BASIC PATIENT CARE PROCEDURES

SUBCOURSE MD0556 EDITION 100
DEVELOPMENT

This subcourse is approved for resident and correspondence course instruction. It reflects the current thought of the Academy of Health Sciences and conforms to printed Department of the Army doctrine as closely as currently possible. Development and progress render such doctrine continuously subject to change.

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CLARIFICATION OF TRAINING LITERATURE TERMINOLOGY

When used in this publication, words such as "he," "him," "his," and "men" are intended to include both the masculine and feminine genders, unless specifically stated otherwise or when obvious in context.
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INTRODUCTION

The medical soldier caring for patients provides a valuable service to his comrades. He must meet high standards with integrity, dignity, calm thinking, and careful study. The purpose of this subcourse is to provide you with a working knowledge of the procedures discussed herein; however, you must receive guidance and hands-on supervision to become proficient at the procedures described.

Subcourse Components:

The subcourse instructional material consists of the following:

- Lesson 1, Hygiene and Care of the Patient.
- Lesson 2, Positioning the Patient.
- Lesson 3, Caring for the Patient’s Environment.
- Lesson 4, Specimen Collection
- Lesson 5, Handwashing Procedures

Study Suggestions:

Here are some suggestions that may be helpful to you in completing this subcourse:

--Read and study each lesson carefully.
--Complete the subcourse lesson by lesson. After completing each lesson, work the exercises at the end of the lesson, marking your answers in this booklet.

--After completing each set of lesson exercises, compare your answers with those on the solution sheet that follows the exercises. If you have answered an exercise incorrectly, check the reference cited after the answer on the solution sheet to determine why your response was not the correct one.

Credit Awarded:

To receive credit hours, you must be officially enrolled and complete an examination furnished by the Nonresident Instruction Branch at Fort Sam Houston, Texas. Upon successful completion of the examination for this subcourse, you will be awarded 10 credit hours.
You can enroll by going to the web site http://atrrs.army.mil and enrolling under "Self Development" (School Code 555).

A listing of correspondence courses and subcourses available through the Nonresident Instruction Section is found in Chapter 4 of DA Pamphlet 350-59, Army Correspondence Course Program Catalog. The DA PAM is available at the following website:  http://www.usapa.army.mil/pdffiles/p350-59.pdf.
LESSON ASSIGNMENT

LESSON 1
Hygiene and Care of the Patient.

TEXT ASSIGNMENT
Paragraph 1-1 through 1-18.

LESSON OBJECTIVES
When you have completed this lesson, you should be able to:

1-1. Identify the composition and importance of hygiene and care.

1-2. Given a patient's condition, identify the procedure for administering the appropriate therapeutic bath.

1-3. Identify the procedures for administering a bed bath/partial bath.

1-4. Identify the procedures for administering a towel bath.

1-5. Identify the procedures for assisting a patient to take a tub bath.

1-6. Identify the procedures for administering a tepid sponge bath.

1-7. Identify the purpose and the procedures used to care for the hands and feet.

1-8. Identify the purpose and the procedure used to care for the patient's eyes, ears, and nose.

1-9. Identify the procedures for performing catheter care with a patient with an indwelling catheter.

1-10. Identify the procedures for administering a backrub to a patient.

1-11. Identify the purposes and the procedures for administering oral hygiene.
1-12. Identify the purpose and the procedure for administering routine mouth care.

1-13. Identify the procedures for denture care.

1-14. Identify the procedures for administering special mouth care.

1-15. Identify the procedures for a patient with hair and the necessary equipment, provide care of the patient's hair.

1-16. Identify the proper procedures for administering urinal and bed pan assistance.

**SUGGESTION**

Work the lesson exercises at the end of this lesson before beginning the next lesson. These exercises will help you accomplish the lesson objectives.
LESSON 1
HYGIENE AND CARE OF THE PATIENT

1-1. OVERVIEW

   a. Administering Hygiene. Hygiene includes care of the skin, along with the hair, hands, feet, eyes, ears, nose, mouth, back, and perineum. This includes the bath, components of the bath, bed making, and assisting the patient in the use of the bed pan, urinal, and bedside commode.

   b. Importance of Hygiene and Care. The bath stimulates circulation in the skin and underlying tissues; it cleans and refreshes, promoting health and comfort; it provides some exercise for the patient; and similar to the opportunities available in making the occupied patient's bed, it provides excellent opportunities for observation of the patient's physical and emotional condition and for patient-centered conversation to promote good interpersonal relationships.

1-2. ADMINISTERING A SPECIAL (THERAPEUTIC) BATH

   a. Sitz Bath. The sitz bath cleanses and aids in reducing inflammation of the perineal and anal areas. It is for patients who have undergone rectal or vaginal surgery or childbirth. The sitz bath also relieves discomfort from hemorrhoids or fissures. Two kinds of sitz baths are shown in figures 1-1 and figure 1-2. Water temperature should be maintained at 110°F (about 43°C). The sitz bath should last from 20 to 30 minutes.

   Figure 1-1. Built-in sitz bath.
b. **Cool Water Tub Bath.** The cool water bath is given to relieve tension or lower the body temperature. Care must be taken to prevent the patient from chilling. The water temperature is tepid, not cold (98.6°F (37°C)).

c. **Warm Water Tub Bath.** The warm water bath is primarily to reduce muscle tension. Recommended water temperature is 109.4°F (43°C).

d. **Hot Water Tub Bath.** The hot water tub bath is given to assist in relieving muscle soreness and muscle spasm. The procedure is not recommended for children. For adults, the water temperature should be 113° to 115°F (45° to 46°C).

### 1-3. ADMINISTERING A BED BATH/PARTIAL BATH

a. **General.** When a patient is either confined to bed, must conserve energy, or is helpless, the medical specialist may give the entire bath; however, the patient should do as much for himself as his conditions permit. All necessary equipment is provided and the areas the patient cannot reach are bathed for him. Each bed patient should have his back bathed and rubbed for him.

b. **Important Points.**

(1) Sometimes a complete bath is too exhausting for a patient. Therefore, a partial bath may be given to include the face, hands, axilla (region under the arms), genitalia, back, and buttocks.

(2) The patient's position during the bath is determined by his physical conditions and his movement abilities. Unless contraindicated (undesirable or prohibited), the bed is level and movement and position change is encouraged. The specialist is encouraged to use good body mechanics and to request assistance when necessary when moving and positioning a patient.
(3) While washing individual areas, the skin should be checked thoroughly for breakdown. During washing, range of motion should be done.

(4) When supporting binders and leg bandages are used, the specialist finds out in advance if they can be removed for skin cleansing, and if they are to be reapplied. The patient receiving a bed bath will often have tubing attachments that must be handled so that they continue to function as he is moved and turned. All tubing must be carefully checked before and immediately after position changes.

(5) Avoid chilling and unnecessarily exposing the patient. Provide for privacy with the compartment curtain or screen.

(6) Change bath water when it becomes cold, dirty, or excessively soapy.

(7) Do not place soap in bath water. Too much suds will prevent adequate rinsing.

(8) Patients with diabetes mellitus will require special foot care.

(9) Expose only those body parts being bathed (figure 1-3).

(10) Don gloves if danger of contact with body fluids exist.

(11) Maintain a neat, clean work area.

Figure 1-3. Bed bath/partial bath.
c. **Procedure.**

(1) Check the physician’s orders.

(2) Visit the patient; introduce yourself and inform him of the procedure. Offer him a bedpan, urinal, or use of bathroom.

(3) Check for the required personal toilet articles and clean linen available in the unit. Clear the top of his bedside cabinet and place the cabinet and chair for optimum workspace. Adjust the room temperature and provide privacy.

(4) Prepare supplies and equipment. The following materials should be assembled:

   (a) Washbasin and water (110-115°F).
   (b) Hygiene articles, such as lotion, powder, and deodorant.
   (c) Pajamas or gown.
   (d) Linen as necessary.
   (e) Portable screen as necessary.
   (f) Laundry bag or hamper.
   (g) Soap and soap dish.
   (h) Bath towels (2).
   (i) Washcloths (2).
   (j) Nail file and comb.
   (k) Disposable gloves.

(5) Wash your hands.

(6) Place bath equipment on the cabinet. Place clean linen on the chair in order of use.

(7) Loosen top covers at the foot of the bed. Fold and remove spread and blanket. Leave top sheet for cover.
(8) Lower side rail, position patient on near side of bed, and raise bed to working level.

(9) Loosen top linens from the foot of the bed; place bath blankets over the top linens. Ask patient to hold bath blankets while you remove top linens. If patient is unable, you will have to hold bath blanket in place while removing linens.

(10) Remove the pillow and raise the head of the bed to semi-Fowler's position if patient can tolerate it. Place it at the back of the chair (hang the pillow case to receive soiled linen, if laundry hamper is not readily available). Do not permit soiled laundry to touch your uniform.

(11) Assist the patient with oral hygiene. If the patient is unable, you should perform procedures in paragraphs 1-11 through 1-14.

(12) Remove the patient's gown/pajamas, all undergarments, and jewelry.

   (a) If the patient has an injured arm or shoulder, start removing the coat from the uninjured side. When only limited movement is permitted, the pajama coat is worn back to front, and left unfastened.

   (b) To remove the coat, unbutton and tuck the excess material under the back toward the far shoulder. Raise the far shoulder, remove the sleeve, and tuck the coat under the near shoulder. Raise the near shoulder and pull the coat through, removing it from the near arm.

   (c) To remove the pants, loosen the waist tie, unbutton, and pull the pants below the hips while keeping the patient covered with the sheet. Grasping the waist portion, ease the pants off over the feet.

(13) Wash the patient's eyes and face.

   (a) Place the bath towel under the patient's head and the hand towel over his chest. Form a mitt with the bath cloth around hand; ends of bath cloth should not dangle (fig. 1-4). Dip mitt and hand into bath water. Squeeze out excess water.

   (b) Bathe the eyelids, using a different portion of the cloth for each eye. Cleanse from inner to outer canthus (corner of eye), as in figure 1-5. Dry thoroughly.

   (c) Apply soap to the cloth, unless soap is not to be used on the patient's face. Do not leave soap in water. Rinse bath cloth. Using firm, gentle strokes, wash the face to the hairline. Wash the ears and neck. Use cotton-tipped applicators to cleanse pinna of ear.
(14) Wash the upper limb.

(a) Remove the bath towel from under the patient's head. Expose the arm farthest from you. Place the bath towel lengthwise under his shoulder and arm.

(b) Wash the arm, using long firm strokes from the wrist to the shoulder. Wash the armpit thoroughly. Rinse and dry. Apply deodorant if applicable.

(c) Fold the towel in half. Place basin on folded towel on the bed; immerse patient's hand in the water. Wash hands and nails while encouraging finger movements. Clean and trim the fingernails as needed.

(d) Remove basin and dry the hand.

(e) Repeat the procedure on the near arm and hand.
(15) Wash the chest and abdomen.

(a) Cover the patient's chest with bath towel; fold bath blanket down to waist; and wash the chest with a circular motion. Be sure to cleanse and dry under breast and skin folds very well.

(b) Fold bath blanket down to pubic area, keeping chest covered with dry towel. Wash abdomen including umbilicus (using cotton-tipped applicators) and skin folds. Dry thoroughly.

(c) Raise side rail; empty basin into hopper or stool. Rinse basin and wash cloth. Refill basin 2/3 full with water at 110º to 115ºF (43º to 46ºC).

(16) Wash the lower limb.

(a) Expose the far leg, draping the sheet securely into the groin and under the thigh. Check to see that genitalia are not exposed when the leg is flexed.

(b) Wash, rinse, and dry the thigh and leg.

(c) Place the basin on a towel on the bed so that the patient's foot can be immersed in the basin with no pressure on the calf of the leg. Wash the foot, paying particular attention to the skin between the toes, at the heels, and at the ankles. Encourage toe and ankle movement. Trim and clean toenails if necessary.

(d) Support the leg at the knee and heel when moving his foot from the basin. Place the basin on the table. Dry the foot thoroughly, rubbing any calloused area with a towel to remove dead skin. Apply lotion to the foot and ankle, massaging the heel in circular motion with the palm of your hand.

(e) Repeat the procedure on the near thigh, leg, and foot.

(f) Change the bath water and rinse the washcloth thoroughly.

(17) Wash the back and buttocks.

(a) Turn the patient to wash his back and buttocks. His position may be prone (on the abdomen) or lateral recumbent (on the side), but the entire back and buttocks should be exposed.

(b) Place the towel close to the back and lengthwise on the bed.

(c) Bathe, rinse, and dry the back from the neck to the sacrum (region in back of pelvis). Pay particular attention to the folds of the buttocks and anal areas.
(d) Rub the back with lotion. Use firm, gentle, circular movements, starting at the base of the spine and rubbing with the heel of both hands, up and out, and over the shoulders. Finish with circular movements at the upper spine and nape of the neck.

(18) Wash the genitalia area.

(a) Turn the patient on his back, to the near side of the bed, and place the towel under his hips.

(b) Hand the patient the prepared washcloth and assist in washing the pubic area and genitalia as necessary. There should be minimal exposure but thorough washing, rinsing, and drying.

NOTE: If the patient has an indwelling catheter, the entire procedure should be done for him.

(19) Put pajamas on the patient.

(a) Replace the coat. If the patient has an injured arm or shoulder, start replacing the coat from the injured side. Slip your hand through the sleeve cuff to his shoulder and grasp the patient's hand. Draw his hand and arm through the sleeve. Now tuck the material under to his other shoulder on the injured side and guide his hand and arm through the sleeve.

(b) To replace the pants, slip your hand through the pant leg from the cuff to the waist and grasp the patient's feet to guide each leg through its pant leg. Raise the patient's buttocks and pull the pants over his hips to the waist. Fasten the buttons and tie at the waist.

(20) Comb the patient's hair.

(21) Remove the bath equipment to the utility room; clean and store it.

(22) Remake the bed. If possible, assist the patient to a chair or stretcher and make the bed as in Lesson 3, paragraph 3-4. If the patient must remain in bed, make it as discussed in Lesson 3, paragraph 3-5.

1-4. ADMINISTERING A TOWEL BATH

a. General. When a patient, confined to bed, has casts and/or special dressing, the medical specialist may be required to give a towel bath. The towel bath prevents contamination of special dressing or cast. It also will comfort and encourage relaxation.
b. **Important Points.** Bathing the patient following the proper procedure will promote an effective towel bath, provide warmth, keep the bed dry, and avoid causing the patient to chill.

c. **Procedure.**

   (1) Check the physician’s orders. Confer with the nurse in charge to determine need for towel bath.

   (2) Explain the procedure to the patient.

   (3) Adjust the room temperature, and provide privacy.

   (4) The following supplies and equipment should be assembled:

      (a) Concentrate and/or solution Septi-Soft®.

      (b) Measuring device, such as liter-calibrated device or plastic medication cup.

      (c) Towel (3 ft x 7 1/2 ft).

      (d) Large plastic bag.

      (e) Bath towel.

      (f) Washcloths (2).

      (g) Bath blankets (2 or 3).

      (h) Disposable gloves.

      (i) Linens for bedmaking.

      (j) Articles for personal hygiene (comb, toothbrush, lotion, toothpaste, mouthwash).

   (5) Prepare the patient for a towel bath.

      (a) Remove patient’s clothing and excess bedding (top linens, bed spread). Place the patient on the bath blanket and cover the patient with the blanket.

