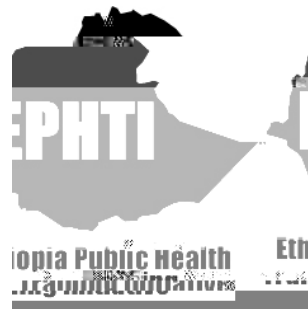


## LECTURE NOTES

For Nursing Students

# *Basic Nursing Arts*



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Hawassa University

In collaboration with the Ethiopia Public Health Training Initiative, The Carter Center,  
the Ethiopia Ministry of Health, and the Ethiopia Ministry of Education

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## PREFACE

Nursing is core part in health service delivery system in which health promotion, disease prevention, curative and rehabilitative health strategies are applied. The skill of basic nursing art for the beginning public health nurse is of paramount important. The purpose of preparing this lecture note is to equip public health nurses with basic nursing skills, which will enable them to dispatch their responsibility as well as to develop uniformity among Ethiopian Public Health Nurse Training Higher Institutions.

The lecture note contains basic selected topics, which are relevant to their scope. It is well known that no nursing service can be provided with out basic skills of nursing art. For public health nurse to provide health service at different settings; hospital, health center, health post and at the community level, the course is very essential.

The lecture note is therefore organized in logical manner that students can learn from simpler to the complex. It is divided in to units and sub **topics**. Important abbreviations and glossaries have been included in order to facilitate teaching learning processes. On top of that learning objectives are clearly stated to indicate the required outcomes. Trial is made to give some scientific explanation for procedure and some relevant study questions are prepared to each unit to aid students understand the subject.

## ACKNOWLEDGMENTS

My deepest appreciation is to Carter Center and Professor Dennis Carlson, senior consultant of the Center for his undivided and genuine support starting from initiation of the lecture note preparation, provision of materials and technical advise.

I also extend many thanks to colleagues from sisterly institutions and staff of our department for their valuable comments and criticism, other wise the lecture note would have not been shaped.

Similarly, my felt thanks is to supportive staff of Carter Center, Ato Aklilu Mulugetta for his devoted support through the preparation of this lecture note.

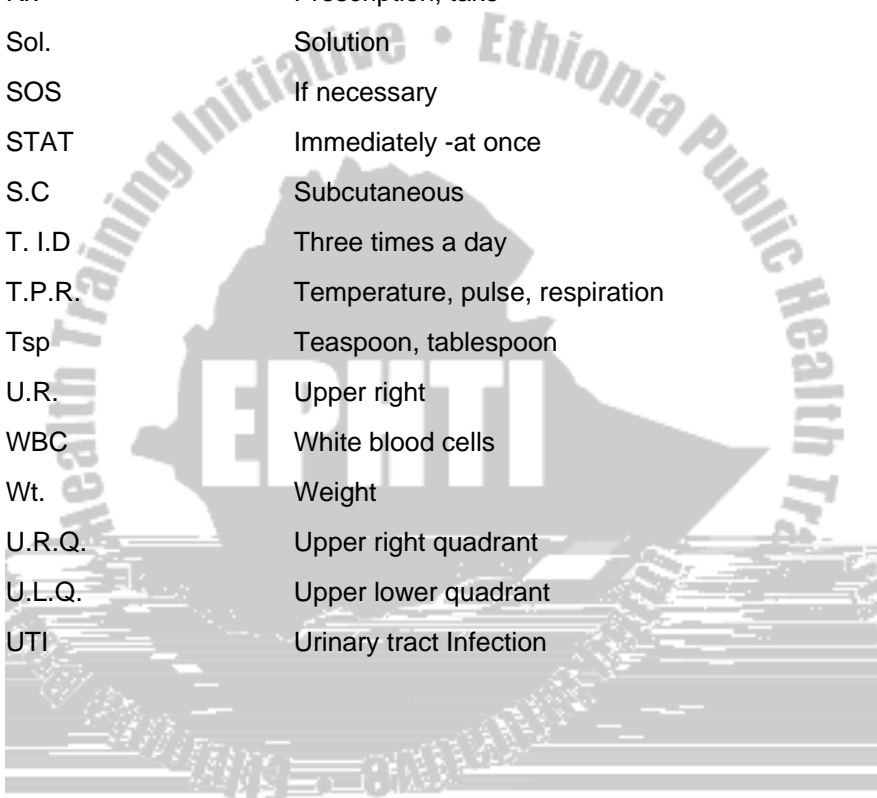
Last but not least, I thank all our College authorities for permission to work on this lecture note besides the routine activities of the college.



## ABBREVIATIONS & SYMBOLS

A.C.	Before meal (ante cibum)
ACTH	Adreno cortico trophic hormone
AD.	As desired
AM.	Morning
AMALG	Amalgam filling
AMA	Against medical advice
A and P	Auscultation and percussion
APC	Aspirin, Phenacetine & caffeine
AQ	Aqueous
BID	Twice a day (bis in die)
B.M	Bowel movement
B.M.R.	Basal metabolic rate
B.P	Blood pressure
B.R.P.	Bathroom privilege
BUN	Blood urea nitrogen
°C	Centigrade
C.B. C	Complete blood count
CC	Cubic centimeter
C.N. S.	Central nervous system
Co <sub>2</sub>	Carbon dioxide
C.S. F.	Cerebro- spinal fluid
D and C	Dilatation and Curettage
D/NS	Dextrose in normal saline
DPT	Diphtheria, pertusis, tetanus
D/W	Dextrose in water
Dx	Diagnosis
EEG	Electro encephalogram
E.E.N.T.	Eye, ear, nose, throat

ECG	Electrocardiogram
°F	Fahrenheit
F.B.S.	Fasting blood sugar
F.H.B.	Fetal heartbeat
G.I.	Gastro intestinal
G or Gm	Gram
gr.	Grain
gt.	Drop (gutte)
gtt.	Drops
G.U.	Genito urinary
GYN.	Gynecology
HCL	Hydrochloric acid
Hb	Hemoglobin
HS	At bed- time (hours of sleep)
H <sub>2</sub> O	Water
I.V.	Intravenous
I.V.P	Intravenous pyelogram
KI.	Potassium iodide
L. P	Lumbar puncture
NaCl	Sodium Chloride
NOCTE	At night
N.P.O.	Nothing by mouth (nothing by os)
O.P.D.	Out Patient Department
O.R.	Operating room
PM	After noon
PRN	As needed, when necessary
Pt.	Patient
Q.	Every
Q.D.	Every Day



Q.H.	Every Hour
Q.I.D.	Four times a day
Q.N.	Every night
Q.O.D.	Every other day
R.B.C.	Red blood count or red blood cell
Rh.	Rhesus factor
Rx	Prescription, take
Sol.	Solution
SOS	If necessary
STAT	Immediately -at once
S.C	Subcutaneous
T. I.D	Three times a day
T.P.R.	Temperature, pulse, respiration
Tsp	Teaspoon, tablespoon
U.R.	Upper right
WBC	White blood cells
Wt.	Weight
U.R.Q.	Upper right quadrant
U.L.Q.	Upper lower quadrant
UTI	Urinary tract Infection

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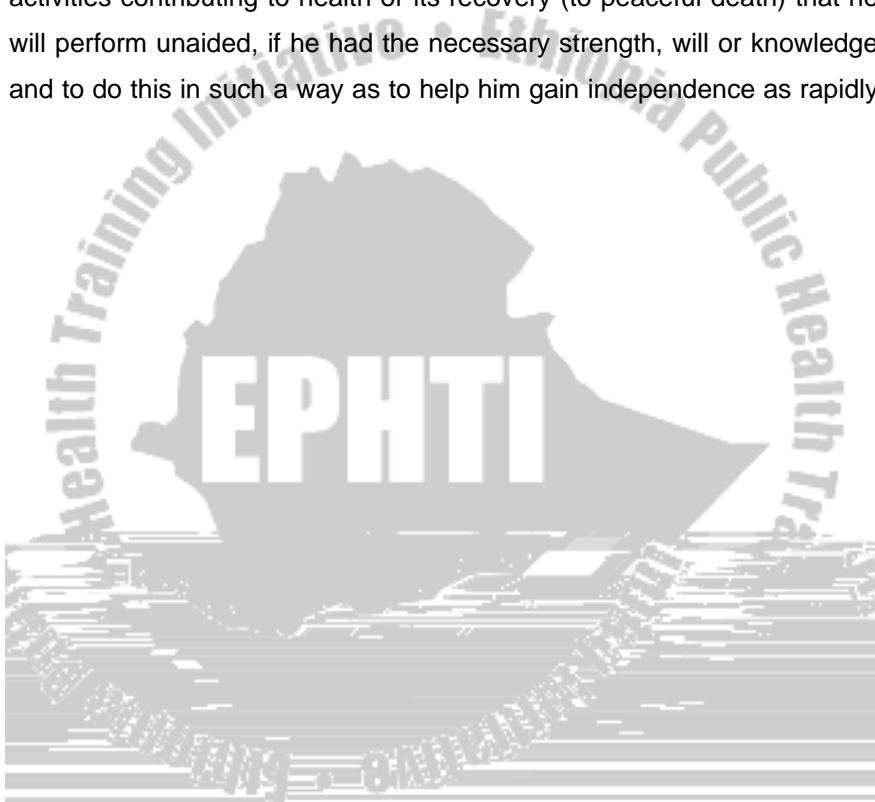
# UNIT ONE

## INTRODUCTION

### Nursing

***Definition:***

It is assisting the individual, sick or well in the performance of those activities contributing to health or its recovery (to peaceful death) that he will perform unaided, if he had the necessary strength, will or knowledge and to do this in such a way as to help him gain independence as rapidly



She greatly modified the tradition of nursing that existed before her era. She also contributed to the definition of nursing " to put the patient in best possible way for nature to act." Since her time modern nursing development has rapidly occurred in many parts of the world.

### **History of Nursing in Ethiopia**

Even though Ethiopia is one of the oldest countries in the world, introduction of modern medicine was very late. Health care of communities and families was by Hakim (wogesha or traditional healers). Around 1866 missionaries came to Eritrea, (one of the former provinces of Ethiopia) and started to provide medical care for very few members of the society. In 1908 Minlik II hospital was established in the capital of Ethiopia. The hospital was equipped and staffed by Russians.

Later hospital building was continued which raised the need to train health auxiliaries and nurses. In 1949



## UNIT TWO

### CARE OF THE PATIENT UNIT AND EQUIPMENT

#### Learning Objective

At completion of this unit the learner will be able to:

State the general instruction for nursing procedures.

Define patient and patient unit.

Take care of patient unit and equipment in health care facilities

Admit and discharge patients according to agency policy

Assist helpless patients to move and maintain normal body alignment

#### General Instructions for All Nursing Procedures

1. Wash your hands before and after any procedure.
2. Explain procedure to patient before you start.
3. Close doors and windows before you start some procedures like bed bath and back care.
4. Do not expose the patient unnecessarily.
5. When ever possible give privacy to all patients according to the procedure.
6. Assemble necessary equipment before starting the procedure.
7. After completion of a procedure, observe the patient reaction to the procedure, take care of all used equipment and return to their proper place.
8. Record the procedure at the end.

## A. Care of Patient Unit

### I. THE PATIENT UNIT

#### Definition:

**Patient:** A *Latin* word meaning to suffer or to bear.

- Is a person who is waiting for or undergoing medical treatment and care.

**A. Patient Care Unit:** is the space where the patient is accommodated in hospital and consists of the bed, an over bed table, a bedside table, and possibly a chair. There may also be closet space or drawer.

#### The patient unit is of three types:

1. Private room – is a room in which only one patient be admitted
2. Semi private room – is a patient unit which can accommodate two patients
3. Ward- is a room, which can receive three or more patients. Consists of a hospital bed, bed side stand, over bed table, chair, overhead light, suction and oxygen, electrical outlets, sphygmomanometer, a nurses call light, waste container and bed side table.

## B. Hospital Bed

**Gatch bed:** a manual bed which requires the use of hand racks or foot pedals to manipulate the bed into desired positions i.e. to elevate the head or the foot of the bed

Most commonly found in Ethiopia hospitals

Are less expensive and free of safety hazard

Handles should be positioned under the bed when not in use

**C. Side rails**

Half rails – run only half the length of the bed, are meant to prevent client falls

It should be attached to both sides of the bed

**Rails**

- Full rails – run the length of the bed
- Half rails – run only half the length of the bed and commonly attached to the pediatrics bed.

**D. Bed Side Stand**

Is a small cabinet that generally consists of a drawer and a cupboard area with shelves

Used to store the utensils needed for clients care. Includes the washbasin (bath basin, emesis (kidney) basin, bed pan and urinal

Has a towel rack on either sides or along the back

Is best for storing personal items that are desired near by or that will be used frequently

E.g. soap, shampoo, lotion etc

**E. Over Bed Table**

The height is adjustable

Can be positioned and consists of a rectangular, flat surface supported by a side bar attached to a wide base on wheels

Along side or over the bed or over a chair

Used for holding the tray during meals, or care items when completing personal hygiene

**F. The Chair**

Most basic care units have at least one chair located near the bedside

For the use of the client, a visitor, or a care provider

**G. Overhead Light (examination light)**

Is usually placed at the head of the bed, attached to either the wall or the ceiling

A movable lamp may also be used

Useful for the client for reading or doing close work

Important for the nurse during assessment

**H. Suction and Oxygen Outlets**

Suction is a vacuum created in a tube that is used to pull (evacuate) fluids from the body E.g. to clear respiratory mucus or fluids

Oxygen is one of the gases frequently used for health care today. Oxygen is derived through a tube.

