughout the process; assist during the examination by handling the physician's instruments, managing changes in light, collecting samples as ordered, and conducting diagnostic procedures as ordered; assist the patient when the examination is done, including helping the patient dress, scheduling further diagnostic tests as ordered, and answering the patient's questions. Complete the documentation, disinfect the examination room and equipment, and restock supplies to ready the room for the next patient (see Procedure 32-8).

14. Summarize the role of the medical assistant in the physical examination process.
    The medical assistant must pay attention to the patient's needs and assist the physician with the procedure. This includes preparing the room and supplies, preparing the patient, documenting pertinent patient information, and assisting the physician throughout the process. After the examination has been completed, the medical assistant should help the patient as needed, complete diagnostic procedures as ordered, and respond to the examination room for the next patient.

15. Determine the role of patient education during the physical examination.
    Before, during, and after the physical examination are excellent times to provide appropriate patient education. The medical assistant should clarify or reinforce any information provided by the physician and should take advantage of "teaching moments" to promote patient well-being.

16. Discuss the legal and ethical implications of the physical examination.
    The medical assistant is part of the legal contract established between the patient and physician. This contract begins at the time of the first visit to the ambulatory care facility. Maintaining confidentiality and providing respectful service are crucial to the integrity of that patient contract.
CONNECTIONS

Study Guide Connection: Go to the Chapter 32 Study Guide. Read and complete the activities.

Evolve Connection: Go to the Chapter 32 link at evolve.elsevier.com/kinn to complete the Chapter Review and Chapter Quiz. Pursue other resources listed for this chapter to increase your knowledge of Assisting with the Primary Physical Examination.