      (b) Cover the areas that should not be wet (surgical dressings, casts) with plastic.
(c) Fan fold the clean bath blanket at foot of the bed.

(d) Arrange the patient to the supine position.

(6) Prepare the towel for bathing the patient (figure 1-6).

![Figure 1-6. Prepare a towel.](image)

(a) Fold towel in half, top to bottom; fold in half again, top to bottom; now half again, side to side. Then roll towel with bath towel and washcloth inside, beginning with folded edge.

(b) Place rolled up towel (with bath towel and washcloths inside) in plastic bag with salvage edges toward open end of bag.

(c) Draw 2000 ml of water at 115º to 120ºF into plastic pitcher. Measure 30 ml of concentrate or 90 ml of solution. (If using dispenser with a pump, a single stroke measures 30 ml.) Mix 2000 ml of water and Septi-Soft®.

(d) Pour mixture over towel inside plastic bag.

(e) Knead the solution quickly into towel, position plastic bag with open end in sink, and squeeze out excess water, giving added wringing twists to salvage edges of towel.

(7) Bathe patient (figure 1-7).

![Figure 1-7. Bathe the patient.](image)
(a) Fold bath blanket down to waist. Remove warm, moist towel from plastic bag and place on patient's right or left chest with open edges up and outward. Unroll towel across chest.

(b) Open towel to cover entire body while removing top bath blanket. Tuck towel in and around body (leave bath towel and washcloths in plastic bag to keep warm).

(c) Begin bathing at feet, using gentle, massaging motion. Employ clean section of towel for each part of body as you move toward patient's head.

(d) Fold lower part of towel upward away from feet as bathing continues.

(e) Put clean bath blanket up over patient as you move upward. Leave 3 inches of exposed skin between towel and bath blanket. Skin will dry in 2 or 3 seconds.

(f) Wash face, neck, and ears with one of prepared washcloths.

(g) Turn patient onto side.

(h) Use bath towel for back care.

(i) Use second washcloth for perineal care (don disposable gloves).

(j) When bath is completed, remove towel and place with soiled linens in plastic laundry bag.

(k) If top bath blanket is not soiled, fold and use later.

1-5. ASSISTING A PATIENT TO TAKE A TUB BATH

a. General. A patient who is not confined to bed and is not helpless will, in some cases, be recommended to have a tub bath. All necessary supplies and equipment is provided by the medical specialist. Any assistance in getting in and out of bed, getting in and out of the tub, and/or reaching areas of the body while bathing will be rendered by the specialist.

b. Important Points.

(1) Provide safety measures to prevent slipping, tripping, or falling.

(2) Maintain privacy.

(3) Encourage performance.
c. **Procedure.**

(1) Determine if activity is allowed. Consult with registered nurse (RN) in charge and check physician's orders.

(2) Make certain tub or shower appliance is clean. Check local standard operating procedure (SOP). Place nonskid mat on tub or shower floor and disposable mat outside of tub or shower.

(3) Gather all items necessary for bathing:
   
   (a) Towel.
   
   (b) Washcloth.
   
   (c) Soap.
   
   (d) Deodorant.
   
   (e) Lotion.
   
   (f) Clean gown.

(4) Assist patient to tub or shower. Be certain patient wears robe and slippers.

(5) Instruct patient on how to use call signal and place "in use" sign on tub or shower door if private bath is not being used.

(6) If tub is used, fill with warm water (109°F (43°C). Have patient test water; adjust temperature if needed. Instruct patient on use of faucets--which is hot and which is cold. If shower is used, turn water on and adjust temperature.

(7) Caution patient to use safety bars. Discourage the use of bath oil in water. Check on patient every 5 minutes. Do not allow the patient to remain in tub more than 20 minutes.

(8) Return to room when patient signals. Knock before entering.

(9) Assist patient out of tub and with drying. If patient complains of weakness, vertigo, or syncope, drain tub before patient gets out and place towel over patient's shoulder.

(10) Assist patient into clean gown, robe, and slippers. Accompany to room and position for comfort in either chair or bed.
(11) Make unoccupied bed if patient can tolerate sitting in chair. Perform back, hair, nail, and skin care.

(12) Return to shower or tub. Clean according to SOP. Place all soiled linens in laundry bag and return all articles to patient's bedside.

(13) Wash hands.

1-6. ADMINISTERING A TEPID SPONGE BATH FOR TEMPERATURE REDUCTION

a. General. A patient whose temperature reaches 102.2°F will usually develop flush color, very warm and moist skin, and an accompanying headache. A tepid sponge bath may be recommended to reduce body temperature. Desired temperature reached is 99.6°F.

b. Important Points.

(1) Remind the patient to call for assistance when getting up. The combination of the elevated temperatures and sponge bath could weaken the patient.

(2) Check the patient's temperature, blood pressure, and heart rate every 15 minutes.

(3) Maintain a level of privacy.

c. Procedure.

(1) Observe patient for elevated temperature. Review physician's orders.

(2) Explain the procedure to patient.

(3) Prepare the equipment:

(a) Bath basin.

(b) Tepid water (37°C; 98.6°F)

(c) Washcloth (4).

(d) Bath thermometer.

(e) Bath blanket.

(f) Patient thermometer.
(4) Provide privacy; wash hands.

(5) Cover patient with blanket, remove gown, and close windows and doors.

(6) Test the water temperature. Place washcloths in water and then apply wet cloths to each axilla and groin.

(7) Gently sponge an extremity for about 5 minutes. If the patient is in tub, gently sponge water over his upper torso, chest, and back.

(8) Continue sponge bath to other extremities, back, and buttocks for 3 to 5 minutes each. Determine temperature every 15 minutes.

(9) Change water; reapply freshly moistened washcloths to axilla and groin as necessary.

(10) Continue with sponge bath until body temperature falls slightly above normal. Discontinue procedure according to SOP.

(11) Dry patient thoroughly, and cover with light blanket or sheet.

(12) Return equipment to storage, clean area, and change bed linens as necessary. Wash hands.

(13) Record time procedure was started, when ended, vital signs, and patient's response.

1-7. CARE OF THE HANDS AND FEET

a. General. Special attention is often required to prevent infection, odor, and injury of the patient's hands and feet. Problems often arise from abuse or poor care of hands and feet, such as biting the nails and wearing ill-fitted shoes. Assessment of the feet involves a thorough examination of all skin surfaces. Areas between toes should be carefully checked. Patients with diabetes mellitus or peripheral vascular disease should be observed for adequate circulation of the feet. Because of poor vision and decreased mobility, the elderly are at risk for foot disorders. Care of hands and feet can be administered during the morning bath or at another convenient time.

b. Important Points.

(1) Notice general physical conditions that may place the patient at risk for infections.

(2) Prevent interruptions during the procedure.
(3) Soak in warm water to soften nails and loosen foreign particles.

(4) Prevent spread of microorganisms.

c. **Procedure.**

(1) Obtain physician's order if necessary.

(2) Explain procedure.

(3) Prepare equipment:

   (a) Washbasin.

   (b) Emesis basin.

   (c) Washcloth.

   (d) Hand towel.

   (e) Nail clippers, emery board, and orangewood stick.

   (f) Lotion.

   (g) Disposable bath mat.

   (h) Disposable gloves (optional).

(4) Wash hands, and arrange supplies within easy reach.

(5) Position patient in chair, place disposable mat under patient's feet if possible, and provide patient with privacy.

(6) Fill the basin with water at 100° to 110°F (38° to 44°C). Place the basin on a disposable mat and help patient place feet into basin. Soak feet for 15 to 20 minutes, rewarming water as necessary (figure 1-8).

(7) Place overbed table in low position in front of the patient. Fill emesis basin with water at 100° to 110°F (38° to 44°C). Place the basin on the table and place patient's fingers into basin. Soak fingernails 10 to 20 minutes; rewarm water as necessary (figure 1-9).
(8) Clean under fingernails with orange stick. Trim nails straight across and even with clippers. Shape fingernails with emery board. Push cuticles back gently with washcloth or with orangewood stick.

(9) Don glove and wash areas of the feet that are calloused with washcloth.

(10) Trim and clean toenails as in step 8 for fingernails.

(11) Apply lotion or cream to hands and feet. Return patient to bed and position for comfort.

(12) Remove gloves and store them in proper container. Clean all equipment and store. Place soiled linen in laundry bag. Wash your hands.
1-8. **CARING FOR THE EYES, EARS, AND NOSE**

a. **General.** The eyes, ears, and nose require special attention for cleansing during the patient's bath. The specialist has the responsibility of assisting patients in the care of eyeglasses, contact lenses, artificial eyes, or hearing aids. Assessments must be made of the patient's knowledge and methods used to care for the aids, as well as any problems he might be having with the aids. Patients with limited mobility cannot grasp small objects. Patients that have reduced vision or are seriously fatigued will also require assistance from the specialist.

b. **Important Points.** The eyes, ears, and nose are sensitive and therefore extra care should be taken to avoid injury to these tissues. Never use bobby pins, toothpicks, or cotton-tipped applicators to clean the external auditory canal. Such objects may damage the tympanic membrane (eardrum) or cause wax (cerumen) to impact within the canal.

c. **Procedure.**

   (1) **Care of the eyes.**

   (a) Cleansing of the circumorbital (circular area around the eye) area of the eye is usually performed during the bath, and involves washing with a clean washcloth moistened with clear water. Do not use soap because of the possibility of burning and irritation. The eye is cleansed from the inner to outer canthus. A separate section of the washcloth is used each time. This is to prevent spread of infection. Place a damp cotton ball on lid margins to loosen secretions. Never apply direct pressure over the eyeball. Exudate from the eye should be removed carefully, and as often as necessary to keep the eye clean.

   (b) The eyelashes, tearing, and split-second blink reflex usually keeps the eyes well protected. An unconscious patient may need frequent special eye care. Secretions may collect along the margins of the lid and inner canthus when the blink reflex is absent or when the eyes do not completely close. The physician may order lubricating eye drops. In some cases, the eyes may be medicated and covered to prevent irritation and corneal drying.

   (c) Many patients wear eyeglasses. The specialist will use care when cleaning glasses, and protect them from breaking. Eyeglasses should be stored in the case and placed in the drawer of the bedside stand. Glasses are made of hardened glass or plastic that is impact resistant to prevent shattering, but they can easily be scratched. Plastic glasses require special cleaning solutions and drying tissues. Warm water and a soft dry cloth may be used for cleansing glass lens.
(d) Most patients prefer to care for their own contact lens. A contact lens is a small, round, sometimes colored disk that fits over the cornea. If the patient is unable to remove the lens, the specialist should seek assistance from someone who is familiar with the procedure. The lens should not be reinserted until the patient is capable of caring for the lens himself. It is very important that you care for the patients who are unable to properly take care of their lens. Prolonged wearing of contact lens may cause serious damage to the cornea.

(2) Care of the ears.

(a) The ears are cleaned during the bed bath. A clean corner of a moistened washcloth rotated gently into the ear is used for cleaning. Also, a cotton-tipped applicator is useful for cleansing the pinna.

(b) The care of the hearing aid involves routine cleaning, battery care, and proper insertion techniques. The specialist must assess the patient's knowledge and routines for cleaning and caring for his hearing aid. The specialist will also determine whether the patient can hear clearly with the use of the aid by talking slowly and clearly in a normal tone of voice. Have the patient suggest any additional tips for care of the hearing aid. When not in use, the hearing aid should be stored where it will not become damaged. The hearing aid should be turned off when not in use. The outside of the hearing aid should be cleaned with a clean, dry cloth. Hearing loss is a common health problem with the elderly, and the aid assists in the ability to communicate and react appropriately in the environment.

(3) Care of the nose.

(a) Secretions can usually be removed from the nose by having the patient blow into a soft tissue. The specialist must teach the patient that harsh blowing causes pressure capable of injuring the eardrum, nasal mucosa, and even sensitive eye structures. If the patient is not able to clean his nose, the specialist will assist using a saline moistened washcloth or cotton tipped applicator. Do not insert the applicator beyond the cotton tip.

(b) Suctioning may be necessary if the secretions are excessive. When patients receive oxygen per nasal cannula, or have a nasogastric tube, you should cleanse the nares every 8 hours. Use a cotton-tipped applicator moistened with saline. Secretions are likely to collect and dry around the tube; therefore, you will need to cleanse the tube with soap and water.
1-9. CARE OF THE PATIENT WITH AN INDWELLING CATHETER

a. General. Catheter care is to be performed twice daily on all patients with indwelling catheters unless otherwise ordered by the doctor. Daily catheter care should include cleansing of the metal catheter junction with soap and water and the application of water-soluble microbicidal ointment (Betadine®, unless other ointment or cream is ordered by the physician. The urinary catheter should be inserted only by adequately trained personnel using sterile technique.

b. Important Points.

   (1) Never use inverted drainage bags.

   (2) Never elevate the bag above the level of the patient's bladder.

   (3) Always use a sterile, closed-drainage system with disposable, clear plastic bag and connecting tubes.

   (4) Do not break the sterile continuity when removing the urine.

c. Procedure.

   (1) Check the physician's orders.

   (2) Introduce yourself and explain the procedure.

   (3) Provide privacy.

   (4) Obtain supplies:

      (a) Betadine® (or ointment of physician's choice).

      (b) Soft washcloth.

      (c) Soap and water.

      (d) Sterile, cotton-tipped applicator and gloves.

   (5) Wash your hands and don gloves.

   (6) Position the patient for comfort.

   (7) Cleanse around urethral meatus and adjacent catheter. Cleanse entire catheter with soap and water.
(8) Repeat cleansing to remove all exudate from meatus and catheter.

(9) Open package of sterile cotton-tipped applicators. Do not touch cotton tip. Apply Betadine® ointment to applicator. Do not touch wrapper to cotton tip.

(10) Apply ointment to junction of catheter and urethral meatus.

(11) Remove your gloves. Clean and store equipment. Dispose of contaminated supplies in proper receptacle.

(12) Wash your hands.

(13) Position the patient for comfort.

1-10. ADMINISTERING THE BACKRUB

   a. General. The backrub is usually administered after the patient's bath. It should be offered to the patient because it promotes relaxation, relieves muscular tension, and stimulates circulation. During the backrub, the specialist is able to observe the patient's skin. To give an effective backrub, the specialist will massage the back for 3 to 5 minutes (figure 1-10).

   ![Figure 1-10. Administer a backrub.](image)

   b. Important Points.

   (1) The backrub is contraindicated if the patient has such conditions as fractures of the ribs or vertebral column, burns, pulmonary embolism, or open wounds.

   (2) Monitor pulse and blood pressure of those patients with a history of hypertension or dysrhythmias.
c. **Procedure.**

(1) Explain to the patient what you are going to do.

(2) Prepare equipment:
   (a) Bath blanket (optional).
   (b) Bath towel.
   (c) Skin lotion, alcohol, or powder.

(3) Adjust bed height to working level.

(4) Provide privacy and quiet environment.

(5) Lower side rail. Position patient with back toward self. Cover patient so that only parts to massage are exposed.

(6) Wash hands, and warm if necessary. Warm lotion by holding some in hands. Explain that lotion may feel cool.

(7) Begin massage by starting in sacral area using circular motions. Stroke upwards to shoulders. Use firm, smooth strokes to massage over scapulae. Continue to upper arms with one smooth stroke and down along side of back to iliac crests. Do not break contact with patient's skin. Complete massage in 3 to 5 minutes.