**I. Electrical Outlets**

Almost always available in the wall at the head of the bed

**J. Sphygmomanometer**

The blood pressure assessment tool, has two types:

1. An aneroid
2. Mercury, which is frequently used during nursing assessment.

**K. Call Light**

Used for client's to maintain constant contact with care providers

**II. Care of Patient Unit**

Nursing staffs are not responsible for actual cleaning of dust and other dirty materials from hospital. However, it is the

staff nurses' duty to supervise the cleaner who perform this job.

**A. General Rules for Cleaning**

Dry dusting of the room is not advisable.

Dusting should be done by sweeping only

Use a damp duster for collecting duster who perfx      Dus7he st

x



Protect table tops when using hot utensils or any solution that may leave stain or destroy the table top

Report promptly any damaged or missing equipment

2. *Care of Equipment in General*





To remove vitamin B complex stains dissolve in water or spirit

Mucus stains – soak in salty water

Rust \_ soak in salt and lemon juice and then bleach in sun

#### 4. *Care of Pick Up Forceps and Jars*

**Pick up forceps:** an instrument that allows one to pick up sterile equipment.

**Sterile equipment:** material, which is free of all forms of microorganism.

Pick up forceps should be kept inside the jar in which 2/3 of the jar should be filled with antiseptic solution

Wash pick up forceps and jars and sterilize daily

Fill jar with disinfectant solution daily

Care should be taken not to contaminate tip of the forceps

Always hold tip downward

If tip of forceps is contaminated accidentally, it should be sterilized before placing it back in the jar to avoid contamination.

#### 5. *Rubber Bags*

Example: hot water bottles, ice bags should be drained and dried

They should be inflated with air and closed to prevent the sides from sticking together

#### 6. *Rubber Tubing*

Should be washed with warm, soapy water

The inside should be flushed and rinsed well

### **Admission and Discharge**

#### **A. Admission**

Admission is a process of receiving a new patient to an individual unit (ward) of the hospital. (Hospitalized individuals have many needs and concerns that must be identified then prioritized and for which action must be taken).

**Purpose**

To help a new patient to adjust to hospital

To alleviate the patient's fear and worry about the hospitalization.

***Nurse's Responsibilities During Admission of a Patient to Hospital***

1. Check for orders of admission
2. Assess the patient's immediate need and take action to meet them.  
These needs can be physical (e.g. acute pain) or emotional distress, (upset)
3. Make introduction and orient the patient
  - Greet the patient
  - Introduce self to the patient and the family
  - Explain what will occur during the admission process (admission routines) such as admission bath, put on hospital gowns etc.
  - Orient patient to individual unit: Bed, bathroom, call light, supplies and belonging; and how these items work for patient use.
  - Orient patient to the entire unit: location of nurses office, lounge etc.
  - patient use.

Intake and output  
Height and weight (if required)  
General assessment

- b. Interview patient and take nursing history to determine what medication the patient is currently taking, any allergies, and patient's entering complaints and concern.
5. Take care of the patient's personal property
  - Items that are not needed can be sent home with family members
  - Other important items can be kept at bedside or should be put in safe place by cabling with patient's name.
6. Record keeping or maintaining records
  - Record all parts of the admission process
  - Other recording include
    - Notification to dietary departments
    - Starting kardex card and medication records
    - If there is specific form to the facility, complete it.

## **B. Discharging a Patient**

Indications for discharge

- Progress in the patient's condition
- No change in the patient's condition (Referral)
- Against medical advice
- Death

### ***Nurse's Responsibility During Discharging a Patient***

1. Check for orders that a patient need to be discharged

Give information for a new person involved in the patient care.

Contact family or significant others, if needed.

Arranging transportation

3. Teaching the patient about

What to expect

Medications (Treatments)

Activity

Diet

Need for continued health supervision

4. Do final assessment of physical and emotional status of the patient and the ability to continue own care.

5. Check and return all patients' personal property (both items in patient unit and those kept in safe area).

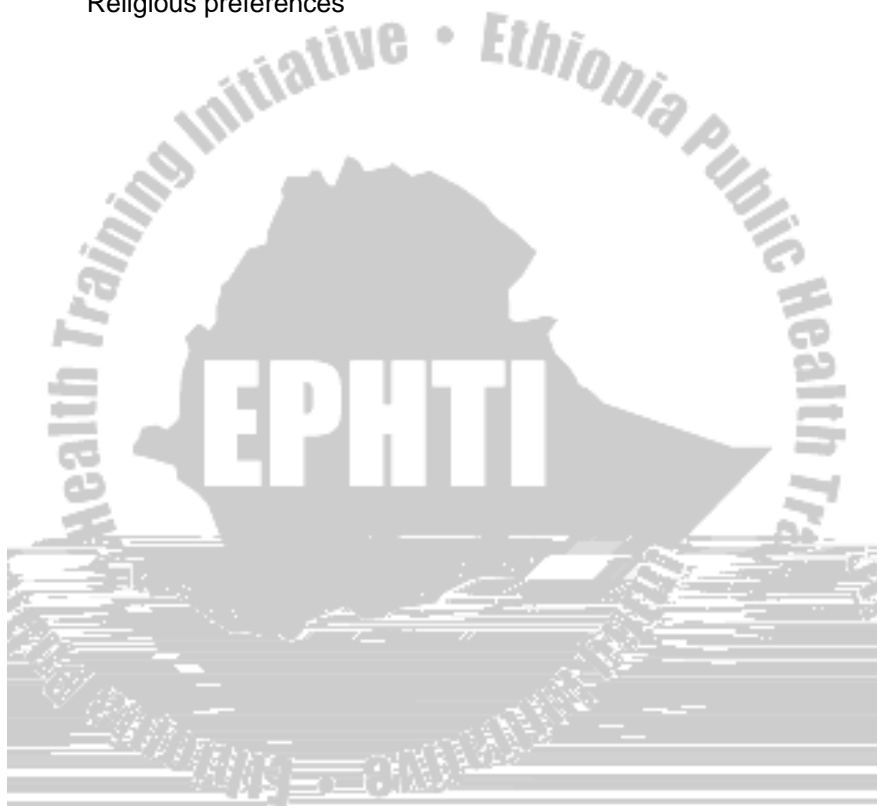
6. Help the patient or family to deal with business office for customary financial matters and in obtaining supplies.

7. Keep records

o Write discharge note

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- Current medication
- Current treatments that are to be continued
- Eating and sleeping habits
- Self-care abilities
- Support networks
- Life-style patterns
- Religious preferences



To document diagnosis or treatment of a patient while in the hospital and after discharge if the patient return for treatment at a future time.

To maintaining accurate date on matters demand by courts

To providing material for research

To serve as information in the education of health personnel

To secure needed vital statistics

To promoting public health

**General Rules for Observation and Recording**



As part of the admission process a new chart should be opened and certain forms must be filled

### Orders of Assembling Patients Chart

- a. Order sheet
- b. Progress notes (may differ from hospital to hospital)
- c. Nursing notes
- d. Vital sign sheet
- e. Laboratory reports

### Safety and Comfort Measures and Devices

1. **Cotton Rings:** are small circles of cotton rolled with gauze or bandage with hole in the middle.

Used to relieve pressure from small areas such as the elbows and heels

2. **Air Rings:**

Should be filled with air and covered with pillow case

Not commonly used

Should be changed frequently

Used to relieve pressure from the buttocks (to prevent bed sore)

3. **Cradles (Bed Cradle):**

Also called Anderson frame.

Is a frame, which is made of wire, wood or iron.

Designed to keep the top bedclothes off the feet, legs, and even abdomen of client in case of injury.

4. **Pillow:**

Placed under head, back, between knees or at the foot of the bed to prevent foot drop and keep the patient.

Are used to give comfort, support and to position a patient properly.

**5. Sand Bags:**

Are heavy, cylindrical or rectangular sand-filled bags.

Are used for supporting or immobilizing a limb.

They should be covered with towel and placed one on either





Should be adjusted to the client's height so that the soles rest firmly against it and the ankles are maintained at  $90^{\circ}$ .

### **Lifting and Moving a Patient**

**Body Mechanics:** is the effort; coordinated, and safe use of the body to produce motion and maintain balance during activity

A person maintains balance as long as the line of gravity passes through the center of the body and the base support

**Line of gravity:** an imaginary vertical line drawn through an object's center of gravity

The point at which all of the mass of an object is centered

Base of support: the foundation on which an object rests

### **Principles**

Balance is maintained and muscle strain is avoided as long as the line of gravity passes through the base of support

The wider the base of support and the lower the center of gravity, the greater the stability

Objects that are close to the center of gravity are moved with the least effort

### **Purpose of Proper Body Mechanics**

### Person resting in a chair or bed

- The presence of the chair gives wider base of support
- The center of gravity is lower
- The line of gravity is less mobile thus; a person has greater stability and balance in a sitting or lying position than a standing position.

### ***Moving a Patient***

#### **Purpose:**

- To increase muscle strength and social mobility
- To prevent some potential problems of immobility
- To stimulate circulation
- To increase the patient sense of independence and self-esteem
- To assist a patient who is unable and move by himself
- To prevent fatigue and injury
- To maintain good body alignment

Ensure that the client is appropriately dressed to walk and wears shoes or slippers with non-skid. Proper attire and footwear prevent chilling and falling.

If a client begins to experience the sign and symptoms of orthostatic hypotension or extreme weakness

Quickly assist the client into a near by chair or other chair and help him/her to lower the head between the knees. Facilitates blood flow to the brain

If a chair is not close by assist the client to a horizontal position on the floor before fainting occurs

#### **Controlling Postural Hypo tension**

- Sleep with the head of the bed elevated (8-12 inches). This makes the person's position change on rising less severe.
- Avoid sudden changes position. Arise from bed in three steps:

Sit on the side of the bed with legs dangling for 1 minute

Stand with core holding on to the edge or the bed or another non mobile object for 1 minute

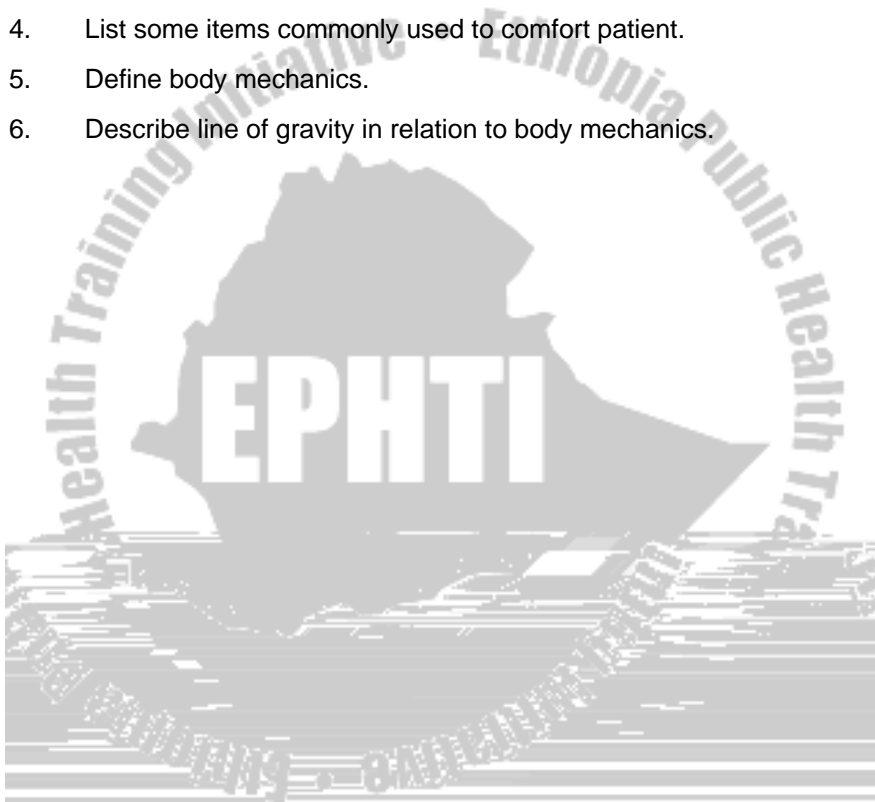
Sit up in the bed for one minute

Gradual change in position stimulates renin, kidney enzyme that has a role in regulating BP and which prevents a dramatic drop in BP

- Balance is maintained with minimal effort when the base of support is enlarged in the direction in which the movement will occur
- Contracting muscles before moving an object lessens the energy required to move it
- The synchronized use of as many large muscles groups as possible during an activity increases overall strength and prevents muscle fatigue and injury
- The closer the line of gravity to the center of the base of support, the greater the stability
- The greater the friction against the surface beneath an object the greater the force required moving the object. (Pulling creates less friction than pushing)
- The heavier the object, the greater the force needed to move the object
- Moving an object along a level surface required less energy than moving an object up an inclined surface or lifting it

**Study Questions**

1. State some of the important general instructions for nursing procedures.
2. What does patient unit consists of?
3. Mention some of the nursing responsibilities during admission and discharge of the patient.
4. List some items commonly used to comfort patient.
5. Define body mechanics.
6. Describe line of gravity in relation to body mechanics.