(8) Gently but firmly knead skin by grasping area between thumb and fingers. Work across each shoulder and around nape of neck. Continue downward along each side to sacrum.

(9) With long, smooth strokes, end massage. Remove excess lubricant from patient's back with towel, and retie gown. Position for comfort. Lower bed, and raise side rail as needed.

(10) Place soiled laundry in proper receptacle. Wash hands.
1-11. ORAL HYGIENE

Oral hygiene (mouth care for cleanliness) is essential to the care of all patients, as the mouth normally harbors many bacteria. The patient's resistance may become so lowered during illness that severe infections of the mouth tissue may result. Mouth breathing, restricted oral fluids, elevated temperature, and other conditions that may accompany illness cause drying and cracking of mouth tissues. Such conditions aid the development of infection. When a patient is too ill to care for his mouth and teeth, the medical specialist must help him or must perform the procedure for him. Ambulatory patients may need reminding to carry out self-care measures. Problem in oral hygiene should be referred to the Dental Service.

1-12. ROUTINE MOUTH CARE

a. General. Mouth care should be given at least every morning and evening to all patients, and preferably after every meal. Routine mouth care is essentially assisting a patient to brush his teeth (figure 1-11) and to rinse his mouth thoroughly, as often as needed. The purposes are to keep the mouth clean, to prevent sores and mouth odors, to retard or prevent deterioration of teeth, and to refresh the patient.

![Figure 1-11. Cleaning the teeth.]

b. Equipment. The following equipment is appropriate for routine mouth care.

1. Glass of water.
2. Drinking tube if necessary.
3. Hand towel.
4. Toothbrush and dentifrice.
5. Mouthwash, if desired.
c. **Procedure for Patient Able to Help Himself.** Following is the procedure for routine mouth care for a bed patient able to help himself.

(1) Place the patient in a comfortable position.

(2) Arrange the equipment within his reach on the bedside cabinet or on an over bed table.

(3) Remove and clean the equipment promptly when he is finished.

**NOTE:** Rinse the toothbrush thoroughly under running water and allow it to air dry—not place the damp brush in the cabinet.

d. **Procedure for a Patient Requiring Assistance.** Following is the procedure for routine mouth care for a bed patient requiring some assistance.

(1) Turn the patient on his side or if on his back, turn his head to the side.

(2) Place a towel under his chin and over the bedding.

(3) Pour the water over the brush; place dentifrice on it.

(4) Give the patient his brush and hold the basin under his chin while he brushes his teeth (figure 1-12).

![Figure 1-12. Assisting patient with mouth care.](image-url)
(5) Encourage the patient to rinse his mouth frequently, using the drinking tube, if necessary to draw water in his mouth. The basin receives the used rinse water.

(6) Remove the basin; wipe his face and lips with the hand towel.

(7) Remove and clean the equipment.

(8) Wash your hands.

e. **Procedure for a Patient Unable to Brush His Teeth.** Following is the procedure for providing mouth care for a patient unable to brush his teeth.

   (1) Proceed as in paragraph 1-12c above except that all steps are done for the patient.

   (2) Finish the mouth cleansing with a gentle brushing of the tongue from back to front, and with a thorough final rinsing.

   (3) The patient's teeth should be flossed at least weekly.

**1-13. CARE OF DENTURES**

a. **General.** Dentures should be given the same careful cleansing as the natural teeth. The conscious patient normally wears his teeth. Moreover, since some patients are embarrassed by having artificial teeth, medical personnel should be considerate. The patient normally cleans his mouth and natural teeth while dentures are out of his mouth. Clean dentures under running water, if possible.

b. **Equipment.** The equipment necessary to clean dentures follows:

   (1) Tissues.

   (2) Washbasin.

   (3) Toothbrush or denture brush, dentifrice.

   (4) Denture container.

c. **Procedure.** The following procedure is appropriate for cleaning dentures for a bed patient as in figure 1-13.

   (1) Ask the patient to remove dentures and place them in the container, which may be a glass of water if no other container is available.

   (2) While the patient is cleaning his mouth, take his dentures to the sink. Give him tissues to wipe his mouth.
(3) Place the basin in the sink and brush the dentures over the basin under running water. In event the denture is dropped, it will be cushioned by the water in the basin. After thorough brushing, rinse the dentures and place them in a basin of water while cleaning the denture container.

(4) Return the dentures in the container to the patient.

(5) When a denture is not in use, place it in a marked clean container filled with clean water. Patients should neither wrap a denture in tissue or other material nor store it in a pajama pocket, under the pillow, or in a drawer.

1-14. SPECIAL MOUTH CARE

Special mouth care is required for oral hygiene that cannot be accomplished by routine tooth brushing and mouth rinsing measures. Patients with mouth injuries, oral surgery, or inflamed mouth tissue are given mouth care in consonance with special instructions by the medical or dental officer. In addition, standing operating procedures are often available locally to provide guidance in these situations.

1-15. CARE OF PATIENT'S HAIR

a. General. A patient's hair should be combed daily. In addition, other care is necessary to enhance morale, stimulate circulation of the scalp, and prevent tangled, matted hair.

b. Daily Care. Encourage the patient to rub his scalp with fingertips to stimulate circulation. Comb hair in a becoming style. To assist a patient to comb matted and tangled hair, first comb the ends and progress toward the scalp. Hold the lock of hair being combed between the scalp and the comb to avoid pulling. Brush the hair as necessary (figure 1-14).
c. **Hair Cutting.** Barber service is provided in most service hospitals. The barber makes regular rounds on the nursing unit or comes by appointment. The patient receiving the service pays the fee directly to the barber. Occasionally, hairdresser service can be arranged for patients on the unit. Ambulatory patients go to the barber shop or beauty parlor, if the medical officer approves.

d. **Shampoo.** The patient confined to bed will require a cleansing shampoo at least every two weeks. With the approval of the medical officer, plan the shampoo for a time when the patient feels rested and has no conflicting treatments or appointments. If the patient can be moved to a stretcher, do so and take him to a convenient sink. If this is not possible, do the shampoo in bed.

(1) Following is a list of equipment necessary for the procedure.

(a) Large pitcher of warm water.

(b) Bucket.

(c) Newspaper.

(d) Large rubber sheet.

(e) Bath towels (3).

(f) Washcloth.

(g) Shampoo solution.

(h) Clean comb and brush.
(2) Following is the procedure for administering a shampoo to a patient in bed.

(a) Place a newspaper on the chair and the bucket on the newspaper. Place the pitcher of water, shampoo, comb, brush, and one of the two bath towels on the bedside cabinet.

(b) Move the patient to the near side of the bed. Lower the bed to a level position.

(c) Pull the pillow down under the patient’s shoulders to assisting extending the neck. Fold one bath towel around the neck.

(d) Place the narrow side of the rubber sheet under his head and over the edge of the pillow. Roll the sides of the sheet to improvise a trough, and place the free end in the bucket.

(e) Give the patient a washcloth for his eyes and face.

(f) Check provisions for water drainage before pouring any water.

(g) Wet his hair and apply shampoo. Lather and rinse it.

(h) Reapply shampoo and rinse the hair again repeatedly until his hair is "squeaky clean." (A woman will require more rinse water than a man, but otherwise the procedure is unchanged.)

(i) Slip a dry towel under the patient’s bed. Then roll and remove the rubber sheet. Pull the pillow up into its normal place.

(j) Dry the hair by gently rubbing it with a clean towel.

(k) Remove the equipment and wipe up any water spilled on the floor.

(l) Assist the patient to comb and brush his hair with a clean comb and brush.

1-16. URINAL AND BEDPAN ASSISTANCE

a. **General.** Although bed patients realize the necessity of eliminating body wastes, they sometimes feel embarrassed when the need arises to ask for and use a urinal or bedpan. Medical personnel should reduce the unpleasant aspects as much as possible and assist the patient to maintain proper elimination with the least exertion. The urinal or bedpan is provided promptly anytime one is requested. In addition, bed patients are usually offered one before meals and before visiting hours. After each use, the patient and medical personnel must wash their hands.
b. **Use of Urinal.** Following are the proper procedures for handling a urinal for a male patient (figure 1-15).

![Figure 1-15. Urinals.](image)

1. Raise or level the bed as necessary. For example, some patients may desire to have the head of the bed raised. Others may require the knee part of the bed to be lowered or level.

2. Bring the urinal to the patient inserted in a paper cover. Screen the patient and give the urinal directly to him, placing the cover on the seat of the chair.

3. Assist the patient as needed; for example, adjust his pajama trousers or position the urinal. Instruct the patient to signal when finished. Be sure that he understands that he must never place the urinal on his bedside cabinet. This is for esthetics and sanitary reasons.

4. On signal, return promptly, bringing a basin of warm water. Remove the urinal from the bed. Assist the patient to wash his hands.

5. Note the color and amount of urine before discarding it. If an output record is kept, measure and record the amount and time voided on DD Form 792, Intake and Output Worksheet. If the appearance of the urine seems abnormal, save a specimen for the doctor to observe.

6. Follow the routine procedure for cleansing and storing the urinal.

c. **Use of Bedpan.** Following is the proper procedure for handling a bedpan for either a male or female patient (figure 1-16).
Figure 1-16. Bedpan.

(1) Bring the patient a warmed bedpan inserted in paper cover, rinsed in hot water, and dried.

(2) Provide privacy.

(3) Place the covered pan on the chair seat and prepare to assist the patient as necessary. Lift the bed cover; remove any supporting pillows; and lower the knee rail. Pull the pajama jacket above the waist, and the pants to below the knees. Tell the patient to bend his knees, press his heels against the bed, and raise hips. Slip one hand under his back, and place the pan under the buttocks. Ask for assistance if the patient is heavy and unable to assist in lifting. If the patient cannot raise his buttocks, roll him to the near side of the bed, place the pan under his buttocks, and then roll him back on the pan. Check his position on the pan.

(4) Elevate the head of the bed. Place toilet paper and signal cord within patient's reach, and leave patient alone unless there is a requirement for constant attention.

(5) When the patient is through, answer his signal promptly, bring a basin of warm water. When removing the pan, support the patient in the same way as when the pan was being placed. If the patient is unable to cleanse himself, turn him on his side off the pan and cleanse him with paper. If necessary, wash the anal area with soap and warm water; dry thoroughly.

(6) Place covered pan on chair. Readjust pajamas, bedding, and patient's position. Remove the screen. Air the area by opening a window, if possible.
1-17. APPLY HEAT

a. The reasons for applying heat are to relieve pain, promote purulent (containing pus) drainage, increase circulation to an area, raise the body temperature, and relax muscles. The effects of heat are to increase lymph flow, local metabolism, blood flow and blood vessel dilation, and exchange of substances through capillary walls.

b. Apply heat only according to directions of a physician or supervisor to be sure that no injury comes to the patient. Nerves in the skin are easily numbed after repeated heat application, and the patient may not feel the pain of burn. Ninety-five to 100 degrees Fahrenheit is considered warm, while 100 to 110 degrees Fahrenheit is considered hot. If you are unsure of the correct temperature, check with the physician or supervisor. Then check with the patient to be sure the application is not too hot. Always make sure a patient can remove the heating device or move away from it if it is causing excessive discomfort. Remember that eyelids, neck, and the inside surface of arms are especially sensitive to heat.

c. Cases that require special protection from excessive heat are infants, the elderly, persons with fair skin, and patients with other disease processes present. In such cases as these, you must remain with the patient for the entire procedure and constantly monitor how well the patient is tolerating the treatment. Certain patients should be observed closely and should not be left alone while receiving therapy because they cannot tell when heat is intense. These are patients in altered levels of consciousness, paralyzed, anesthetized, with impaired circulation, and with some metabolic diseases.

d. Methods of applying heat to patients are many and varied. The old hot water bottle, now known as the warm water bag, placed in a protective cover to protect the patient from burns, is often the perfect answer to the need. The chemical hot pack is capable of excessive heat, and care must be taken to avoid serious burns. The physician’s order will dictate whether to use warm or hot moist compresses. Other methods of applying heat include soaks, sitz baths, Aqua K pack, the heat cradle, and electric heating pads.

NOTE: Do not use these methods for patients with malignant cancer, edema, or abdominal injuries unless ordered by a physician.

e. If at any time the patient complains of pain, or if you see burns, swelling, paleness, maceration (water-logged skin caused by moist heat), or redness that does not diminish with pressure, you must remove the heat treatment.
1-18. APPLY COLD

a. The reasons for applying cold are to prevent edema, relieve pain, decrease circulation, decrease metabolism, and to slow or stop bleeding. The effects of cold are to decrease blood flow, oxygen, tissue temperature, local metabolism, lymph flow, to enhance blood clotting, and to slow nerve impulses.

b. As when applying heat, apply cold only according to directions of a physician or supervisor. Nerves in the skin are easily numbed, and the patient may not feel any pain. Therefore, it is up to you to discontinue any cold application if the patient complains of numbness, if the skin looks white or spotty, or if the patient develops a rapid pulse, bluish lips, bluish nail beds, or chills. Keep the temperatures between 40 to 80 degrees Fahrenheit, and check with the physician if you are unsure. Then check with the patient to be sure the application is not causing pain.

c. Methods of applying cold include chemical cold packs, ice bag for head, collar, cold soaks, cold compresses, and a cold or tepid alcohol sponge bath. Always place a hand towel over the treatment site before applying any wrapped cold pack.

d. Cases or conditions when cold is not used are 24 hours after a burn or sprain injury, elderly patients with decreased metabolic rate, arthritic patients, and very young children. The possible complications resulting from the use of cold are chills, pain, maceration, ischemia, blister, and hypothermia.

Continue with Exercises
EXERCISES, LESSON 1

INSTRUCTIONS: Answer the following exercises by marking the lettered response that best answers the question or best completes the statement.

After you have completed all of the exercises, turn to "Solutions to Exercises" at the end of the lesson and check your answers.

1. The sitz bath is given to:
   a. Relieve tension or lower the body temperature.
   b. Cleanse and aid in reducing inflammation of the perineal and anal areas.
   c. Reduce muscle tension.
   d. Assist in relieving muscle soreness and muscle spasm.

2. The cool water tub bath is given to:
   a. Assist in relieving muscle spasm and muscle soreness.
   b. Reduce muscle tension.
   c. Relieve tension and lower the body temperature.
   d. Reduce inflammation of the perineal and anal areas.

3. The warm water tub bath is given to:
   a. Reduce muscle tension.
   b. Assist in relieving muscle tension and muscle spasm.
   c. Cleanse and aid in reducing inflammation.
   d. Relieve tension and lower the body temperature.
4. The bed bath/partial bath is administered when the patient is either:
   a. Confined to bed, must conserve energy, or is helpless.
   b. Tired, must conserve energy, or is confined to bed.
   c. Confined to bed, must get plenty of sleep, or is nervous.

5. You should change bath water when it becomes:
   a. Cold, dirty, or excessively soapy.
   b. Warm, excessively soapy, or dirty.
   c. Extremely soapy, dirty, or too clear.
   d. Dirty, old, or too cold.

6. During the procedure for giving a bed bath or partial bath, the first step of the process is to:
   a. Introduce yourself and inform the patient of the procedure.
   b. Prepare supplies and equipment.
   c. Check the physician's orders.
   d. Check the required personal toilet articles, and for clean linen available in the unit.

7. When cleaning the inner eye, it is important to remember to move the mittcloth in the direction:
   a. From outer to inner canthus.
   b. From top to bottom of eye.
   c. From inner to outer canthus.
   d. From bottom to top of eye.
8. When preparing to administer the bed bath/partial bath, the temperature of the water should be how many degrees Fahrenheit?
   a. 100 to 105.
   b. 110 to 115.
   c. 115 to 120.
   d. 120 to 125.

9. When soap can be used on the patient's face, it should be applied:
   a. To the cloth, and then to the patient's face.
   b. Directly to the patient's face, and wiped off with cloth.
   c. In the water for a while, and then to the cloth.
   d. Only to the ears and face, but not on neck.

10. When you administer the bed bath/partial bath, the first part of the body to be exposed is:
    a. The upper limb.
    b. The upper leg.
    c. The abdomen.
    d. The feet.

11. Which area of the body should not be exposed when washing the upper and lower limbs?
    a. Genitalia.
    b. Feet.
    c. Thigh.
    d. Stomach area.
12. A partial bath to the genitalia area is given by turning the patient:
   a. On his back to the near side of the bed, and placing the towel under his hips.
   b. On his side and far side of the bed, and placing the towel under his hips.
   c. On his back to the far side of the bed, and placing the towel under his hips.
   d. On his stomach to the far side of the bed, and placing the towel under his stomach.

13. To replace the pajama coat of a patient with an injured arm or shoulder, start replacing:
   a. From the uninjured side.
   b. From the far side.
   c. From the near side.
   d. From the injured side.

14. The towel bath is administered by the specialist when a patient is sick or confined to:
   a. The hospital room.
   b. Bed.
   c. Ward.
   d. The general hospital area.
15. When preparing the towel bath, the specialist should draw ___________milliliters of water into the plastic container.
   a. 1000.
   b. 2000.
   c. 3000.
   d. 4000.

16. When the towel bath is completed, remove towel and:
   a. Fold it for use later.
   b. Dispose of it.
   c. Place with soiled linens in laundry bag.
   d. Send it directly to laundry.

17. Do not allow the patient to remain in the bath tub more than ___________minutes.
   a. 5.
   b. 10.
   c. 15.
   d. 20.

18. The purpose of administering the tepid sponge bath is to:
   a. Lower the patient's body temperature.
   b. Raise the patient's body temperature.
   c. Maintain the patient's body temperature.
   d. Lower the patient's blood pressure.
19. When administering a tepid sponge bath, the step after checking the physician's orders is to:
   a. Cover the patient with a blanket.
   b. Provide privacy.
   c. Explain and outline steps of procedures to the patient.
   d. Prepare the equipment.

20. Caring for the hands and feet require filling the basin full of water at:
   a. 90 to 100ºF.
   b. 100 to 110ºF.
   c. 110 to 120ºF.
   d. 120 to 130ºF.

21. When you have finished caring for the hands and feet, you should:
   a. Wash your hands.
   b. Place soiled linens in laundry bag.
   c. Clean all equipment and store.
   d. Remove gloves and store them in proper container.

22. Eyeglasses made with glass lens may be cleaned by using:
   a. Warm water and a soft dry cloth.
   b. Special cleaning solutions and drying tissues.
   c. Warm water and drying tissues.
   d. Hot water and hot dry cloth.
23. The specialist should learn the routines for cleaning and caring for the patient's hearing aid, and determine if the patient can hear clearly with the aid by talking in a __________ tone of voice.
   a. Loud.
   b. Moderate.
   c. Normal.
   d. Slow.

24. The patient receiving oxygen through the nasal cannula, or has a nasogastric tube should have the nares cleaned every ________ hours.
   a. 6.
   b. 8
   c. 10.
   d. 12.

25. The meatal-catheter junction should be cleansed daily with soap and water, and the application of:
   a. A hypochlorite solution.
   b. A mild solution of hydroxide.
   c. Water-soluble microbicidal ointment.
   d. Alcohol swabs.
26. When caring for a patient with an indwelling catheter, the specialist should:
   a. Use inverted drainage bags.
   b. Elevate the bag above the level of the patient's bladder.
   c. Use a sterile, closed-drainage system with disposable, clear plastic bag and connecting tubes.
   d. Break the sterile continuity when removing the urine.

27. The backrub is usually administered:
   a. Before the patient's bath.
   b. After the patient's bath.
   c. During the patient's bath.
   d. When the patient is going to sleep.

28. The specialist will massage the patient's back for:
   a. 1 minute.
   b. 2 to 3 minutes.
   c. 2 to 4 minutes.
   d. 3 to 5 minutes.

29. The backrub is contraindicated (not given) if the patient has such conditions as:
   a. Fractured ribs, burns, or high blood pressure.
   b. Pulmonary embolism, heart condition, or open wounds.
   c. Fractured ribs, burns, or open wounds.
   d. Hypertension, dysrhythmias, or fractured ribs.
30. To administer a backrub, the specialist should first:
   a. Explain to the patient what you are going to do.
   b. Prepare the equipment.
   c. Adjust bed height to working level.
   d. Provide privacy and quiet environment.

31. Prior to moving to another task following the backrub, you should:
   a. Lower the bed rail, and raise the side rail as needed.
   b. Wash your hands.
   c. Remove excess lubricant from patient's back.
   d. Position the patient and make him comfortable.

32. The patient who can help himself during routine mouth care should:
   a. Rinse the toothbrush thoroughly under running water and allow it to air dry.
   b. Disinfect the toothbrush and place it in the cabinet.
   c. Place the toothbrush in the cabinet and allow it to thoroughly dry before the next use.
   d. Place the toothbrush in a glass of clean water when it is not in use.

33. The urinal or bedpan is provided anytime one is requested by the patient; in addition, it is usually offered:
   a. Before meals and before visiting hours.
   b. Before meals and after visiting hours.
   c. After meals and after visiting hours.
   d. After meals and before visiting hours.

Check Your Answers on Next Page
SOLUTIONS TO EXERCISES, LESSON 1

1. b (para 1-2a)
2. c (para 1-2b)
3. a (para 1-2c)
4. a (para 1-3a)
5. a (para 1-3b(6))
6. c (para 1-3c(1))
7. c (para 1-3c(13)(b))
8. b (para 1-3c(1)(a))
9. a (para 1-3c(13)(c))
10. a (para 1-3c(14))
11. a (para 1-3c(16)(a))
12. a (para 1-3c(18)(a))
13. d (para 1-3c(20)(a))
14. b (para 1-3a)
15. b (para 1-4c(6)(c))
16. c (para 1-4c(7)(j))
17. d (para 1-5c(7))
18. a (para 1-6a)
19. c (para 1-6c(2))
20. b (paras 1-7c(6,7))
21. d (para 1-7c(12))
22. a (para 1-8c(1)(c))
23. c (para 1-8c(2)(b))
24. b (para 1-8c(3)(b))
25. c (para 1-9a)
26. c (para 1-9b(3))
27. b (para 1-10a)
28. d (para 1-10a)
29. c (para 1-10b(1))
30. a (para 1-10c(1))
31. b (para 1-10c(10))
32. a (para 1-12c(3))
33. a (para 1-16a)

End of Lesson 1
LESSON ASSIGNMENT

LESSON 2
Positioning the Patient.

TEXT ASSIGNMENT
Paragraph 2-1 through 2-10.

LESSON OBJECTIVES
When you have completed this you should be able to:

2-1. Identify the benefits of positioning the patient.

2-2. Identify and define body mechanics, body posture, and the common body rest positions.

2-3. Identify methods of positioning the patient, to include orienting the patient, modification of bed rest positions, and body alignment in bed.

2-4. Identify methods of moving and lifting while avoiding back strain.

2-5. Identify techniques in moving bed patients.

2-6. Identify range-of-motion.

2-7. Identify the stages involved in lifting a patient from floor to bed level.

2-8. Identify the common position support devices and methods in which they are applied.

2-9. Identify the bed cradle, its use, and function.

2-10. Identify the methods by which the patient is properly placed on the footboard.

2-11. Identify the proper procedure for placing a patient on his side.

2-12. Identify the range-of-motion exercises for the neck.

2-13. Identify methods of preventing bed or pressure sores; areas of susceptibility, stages of development, preventive measures, and treatment.
2-14. Identify the range-of-motion exercises for the hip.

**SUGGESTION**

Work the lesson exercises at the end of this lesson before beginning the next lesson. These exercises will help you accomplish the lesson objectives.
LESSON 2

POSITIONING THE PATIENT

2-1. OVERVIEW

Physical comfort is very important to a human being. This is especially applicable to a bed patient. Both the patient and nursing service personnel need physical comfort as they respectively recuperate or perform nursing care. Since enlisted nursing personnel come in contact with the patient more than other medical personnel, they should employ procedures which will ensure the comfort, safety, and well being of the patient. In addition, they should consider their own physical comfort. Only those techniques which reduce or prevent undue strain on the muscles should be used when lifting or moving patients. The benefits of proper body mechanics and good posture include the efficient use of muscles, promotion of normal body functions, avoidance of strain and fatigue, and prevention of deformity.

2-2. BODY POSTURE AND BODY MECHANICS

Through the knowledge of the correct application of their own muscles, medical nursing personnel can instruct patients on how to use theirs. The combination of good posture and body mechanics benefits both medical personnel and the patients.

a. Posture. Posture is body alignment. It refers to the relative positions of the body when lying down, standing, sitting, or any other activity. Posture determines the stress and the strain on muscles and the distribution of weight. It affects the pressure on many of the organs of the body. Posture also affects such important functions of the body as circulation, respiration, and digestion as well as actions of the joints. To attain good posture, which requires the least strain to maintain, the following respective positions should be practiced.

(1) In a standing position, the back should be straight; feet firmly on the ground, about 4 to 6 inches apart to give an adequate base of support, with the toes pointing straight ahead or slightly toed out; head and rib cage held high; chin, abdomen, and buttocks pulled in; and knees slightly bent (figure 2-1).

(2) In a sitting position, the back should be straight, with the weight resting equally on the buttocks and under surface of the thigh, but not on the base of the spine (figure 2-2).
b. **Body Mechanics.** Body mechanics is the coordinated use of the body parts to produce motion and to maintain balance. The use of good body mechanics promotes the efficient use of muscles and conserves energy. The following principles apply to any moving or lifting activity:

1. Face the direction of movement.
2. Use large muscle groups of the legs, arms, and shoulders to lessen the strain on the back and abdominal muscles.
3. Bring the object to be lifted or carried as close to the body as possible before lifting. (This keeps both centers of gravity close together.)
4. Bend the knees and keep the back straight when leaning over at work level.
5. Kneel on one knee, or squat, and keep the back straight when working at the floor level.
6. Push, pull, slide, or roll a heavy object on a surface to avoid unnecessary lifting.
7. Obtain help before attempting to move an obviously unmanageable weight.
8. Work in unison with an assistant. Give instructions and agree on the signal to start the activity.
2-3. POSITIONING THE PATIENT

Bed rest is an important part of treatment ordered by the medical officer. In addition, the medical officer usually allows a certain amount of physical effort and movement by the patient. If the patient is unable to move himself, he must be moved and repositioned at least every two hours, day and night. If the patient can move himself, he must be encouraged to do so; also, check to see if his posture is good.

a. **Orient the Patient.** Tell the patient what is to be done, why it is to be done, and how it is to be done. Usually an orientation including the above elicits the full cooperation of the patient.

b. **Modification of Bed Rest Positions.** Several positions should be used to provide comfort, support, and good body alignment. Sometimes a patient is reluctant to change a position because of a painful disorder; however, failure to change a position may result in deformity of a body part. For example, the continuous use of head and knee rests favor development of a restricted range of joint movement at the hip and knee. An effective preventive position is the front lying (prone) one. In this position, the patient is flat on the abdomen, legs extended, feet over the edge of the mattress, and toes pointing to the floor as illustrated in figure 2-3. Other positions include supine (back lying) (figure 2-4), lateral recumbent (on either side) (figure 2-5), and Fowler's position (semi-upright with back and knee rests elevated) (figure 2-6).

![Prone position](image1)

Figure 2-3. Prone position.

![Supine position](image2)

Figure 2-4. Supine position.
(1) Position changes provide alternate weight-bearing surfaces to relieve pressure, improve circulation, and preserve muscle function as different muscle groups contract and relax.

(2) No one position will remain comfortable and safe indefinitely.

c. **Body Alignment in Bed.** Good body alignment can be achieved in any of the bed rest positions (b above). The following points should be checked.

(1) Head should be in midline with the trunk.

(2) Back should be straight, with normal body curves (cervical, thoracic, and lumbar) maintained.
(3) Ribs should be elevated to prevent constriction of the chest.

(4) Arms and legs should be in a position of function (the position for maximum usefulness of the joints, feet, and hands).

(a) Position of function of legs and feet. This position favors standing upright and walking. In general, if the toes point to the ceiling when in a back-lying position and point to the floor when in a front-lying position, the feet, legs, and hips are in good alignment.

(b) Position of function of arms and hands. This position favors raising the arms and grasping things with the fingers. The hand should not droop at the wrist, be clenched in a fist, or be flat. The position of function for the hand is dorsiflexion (at a slight upward angle) at the wrist, with the fingers and thumb in position to write with a pencil.

2-4. MOVING AND LIFTING ACTIVITIES

Body mechanics enable medical personnel to perform moving and lifting activities while avoiding back strain. Primarily, the concern is for moving patients while standing at a hospital bed; however, the methods discussed can apply also to lifting or moving objects of similar weight.

a. Prepare the Patient and Your Body for Lifting Movement. Before starting to lift a patient, always explain the procedure to him. In addition, prepare your body for the lifting movement as follows:

(1) Stand with your feet apart, one foot advanced (figure 2-7A) facing the side of the bed.

(2) Lower your body to the working level by flexing your knees and at the same time keeping your back straight (figure 2-7B).

(3) Lean forward and slide your hands and arms under the patient, keeping the elbows close to your body and the back straight. At the same time, tense contract the abdominal and gluteal muscles in anticipation of moving the patient (figure 2-7C).

b. Mechanics of Body Movements. The following procedures relate to the mechanics of your body as you move the patient in the various directions.

(1) To move the patient toward you, let the arm holding the patient slide on the surface toward you while shifting your weight backward from front to rear foot (figure 2-7D).
Figure 2-7. Body positions for moving and lifting.

(2) To move the patient away from you, let the arm holding the patient slide on the surface away from you while you shift your weight forward from rear to front foot.

(3) To lift the patient, first move the patient toward you. This keeps the centers of gravity close together. Keeping elbows close to your body, straighten your knees to equalize the weight on both feet. Support the weight of the patient against the chest as you shift your weight backward.

(4) To lower the patient to the bed surface, flex the knees to lower your body to working level.

2-5. TECHNIQUES IN MOVING BED PATIENTS

a. Preparation Before Moving Patients. The principles of body mechanics should be employed when assisting or moving the patient. Important points that should be resolved before the procedures start include the following:

(1) Check the medical officer's orders and the nursing care plan card in order to determine any restriction of the patient's movement and to know what the patient should be encouraged to do. Explain to the patient, how he can assist in the procedure.

(2) Obtain the equipment and the assistance necessary before moving patient.