**Anesthetic bed:** is a bed prepared for a patient recovering from anesthesia

**Purpose:** to facilitate easy transfer of the patient from stretcher to bed

**Amputation bed:** a regular bed with a radle and sand bags

**Purpose:** to leave the amputated part easy for observation

**Fracture bed:** a board under normal radle

**Purpose:** to provide a flat, unyielding surface to support a fracture part

**Cardiac bed:** is one prepared for a patient with heart problem

**Purpose:** to ease difficulty in breathing

### General Instructions

1. Put coverings in order of use
2. Wash hands thoroughly after handling a patient's bed linen  
Linens and equipment soiled with secretions and excretions harbor micro-organisms that can be transmitted directly or by hand's uniforms
3. Hold soiled linen away from uniform
4. Linen for one client is never (even momentarily) placed on another client's bed
5. Soiled linen is placed directly in a portable linen hamper or a pillow case before it is gathered for disposal
6. Soiled linen is never shaken in the air because shaking can disseminate secretions and excretions and the microorganisms they contain

7. When stripping and making a bed, conserve time and energy by stripping and making up one side as completely as possible before working on the other side
8. To avoid unnecessary trips to the linen supply area, gather all needed linen before starting to strip bed
9. Make a vertical or horizontal toe pleat in the sheet to provide additional room for the clients feet.  
**Vertical** - make a fold in the sheet 5-10 cm 1 to the foot  
**Horizontal** – make a fold in the sheet 5-10 cm across the bed near the foot
10. While tucking bedding under the mattress the palm of the hand should face down to protect your nails.

#### Order of Bed Covers

1. Mattress cover
2. Bottom sheet
3. Rubber sheet
4. Cotton (cloth) draw sheet
5. Top sheet
6. Blanket
7. Pillow case
8. Bed spread

#### Note

*Pillow should not be used for babies*

*The mattress should be turned as often as necessary to prevent sagging, which will cause discomfort to the patient.*

#### A. Closed Bed

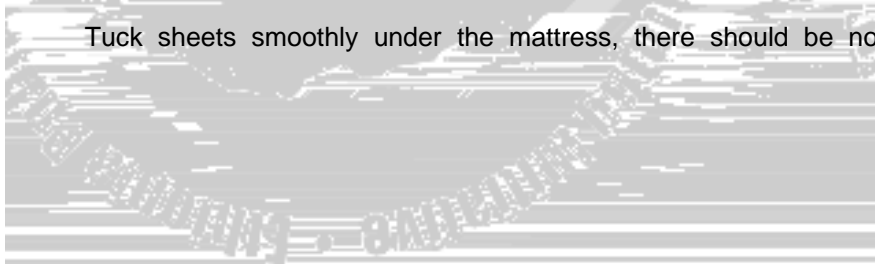
It is a smooth, comfortable, and cle

**Essential Equipment:**

Two large sheets  
Rubber draw sheet  
Draw sheet  
Blankets  
Pillow cases  
Bed spread

**Procedure:**

Wash hands and collect necessary materials  
Place the materials to be used on the chair. Turn mattress and arrange evenly on the bed  
Place bottom sheet with correct side up, center of sheet on center of bed and then at the head of the bed  
Tuck sheet under mattress at the head of bed and miter the corner  
Remain on one side of bed until you have completed making the bed on that side  
Tuck sheet on the sides and foot of bed, mitering the corners  
Tuck sheets smoothly under the mattress, there should be no



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Place bed spread with right side up and tuck it  
Miter the corners at the foot of the bed  
Go to other side of bed and tuck in bottom sheet, draw sheet,  
mitering corners and smoothening out all wrinkles, put pillow case  
on pillow and place on bed  
See that bed is neat and smooth  
Leave bed in place and furniture in order  
Wash hands

## **B. Occupied Bed**

**Purpose:** to provide comfort, cleanliness and facilitate position of the patients

### **Essential equipment:**

Two large sheets  
Draw sheet  
Pillow case  
Pajamas or gown, if necessary

### **Procedure:**

If a full bath is not given at this time, the patient's back should be washed and cared for  
Wash hands and collect equipment  
Explain procedure to the patient  
Carry all equipment to the bed and arrange in the order it is to be used  
Make sure the windows and doors are closed  
Make the bed flat, if possible  
Loosen all bedding from the mattress, beginning at head of the bed, and place dirty pillow cases on the chair for receiving dirty linen

Have patient flex knees, or help patient do so. With one hand over the patient's shoulder and the other hand over the patient's knees, turn the patient towards you

Never turn a helpless patient away from you, as this may cause him/her to fall out bed

When you have made the patient comfortable and secure as near to the edge of the bed as possible, to go the other side carrying your equipment with you

Loosen the bedding on that side

Fold the bed spread half way down from the head

Fold the bedding neatly up over patient

Roll dirty bottom sheet close to patient

Put on clean bottom sheet on used top sheet center, fold at center of bed, rolling the top half close to the patient, tucking top and bottom ends tightly and mitering the corner

Put on rubber sheet and draw sheet if needed

Turn patient towards you on to the clean sheets and make comfortable on the edge of bed

Go to the opposite side of bed. Taking basin and wash cloths with you, give patient back care

Remove dirty sheet gently and place in dirty pillow case, but not on the floor

Remove dirty bottom sheet and unroll clean linen

Tuck in tightly at ends and miter corners

Turn patient and make position comfortable

Back rub should be given before the patient is turned on his /her back

Place clean sheet over top sheet and ask the patient to hold it if she/he is conscious

Go to foot of bed and pull the dirty top sheet out

Replace the blanket and bed spread

Miter the corners

Tuck in along sides for low beds

Leave sides hanging on high beds

Turn the top of the bed spread under the blanket

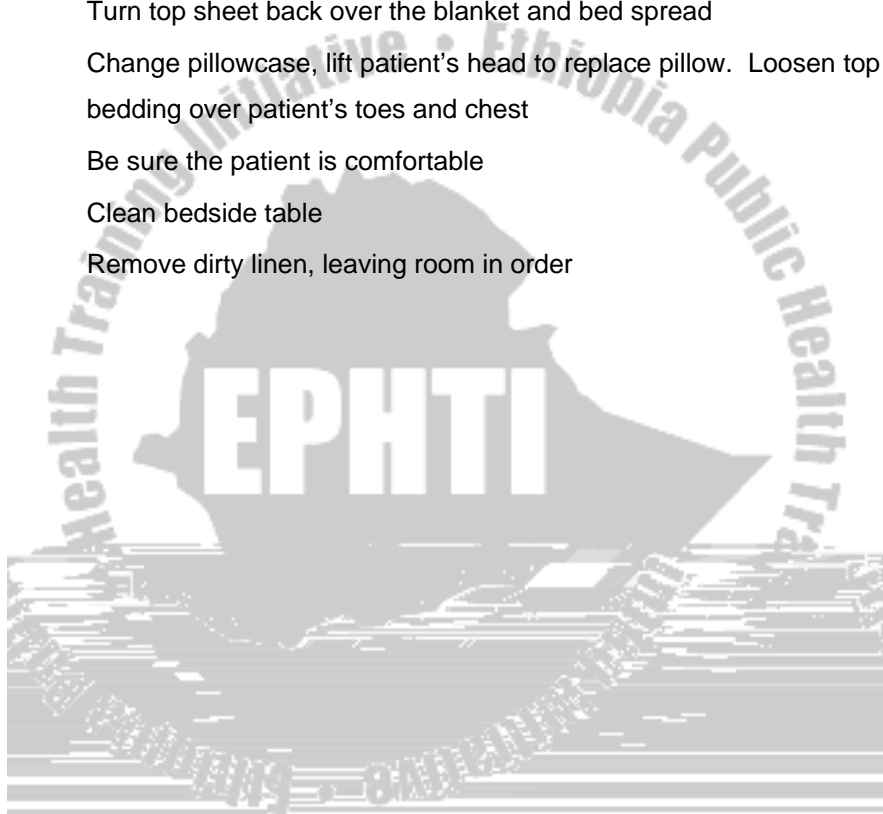
Turn top sheet back over the blanket and bed spread

Change pillowcase, lift patient's head to replace pillow. Loosen top bedding over patient's toes and chest

Be sure the patient is comfortable

Clean bedside table

Remove dirty linen, leaving room in order



## UNIT FOUR

### GENERAL CARE OF THE PATIENT

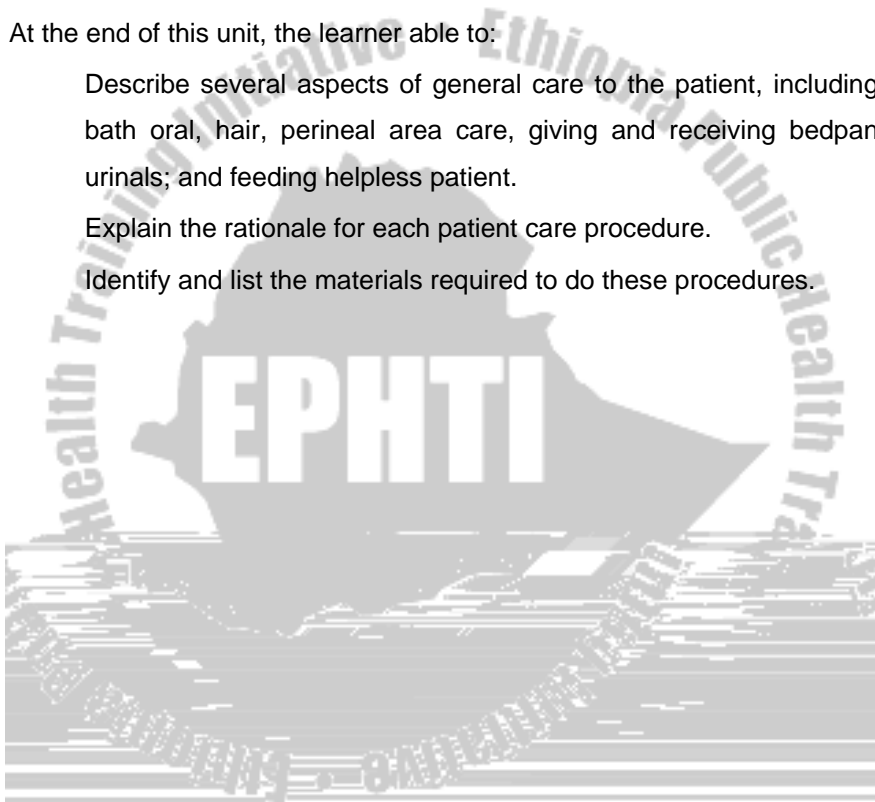
#### Learning Objectives

At the end of this unit, the learner able to:

Describe several aspects of general care to the patient, including bath oral, hair, perineal area care, giving and receiving bedpan urinals; and feeding helpless patient.

Explain the rationale for each patient care procedure.

Identify and list the materials required to do these procedures.



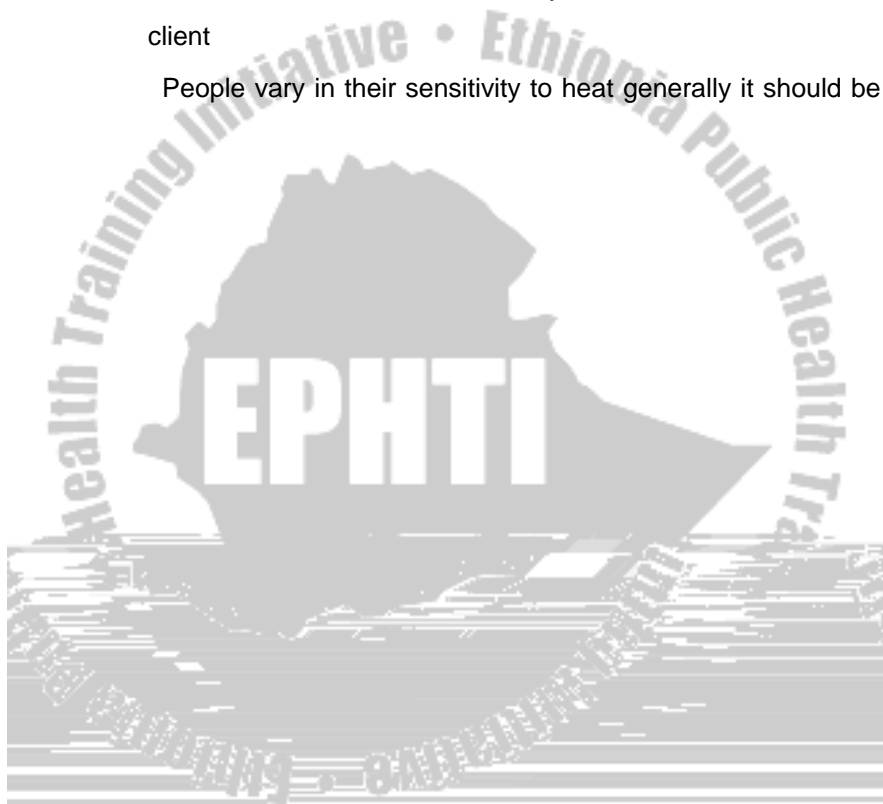
nurse can assist by washing the back) omitted are the arms, chest, abdomen.

Tub bath: preferred to bed baths because it is easier to wash and rinse in a tub. Also used for therapeutic baths

Shower: many ambulatory clients are able to use shower

The water should feel comfortably warm for the client

People vary in their sensitivity to heat generally it should be 90-100°F (32-38°C)



Assist the client to move near you – facilitates access which avoids undue reaching and straining

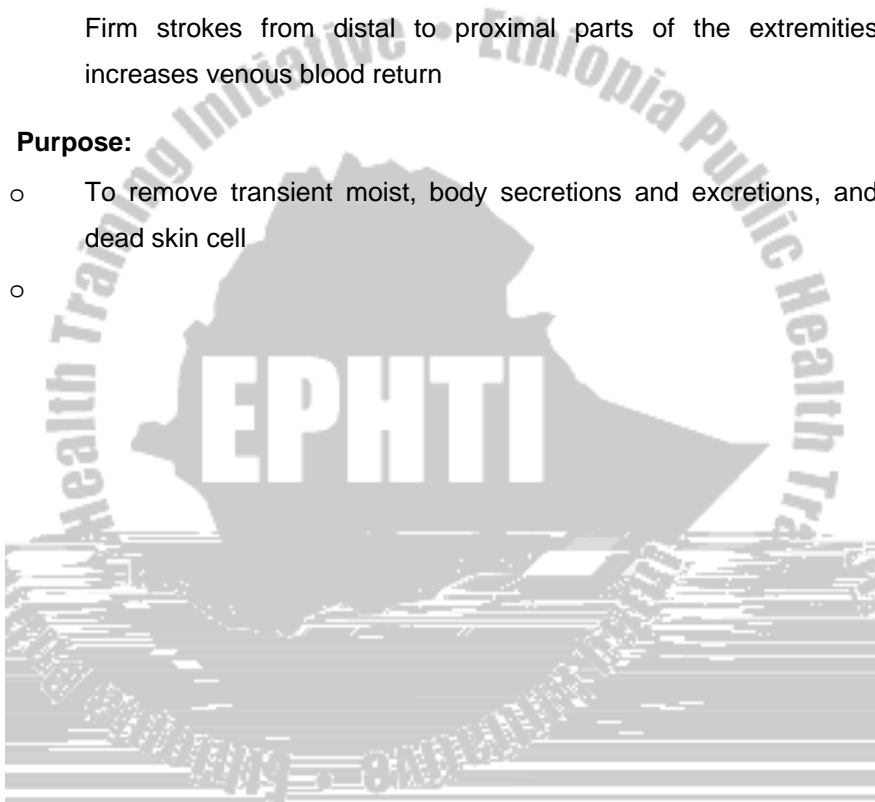
Make a bath mitt with the washcloth. It retains water and heat better than a cloth loosely held

Clean the eye from the inner canthus to the outer using separate corners of the wash cloth – prevents transmitting micro organisms, prevents secretions from entering the nasolacrimal duct

Firm strokes from distal to proximal parts of the extremities increases venous blood return

**Purpose:**

- To remove transient moist, body secretions and excretions, and dead skin cell
- 



Hamper for soiled cloths

Basin with warm water (43-46<sup>0</sup>c for adult and 38-40<sup>0</sup>c for children)

Soap on a soap dish

Hygienic supplies, such as, lotion, powder or deodorants (if required)

Screen

Disposable gloves

### **Procedures**

1. Prepare the patient unit

Close windows and doors, use screen to provide privacy.

2. Prepare the patient and the bed

Place the bed in high position to reduce undue strain on the nurse's back

Remove pt's gown and pajamas

Assist pt to move toward you so it facilitates access to reach pt without undue straining. Position the pt in supine, semi-Fowler's or Fowler's depending on the pt's condition.

3. Make a bath mitt with the washcloth, so it retains water and heat than a cloth loosely held

4. Washing body parts

Expose only the parts of the patient's body being washed avoid unnecessary exposing.

Wash, rinse and dry each body parts thoroughly using washing towels and paying particular attention to skin folds.

Suggested order for washing body parts;

Face, ear, neck

Arms and hands further away from the nurse

Chest

Arms and hands nearest to the nurse

Buttocks and genital area





**Bath Solutions**

1. Saline: 4 ml (1Tsp) NaCl to 500 ml (1 pt) water  
Has a cooling effect  
Cleans  
Decrease skin irritation
  2. Sodium: 4 ml (1Tsp) NCHCO<sub>3</sub> to 500 ml (1 pt) water, bicarbonate or 120-360 ml 120 liters  
Has a cooling effect  
Relieves skin irritation
  3. Potassium permanganate (Kmn<sub>4</sub>): available in tablets, which are crushed, dissolved in a little water, and added to the bath  
Cleans and disinfects  
Treats infected skin areas
- Oatmeal (Aveeino) and cornstarch can also be used

**Back Care (massage):** includes the area from the back and shoulder to the lower buttocks

**Purpose**

- To relieve muscle tension
- To promote physical and mental relaxation
- To improve muscle and skin functioning
- To relieve insomnia
- To relax patient
- To provide a relieve from pain
- To prevent pressure sores (decubitus)

**Procedure**

1. Prepare the pt and pt's unit

Provide privacy by using screen or closing windows and doors.

Assist pt to move close to your working side

Position patient prone (lie on abdomen) if possible. If not because of the pt's condition, use side lying position with the pt facing away from you.

Expose the back of the pt.

Spread towel close to pt's back to protect foundation of the bed.

Wash the back with warm water and soap using wash towel, rinse and dry it (if it is not given with bath)

## 2. Massaging the back

Pour small amount of lotion (oil) on your palm and rub your palms together to warm the lo



Complete the back rub using long, firm strokes up and down the back. (shoulder to sacrum and back to shoulder).

3. Recomfort the pt.

Mop extra oil/lotion from the pt's back using towel.

Apply powder / alcohol to dry further moisture from the back, if the skin is moist in its nature

Dress up the pt's pajama and replace the top cover.

Reposition the pt.

Leave the pt comfortably

4. Give proper care of equipments

5. Document the procedure, your observations and pt's reactions

Report any abnormal observations on the skin of the back (such as signs of pressure sore) to the nurse and physician in charge of the pt.

**Three Types of Massage Strokes**

1. Effleurage: stroking the body

2. Light, circular friction and straight, deep, firm, strokes

3. Petrissage: kneading and making large quick pinches of the skin, tissue, and muscle

Clean the back first

Warm the massage lotion or oil before use by pouring over your hands: cold lotion may startle the client and increase discomfort

1. Effleurage the entire back: has a relaxing sedative effect if slow movement and light pressure are used

2. Petrissage first up the vertebral column and then over the entire back: is stimulating if done quickly with firm p



Emesis basin



Remove the basin

Remove the towel

Assist the patient in wiping the mouth

Reposition the patient and adjust the bed to leave patient comfortably

5. Give proper care to the equipments
6. Document assessment of teeth, tongue, gums and oral mucosa. Report any abnormal findings.

### **Mouth Wash Solutions**

1. Normal solution: a solution of common salt with water in proportion of 4 gm/500 cc of water
2. Hydrogen peroxide – 5-20 cc (in water)
3. KMNO<sub>4</sub> – in crystal form  
4cc or KMNO<sub>4</sub> solution in a glass of water (1:700) or one small crystal in a glass of water
4. Soda-bicarbonate solution: 4 gm. of soda in pint of water
5. Thymal solution:  $\frac{1}{4}$  -  $\frac{1}{2}$  TSF of thymal in one cup of water (100-150 cc of water)
6. Lemon juice (Lemon juice) - in a common (1:700 wa

**Note:** If the patient has denture remove them before starting and wash them with brush

### **Mouth care for unconscious patient**

#### Position

Side lying with the head of the bed lowered, the saliva automatically runs out by gravity rather than being aspirated by the lungs or if patient's head can not be lowered, turn it to one side: the fluid will readily run out of the mouth, where it can be suctioned

Rinse the patient's mouth by drawing about 10 ml of water or mouth wash in to the syringe and injecting it gently in to each side of the mouth

If injected with force, some of it may flow down the clients throat and be aspirated into the lung

All the rinse solution should return; if not suction the fluid to prevent aspiration

### **Giving and Receiving Bedpans and Urinals**

Bedpan is a material used to receive urine and feces in females and feces in male

Urinal -is used to receive urine

Are of two types male and female

#### **Types of Bedpan**

1. The high back, or regular pan (standard pan)
2. A fracture, the slipper or low back pan

#### **Advantage**

Has a thinner rim than as standard bed pan

Is designed to be easily placed under a person's buttocks

#### **Disadvantage**

Easier to spill the contents of the fracture pan





***If the client is unable to achieve regular defecation help by attending to:***

1. The provision of privacy
2. Timing – do not ignore the urge to defecate

A patient should be encouraged to defecate when the urge to defecate is recognized

The patient and the nurse can discuss when mass peristalsis normally occurs and provide time for defecation (the same time each day)

3. Nutrition and fluids

For a constipated client: increase daily fluid intake, drink hot liquids and fruit juices etc

For the client with diarrhea – encourage oral intake of foods and fluids

For the client who has flatulence: limit carbonated beverages; avoid gas-forming foods

4. Exercise

Regular exercise helps clients develop a regular defecation pattern and normal feces

5. Positioning

Sitting position is preferred

**Measures to assist the person to void include:**

Running water in the sink so that the client can hear it

Warming the bed pan before use

Pouring water over the perineum slowly

Having the person assume a comfortable position by raising the head of the bed (men often prefer to stand)

Providing sufficient analgesia for pain

Having the person blow through a straw into a glass of water –  
relaxes the urinary sphincter



**Equipments**

Bath towel

Cotton balls and gauze squares

Pitcher with warm water or/and prescribed solution in container

Gloves

Bed pan

Bed protecting materials

Perineal pad or dressing (if needed)

**Procedure****1. Patient preparation**

Give adequate explanation

Provide privacy

Fold the top bedding and pajamas (given to expose perineal area and drape using the top linen.)

Position pt lying on back with knees flexed and spread apart.

Place bed protecting materials under the pt's hip

Place the bedpan under pt's buttock.

**2. Cleaning the genital area**

Put on gloves

**For Female**

Remove dressing or pad used

Inspect the perineal area for inflammation excoriation, swelling or any discharge.

**a. In case of post partum or surgical pt**

Clean by cotton swabs, first the labia majora then the skin folds between the majora and minora by retracting the majora using gauze squares, clean from anterior to posterior direction using separate swab for

each strokes. (This directions lessens the possibility of urinary tract contamination)

b. In case of non-surgical pts

Wash or clean the genital area with soapy water using the different quarters of the washcloth in the same manner.

### Female Perineum

Is made up of the vulva (external genitalia), including the mons pubis, prepuce, clitoris, urethral and vaginal orifices, and labia majora and minora

The skin of the vaginal orifice is normally moist

The secretion has a slight odor due to the cells and normal vaginal flora

The clitoris consists of erectile tissues and many nerves fibers. Is very sensitive to touch

### Care

Convenient for a woman to be on a bed pan to clean and rinse the vulva and perineum

Secretion collects on the inner surface of the labia

Use on hand to gently retract the labia

Use a separate section of wash cloth for each wipe in a downward motion (from urethra to back perineum)

Then clean the rectal area

### Note

*Following genital or rectal surgery, sterile supplies may be required for cleaning the operative site, E.g. Sterile cotton balls*

*The operative site and perineal area may be washed with an antiseptic solution – apply by squirting them on the perineum from a squeeze bottle*



**Combing/Brushing of Hair**

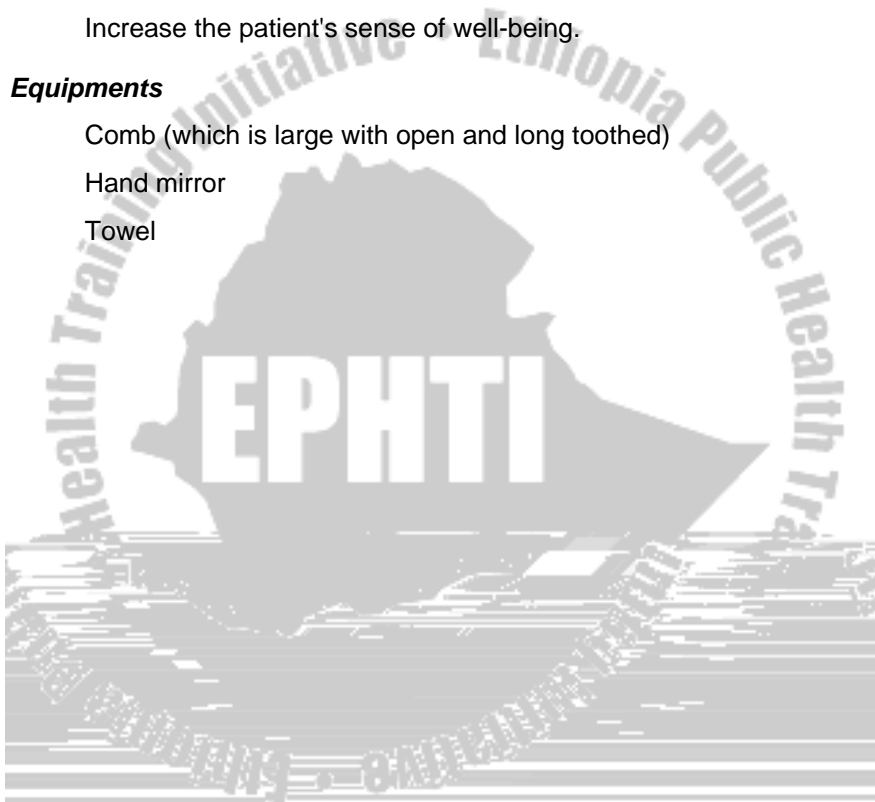
A patient hair should be combed and brushed daily most patients do this themselves if the required materials provided and others may need nurse's help (assistance)

***Purpose***

- Stimulates the blood circulation to the scalp
- Distribute hair oils evenly and provide a healthy sheen
- Increase the patient's sense of well-being.