(3) Ensure that the bed wheels are locked; and start with the bed level (unless contraindicated).

b. Moving a Patient Up in the Bed. There is a tendency for the mattress and the patient to slip down when the head of the bed has been elevated. Lower the head rail to a level position and move the mattress up before repositioning the patient, as free space at the foot of the bed is needed to adjust the bedding.
(1) **Moving the mattress up.** This procedure is used when the patient can assist and raise his buttocks off the bed on signal. Stand behind the head of the bed and grasp the mattress; give the signal; brace your forward thigh against the bed; and slide the mattress and patient up. If the patient cannot assist, ask for help. Instruct the assistant to stand at the opposite side of the bed and grasp the mattress. On signal, slide the bed mattress and patient up.

(2) **Moving the patient up.** Pull the pillow upright; tell the patient to reach back and grasp the bars at the head of the bed and bend his knees; slide one arm under the patient’s shoulders and the other arm under his buttocks (figure 2-8); on signal, have the patient pull with his arms and push with his feet while you slide him upward. When the patient cannot assist, the assistant, standing on the opposite side of the bed, likewise slides his arms under the patient and, in unison, both shift their weight and slide the patient up.

![Figure 2-8. Moving a patient up in bed.](image)

(3) **Using a drawsheet.** A drawsheet may be used to help move a helpless patient. An assistant is needed. Loosen the sheet and roll it close to either side of the patient's body. In unison, grasp the rolled sheet and slide the sheet and patient upward. Then smooth the loosened sheet free of all wrinkles, tighten, and tuck it under the sides of the mattress.

c. **Assisting a Patient to Raise Head and Shoulders.** This procedure is used to remove or replace the pillow or to assist the patient into a sitting position. Stand facing the head of the bed with one foot advanced. Slip your arm nearest the patient under his axilla and brace this hand against the back of his shoulder. Tell him to bend his knees to relieve strain on his abdominal muscles and to brace the hand of his supported arm against the back of your shoulder. By linking arms, you and the patient make use of shoulder and chest muscles to lift his body weight (figure 2-9). This linking of arms provides mutual support. At the given signal, raise his back and shoulders by shifting your weight from the front to the rear foot. Use your free hand to support his head or to remove or replace the pillow.
d. **Moving a Patient to the Side of The Bed.** A patient is easier to move or lift when he is close to the side of the bed since the medical worker can be closer to the patient’s center of gravity. Consequently, other procedures require less strain. When working alone move the upper and lower parts of the body separately. To move his upper body, slide one arm under his head and shoulders and one arm under his back; then slide his upper body toward you. To move his lower body, slide one arm under his hips and one under his thighs, and then slide his lower body toward you. Realign his shoulders, hips, and legs.

e. **Turning a Patient on His Side.** When working alone, always turn the patient toward you. Stand on the side of the bed toward which the patient is to be turned. Flex his knees toward you. Place one hand on his far shoulder and the other on his far hip. Bracing your body against the side of the bed, gently roll the patient toward you. Now go to the opposite side of the bed. Slide your arms under the patient's hips and draw his hips toward you, toward the center of the bed. Flex his upper leg forward on his extended lower leg to prevent him from rolling backward. Check his shoulder alignment. His lower arm should be in front of his chest or extended along his back, but not caught under his body (figure 2-10). Return to the original side of the bed. Arrange the pillow to support his head. Use two additional pillows to support his upper arm and upper leg and to maintain shoulder and hip alignment.
2-6. RANGE OF MOTION

   a. Range of motion is a group of exercises performed to proper preserve movement of a joint. Types of motion are depicted below.

   b. Parts of the body that can be exercised by the respective range-of-motions are depicted in the following: (figures 2-11 through 2-22).

   ![Diagram of range-of-motion exercises for the neck]

   **Flexion**  **Extension**  **Hyper-extension**  **Rotation**  **Lateral flexion**

   Figure 2-11. Range-of-motion exercises for the neck.
Figure 2-12. Range-of-motion exercises or the shoulder.

Figure 2-13. Range-of-motion exercises motion exercises for the elbow.
Figure 2-14. Range-of-motion exercises for the forearm.

Figure 2-15. Range-of-motion exercises for the wrist.
Figure 2-16. Range-of-motion exercises for the thumb.

Abduction  
Adduction  
Extension

Opposition to little finger  
Extension  
Flexion

Figure 2-17. Range-of-motion exercises for the fingers.

Abduction  
Adduction

Figure 2-18. Range-of-motion exercises for the hip.

Flexion  
Extension

Abduction  
Adduction

Outward rotation  
Inward rotation
Figure 2-19. Range-of-motion exercises for the knee.

Figure 2-20. Range-of-motion exercises for motion exercises for the ankle.
2-7. ARMS CARRY LIFT FROM FLOOR TO BED LEVEL

   Situations may arise which require a patient to be lifted from the floor to a bed or wheeled litter. For this procedure, perhaps two bearers should be sufficient to lift a lightweight patient but three or more bearers are necessary to lift a heavy patient. The signals or commands should be given by the bearer lifting the patient's head and shoulders. The following procedures are appropriate.

   a. Place the bed or stretcher to receive a patient lifted from the floor at the far side of the patient and parallel to him. Lock the wheels of the bed or stretcher. All bearers kneel on the knee nearest the patient's feet. Each bearer slides his arms under the patient at a space interval, which allows the bearer's elbows to be held close to his body, while supporting the patient's shoulders, back, hips, and thighs (figure 2-23A).
b. At the command, all lift in unison, shifting weight backward, and carrying the patient to a support position on their braced thighs (the thigh toward the patient's head) (figure 2-23B).

c. Continuing in the kneeling position and at the command, all lift and turn the patient inward their chest. Now, with back straight, all rise to standing position (figure 2-23C).

NOTE: This is a key maneuver for proper weight distribution. Attempting to rise to a standing position while supporting the patient's weight on the outstretched forearms will cause a severe strain.

d. To lower the patient to a bed placed parallel, all step forward to the side of the bed. Flexing the knees, shifting the weight to the front, and keeping the back straight, lower the patient gently to the bed (figure 2-23D).

![Figure 2-23. Lifting patient from floor to bed.](image)

2-8. POSITION SUPPORT DEVICES

Position support devices are used to maintain good body alignment and aid comfort for bed patients. The more common support devices on the nursing unit include the adjustable Gatch bed, footboards, pillows, sandbags, and rolled and folded towels, sheets, and blankets.
a. **Requirements.** Any position support device should meet the following requirements.

   (1) Promote good posture and conform to the part of the body being supported.

   (2) Be firm enough to support the part, yet not cause undue pressure.

   (3) Be of sufficient size to support a part along its entire length.

   (4) Be clean and protected against moisture and body secretions.

b. **Use of Support Devices.** The reason for using a device should be explained to the patient. He should be encouraged to participate to the extent possible in maintaining good body alignment. Following is a description of the more common devices.

   (1) **The Gatch bed.** Raising and lowering the back and knee rests on the adjustable Gatch bed provides support and allows for position changes, but there are disadvantages that must be considered. When the back rest is elevated, the patient tends to slide down in bed, with his body weight concentrated on the base of his spine. This is undesirable. Elevation of the knee rest counteracts this to some extent, but continued use of the knee rest causes undesirable pressure in the popliteal space (behind the knee) and can lead to restrictions in the range movement of the knee and hip. The Gatch bed should be used for variations in position and not as a substitute for active movement of the patient.

   (2) **The footboard.** When properly placed in relation to the patient's feet, the footboard helps prevent foot drop (plantar flexion). The patient's feet should be supported at right angles to the legs then he lies on his back. A padded board, a firm pillow, or a blanket roll is braced between the end of the bed and the patient's feet. Such a device also helps prevent the patient from sliding down in the bed, relieves the pressure of bedding on the toes, and provides a resistant surface against which the patient can push for exercise to maintain circulation and muscle tone. The board or pillow roll should extend higher than the toes (figure 2-24).

   (3) **Pillows.** These have multiple uses, but placement in relation to body curves is essential. The standard-size pillow is often too large, but folded bath towels placed in a pillowcase can be substituted when small, firm pillow support is recommended. When the patient is supine or has the back rest elevated, the pillow supporting the head should start well under the shoulders. (A common mistake is to tuck the pillow behind the neck, forcing the head forward.) When pillows are used to elevate a limb, they should be placed so that the entire limb is supported. Two or more pillows may be required. It is important to remember that, unless otherwise ordered, the foot or hand should be slightly higher than the rest of the limb. Arrange the pillows in order to provide an inclined plane. In moving an injured arm or leg, place both hands
beneath the injured limb, at the joints above and below injury. Raise the limb slowly and gently and place it on the supporting pillow or pillows. Figure 2-25 illustrates the leg and arm supported in abduction with pillows covered by sheets. The head is supported with a small pillow (figure 2-26).

A. Feet supported with board or weighted box. Knee flexion maintained with small pillows. Shoulders and head supported with small pillow starting well under shoulders.

B. Feet supported with covered board or weighted box. Slight flexion of knee maintained with a folded bath towel or folded pillow. Lumbar position region supported with small pillow.

C. Heels placed against board support ankle joint with folded bath towel. Abdomen supported with firm small pillow. Shoulder supported with folded bath towel.

Figure 2-24. The footboard.
2-9. BED CRADLE

A bed cradle is used to keep the weight of bed coverings off the body part to be protected. Moreover, the dimensions of the bed cradle enable the limbs to be elevated on pillows when necessary. When using the bed cradle, bed making is modified for protection and comfort of the patient and to maintain a neat appearance. The following equipment and procedures are appropriate when a bed cradle is to be used.

a. Equipment. The equipment required when using a bed cradle follows:

(1) Bed cradle, standard model or field (collapsible).

(2) Roller bandage.

(3) Usual allowance of bed linen, plus one additional sheet and blanket.

b. Procedure. The bed foundation is completed as for the patient occupied bed. Proceed as follows:

(1) Place the cradle in position over the patient, with no part in contact with a body part. Secure the cradle in place with bandage loops tied to the bedframe.

(2) Place the top covers to provide adequate covering for the shoulders, then drag these ends over the head-end of the cradle.
(3) Place the additional blanket and covering sheet crosswise over the cradle, overlapping the top covers with the surplus toward the foot of the bed.

(4) Tuck the surplus edges of the cradle covering under the foot of the mattress. Miter corners, arranging the top folds to hang free. Fold back the overlapped covers as required for access to the body part protected by the cradle.

2-10. PREVENTION OF PRESSURE SORES

Timely change and movement of a patient's position as well as the knowledgeable uses of support devices go a long way toward the prevention of pressure or bedsores. Nevertheless, since pressure sores can develop within a few hours of neglect, constant vigilance and good nursing care can prevent them.

a. Areas of Susceptibility. Pressure sores are more likely to develop over the more bony prominence of the body (figure 2-27). In addition, sores can also develop on such areas as toes, knees, shoulders, chin, and forehead when circulation to the skin of these areas is restricted by the pressure of body weight and the patient is unable to move.

![Figure 2-27. Areas susceptible to bedsores.](image)

Figure 2-27. Areas susceptible to bedsores.
b. **Stages of Development.** Pressure sores develop in three recognized stages.

(1) The first stage reveals redness of the skin in the area.

(2) In the second stage, a bluish or mottled (blotches of different shades) discoloration of the skin occurs.

(3) In the third stage, there is a break in the skin that can develop rapidly into a decubitus ulceration (a destruction of underlying tissue).

c. **Preventive Nursing Measures.** Pressure sores can complicate recovery of the patient for weeks and even months. Therefore, nursing personnel must be alert and perform the following preventive measures.

(1) Change the patient's position at least every 2 hours, or more frequently if necessary. Remember that there are four body surfaces on which to turn the patient to relieve pressure on any one area.

(2) Inspect all skin areas of all bed patients daily during the bath procedure and at evening care. Massage skin areas over bony prominence to stimulate circulation. Report any suspicious (reddened) area immediately to the nurse in charge, and relieve pressure by changing position. Report any complaint of numbness or tingling under a cast or splint.

(3) Keep the patient's skin clean and dry. Wash areas soiled by body excretions immediately with soap and water, rinse well, and dry thoroughly.

(4) Keep bed linen clean, dry, free of wrinkles, and free of crumbs and any other foreign matter.

(5) Use pillows and all positioning and comfort devices properly. Rubber rings, cotton doughnuts, and similar articles often cause new circumscribed pressure areas; hence, they should not be used.

d. **Treatment of Pressure Sores.** The best treatment is prevention by proper nursing care. The medical officer's orders must be followed for application of any medication. Aseptic technique must be used on any broken skin areas.

*Continue with Exercises*
EXERCISES, LESSON 2

INSTRUCTIONS: Answer the following exercises by marking the lettered response that best answers the question or best completes the statement.

After you have completed all of the exercise, turn to "Solutions to Exercises" at the end of the lesson and check your answers.

1. Posture is:
   a. Standing.
   b. Body alignment.
   c. Walking.
   d. Sitting erect.

2. In the standing position, the back should be straight; feet firmly on the ground, about __________ inches apart.
   a. 4 to 6.
   b. 6 to 8.
   c. 8 to 10.
   d. 10 to 12.

3. Posture in the sitting position, the back should be straight, with the weight resting equally on the thigh and the:
   a. Buttocks.
   b. Spine.
   c. Knees.
   d. Legs.
4. Which of the following is not a principle that applies to lifting an object?
   a. Push, pull, slide, or roll a heavy object on a surface to avoid unnecessary lifting.
   b. Kneel on both knees, or squat, and keep the back straight when working at the floor level.
   c. Obtain help before attempting to move an obviously unmanageable weight.
   d. Work in unison with an assistant. Give instructions and agree on the signal to start the activity.

5. The bed rest position where the patient is flat on the abdomen, legs extended, feet over the edge of the mattress, and toes pointed to the floor is the:
   a. Fowler position.
   b. Lateral position.
   c. Supine position.
   d. Prone position.

6. The patient lying flat on his back is in the:
   a. Prone position.
   b. Supine position.
   c. Lateral position.
   d. Fowler's position.

7. A person lying on either side is in the ________________ position.
   a. Fowler's.
   b. Lateral recumbent.
   c. Supine.
   d. Prone.
8. The ________________ position will remain comfortable and safe indefinitely.
   a. Sitting.
   b. Fowler’s.
   c. Lateral.
   d. None of the above.

9. Which one is correct to achieve good body alignment in bed?
   a. Head should be in midline with the trunk.
   b. Back should be straight, with normal body curves maintained.
   c. Ribs elevated to prevent constriction of chest.
   d. All of the above.

10. Body mechanics enable medical personnel to perform moving and lifting:
    a. While avoiding back strain.
    b. In order to pick up more weight.
    c. To prevent dropping supplies.
    d. While standing far away from an object.

11. Mechanics of body movements suggest that to move a patient toward you, let the arms holding the patient slide on the surface toward you while:
    a. Shifting your weight forward from rear to front foot.
    b. Shifting your weight backward from front to rear foot.
    c. Shifting your weight equally on each foot.
    d. None of the above.
12. To move a patient away from you, let the arm holding the patient slide on the surface away from you while:
   a. You shift your weight forward from rear to front foot.
   b. You shift your weight equally on each foot.
   c. You shift your weight backward from front to rear foot.
   d. None of the above.

13. Which one of the following is not one of the principles that apply to moving or lifting activity?
   a. Face the direction of movement.
   b. Use large muscle groups of legs, arms, and shoulder.
   c. Push, pull, slide, or roll a heavy object.
   d. Allow the patient to roll to your side as this will reduce back strain.