***Equipments***

- Comb (which is large with open and long toothed)
- Hand mirror
- Towel





Tuck the towel under the pt's shoulder and neck

Place (arrange) the shampoo basin under the pt's head with one end extending to the receptacle for used water.

If there is no shampoo basin, use the plastic sheet, which is under pt's shoulder and head, make a funnel type fold and extend it to the receptacle.

Place the receptacle on chair/table on the working side of the bed.

3. Protect the patient's eyes and ears

Place damp washcloths over the pt's eyes to protect from soapy water.

Place cotton balls in the patient's ears to prevent water collecting in the ear canals.

4. Shampooing/washing the hair

Wet the hair thoroughly with water

Apply shampoo (soap) to the scalp.

Massage all over the scalp symmetrically using your fingertips

Rinse the hair with plain water to remove the shampoo/soap

Remove damp washcloth from pt eyes and cotton balls from ears.

5. Dry the patient's hair

Squeeze the hair with your hands to remove as much water as possible

Rub pt's hair with towel

Use hair drier (if available)

6. Ensure pt's comfort

Remove plastic sheet shampoo basin

Assist pt for comfortable position



Assist pt in grooming

7. Care of equipment
8. Documentation and reporting

### **Pediculosis Treatment**

#### ***Purpose***

To prevent transmission of some arthropod born diseases

To make patient comfortable

#### ***Definition***

*Pediculosis*: infestation with lice

#### **Lice:**

Are small, grayish white, parasitic insects that infest mammals

Are of three common kinds:

*Pediculose capitis*: is found on the scalp and tends to stay hidden in the hairs

*Pediculose pubis*: stay in pubic hair

*Pediculose corporis*: tends to cling to clothing, suck blood from the person and lay their eggs the clothing suspect their presence in the clothing if:

- a. The person habitually scratches
- b. There are scratches on the skin, and
- c. There are hemorrhagic spots in the skin where the lice have sucked blood

Head and body lice lay their eggs on the hairs then eggs look like oval particles, similar to dandruff, clinging to the hair.

#### ***Treatment of Pediculosis***

##### **Pediculosis Capitus**

1. DDT (Dichloro Diphenyl Trichloro Ethane) one part to nine parts of talcum powder

Can destroy the lice in about 2 hrs

The effect lasts for 6 days if not washed

Does not destroy nit or eggs

Also available in liquid forms

2. Kerosene Oil mixed with equal parts of sweet oil

Destroys both adult lice and eggs of nits

From aesthetic point of view, kerosene causes foul smell and create discomfort to patient and the attendant

**Guidelines for Applying Pediculicides**

**Hair:**

Apply pediculicide shampoo to dry hair until hair is thoroughly saturated and work shampoo in to a lather

Allow product to remain on hair for stated period (varies with products)

Pin hair and allow to dry

Use a fine toothed comb to remove death lice and nits (comb should not be shared by other family members)

Repeat it in 8-10 days to remove any hatched nits

Apply pediculious lotion (or cream) to affected areas

Bath after 12 hrs and put on clean clothes

3. Oil of Sassafras

Is a kind of scented bark oil

Only destroy lice not nits

For complete elimination, the oil should be massaged again after 10 days when the nits hatch

Is used daily for a week with equal parts of Luke warm H<sub>2</sub>O then it should be repeated after a week

4. Gcmmaxine (Gamma Bengenhexa Chloride)



Control unpleasant odors in the room by refreshing the room. Oder free environment makes eating more pleasant and aids digestion.

2. Prepare the patients

Offers bedpan and urinals. To comfort pt and avoid interruption by elimination needs.

Assist pt to wash hands, face and oral care

Position patient comfortably

Mid or high Fowler's position

Protect the bed using suitable protective cover

3. Prepare the food tray

Identify the types of diet ordered.

Assess any special conditions in which the pt delayed or omitted (e.g. Lab, radiologic examination or surgery)

Assess any cultural or religious limitations, specific likes or dislikes.

Obtain any special utensils that you planned to use

4. Feed the patient

Place the food tray in such a way that the patient can see the food.

Position yourself at pt's eye level, if at all possible

Digestion is better when pt is not emotionally upset.

Never hurry a pt's eating. This can make pt uncomfortable and fearful of taking up your time.

Allow pt to determine when enough has been eaten, as way of providing choices.

5. Comfort patient

Assist hand washing and oral care

Offer bedpan and commodes, of indicated

Comfort patient, provide quite environment so that the pt may relax after meal, which also promote good digestion.

7. Care of equipment
8. Document feeding and any assessment

### **Morning, Afternoon, and Evening Care**

Morning, afternoon, and evening care are used to describe the type of hygienic care given at different times of the day

### **Early Morning Care**

Is provided to clients as they awaken in the morning

In a hospital it is provided by nurses on the night shift

Helps clients ready themselves for breakfast or for early diagnostic tests

Consists of:

Providing a urinal or bed pan if client is confined to bed

Washing the face and hands and

Giving oral care

### **Morning Care**

Is provided after clients have breakfast

#### ***Includes:***

The provision of a urinal or bed pan

A bath or shower

Perineal care

Back massage and

Oral, nail and hair care

Making clients bed

### **Afternoon Care**

When clients return from physiotherapy or diagnostic tests

Includes:

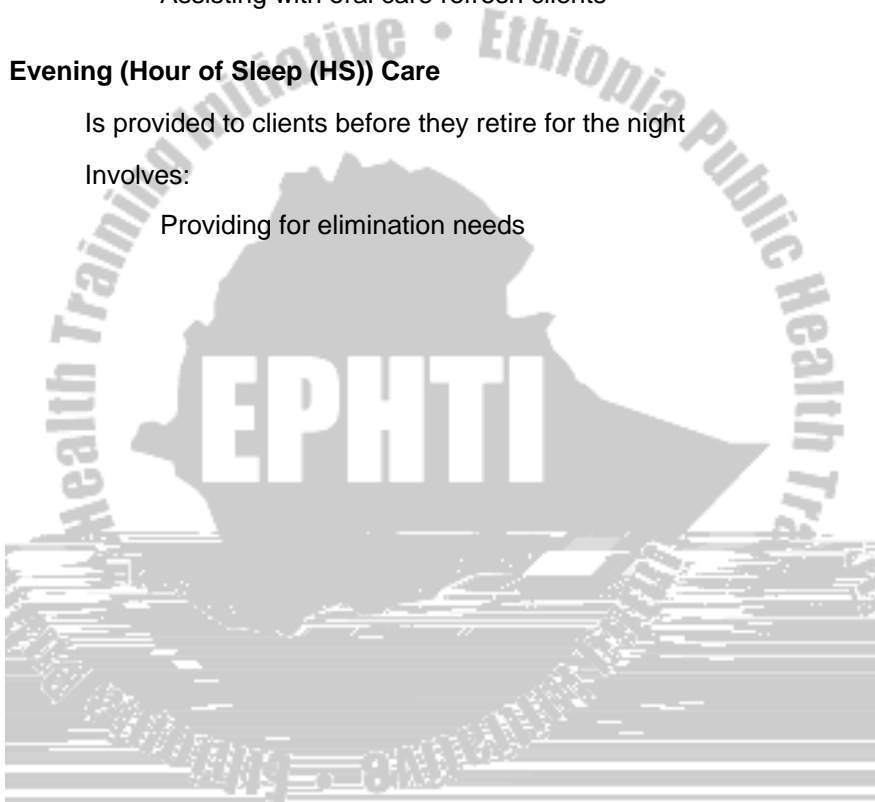
- Providing bed pan or urinal
- Washing the hands and face
- Assisting with oral care refresh clients

### **Evening (Hour of Sleep (HS)) Care**

Is provided to clients before they retire for the night

Involves:

- Providing for elimination needs





***Purpose of Patients Chart***

- a. For diagnosis or treatment of a patient while in the hospital (find after discharge) if patient returns for treatment in the future time
- b. For maintaining accurate data on matters demanded by courts
- c. For providing material for research
- d. For serving an information in the education of health personnel (medical students, interns , nurses, dietitians, etc)
- e. For securing needed vital statistics
- f. For promoting public health

***General Rules for Charting***

Spelling

Make certain you spell correctly

Accuracy

Records must be correct in all ways, be honest

Completeness

No omission, avoid unnecessary words or statement

Exactness

Do not use a word you are not sure of

Objective information

Record what you see avoid saying (condition better)

Legibility

Print/write plainly and distinctively as possible

Neatness

No wrinkles, proper speaking of items

Place all abbreviation, and at end of statement

Composition / arrangement





To check for retention of body fluid

### **Fluid balance sheet**

24 hrs the intake out put should be compared and the balance is recorded

Positive balance if intake >output

Negative balance if out put >intake

## **II. Vital Signs (Cardinal Signs)**

Are signs that reflect changes in the functions of the body

Includes: T, PR, RR, and BP

### **Times to Assess Vital Signs**

1. On admission – to obtain baseline date
2. When a client has a change in health status or reports symptoms such as chest pain or fainting
3. According to a nursing or medical order
4. Before and after the administration of certain medications that could effect RR or BP  
(Respiratory and CVs)
5. Before and after surgery or an invasive diagnostic procedures
6. Before and after any nursing intervention that could affect the v/s.  
E.g. Ambulation

## **I Temperature**

### **Factors Affecting Body Temperature**

1. Age

Children's temperature continue to be more labile than those of adults until puberty

Elderly people, particularly those > 75 are at risk of hypothermia

Normal body temperature of the newborn if taken orally is 37 °C.





**Types**

1. Oral thermometer  
Has long slender tips
2. Rectal thermometer  
Short, rounded tips
3. Axillary  
Long and slender tip

**1. Rectal Temperature:**

Readings are considered to be more accurate, most reliable

**Contraindication**

- Rectal or perineal surgery;
- Fecal impaction – the depth of the thermometer insertion may be insufficient;
- Rectal infection;
- Neonates –can cause rectal perforation and ulceration;
- Is  $> 0.65^{\circ}\text{C}$  ( $1^{\circ}\text{F}$ ) higher than the oral temperature;
- Position the person laterally;
- Apply lubricant 2.5 cm above the bulb;
- Insert the thermometer 1.5 – 4 cm into the anus. For an infant 2.5cm, for a child 3.7 cm – for an adults 4 cm
- Measured for 2-3 minutes
- A rectal thermometer record does not respond to changes in arterial temperature as quickly as an oral thermometer

**2. Oral**

- Most accessible and convenient
- The thermometer tip is placed beside the frenulum below the tongue
- Is 0.65 (1 F) more than the axillary
- The recommended time is 2-3 minutes

If a client has been taking cold or hot food or fluids or smoking wait 30 minutes

### **Contraindication**

Child below 7 yrs

If the patient is delirious, mentally ill

Unconscious

Uncooperative or in severe pain

Surgery of the mouth

Nasal obstruction

If patient has nasal or gastric tubes in place

### **3. Axillary**

Safest and most noninvasive

The bulb of thermometer is placed in the clients axillary hollow

Leave it in place for 5-10 minutes

### **II. Pulse**

It is a wave of blood created by contraction of the left ventricle of the heart. i.e. the pulse reflects the heart beat or is the same as the rate of ventricular contractions of the heart – in a healthy person.

In some types of cardiovascular diseases heartbeat and pulse rate differs. E.G. Client's heart produces very weak or small pulses that are

1. **Age:** as age increase the PR gradually increases. New born to 1 month – 130 BPM 80-180 (range). Adult 80 BPM(beat per minute) – 60 – 100 BPM(beat per minute)
2. **Sex:** after puberty the average males PR is slightly lower than female
3. **Exercise:** PR increase with exercise
4. **Fever:** increases PR in response to the lowered B/P that results from peripheral vasodilatation – increased metabolic rate
5. **Medications:** digitalis preparation decreases PR, Epinephrine – increases PR
6. **Heat:** increase PR as a compensatory mechanism
7. **Stress:** increases the sympathetic nerve stimulation – increases the rate and force of heart beat
8. **Position changes:** when a patient assumes a sitting or standing position blood usually pools in dependent vessels of the venous system. Pooling results in a transient decrease in the venous blood return to heart and subsequent decrease in BP increases heart rate.

#### **Pulse Sites**

1. **Temporal:** is superior (above) and lateral to (away from the midline of) the eye
2. **Carotid:** at the side of the neck below tube of the ear (where the carotid artery runs between the trachea and the sternocleidomastoid muscle)
3. **Apical:** at the apex of the heart: routinely used for infant and children < 3 yrs
4. In adults – Left midclavicular line under the 4<sup>th</sup>, 5<sup>th</sup>, 6<sup>th</sup> intercostals space

5. Children < 4 yrs lt. Of the Lt. mid clavicular line
6. **Brachial:** at the inner aspect of the biceps muscle of the arm or medially in the antecubital space (elbow crease)
7. **Radial:** on the thumb side of the inner aspect of the wrist – readily available and routinely used
8. **Femoral:** along the inguinal ligament. Used on infants and children
9. **Popliteal:** behind the knee. By flexing the knee slightly
10. **Posterior Tibial:** on the medial surface of the ankle
11. **Pedal (Dorsalis Pedis):** palpated by feeling the dorsum (upper surface) of the foot on an imaginary line drawn from the middle of the ankle to the surface between the big and 2<sup>nd</sup> toes

### Method

Pulse: is commonly assessed by palpation (feeling) or auscultation (hearing)

The middle 3 fingertips are used with moderate pressure for palpation of all pulses except apical; the most distal parts are more sensitive,

### Assess the Pulse for

- Rate
- Rhythm
- Volume
- Elasticity of the arterial wall

### **Pulse Rate**

Normal 60-100 b/min (80/min)

Tachycardia – excessively fast heart rate (>100/min)

Bradycardia < 60/min

### **Pulse Rhythm**

The pattern and interval between the beats, random, irregular beats – dysrhythmia





## Assessment

The client should be at rest

Assessed by watching the movement of the chest or abdomen.

Rate, rhythm, depth and special characteristics of respiration are assessed

**A. Rate:** is described in rate per minute (PRM)

Healthy adult RR = 15- 20/ min. Is measured for full minute, if regular for 30 minutes.

1. Eupnoea- normal breathing rate and depth
2. Bradypnea- slow respiration
3. Tachypnea - fast breathing
4. Apnea - temporary cessation of breathing

**B. Rhythm:** is the regularity of expiration and inspiration

Normal breathing is automatic & effortless.

**C. Depth:** described as normal, deep or shallow.

Deep: a large volume of air inhaled & exhaled, inflates most of the lungs.

Shallow: exchange of a small volume of air minimal use of lung tissue.

## IV Blood Pressure

Arterial BP: is a measure of a pressure exerted by the blood as it flows through the arteries

There are two types of blood pressure.

1. **Systolic pressure:** is the pressure of the blood as a result of contraction of the ventricle  
(is the pressure of the blood at the height of the blood wave);
2. **Diastolic blood pressure:** is the pressure when the ventricles are at rest.

3. **Pulse pressure:** is the difference between the systolic and diastolic pressure

Blood pressure is measured in **mm Hg** and recorded as fraction. A number of conditions are reflected by changes in blood pressure.

#### Conditions Affecting Blood Pressure

Fever	Increase
Stress	"
Arteriosclerosis	"
Obesity	"
Hemorrhage	Decrease
Low hematocrit	"
External heat	"
Exposure to cold	Increase

#### Sites for Measuring Blood Pressure

1. Upper arm using brachial artery (commonest)
2. Thigh around popliteal artery
3. Fore -arm using radial artery
4. Leg using posterior tibial or dorsal pedis

#### Methods of Measuring Blood Pressure

Blood pressure can be assessed **directly** or **indirectly**

1. Direct (invasive monitoring) measurement involves the insertion of catheter in to the brachial, radial, or femoral artery. The physician inserts the catheter and the nurse monitors the pressure reading. With use of correct placement, it is highly accurate.

2. Indirect (non invasive methods)
  - A. The auscultatory
  - B. The palpatory, and
  - C. The flush methods

The auscultatory method is the commonest method used in health activities.

When taking blood pressure using stethoscope, the nurse identifies five phases in series of sounds called Korotkoff's sound.

**Phase 1:** The pressure level at which the 1st joint clear tapping sound is heard, these sounds gradually become more intense. To ensure that they are not extraneous sounds, the nurse should identify at least two consecutive tapping sounds.

**Phase 2:** The period during deflation when the sound has a swishing quality

**Phase 3:** The period during which the sounds are crisper and more intense

**Phase 4:** The time when the sounds become muffled and have a soft blowing quality

**Phase 5:** The pressure level when the sounds disappear

### **Procedure**

Assessing Blood pressure (ARM)

### **Purpose**

- To obtain base line measure of arterial blood pressure for subsequent evaluation
- To determine the clients homodynamic status
- To identify and monitor changes in blood pressure resulting from a disease process and medical therapy.

### **EQUEPMENT**

- Stethoscope
- Blood pressure cuff of the appropriate size
- Sphygmomanometer

**Intervention**

1. Prepare and position the patient appropriately
  - Make sure that the client has not smoked or ingested caffeine, with in 30 minutes prior to measurement.
  - Position the patient in sitting position, unless otherwise specified. The arm should be slightly flexed with the palm of the hand facing up and the fore arm supported at heart level
  - Expose the upper arm
2. Wrap the deflated cuff evenly around the upper arm.
  - Apply the center of the bladder directly over the medial aspect of the arm. The bladder inside the cuff must be directly over the artery to be compressed if the reading to be accurate.
  - For adult, place the lower border of the cuff approximately 2 cm above antecubital space.
3. For initial examination, perform preliminary palipatory determination of systolic pressure
  - Palpate the brachial artery with the finger tips
  - Close the valve on the pump by turning the knob clockwise.
  - Pump up the cuff until you no longer feel the brachial pulse
  - Note the pressure on sphygmomanometer at which the pulse is no longer felt
  - Release the pressure completely in the cuff, and wait 1 to 2 minutes before making further measurement
4. Position the stethoscope appropriately
  - Insert the ear attachments of the stethoscope in your ears so that they tilt slightly fore ward.

Place the diaphragm of the stethoscope over the brachial pulse; hold the diaphragm with the thumb and index finger.

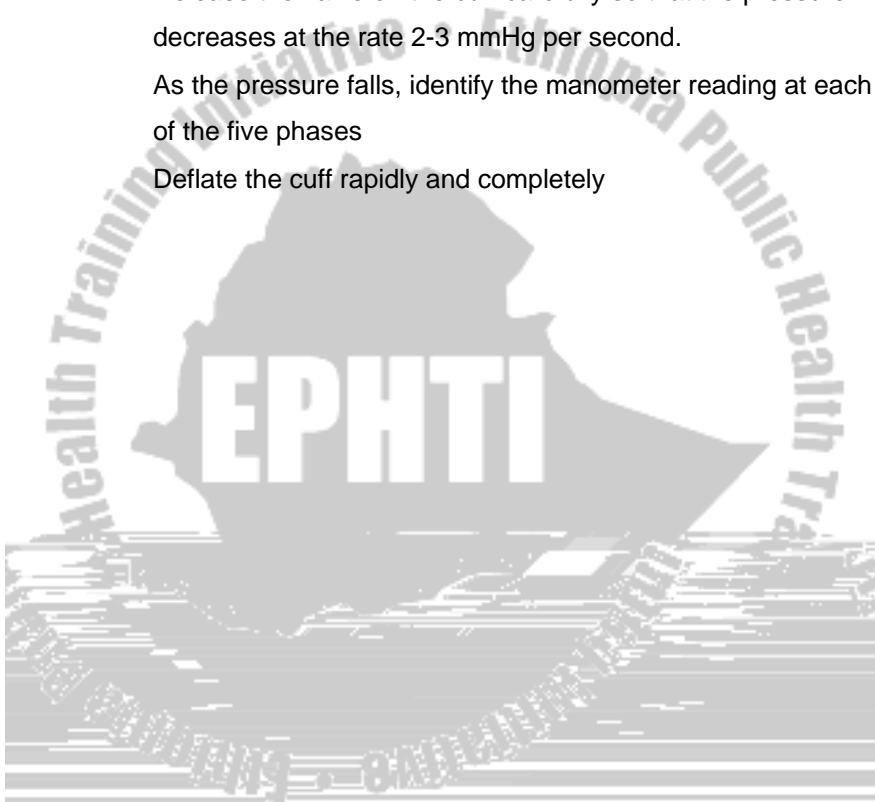
5. Auscultate the client's blood pressure

Pump up the cuff until the sphygmomanometer registers about 30 mm Hg above the point where the brachial pulse disappeared.

Release the valve on the cuff carefully so that the pressure decreases at the rate 2-3 mmHg per second.

As the pressure falls, identify the manometer reading at each of the five phases

Deflate the cuff rapidly and completely



Various types of specimen collected from the patient in the clinical settings, either in out patient departments (OPD) or in-patient units, for diagnostic and therapeutic purposes. These includes, stool, urine, blood and other body fluid or tissue specimens.

### **General Considerations for Specimen Collection**

When collecting specimen, wear gloves to protect self from contact with body fluids.

1. Get request for specimen collection and identify the types of specimen being collected and the patient from which the specimen collected.
2. Get the appropriate specimen container and it should be clearly labeled have tight cover to seal the content and placed in the plastic bag or racks, so that it protects the laboratory technician from contamination while handling it.

The patient's identification such as, name, age, card number, the ward and bed number (if in-patient).

The types of specimen and method used (if needed).

The time and date of the specimen collected.

3. Assemble and organize all the necessary materials for the specimen collection.
4. Give adequate explanation to the patient about the purpose, type of specimen being collected and the method used.
5. When collecting specimen wear gloves to protect self from contact with the specimen (body fluids in particular)
6. Put the collected specimen into its container without contaminating outer parts of the container and its cover.
7. All the specimens should be sent promptly to the laboratory, so that the temperature and time changes do not alter the content.

#### **A. Collecting Stool Specimen**

**Purpose**

For laboratory diagnosis, such as microscopic examination, culture and sensitivity tests.

**Equipments required**

Clean bedpan or commode  
Wooden spatula or applicator  
Specimen container  
Tissue paper  
Laboratory requests  
Disposable glove, for patients confined in bed  
Bed protecting materials  
Screen  
Hand washing sets

**Procedure**i) For ambulatory patient

Give adequate instruction to the patient to

Defecate in clean bedpan or commode (toilet)

Avoid contaminating the specimen by urine, menstrual period or used tissue papers, because these may affect the laboratory analysis.

Void before collecting the specimen

Transfer the sample (specimen) to the container using spatula or applicator

ii) For patients confined in bed

1. Prepare the patient's unit

Provide privacy by drawing screen, closing windows and doors (To provide privacy)



2. Prepare the patient

Put on gloves

Position the patient

Place bed protecting materials under the patient's hips

Assist the patient and place the bed pan under the patient's buttocks (follow the steps under "Giving and removing bedpan")

Give patient privacy by leaving alone, but not far

Instruct the patient about how to notify you when finished defecation.

Remove the bedpan and keep on safe place by covering it

Recomfort the patient

3. Obtain stool sample

Take the used bedpan to utility room/toilet container using spatula or applicator without contaminating the outside of the container.

The amount of stool specimen to be taken depends on the purpose, but usually takes.

- 3.5cm sample from formed stool
- 15.30 ml sample from liquid stool

Visible mucus, pus or blood should be included into sample stool specimen taken.

4. Care of equipments and the specimen collected.

Handle and label the specimen correctly

Send the specimen to the laboratory immediately, unless there is an order for its handling. Because fresh specimen provides the most accurate results.

Dispose the bedpan's content and give proper care of all equipments used.

5. Documentation and report

## **B. Collecting Urine Specimen**

Types of urine specimen collection

1. Clean voided urine specimen  
(Also called clean catch or midstream urine specimen)
2. Sterile urine specimen
3. Timed urine specimen

It is two types

Short period    1-2 hours

Long period    24 hours

### **Purpose**

For routine laboratory analysis

To check the presence of cells or microorganisms

For culture and sensitivity tests

### **Equipments Required**

Disposable gloves

Specimen container

Laboratory requisition form (Completely filled)

Water and soap or cotton balls and antiseptic solutions (swabs).

For patients confined

Urine receptacles (i.e. bedpan or urinals)

Bed protecting materials

Screen (if required)

**Procedure**i) For ambulatory patients

Give adequate instruction to the patient about

The purpose and method of taking specimen

Assist the patient to move to the toilet

ii) For patient confined in bed

1. Prepare the patient unit providing privacy

2. Prepare the patient

Put on gloves

Place bed protecting materials under patient's hips

Assist the patient to position in bed and in positioning the receptacles

Assist the patient or clean the vulva or penis thoroughly using soap and water or antiseptic swabs (Follow the steps of giving and receiving bed pan/urinal and cleaning the genitalia)

3. Obtain urine specimen

Ask patient to void

Let the initial part of the voiding passed into the receptacle (bed pan or urinal) then pass the next part (the midstream) into the specimen container.

Hold the vulva or penis apart from the specimen container while the patient voids to decrease urine contamination.

Don't allow the container to touch body parts

Collect about 30-60 ml midstream urine

Handle the outside parts of the container and put on the cover tightly on specimen container

Clean the outside parts of the container with cotton if spillage occurs

Remove the glove

4. Recomfort the patient
5. Care of the specimen and the equipment
  - Handle and label the container correctly
  - Send the urine specimen to the laboratory immediately together with the completed laboratory requested forms
  - Empty the receptacles content properly
  - Give appropriate care for the used equipments
6. Document pertinent data's and report abnormal observation, such as
  - Specimen collected, amount, time and date.
  - Pertinent observation of the urine
  - Patients experience during voiding

### ***Collecting a Sterile Urine Specimen***

Sterile urine specimen collected using a catheter in aseptic techniques (The whole discussion for this procedure presented on the catheterization part)

### ***Collecting a Timed Urine Specimen***

#### ***Purpose***

For some tests of renal functions and urine compositions, such as:- measuring the level of adrenocortico steroid or hormones, creatinine clearance or protein quantitation tests.

#### ***Equipments Required***

Urine specimen collecting materials (usually obtained from the laboratory and kept in the patient's bathroom.)

Format for recording the time, date started and end, and the amount of urine collected on each patient's voiding during the specified period for collection.

### **Procedure**

#### 1. Patient preparation

Adequate explanation to the patient about the purpose of the test, when it begins and what to do with the urine

Place alert signs about the specimen collection at the patient's bedside or bathroom.

Label the specimen container to include date and time of each voiding as well as patient's identification data

Containers may be numbered sequentially (e.g. 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup> etc)

#### 2. Collecting the urine

Usually it is begin in the morning

Before you begin the timing, the patient should void and do not use this urine (It is the urine that has been in the bladder some time)

Then all urine voided during the specified time (e.g. the next 24 hours) is collected in the container

At the end of the time (e.g. 24 hours period) the patient should void the last specimen, which is added to the rest.