14. When moving the mattress up, you should:
   a. Stand in front of the bed and grasp the mattress.
   b. Stand behind the head of the bed and grasp the mattress.
   c. Brace your hip against the bed while pulling.
   d. Stand on either side of the bed and pull the mattress up.

15. To turn a patient on his side, when you are working alone, always:
   a. Turn the patient toward you.
   b. Turn the patient away from you.
   c. Turn the patient toward the center of the bed.
   d. Turn the patient toward the outer edge of the bed.
16. Before starting to lift the patient, you should first:
   a. Move the patient away from you.
   b. Shift your weight forward.
   c. Explain the procedure to him.
   d. Move the patient toward you.

17. The figure to the right shows range-of-motion for the:
   a. Neck.
   b. Shoulder.
   c. Elbow.
   d. Forearm.

18. The figure to the right shows range-of-motion for the:
   a. Shoulder
   b. Elbow.
   c. Forearm.
   d. Wrist.

19. The figure to the right shows range-of-motion of the:
   a. Hip.
   b. Knee.
   c. Ankle.
   d. Foot.
20. The figure to the right shows range-of-motion of the:

a. Hip.

b. Knee.

c. Foot.

d. Toes.

Check Your Answers on Next Page
SOLUTIONS TO EXERCISES, LESSON 2

1. b (para 2-2a)
2. a (para 2-2a(1))
3. a (para 2-2a(2))
4. b (para 2-2b)
5. d (para 2-3b)
6. b (para 2-3b)
7. b (para 2-3b)
8. d (para 2-3b(2))
9. d (para 2-3c)
10. a (para 2-4)
11. a (para 2-4b(1))
12. a (para 2-4b(2))
13. d (para 2-2b)
14. b (para 2-5b (1))
15. a (para 2-5e)
16. c (para 2-4a)
17. b (figure 2-12)
18. b (figure 2-13)
19. b (figure 2-19)
20. a (figure 2-18)

End of Lesson 2
LESSON ASSIGNMENT

LESSON 3

Caring for the Patient's Environment.

TEXT ASSIGNMENT

Paragraph 3-1 through 3-5.

LESSON OBJECTIVES

When you have completed this lesson, you should be able to:

3-1. Identify reasons for providing care for the patient's environment.

3-2. Identify the types of cleaning and procedure used in cleaning the patient's unit.

3-3. Identify the general principals of bedmaking.

3-4. Identify methods of making the ambulatory patient's bed.

SUGGESTION

Work the lesson exercises at the end of this lesson before beginning the next lesson. These exercises will help you accomplish the lesson objectives.
To provide safety and comfort of the patient, his unit should be cleaned in such a manner as to provide a safe and attractive environment. In addition, his bed should be made in a manner that provides comfort and appears neat and orderly. The bed is the center of activities for many patients in a hospital. The patient may be fed, bathed, and receive treatment in his bed; therefore, it should be made as clean and as pleasant as possible.

3-2. CLEANING A PATIENT UNIT

a. **Scope of Responsibility.** Nursing service personnel are responsible for the bed, bedside cabinet, chair, overbed table (when used), lamp, and curtain or cubicle partition. In addition, when custodial housekeeping services are not available, the medical specialist is also responsible for the floor and windowsills within the patient unit area and the adjoining bathroom.

b. **Types of Cleaning.** The two types of unit cleaning are termed concurrent and terminal.

   (1) Concurrent unit cleaning is the cleaning of a unit daily or in accordance with local standing operating procedure (SOP). A similar procedure is required on a regularly scheduled basis for a long-term patient to ensure that any accumulation of dust and germs is eliminated.

   (2) Terminal unit cleaning is the cleaning of a unit, when the patient is discharged, transferred, or dies. This type of cleaning includes more activity than the daily (concurrent) cleaning of the area.

c. **Equipment.** The equipment required to clean a patient unit follows:

   (1) Wheeled utility cart.

   (2) Wheeled laundry camper.

   (3) Cleaning cloths.

   (4) Wastebasket with paper bag or plastic liner.

   (5) Basin of prescribed detergent-germicide solution.
d. Terminal Cleaning Procedure.

(1) Assemble the equipment in the utility room and take it to the patient unit.

(2) Clear the bedside cabinet (and overbed table if used). Check for any personal articles left by the patient and turn them in to the wardmaster. Place all utensils and any reusable treatment equipment on the cart. Discard waste in the wastebasket. Place any unused linen in the unit in the laundry hamper.

(3) Strip the bed. Remove the pillow, placing the pillow on the chair and the pillowcase in the hamper. Lower the Gatch bed. Loosen the bedding all around, walking around the bed and lifting the mattress edge to release the linen without snagging it on the bedsprings. Check to see that no articles are concealed in the linen folds. Roll each piece toward the foot of the bed. Check the pocket of discarded pajamas and bathrobe. Place all linen in the hamper. Fold woolen blankets, if used, and place them on the cart for special laundry.

(4) Clean the bed. Wash the top of the plastic mattress cover and inspect it for any tears. Rinse the cloth frequently and use it damp but not dripping wet. Replace any damaged cover. Turn the clean surfaces of the mattress together, toward the head of the bed. Wash the bottom half of the bedframe and all crevices. Lower the Gatch bed at the knee. By grasping the clean fold of the mattress, lift and swing its clean side crosswise on the clean half of the spring and wash the exposed surface. Place the pillow on the unwashed upper half of the spring. Wash the top surface of the pillow. Place the pillow clean side down on the clean mattress surface and wash the other side. Wash the upper spring, raising the head portion of the bed, to complete bed cleansing (figure 3-1).

Figure 3-1. Cleaning the bedside unit.
(5) Wash the cabinet, inside and out. Complete the unit cleaning by washing the chair, bed lamp (cord unplugged), signal cord, and overbed table.

(6) If you are responsible for the floor, sweep and mop it and wash the windowsills. Wash your hands when the cleaning is completed and remake the bed for a new occupant.

(7) Discard the waste. If cleaning cloths are to be reused, place them in the laundry hamper.

(8) Wash the collected utensils and place them in the utensil boiler (sanitizer) for a 30-minute boiling period. Wash the utility cart and return it to the storage place.

(9) Wash hands.

(10) Remove the clean utensils from the utensil boiler. Dry and return them to the storage shelf.

3-3. GENERAL PRINCIPALS OF BEDMAKING

a. Make all beds in a nursing unit alike for uniformity of appearance. A well-made bed is neat, comfortable, free of wrinkles, and readily adaptable to the specific needs of an individual patient.

b. When making beds, use good body mechanics and make each movement purposeful.

c. Handle all linen in order to reduce dust and spread of microorganisms. Do not shake or fan out the clean or soiled linen. Hold the soiled linen away from your uniform and place it in the laundry hamper.

d. Provide clean blankets for each new hospital patient. Use cotton blankets for safety and economy of laundering.

e. Following Army Medical Department policy, use plastic protective cover on all mattresses and pillows. (Add a rubber or laminated cotton drawsheet to protect the bottom or foundation sheet as necessary.)

f. When standard cotton bedspreads are not available, use a top sheet as a blanket cover.
3-4. MAKING THE AMBULATORY PATIENT’S BED

a. General. An ambulatory patient is one who is able to walk, and therefore, not confined to bed. Except for the equipment used and minor differences concerning the folding of the top covers and the cleaning required, the ambulatory patient's bed (also referred to as an occupied open bed) and an unoccupied closed bed (made after terminal cleaning of a bed unit) are generally made in like manner. Generally, in an unoccupied closed bed the top covers are not folded back in order to maintain clean inner surfaces. A check is made of the condition of the plastic mattress cover and plastic pillow cover and they are replaced as necessary. In addition, before this bed is made, the cleaning will have been done and all linen, blanket, and bedspread must be clean. The following equipment and procedures relate to making an unoccupied open bed routinely on a daily basis. Linen is changed as required, in consonance with local nursing unit policy.

b. Equipment. The daily allowance of clean linen including towel and washcloth is obtained as required. Other equipment consists of the following:

   (1) Washbasin containing detergent-germicide solution.
   (2) Cleaning cloth.
   (3) Clothes hamper.
   (4) Paper bag.

c. Preliminary Procedures.

   (1) Assemble the materials at the bedside, placing the clean linen on the chair in the order of use--pillow, pillowcase, spread, blanket, and sheets on top. Then move the bedside cabinet and chair away from the bed and adjust the bed to a level (horizontal) position. Turn the bed crank handle inward to prevent injury.

   (2) Strip the bed and tighten the mattress cover from head to foot. Strip the bed according to the following:

      (a) Remove the soiled pillowcase and place it in the clothes hamper. Place the pillows against the chair back.

      (b) Loosen all linen while moving around the bed, raising the mattress lightly and lifting the linen edges free. Do not tug the linen as this may cause the linen to snag on the springs.

      (c) If any item of linen is to be reused, fold the linen as it is removed from the bed and place it on the clothes hamper.
NOTE: If a linen hamper is not available within or adjacent to the bed unit, hang the used pillowcase on the back of the chair to receive the soiled linen. Do not allow soiled linen to touch the floor.

d. Steps in Bed Making. The bed is made in the following manner, completing one side before going to the other.

(1) Step 1. Place the bottom sheet on the mattress. Center it lengthwise; fold at midline with the hem seam down and the bottom hem even with the foot edge. Unfold the sheet across the bed. Tuck the surplus under the head of the mattress. Pull the excess sheet taut and smooth over the top edge of the mattress, tightening it from the underside of the mattress (figure 3-2).

(2) Step 2. To miter the corner, pick up a hanging side of the sheet edge about 12 inches from the head of the mattress. Lay it back on the mattress in a triangle fold.

(3) Step 3. Tuck the hanging corner of the sheet under the mattress, holding your hands palm down to protect your knuckles from the bedspring.

(4) Step 4. Place your hand at the side of the mattress and even with the top edge. Bring the triangle fold down over your hand to ensure a firm, smooth mitered corner.

(5) Step 5. Tuck the sheet under the mattress working from top to bottom. If mitered properly, the sheet will be smooth and neat when the bed is occupied, and when the Gatch bed is elevated.

(6) Step 6. Center the top sheet on the foundation (previously placed sheets) with the hem seam up and even with the head edge of the mattress. Permit the surplus to extend at the foot.

(7) Step 7. Center the blanket with the edge approximately 8 inches (about one handspan) from the head edge of the mattress and the surplus at the foot.

(8) Step 8. Center the spread or sheet with the edge even with the head of the mattress and the surplus at the foot.

(9) Step 9. Place your hand under the foot end of the side of the mattress to hold the foundation sheet taut while raising the mattress slightly. Smooth and tuck the top sheet, blanket, and spread under the foot of the mattress. Miter the corner. Leave the side of the top covers hanging free.
Step 1.
Place bottom sheet on mattress.

Step 2.
Miter the corner.

Step 3.
Tuck the hanging corners.

Step 4.
Place hand at side of mattress.

Step 5.
Tuck sheet under mattress.

Figure 3-2. Making a bed (continued)
Step 6.  Center the top sheet.

Step 7.  Center the mattress

Step 8.  Center the spread.

Step 9.  Tuck the top sheet.

Step 10
Complete making of bed.

Figure 3-2. Making a bed (concluded)
(10) **Step 10.** Go to the opposite side of the bed and complete the making of the bed as follows:

(a) In sequence, fold back the spread, blanket, top sheet, and, if used, the drawsheet and protective sheet to the center of the bed.

(b) Smooth and straighten the foundation sheet, maturing the top corner and pulling the sheet taut while tucking the side under the mattress from head to foot. If used, pull the protective and drawsheets taut and tuck them under the mattress.

(c) Bring over the top covers in succession. Tuck them under at the foot and miter the corner.

(d) Fold the top edge of the spread under the blanket edge; then bring the top sheet over to form a cuff and fanfold the bedding half-way to the foot of the bed.

**NOTE:** Do not form a cuff when preparing a closed bed.

(11) **Step 11.** Replace the pillowcase and pillow (figure 3-3).

(a) Gather the open-end portion of the pillowcase to about midway of the pillowcase length.

(b) Fit the pillow in the case with one hand while continuing to hold the gathered edges with the other.

(c) Move one hand to the closed end grasping the pillowcase and the pillow within. With the other hand, extend the pillowcase so that it covers the pillow.

(d) Fit the pillow into the corner on one side of the pillowcase and pleat the excess under at the opposite side.

(e) Place the pillow neatly at the head of the bed with the open end of the case away from the door.

![Figure 3-3. Putting on pillowcases.](MD0556_3-9)
e. **Concurrent Cleaning.**

(1) Damp-dust bedside cabinet, bedframe, and chair.

(2) Realign the bed, bedside cabinet, and chair. Turn inward the bed wheels and crank handles. Lock the wheels.

(3) Hang a clean paper bag by securing the tab edge between the surfaces of the bedside cabinet top. (Tear down the sides of the bag to form 2-inch tabs. Fold three sides outward to form a cuff; the fourth side is the hanger. Folding in this manner provides clean surfaces for handling.) A paper bag is used for disposal of tissue wipes and other personal debris. It is not used for soiled dressings.

(4) Leave the unit clean, orderly, and ready for occupancy. Check to see that the lamp and signal cord (if used) is in the proper location.

(5) Discard the waste. Wash and sanitize the washbasin and wash your hands.

### 3-5. **MAKING THE PATIENT OCCUPIED BED**

a. **General.** Changing bed linen and making a comfortable, neat bed while it is occupied by a patient usually follows the completion of a cleansing bath. During this time, excellent opportunities are provided to establish good relations with the patient through patient-centered conversation and for instructing the patient how to move, turn, conserve energy, and maintain good body alignment. If the patient is helpless or unconscious, two individuals should work together. The operator gives instruction and performs the procedure while the assistant holds the patient and helps to turn him. When an assistant is unavailable to assist a helpless patient, the side rails of the bed opposite the operator should be raised to prevent the patient from falling out of bed.

b. **Precautions in Making a Patient Occupied Bed.** Some precautions in making a patient occupied bed are to prevent exposing the patient, provide for his safety, and (by the proper handling of linen) prevent the possible spread of microorganisms.

c. **Equipment.** The following equipment should be obtained as required.

(1) Washbasin containing an appropriate solution.

(2) Cleaning cloth.

(3) Two sheets.

(4) One pillowcase.
d. **Procedure.** The following procedure for making a patient's occupied bed is appropriate when the patient is not helpless.

1. **Step 1.**
   
   a. Remove the pillow and use the crank handle to level the bed if permitted.
   
   b. Loosen the bed linen while moving around the bed, slightly raise the mattress and lift the linen edges free. To prevent the linen from snagging on the springs, do not tug or jerk it.
   
   c. Pull mattress up to the head of the bed as necessary.
   
   d. Remove the spread and blanket, leaving the top sheet as a cover for the patient.
   
   e. Assist the patient to turn toward you, to the side of the bed, keeping his body covered with the sheet. If required, raise and latch the bedrail when the patient's position has been adjusted.

2. **Step 2.**

   a. Go to the opposite side of the bed. Place the chair in a convenient location.
   
   b. Roll all bedding in layers close to the patient's back. Smooth and tighten the mattress cover from top to bottom.
   
   c. Place the clean foundation (bottom) sheet on the exposed section of the mattress with the hem seam down and the centerfold in the midline of the bed. It should be folded against the patient, bottom edge even with the foot of the mattress. Tuck under the top edge, miter the corner, and smooth and tuck the side under, moving from head to foot.
(d) Replace the protective sheet, if used. Hold the linen folds in place in the center of the bed with one hand, and bring the rolled protective sheet back over the linen folds to the clean foundation. Place the clean cotton drawsheet over the protective sheet, rolling the excess folds toward the patient. Smooth and tuck under the sides of both sheets to complete the near side of the foundation. (The cotton drawsheet should completely cover the protective sheet in order to prevent irritation of the patient's skin, when it is exposed to either the rubber or laminated cotton sheet.)

(e) Tuck all linen folds under the patient as smoothly as possible. Assist the patient to roll over the linen folds to the clean foundation side.

(3) **Step 3.**

(a) Secure the side of the bed, if needed, before going to the opposite side of the bed.

(b) Go to the opposite side of the bed. Pull the rolled linen through. Keep the clean linen close to the patient's back; remove the soiled linen and place it in the clothes hamper. Tighten the mattress cover, head to foot. Complete the foundation.

**NOTE:** If protective sheets (or drawsheet only) are used, pull taut and wrinkle free by tightening the center portion first, then the upper and lower ends.

(c) Turn the patient to the center of the bed. Center the clean top sheet over the patient. Instruct the patient to hold the clean top sheet while you remove the soiled top sheet from underneath, pulling gently from top to bottom. Place the soiled sheet in the clothes hamper.

(d) Replace the blanket and spread, instructing the patient to check for free movement of his feet to be sure the top bedding is loose enough before tucking under and maturing the corners at the foot.

(e) Complete the cuff at the head of the bed. Fold down the top bedding to a level comfortable for the patient.

(4) **Step 4.**

(a) Place a clean case on the pillow. Replace the pillow under the patient's head. Use the crank handle at the foot of the bed and adjust as needed. Also adjust the sides of the bed as needed.

(b) Place the bedside cabinet and the signal cord within the patient's reach.
(5) **Step 5.**

(a) Damp-dust the unit. Attach the clean paper bag and place towels and washcloth in the proper place.

(b) Remove all unnecessary equipment and articles from the unit. Leave the unit clean and orderly.

(c) Return the clothes hamper to the storage area. Discard the waste. Wash and sanitize the equipment that is returned to the utility room. Wash your hands.

**Continue with Exercises**
EXERCISES, LESSON 3

INSTRUCTIONS: Answer the following exercises by marking the lettered response that best answers the question or best completes the statement.

After you have completed all of the exercises, turn to "Solutions to Exercises" at the end of the lesson and check your answers.

1. The cleaning of a unit daily or in accordance with local standing operation procedure (SOP) is termed:
   a. Terminal.
   b. Concurrent.
   c. Procedural.
   d. Systematic.

2. The cleaning of a unit when the patient is discharged, is transferred, or dies, is termed:
   a. Systematic.
   b. Terminal.
   c. Concurrent.
   d. Procedural.

3. The equipment required to clean the patient's unit is assembled:
   a. In the patient's room.
   b. On the cleared bedside cabinet.
   c. In the utility room.
   d. At the nurses' station.
4. Any personal articles left by the patient should be turned in to the:
   a. Head nurse.
   b. Wardmaster.
   c. Guardian or relative.
   d. Legal authority.

5. The first steps of the procedure for cleaning a patient unit should be performed in the following order:
   a. Assemble the equipment, clear the bedside cabinet, strip the bed, and clean the bed.
   b. Clean the bedside cabinet, assemble the equipment, clean the bed, and strip the bed.
   c. Clean the bedside cabinet, strip the bed, clean the bed, and assemble the equipment.
   d. Clean the bed, strip the bed, clear the bedside cabinet, and assemble the equipment.

6. Make all beds in a nursing unit alike:
   a. For beauty.
   b. To satisfy the patients.
   c. To please the nurse.
   d. For uniformity of appearance.
7. When making beds, use good body mechanics, and make each movement:
   a. Rapid.
   b. Quiet.
   c. Purposeful.
   d. Dust free.

8. Including the daily allowance of clean linen, towel and washcloth, the following equipment is needed to make an unoccupied open bed:
   a. Wash basin containing detergent-germicide solution, cleaning cloth, clothes hamper, and paper bag.
   b. Cleaning cloth, sponge, paper bag, and washbasin.
   c. Waxed or foil paper, washbasin, cleaning cloth, and disinfectant spray.
   d. Washbasin, waxed paper or foil paper, cleaning cloth, and clothes hamper.

9. When preparing to make a bed, assemble the materials at the bedside, placing the clean linen on the chair in the order of use:
   a. Sheets, blanket, spread, pillowcase, and pillow on top.
   b. Spread, pillow, pillowcase, blanket, and sheets on top.
   c. Pillow, pillowcase, spread, blanket, and sheets on top.
   d. Blanket, spread, pillowcase, pillow, and sheets on top.

10. When making the bed, you should:
    a. Go around the bed and miter all corners.
    b. Go around the bed again and tuck the surplus sheet under the mattress.
    c. Fold the blanket edge under the top sheet edge of the spread.
    d. Complete one side before going to the other.
11. To miter the corner, during the second step of bed making, pick up a hanging side of a sheet about ______________ inches from the head of the mattress.

a. 12.

b. 15.

c. 18.

d. 24.

12. Tuck the hanging corner of the sheet under the mattress, holding your hands:

a. Palm up.

b. Palm down.

c. One up and one down.

d. Either way.

13. If it is necessary to protect the bottom sheet, add a standard laminated cotton protective sheet or:

a. A blanket.

b. A smooth and neat bed sheet.

c. A fitted sheet.

d. A rubber sheet.

14. Center the blanket with the edge approximately __________ inches from the head edge of the mattress and the surplus at the foot.

a. 2

b. 4

c. 8

d. 16
15. When you are replacing the pillowcase and pillow, gather the open portion of the pillowcase:
   a. To about midway the length of the pillowcase.
   b. To the opposite end of the pillowcase.
   c. About one-fourth the length of the pillowcase.
   d. To three-fourths the length of the pillowcase.

16. Place the pillow neatly at the head of the bed:
   a. With the open end of the case away from the door.
   b. Having the open end of the case toward the door.
   c. With approximately half of the pillow over the head of the blanket.
   d. Having the excess pillowcase tucked under and facing the nearest wall.

17. When cleaning the patient unit, you should:
   a. Turn the bed wheels outward and the crank handles inward.
   b. Turn the bed wheels inward and the crank handles inward.
   c. Turn the bed wheels inward and the crank handles outward.
   d. Turn the bed wheels inward, the handles inward, and unlock the wheels.

18. The bed linen of the occupied bed is usually changed:
   a. Prior to the cleansing bath.
   b. Following the completion of the cleansing bath.
   c. During the cleansing bath.
   d. Immediately following the morning meal.
19. Precautions that should be taken when making the occupied bed include:

a. Prevent exposing the patient, always get help before moving the patient, and provide for his safety.

b. Proper handling of linen to prevent the possible spread of microorganisms, always seek help before moving the patient, and prevent exposing him.

c. Provide for the patient's safety, prevent exposing the patient, and handle linen properly to prevent spread of microorganisms.

d. Always get help to prevent dropping the patient, prevent the spreading of microorganisms, and prevent exposing the patient.

20. When it is necessary to replace the protective sheet:

a. It should be placed under the drawsheet.

b. It should be placed over the blanket.

c. It should be placed over the drawsheet.

d. It should be covered partially by the cotton drawsheet.

Check Your Answers on Next Page
SOLUTION TO EXERCISES, LESSON 3

1. b (para 3-2b(1))
2. b (para 3-2b(2))
3. c (para 3-2d(1))
4. b (para 3-2d(2))
5. a (para 3-2d(1-4))
6. d (para 3-3a)
7. c (para 3-3b)
8. a (para 3-4b(1-4))
9. c (para 3-4c(l))
10. d (para 3-4d)
11. a (para 3-4d(2))
12. b (para 3-4d(3))
13. d (para 3-5d(2)(d))
14. c (para 3-4d(7))
15. a (para 3-4d(11)(a))
16. a (para 3-4d(11)(e))
17. b (para 3-4e(2))
18. b (para 3-5a)
19. c (para 3-5b)
20. a (para 3-5d(2)(d))

End of Lesson 3
LESSON 4

Specimen Collection.

TEXT ASSIGNMENT

Paragraphs 4-1 through 4-7.

LESSON OBJECTIVES

When you have completed this lesson, you should be able to:

4-1. Identify the reasons for collecting samples of specimen.

4-2. Identify the procedures used to collect a sterile urine specimen from a male patient.

4-3. Identify the procedures used to collect a sterile urine specimen from a female patient.

4-4. Identify the procedures used to collect a midstream urine specimen.

4-5. Identify the procedures used to collect a 24-hour urine specimen.

4-6. Identify the presence of occult blood in a stool.

4-7. Identify the procedures used to collect a stool.

4-8. Identify the procedures used in collecting sputum.

SUGGESTION

Work the lesson exercises at the end of this lesson before beginning the next lesson. These exercises will help you accomplish the lesson objectives.
LESSON 4
SPECIMEN COLLECTION

4-1. OVERVIEW

A specimen is a sample or part of a thing, or of several things, taken to show or to determine the characteristics of the whole. The physician or laboratory specialist can determine causes of illnesses or conditions of patients by diagnosing samples. They can also provide preventive measures of certain illnesses by diagnostic process of cultures and samples. Specimen is often taken of urine, stool, blood, and for pathological examination of tissues, organs, and organisms.

4-2. COLLECTING A STERILE URINE SPECIMEN

a. General. A sterile urine specimen can be obtained either by inserting a straight catheter into the urinary bladder and removing urine or by obtaining a specimen from the port of an indwelling catheter using sterile technique. Urine from the dependent drainage bag should not be used for a specimen, since it is not fresh and would not reflect accurate test results. Residual urine, urine left in the bladder after voiding, can be measured at the time of catheterization. The patient voids, and catheterization is performed within 10 minutes. If more than 60 ml of urine remains in the bladder, this is residual urine and the patient may need to have an indwelling catheter inserted. The medical nurse must prepare the patient by explaining which type of urine specimen will be collected. It is important to relieve any anxiety by assuring the patient that there should be no discomfort during the procedure if the patient will remain relaxed: the patient should experience only mild pressure as the catheter is inserted and will feel nothing when urine is collected from the catheter port.

b. Important Points.

(1) Have all supplies ready for the patient to perform the procedure.

(2) Make certain the patient understands the proper procedure for collecting the urine specimen.

(3) Be certain the specimen is labeled correctly: patient's name, room number, date, physician, and type of specimen.

c. Procedure.

(1) Read physician's orders.

(2) Collect supplies.
(a) Sterile cotton balls.
(b) Antiseptic.
(c) Sterile specimen container.

3. Introduce yourself to the patient.

4. Identify patient by checking his identification band.

5. Explain the procedure to the patient.

6. Obtain the catheter port collection:
   (a) Clamp tubing just below catheter port for about 30 minutes (figure 4-1).
   (b) Return in 30 minutes and clean the port with alcohol prep.
   (c) Insert needle into port at 30-degree angle, and withdraw 5 to 10 ml of urine for a specimen (figure 4-2).

Figure 4-1. Clamp catheter port.

Figure 4-2. Insert needle into catheter port.
(d) Place urine in sterile specimen cup.

(e) Unclasp catheter.

(f) Label specimen, and send to laboratory with requisition.

(g) Document the procedure.

(7) Obtain straight catheter collection.

(a) Wash your hands and don sterile gloves, and prepare supplies, using sterile technique--wrap the edges of the sterile drape around the gloved hands.

(b) Place sterile drape under patient's buttocks (figure 4-3).

Figure 4-3. Place sterile drape under buttocks.

(c) Open the lubricant container; add antiseptic (usually iodine solution) to the cotton balls.

(d) Lubricate the catheter about 1.5 to 2 inches (3.5 to 5 cm).
d. Catheterize the Female Patient.

(1) To expose the meatus, place the thumb and forefinger of the nondominant hand between the labia minora. Spread and separate upward. Consider the gloved hand that has touched the patient to be contaminated (figure 4-4).

Figure 4-4. Expose the meatus.

(2) Maintain the position of the contaminated hand until urine is flowing.

(3) Pick up the forceps and secure a cotton ball saturated with antiseptic solution--use one cotton ball for each stroke.

(4) Bring the cotton ball down the center over the meatus towards the rectum; next cleanse each lateral area from superior to inferior.

(5) Deposit used cotton balls onto plastic cover.

(6) To insert a catheter into a female with sterile gloves pick up catheter and insert through urinary meatus 2 to 3 inches (5 to 7.5 cm). **DO NOT FORCE ENTRY OF THE CATHETER**. Discontinue the treatment if the patient has unusual discomfort or if there is continual resistance to the insertion of the catheter. Report the information promptly.

(7) When urine flows, place end of catheter in specimen cup.

(8) Place lid on urine cup and label; clean up supplies.

(9) Send specimen to lab with requisition and document the procedure.
e. Catheterize the Male Patient.

(1) To cleanse the penis, swab the center of the meatus outward in a circular manner. Continue, using a new cotton ball for each progressively larger circle (figure 4-5).

![Figure 4-5. Cleanse the penis.](image)

(2) To insert a catheter into a male, apply gentle traction and pull the penis straight up; slightly pinch the end of the penis and insert the catheter 15 to 20 cm (6 to 8 inches). To facilitate the more difficult passage through the male urethra, ask the patient to breathe deeply; then rotate the catheter slightly. **DO NOT FORCE ENTRY OF THE CATHETER.** Discontinue the treatment if the patient has unusual discomfort or if there is continual resistance to the insertion of the catheter. Report the information promptly.

(3) When urine flows, place end of catheter in specimen cup.

(4) Place lid on urine cup and label. Clean up supplies, send specimen to lab with requisition, and document the procedure.

4-3. COLLECTING A MIDSTREAM URINE SPECIMEN

a. General. A midstream specimen is a voided specimen collected under conditions of thorough cleanliness after approximately the first 30 ml of urine has been voided. The advantage of collecting a voided specimen in this manner is that if organisms appear in the urine, they are mostly from structures such as the bladder or kidneys rather than just surface contamination. Cleansing removes organisms from the urinary meatus. Voiding moves any residual organisms present in the urethra out with the beginning stream of urine.

b. Important Points. Specimens of urine should not be allowed to stand at room temperature before they are sent to the laboratory. Bacterial growth is likely to occur as well as alter other results of the urinalysis. The usual procedure is to store an aurum (gold) specimen in a refrigerator, if it is not taken directly to the laboratory. Specimens that are collected from multiple voidings are either refrigerated on the nursing unit or placed in a container with a chemical preservative.
c. **Procedure.**

(1) Read physician's orders.

(2) Collect supplies.

(3) Introduce yourself to the patient.

(4) Identify patient by identification band.

(5) Explain procedure to patient.

(6) Wash hands and don clean gloves.

(7) If patient is able, allow patient to cleanse perineum with antiseptic solution. Separate the labia well on a female patient. Retract foreskin of an uncircumcised male. Use each cotton ball that is saturated with antiseptic solution one time only. If patient is unable to cleanse area, the nurse will assist with procedure.

(8) Assist the patient.

   (a) Begin to void into container about 30 ml; then place the sterile specimen container so the sides of the labia of the female do not touch;

   (b) To stop flow, void a small amount into specimen cup; and

   (c) Without stopping flow, finish voiding into toilet seat collector.

(9) Secure the lid on the container.

(10) Cleanse and return toilet seat collector, if applicable.