Ensure that urine is free of feces

during the night). If the patient fails to cough out, the nurse can obtain



Ask pt to cough deeply to raise up sputum

Take usually about 15-30 ml sputum

Ask pt to spit out the sputum into the specimen container

Make sure it doesn't contaminate the outer part of the container. If contaminated clean (wash) with disinfectant

Cover the cap tightly on the container

3. Recomfort the patient
  - Give oral care following sputum collection (To remove any unpleasant taste)
4. Care of the specimen and the equipments used
  - Label the specimen container
  - Arrange or send the specimen promptly and immediately to laboratory.
  - Give proper care of equipments used
5. Document the amount, color, consistency of sputum, (thick, watery, tenacious) and presence of blood in the sputum.

#### ***D. Collecting Blood Specimen***

The hospital laboratory technicians obtain most routine blood specimens. Venous blood is drawn for most tests, but arterial blood is drawn for blood gas measurements. However, in some setting nurses draw venous blood.

#### ***Purpose***

Specimen of venous blood are taken for complete blood count, which includes

Hemoglobin and hematocrit measurements

Erythrocytes (RBC) count

Leukocytes (WBC) count

Differential RBC or WBC counts

**Equipment**

Sterile gloves

Tourniquet

Antiseptic swabs

Dry cotton (gauze)

Needle and syringe

Specimen container with the required diluting or preservative agents

Identification/ labeling

Laboratory requisition forms

**Procedure****1. Patient preparation**

Instruct the pt what to expect and for fasting (if required)

Position the pt comfortably

**2. Select and prepare the vein sites to be punctured**

Put on gloves

Select the vein to be punctured. Usually the large superficial veins used such as, brachial and median cubital veins.

Place the veins in dependent positions

Apply tourniquet firmly 15-20 cm about the selected sites. It must be tight enough to obstruct vein blood flow, but not to occlude arterial blood flow.

If the vein is not sufficiently to dilate massage (stroke) the vein from the distal towards the site or encourage the pt to clench and unclench repeatedly.

Clean the punctured site using antiseptic swabs

**3. Obtain specimen of the venous to blood**



Adjust the syringe and needles

Puncture the vein sites

Release the tourniquet when you are sure in the vein



## UNIT SIX

### COLD AND HEAT APPLICATION

#### Learning Objectives

- Describe various types of heat and cold application.
- Define important key terms related to the unit.
- Explain purposes of the procedures in the unit.
- Mention different devices used in hot and/ or cold application.
- Demonstrate skill for application as ordered or required.

#### Care of Patient with Fever

This includes sponging of the skin with alcohol or cool water for reducing temperature

Solution: Tepid (lukewarm) water

#### **Alcohol**

- Part of alcohol to 3 parts of Lukewarm H<sub>2</sub>O remove patient's gown
- Take the patient temperature, sponge the body using the wash cloth alternately, sponge each part

1. To relieve pain and muscles spasm – by relaxing muscles
  - Increase blood flow to the area
2. To relieve swelling (facilitate wound healing)
  - To relieve inflammation and congestion

### **Heat**

Increases the action of phagocytic cells that ingest moisture and other foreign material

Increases the removal of waste products or infection metabolic process

3. To relieve chilling and give comfort

Heat can be applied in both dry and moist forms

Dry Heat :- is applied locally, for heat conduction

By means of a hot water bottle

Moist heat – can be provided, through conduction

By compression or sitz bath

### **Cold Application**

#### **Purpose**

To relieve pain: cold decrease prostaglandin's, which intensify the sensitivity of pain receptors,

Systemic effects of Hot – produce a drop in blood pressure – excessive peripheral vasodilatation

### ***Tepid Sponging***

Definition: sponging of the skin with alcohol or cool water.

Purpose: to lower body temperature (fever)

Tepid (Luke –warm) water + alcohol

3 parts water: 1 part alcohol

The temperature of the water is 32 c (below body temperature) 27-37 – alcohol evaporates at a low temperature and therefore removes body heat rapidly

Less frequently used – because alcohol causes skin drying

Heat loss is by conduction and vaporization

Determine the patients' temperature, PR and RR frequently

Q 15 min

Sponge each area (part) for 2-3 min changing the wash cloth

The sponge bath should take about 30 minutes

Reassess v/s at the end

Discontinue the bath if the clients becomes pale or cyanotic or shivers, or if the PR becomes rapid or irregular

Temperature of hot water bottle (bag) 52 °c for normal adults, 40.5 – 46 °c– for debilitated (unconscious patients).

40.5-46 °c for children < 2 yrs;

Fill the bag about 2/3 full;

Expel the remaining air and secure the top;

Maximum effect occurs in 20-30 min;

The application is repeated Q2 – 3 hrs to relieve swelling compress – a moist gauze or cloth immersed in (hot or cold) water and applied over an area.

**Local Application of Cold and Heat**

***Application of Cold***



To relieve stasis of blood

To increase absorption of inflammatory products

To relieve stiffness of muscle and muscle pain

To relieve pain and swelling of a localized inflammation boil or carbuncle – sometimes increases edema, increases capillary permeability

To increase blood circulation

To promote suppuration

To relieve distention and congestion

To provide warmth to the body

### **Methods**

#### **1. Dry Heat**

Using hot water bottle (bags)

After contact of the body with moisture of water vapors temperature  $>46^{\circ}\text{C}$

$52^{\circ}\text{C}$  for normal adults

$40.5 - 46^{\circ}\text{C}$  for debilitated or unconscious patient's and child  $< 2$  yrs

2/3 of the bag should be filled with water

Expel the remaining air and secure the top

Dry the bag and hold it upside down to test for leakage

Wrap it in a towel or cover and place it on the body part

Maximum effect occurs in 20-30 min

Remove after 30-45 minutes

#### **2. Moist Heat**

1. Hot compress: a wash cloth immersed in hot water of temperature  $40-46^{\circ}\text{C}$  and change the site of washcloth frequently

*Complication*

Paralysis

Numbness

Loss of sensation – fear of burn

## 2. Sitz bath

### Sitz Bath (hit bath)

It is used to sock the client's pelvic area

A clients sits in a special tub or a bowel

The area from the mid things to the iliac crests or umbilicus - increases circulation to the perineum (when the legs are also immersed blood circulation to the perineum or pelvic area decrease)

Temperature of water – 40-43 C (105-110 F) – unless the patient is unable to tolerate the temperature

#### **Purpose:**

To relieve pain in post operative rectal condition

Smoothen irritated skin (perineum)

Facilitates wound healing (after episiotomy)

To release the bladder in case of urinary retention

If it is going to be given in the tub – fill  $\frac{1}{2}$  the tube with water and add the ordered medication

In a bowel – fill  $\frac{2}{3}$  of it with water – add the ordered medication and dilute

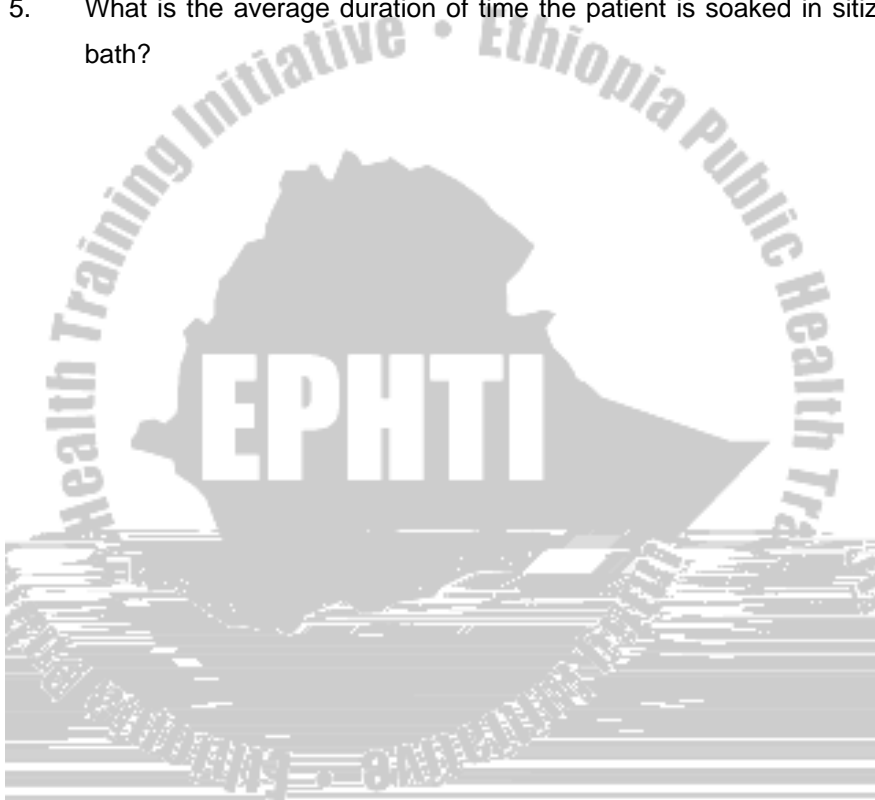
The medication to Rx the perineum in KMNO<sub>4</sub> sol. 250 mg KMNO<sub>4</sub> in 500 ml of water

The duration of the bath is generally 15-20 minutes (20-25) depending on the client's health

Help the client to dry

**Study Questions**

1. Mention the two purposes of the heat application.
2. Describe the mechanism of action of heat application to effect its purposes.
3. What is tepid sponge?
4. What is the common medicine used in sitiz bath?
5. What is the average duration of time the patient is soaked in sitiz bath?





## UNIT SEVEN

### ELIMINATION OF GASTROINTESTINAL AND URINARY SYSTEM

#### Learning Objective

At completion of the unit the student will be able to:

Define enema.

List purposes of different types of gastric aspiration, lavage, enema and catheterization.

Mention types of enema.

Provide enema according to its purpose and need.

Explain mechanism of action of fluids used for enema.

Identify important precautions of the procedure.

Explain purpose of catheterization.

Identify different types of catheters.

Describe indication of catheterization.

Demonstrate sterility technique through out the catheterization.

Intervene the procedure for those in need of it with understanding of both male and female patient.

#### I — Gastric Lavage

**Definition-** This is the irrigation or washing out of the stomach.

#### **Purpose**

1. To remove alcoholic, narcotic or any other poisoning, which has been swallowed.
2. To clean the stomach before operation



**Procedure**

1. Explain procedure to the pt and ask him/her to remove artificial dentures, If any.
2. Protect pt with cape or towel
3. Protect bed linen by spreading the mackintosh on the accessible side of the bed.
4. Place mackintosh or paper under the pail to protect the floor
5. Elevate head of the bed if pt is conscious and the condition permits. But if unconscious, place in prone position with head over the edge of the bed or head lower than the body.
6. Measure the tube from the tip of the nose up to the ear lobe and from the bridge of the nose to the end of the sternum. (32 - 36 c.m.)
7. Gently pass the tube over the tongue, slightly to one side of the midline towards the pharynx. (If patient is unconscious, mouth gag may be used)
8. Ask patient to swallow while inserting the tube and allow to breathe in between swallowing.
9. If air bubbles, cough and cyanosis are noticed the tube is withdrawn and procedure commenced again.
10. After inserting, place funnel end in a basin of water to check if the tube is in the air passage.
11. Fill the small pint measure and pour gently until the funnel is empty, then invert over the pail.
12. Take specimen. If required, and continue the process until the returned fluid becomes clear and the prescribed solution has been used.
13. Remove tube gently and give mouth wash
14. Measure the amount of fluid returned and record
15. Report any abnormality e.g. blood stain or clots or pieces of the gut.

## 2. Gastric Lavage Using a Tube with a Bulb

1. Clamp tubing below bulb.
2. With right hand, squeeze bulb this forcing the air out through the funnel.
3. With left hand, pinch tubing over bulb and at the same time releasing bulb. This creates a suction, which will draw the stomach contents in to the bulb.
4. Lower funnel and allow excess gastric contents to drain in to the pail.
5. Pour 200c.c - 300c.c g of solution into funnel. Before funnel is empty invert it and allow solution to drain.
6. Before solution stops running, turn up funnel and add another quantity of solution
7. Repeat this procedure until returns are clear
8. Gently remove the tube, feel the patient pulse and watch the



## II. GASTRIC ASPIRATION

Aspiration is to withdrawal of fluid

### **Purpose**

1. To prevent or relieve distention following abdominal operation
2. In case of gastrointestinal obstruction, to remove the stomach or gastric contents

3. To keep the stomach empty before on emergency Abdominal operation is done

4. To aspirate the stomach contents for diagnostic purposes

**There are two type of gastric Aspiration**

1. Intermittent method: - In this case, Aspiration is done as condition requires and as ordered.

2. Continues method: - Attached to a drainage bag

**There are 2 ways of supplying suction**

a. Simple suction by the use of a syringe

b. An electric suction machine

The continues method is indicated when it is absolutely necessary and desirable to keep the stomach and duodenum empty and at rest.

**Equipment**

Aspiration tube (Ryle's tube)

Aspiration syringe if this method is used

Gallipots with lubricant e.g. liquid paraffin or vase line, to lubricate the nostrils

Gauze swabs in a bowl

Sodium bicarbonate solution or saline to clean the nostrils

Litmus paper

Water in a galipot to test the right position of the tube in the stomach

Two test tubes and laboratory forms of necessary

Saline or plain water in a galipot to be injected, in case the stomach content is too thick to come out through the syringe.