(11) Label specimen appropriately.

(12) Ensure that specimen is taken to laboratory with requisition.

4-4. **COLLECTING A TWENTY-FOUR HOUR URINE SPECIMEN**

a. **General.** Some tests require that the entire volume of urine from a 24-hour period be collected. The procedure for ensuring that the test can be performed accurately should be followed carefully.

   b. **Important Points.** Use strict sterile technique to prevent infection in the urinary system. Insert the catheter gently to prevent pain or discomfort, as catheterization should not be painful. Teach the patient to relax by deep breathing during catheterization. Answer the patient's questions about the procedure.
c. **Procedure.**

(1) Read physician's order.

(2) Wash hands.

(3) Identify the patient.

(4) Post "Do not disturb" signs on patient's door, bathroom door, and near patient's bed.

(5) Explain procedure.

(6) Instruct patient about the importance of collecting all urine for 24 hours.

(7) Instruct patient not to place toilet tissue or fecal material in urine.

(8) Have patient void when the 24-hour specimen collection is to begin; discard this voiding.

(9) Place labeled container on ice if required. (Some agencies require refrigeration of all specimens. Others advocate that the urine container be placed on ice. For some collection procedures, such as the creatinine clearance test, refrigeration may not be necessary.)

(10) Save all urine for the 24-hours, then place each voided specimen into the larger container with preservative.

(11) Instruct patient to void a few minutes before the end of 24 hours; this urine is part of the 24-hour specimen.

(12) Send specimen to lab promptly; be certain label includes date and time specimen started, patient's name, room number, and test ordered. If more than one container is necessary, make certain both are labeled and numbered.

### 4-5. **DETERMINING PRESENCE OF OCCULT BLOOD IN STOOL**

a. **General.** The presence of blood in body waste is abnormal. Blood in the stool may be bright red, which indicates that the blood is fresh and that the site of bleeding is in the lower gastrointestinal tract. On the other hand, black-tarry-feces means the presence of old blood and that the site of bleeding is higher in the gastrointestinal tract. When blood is present in the stool but cannot be seen without the use of a microscope, it is referred to as **occult** or hidden. A **hemoccult test** detects occult blood in feces.
b. **Important Points.**

   (1) Do not confuse hemorrhoidal bleeding with upper gastrointestinal bleeding.

   (2) Meat-free diet may be ordered 3 days before the test.

### 4-6. COLLECTING A STOOL

a. **General.** Stool specimens are collected and examined for a variety of reasons including to determine the presence of infection or hemorrhage; to observe the amount, color, consistency, and presence of fats; and to identify parasites, ova, and bacteria. The medical nurse collects the feces, labels the specimen appropriately, and sends the specimen and laboratory request to the laboratory. Stool to be examined for parasites must be taken immediately to the laboratory in order for parasites to be examined under the microscope while alive. A stool specimen may also be collected from a colostomy or ileostomy.

b. **Important Points.**

   (1) The medical specialist must know what type stool specimen is ordered and how to collect the specimen.

   (2) Make certain the patient understands what is expected, and provide patient safety.

   (3) A specimen to be examined for ova and parasites must be taken to the laboratory while still warm. Other stool specimens may be kept at room temperature.

### 4-7. COLLECTING SPUTUM

a. **General.** Sputum is mucus from the lung. A sputum specimen must come from deep in the bronchial tree. Expectoration from throat and mouth secretions cannot be used as a sputum specimen. Early morning is the best time to collect a sputum specimen because the patient has not yet cleared the respiratory passages. Many tests can be performed on sputum, such as a culture and sensitivity, cytological examination, and test for acid-fast bacillus. Some patients cannot expectorate a specimen and must have a pharyngeal suctioning to obtain sputum. Closed-method collection containers protect you from contamination from body fluids. The medical specialist explains the procedure and prepares the patient for the test.
b. **Important Points.**

(1) Oral hygiene should be provided after the procedure for patient comfort.

(2) Accuracy of test decreases if delivery of specimen to laboratory is delayed.

(3) Make certain the patient knows how to perform sputum collection.

(4) The nurse must be prepared to obtain the specimen by suctioning if the patient cannot cough.

c. **Procedure.**

(1) Read physician's orders.

(2) Collect supplies.

(3) Introduce yourself.

(4) Identify the patient by identification band.

(5) Explain procedure to patient.

(6) Wash hands and don gloves.

(7) Position patient in Fowler's position.

(8) Instruct patient to take three breaths and force cough into sterile container.

(9) Attach laboratory requisition.

**Continue with Exercises**
EXERCISES, LESSON 4

INSTRUCTIONS: Answer the following exercises by marking the lettered response that best answers the question or best completes the statement.

After you have completed all of the exercises, turn to "Solutions to Exercises" at the end of the lesson, and check your answers.

1. A specimen is a sample or part of a thing, or of several things, taken to show or to determine:
   a. The amount of impurities in a quantity of urine, stool, or blood.
   b. The kinds of impurities in the quantity of urine; stool; or blood; and the quality of stool, urine, or blood.
   c. The number or kinds of pathogenic organisms in a sample, or parts of tissues and organs.
   d. The characteristics of the whole unit or organism.

2. The patient may need to have an indwelling catheter inserted if he voids and more than _________ of residual urine remains in the bladder.
   a. 15 ml.
   b. 30 ml.
   c. 45 ml.
   d. 60 ml.

3. It is important to inform the patient that if he remains relaxed during the insertion of the catheter:
   a. The sharp pain will last only a short while.
   b. A mild sting can be expected.
   c. There should be no discomfort during the procedure.
   d. He will feel only mild pressure when urine is collected from the port of the catheter.
4. When collecting a sterile urine specimen, clamp just below the catheter for about _______ minutes.
   a. 15.
   b. 30.
   c. 45.
   d. 60.

5. When collecting a sterile urine specimen, slightly pinch the end of the penis and insert the catheter:
   a. 7.5 to 10 cm (3 to 6 inches).
   b. 15 to 20 cm (6 to 8 inches).
   c. 20 to 30 cm (8 to 11 inches).
   d. 25 to 45 cm (12 to 18 inches).

6. To insert the catheter into the female, with sterile gloves insert through urinary meatus:
   a. 1 to 2 inches (2.5 to 5 cm).
   b. 2 to 3 inches (5 to 7.5 cm).
   c. 3 to 5 inches (7.5 to 12 cm).
   d. 5 to 7 inches (12 to 17.5 cm).

7. Specimens of urine that are not taken directly to the laboratory are usually:
   a. Refrigerated.
   b. Discarded.
   c. Sealed in a sterile container.
   d. Shaken up.
8. The first step of the procedure for collecting a midstream urine specimen is:
   a. Identify the patient by identification band.
   b. Introduce yourself.
   c. Collect supplies.
   d. Read the physician's order.

9. When collecting a 24-hour urine specimen, post signs:
   a. On the patient's door, bathroom door, and on the stool.
   b. Near the bed, on the stool, and on the patient's door.
   c. On the stool, near the bed, and on the wall.
   d. On the patient's door, bathroom door, and near the patient's bed.

10. Bright red blood in the stool indicates that:
    a. The blood is fresh and the site of the bleeding is in the upper GI tract.
    b. The site of the bleeding is in the higher gastrointestinal tract.
    c. The blood is fresh and the site of the bleeding is in the lower GI tract.
    d. The blood is old and the site of bleeding is in the upper gastrointestinal tract.

11. The type of blood that can be found in the stool, but cannot be seen with the naked eye is called:
    a. Occult blood.
    b. Homocult.
    c. Gross blood.
    d. Edema.
12. Stool specimens are collected to determine the presence of:
   a. Infection.
   b. Bleeding.
   c. Fats.
   d. All of the above.

13. Stool specimens are collected to identify:
   a. Ova.
   b. Parasites.
   c. Bacteria.
   d. All of the above.

14. Sputum is:
   a. A sample of fecal material.
   b. Fluid from the uterus.
   c. Fluid from the lungs.
   d. Fluid from the mouth.

15. The patient who cannot produce sputum by himself must have the medical specialist nurse secure it by:
   a. Pumping.
   b. Suctioning.
   c. Thrusting.
   d. Catheterization.

Check Your Answers on Next Page
SOLUTIONS TO EXERCISES, LESSON 4

1. d (para 4-1)
2. d (para 4-2a)
3. c (para 4-2a)
4. b (para 4-2c(7)(a))
5. b (para 4-2e(2))
6. b (para 4-2d(6))
7. a (para 4-3b)
8. d (para 4-3c(l))
9. d (para 4-4c(4))
10. c (para 4-5a)
11. a (para 4-5a)
12. d (para 4-6a)
13. d (para 4-6a)
14. c (para 4-7a)
15. b (para 4-7a)

End of Lesson 4
LESSON ASSIGNMENT

LESSON 5
Handwashing Procedures.

TEXT ASSIGNMENT
Paragraphs 5-1 through 5-3.

LESSON OBJECTIVES
When you have completed this lesson, you should be able to:

5-1. Identify the most important technique for interrupting the infectious process.

5-2. Identify the purposes for performing the 2-minute handwashing.

5-3. Identify the steps for performing the 2-minute handwashing.

SUGGESTION
Work the lesson exercises at the end of this lesson before beginning the next lesson. These exercises will help you accomplish the lesson objectives.
LESSON 5

HANDWASHING PROCEDURES

5-1. OVERVIEW

The most important technique for interrupting the infectious process is handwashing. Gloves should be worn during any procedure that could result in contact with blood or body fluid, open skin lesions, or mucous membranes. Handwashing procedures should be performed immediately after removal of gloves or if known contamination with blood or with body fluid has occurred. Health care workers with draining lesions should not come in contact with patients or equipment until the problem is corrected.

5-2. PERFORMING A TWO-MINUTE HANDWASH

a. Purposes.

(1) Prevent nosocomial infection.

(2) Maintain safe, clean environment for patients.

(3) Provide safety for health care workers.

(4) Prevent cross-contamination of patients or the spread of microorganisms.

b. Scope of Responsibility. Teaching patients and visitors about procedures and appropriate times for handwashing is an important role for the health care provider. This enables the patient and family to inhibit the spread of microorganisms when health care is continued at home. The importance of handwashing before and after handling food, after handling contaminated articles, and before and after elimination should be stressed in the teaching process.

c. The Two-Minute Handwash. A two-minute handwash will provide appropriate protection before you begin working with a patient. A 30-second handwash should be sufficient before caring for another patient. A one-minute handwash should be appropriate if you have handled organic material or a contaminated object.

d. Additional Actions. In addition to handwashing, other actions can be taken to reduce the chance of transmitting microorganisms. The patient should receive a personal set of care articles, such as a bedpan, urinal, bath basin, thermometer, water pitcher, and drinking glass to prevent cross-contamination. Articles such as contaminated equipment and soiled linen should be placed in special waste containers or laundry bag, and kept away from your uniform.
e. **Schedule for Handwashing.** Handwashing is essential:

(1) Before and after caring for a patient.

(2) After contact with organic material, such as feces, wound drainage, and mucous.

(3) In preparation for an invasive procedure such as suctioning, catheterization, or injections.

(4) Before performing a dressing change or contact with an open wound.

(5) Before preparing and administering medications.

(6) After removing disposable gloves or handling contaminated equipment.

5-3. STEPS FOR PERFORMING THE TWO-MINUTE HANDWASHING

a. **Step One.**

(1) Inspect hands, observing for visible dirt, breaks, or cuts in the skin and cuticles (figure 5-1).

![Figure 5-1. Inspecting hand.](image)

(2) Determine contamination of hands.

(3) Assess areas around the sink that are contaminated or clean.

(4) Explain to the patient the importance of handwashing.
b. **Step Two.**

(1) Remove all jewelry (except plain wedding band) and push watch and long sleeves above wrists.

(2) Adjust water to right temperature and force (figure 5-2).

![Figure 5-2. Adjust water temperature and force.](image)

c. **Step Three.**

(1) Wet hands and wrists under the running water, always keeping hands lower than the elbows.

(2) Lather hands with liquid soap (about one teaspoon).

(3) Wash hands thoroughly using a firm circular motion and friction on back of hands, palms, and wrists. Wash each finger individually, paying special attention to areas between fingers and knuckles by interlacing fingers and thumbs, and moving fingers back and forth.

(4) Wash one minute, rinse thoroughly, relather, and wash another minute, using a continuous amount of friction.

(5) Rinse wrists and hands completely, keeping hands lower than elbows (figure 5-3).
d. **Step Four.**

1. Clean the fingernails carefully under running water, using fingernails of other hand or blunt end of an orange stick.

2. Dry hands thoroughly with paper towels. Start by patting the fingertips, hands, and then wrists, and forearms.

3. Turn off faucets with a dry paper towel (figure 5-4).

4. Use hand lotion if desired.

5. Inspect hands and nails for cleanliness.

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**Continue with Exercises**
EXERCISES, LESSON 5

INSTRUCTIONS: Answer the following exercises by marking the lettered response that best answers the question or best completes the statement.

After you have completed all of the exercises, turn to "Solutions to Exercises" at the end of the lesson and check your answers.

1. Handwashing is the most important procedure for:
   a. Cleansing the hands.
   b. Breaking the cycle of infection.
   c. Decontaminating the skin.
   d. Cleansing an open skin lesion.

2. Which is not one of the purposes of the two-minute handwashing procedures?
   a. Maintain safe, clean environment for patients.
   b. Prevent nosocomial infection.
   c. Prevent cross-contamination or spread of microorganisms.
   d. Destroy all microorganisms to prevent their transmission.

3. Before you begin working with patients, you should perform a:
   a. one-minute handwash.
   b. two-minute handwash.
   c. three-minute handwash.
   d. five-minute handwash.
4. Before caring for another patient, a _____________ handwash should be sufficient.
   a. 30-second.
   b. one-minute.
   c. two-minute.
   d. five-minute.

5. The ________________ handwash should be appropriate if you have handled organic materials or a contaminated object.
   a. 30-second.
   b. one-minute.
   c. two-minute.
   d. five-minute.

6. The first step in performing the two-minute handwash is:
   a. Inspect hands, observing for visible dirt.
   b. Assess areas around the sink.
   c. Determine contaminate of hands.
   d. Explain to the patient the importance of handwashing.

7. Remove all jewelry for the handwash except:
   a. Diamonds.
   b. Necklaces.
   c. Plain wedding bands.
   d. Your watch.
8. Lather your hands with:
   a. Liquid soap.
   b. Bar soap.
   c. Liquid or bar soap.
   d. None of the above.

9. To perform the two-minute handwash:
   a. Rinse thoroughly for one minute, then wash with soap for one minute.
   b. Wash one minute, rinse thoroughly, relather, and wash another minute.
   c. Wash for a minute and a half, and rinse thoroughly for a half minute.
   d. None of the above.

10. You should turn off the faucet with:
    a. The towel used for drying your hands.
    b. A clean, damp paper towel.
    c. A dry paper towel.
    d. Either of the above.

Check Your Answers on Next Page
SOLUTIONS TO EXERCISES, LESSON 5

1. b  (para 5-1)
2. d  (para 5-2a)
3. b  (para 5-2c)
4. a  (para 5-2c)
5. b  (para 5-2c)
6. a  (para 5-3a(l))
7. c  (para 5-3b(l))
8. a  (para 5-3c(2))
9. b  (para 5-3c(4))
10. c  (para 5-3d(3))

End of Lesson 5