Rubber mackintosh and towel to protect the patients chest.

Receiver for sailed swabs

**Procedure**

1. Explain procedure to patient, in order to gain her/his co-operation

2. Prop up in an upright position with help of back rest and pillow
3. Cleanse and lubricate the nostrils
4. Lubricate the Ryle's tube with water
5. Insert the tube as directed in nasal feeding and ask the patient to swallow as the tube goes down.
6. Instruct patient to open her or his mouth to make sure the tube is in the stomach
7. After being sure that the tube is in the right position, inject about 15-20 cc. of saline or water in to the stomach.
8. Draw plunger back to with draw the fluid collect specimen, If needed
9. If the Ryle's tube is to be left in site then a spigot or clamp is used to close the end, but if it is for one aspiration and to be removed immediately, it should be withdrawn very gently to avoid irritating the mucous lining.

**N.B**

1. *Special care of the nose and mouth to prevent dryness should be considered*
2. *Always measure the amount withdrawn accurately noting color, contents and smell*
3. *Record on the fluid chart properly*
4. *Report any change in patient condition regarding pulse, Temperature, B.P fluid out put.*

**III. Enema**

**Enema:** is the introduction of fluid into rectum and sigmoid colon for cleansing, therapeutic or diagnostic purposes.

**Purpose:**

For emptying – soap solution enema the cloth

For diagnostic purpose Barium enema

For introducing drug/substance (retention enema)

### **Mechanisms of some solutions used in enema**

1. Tap water: increase peristalsis by causing mechanical distension of the colon.
2. Normal saline solution
3. Soap solution: increases peristalsis due to irritating effect of soap to the luminal mucosa of the colon.
4. Epsom salt: The concentrated solution causes flow of ECF to the lumen causing mechanical distension resulting in increased peristalsis.

### **Classified into:**

Cleansing (evacuation)  
Retention  
Carminative  
Return flow enema

### **Cleansing enema is of two kinds:**

1. High enema  
Is given to clean as much of the colon as possible  
The solution container should be 30-45 cm about the rectum

The age of the person and

The persons ability to retain the solution

***Purpose***





2. Soap solution – sol. Soap 1gm in 20 ml of H<sub>2</sub>O
3. Epsom salt 15 gm – 120 gm in 1,000 ml of H<sub>2</sub>O

### **Cleansing Enema**

#### **Procedure**

Inform the patient about the procedure

Put bed side screen for privacy

Attach rubber tube with enema can with nozzle and stop cock or clamp

Place the patient in the lateral position with the Rt. leg flexed, for adequate exposure of the anus (facilitates the flow of solution by gravity into the sigmoid and descending colon, which are on the side)

Fill the enema can which 1000 cc of solution for adults

Lubricate about 5 cm of the rectal tube – facilitates insertion through the sphincter and minimizes trauma

Hung the can = 45 cm from bed or 30 cm from patient on the stand

Place a piece of mackintosh under the bed

Make the tube air free by releasing the clamp and allowing the fluid to run down little to the bed pan and clamp open – prevents unnecessary distention

Lift the upper buttock to visualize the anus

Insert the tube

7-10 cm in an adult smoothly and slowly

5-7.5 cm in the child

2.5-3.75 cm in an infant

**Note:** *if resistance is encountered at the internal sphincter, ask the clients to take a deep*

Breath, then run a small amount of solution (relaxes the internal anus sphincter)

Raise the solution container and open the clamp to allow fluid to flow

Administer the fluid slowly if client complains of fullness or pain stop the flow for 30" and restart the flow at a slower rate – decreases intestinal spasm and premature ejection of the solution

Do not allow all the fluid to go as there is a possibility of air entering the rectum or when the client can not hold anymore and wants to defecate, close the clamp and remove the rectal tube from the anus and offer the bed pan.

Remove bed pan and clean the rectal tube

### **Retention Enema**

Administration of solution to be retained in rectum for short or long period

#### **Purpose**

To supply the body with fluid.

To give medication E.g. stimulants – paraldehyde or ant-spasmodic.

To soften impacted fecal matter.

The tube for retention enema is smaller.

#### **Procedure**

Similar with the cleansing enema but the enema should be administered very slowly and always be preceded by passing a flatus tube

#### **Note**

1. *Most medicated retention enema must be preceded by a cleansing enema. A patient must rest for ½ hrs before giving retention enema*
2. *Elevate foot of bed to help patient retain enema*
3. *The amount of fluid is usually 150-200 cc*

4. *Temperature of enema fluid is 37.4 °c or at body*
5. *Kinds of solution used to supply body with fluid are plain H<sub>2</sub>O, normal saline, glucose 5% sodabarbonate 2-5%*
6. *Olive oil 100-200 cc to be retained for 6-8 hrs is given for server constipation*

### **Retention Enema**

Are enemas meant for various purpose in which the fluid usually medicine is retained in rectum for short or long period – for local or general effects

E.g. oil retention enema

Antispasmodic enema

1. Principles:

Is given slowly by means of a rectal tube

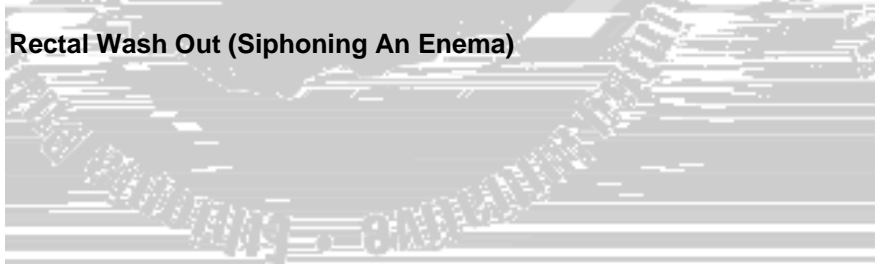
The amount of fluid is usually 150-200 cc

Cleansing enema is given after the retention time is over

Temperature of enema fluid is 37.4 c or body

(Return flow Enema) Harris fluid

### **Rectal Wash Out (Siphoning An Enema)**



Soda-bi-carbonate solution (to remove excess mucus)

Tap water

KMNO<sub>4</sub> sol. 1:6000 for dysentery or weak tannic acid

Tr. Asafetida in 1:1000 to relieve distention

#### Amount of solution

5-6 liters or until the wash out rectum fluid becomes clear

#### **Procedure**

Insert the tube like the cleansing enema

The client lies on the bed with hips close to the side of the bed  
(client assumes a right side lying position for siphoning)

Open the clamp and allow to run about 1,000 cc of fluid in the  
bowel, then siphon back into the bucket

Carry on the procedure until the fluid return is clear

#### **Note:**

*The procedure should not take > 2 hrs*

*Should be finished 1 hr before exam or x-ray – to give time  
for the large intestine to absorb the rest of the fluid*

*Give cleansing enema ½ hr before the rectal wash out*

*Allow the fluid to pass slowly*

#### **Passing a Flatus Tube**

##### **Purpose**

To decrease flatulence (sever abdominal distention)

Before giving a retention enema

##### **Procedure**

Place the patient in Lt. Lateral position

Lubricate the tube about 15 cm

Separate the rectum and insert 12-15 cm in to the rectum and tape it

Connect the free end to extra tubing by the glass connector

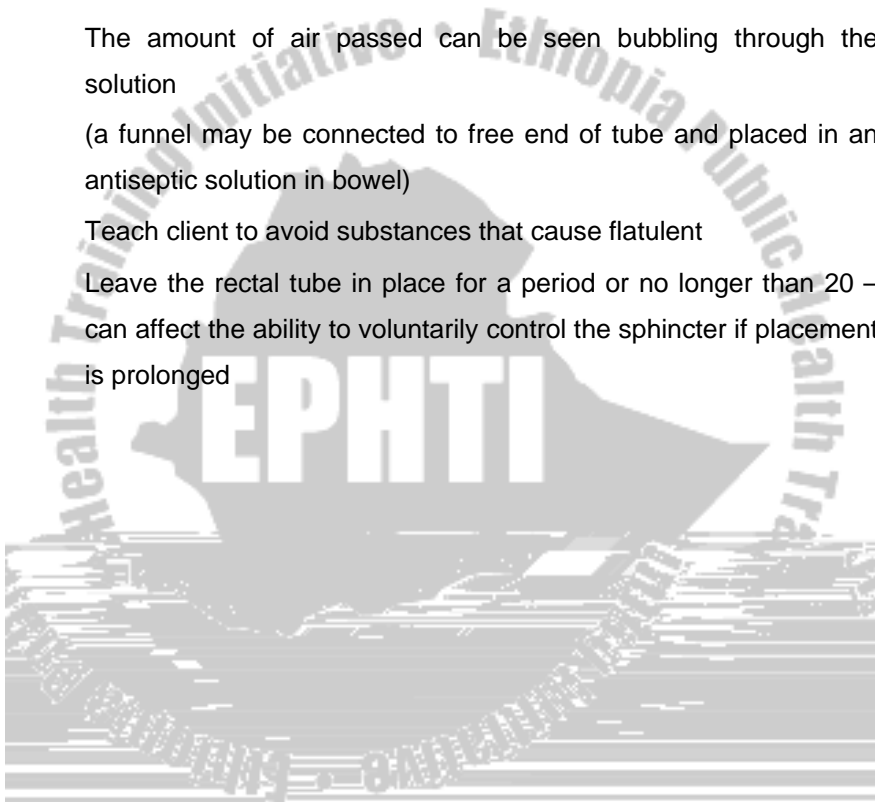
The end of the tube should reach the (tap H<sub>2</sub>O) solution in the bowel

The amount of air passed can be seen bubbling through the solution

(a funnel may be connected to free end of tube and placed in an antiseptic solution in bowel)

Teach client to avoid substances that cause flatulent

Leave the rectal tube in place for a period or no longer than 20 – can affect the ability to voluntarily control the sphincter if placement is prolonged



I.



- Graded on French scale or numbers

2. Determine appropriate catheter size

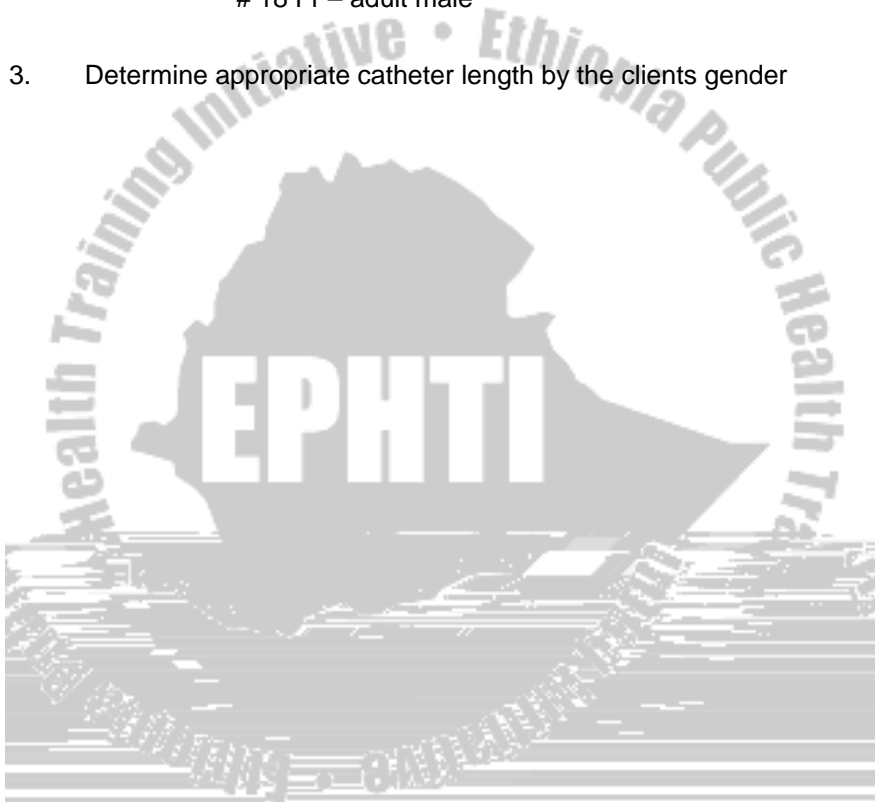
Catheter size depends on the size of the urethral canal

# 8-10 Fr – children

# 14-16 Fr – female adults

# 18 Fr – adult male

3. Determine appropriate catheter length by the clients gender



Drape the patient.

### **Dorsal Recumbent**

Female - for a better view of the urinary meatus and reduce the risk of catheter contaminate.

Male- allows greater relaxation of the abdominal and perennial muscles and permits easier insertion of the tube.

Straight Catheter: is a single lumen tube with a small eye or opening about (1.25 cm) from the insertion tip:

Wash the perennial area with warm water and soap

Rinse and dry the area

Prepare the equipment

Create a sterile field

Drop the client with a sterile drape

Clean the area with antiseptic sol.

Lubricate the insertion tip of the catheter (5-7 cm in)

Expose the urinary meatus adequately by retracting the tissue or the labia minora in an upward direction – female

Retract the fore skin of uncircumcised mal.

Grasp the penis firmly behind the glans and hold straighten the down ward curvature of vertical it go to the body – male hole the catheter 5 cm from the insertion tip

Insert the catheter into the urethral orifice

Insert 5 cm in females and 20 cm in males or until urine com ssue ocatheter into the urethral orifice



**Note.**

If resistance is encountered during insertion, do not force it – forceful pressure can cause trauma. Ask the client to take deep breaths - relaxes the external sphincter (slight resistance is normal)



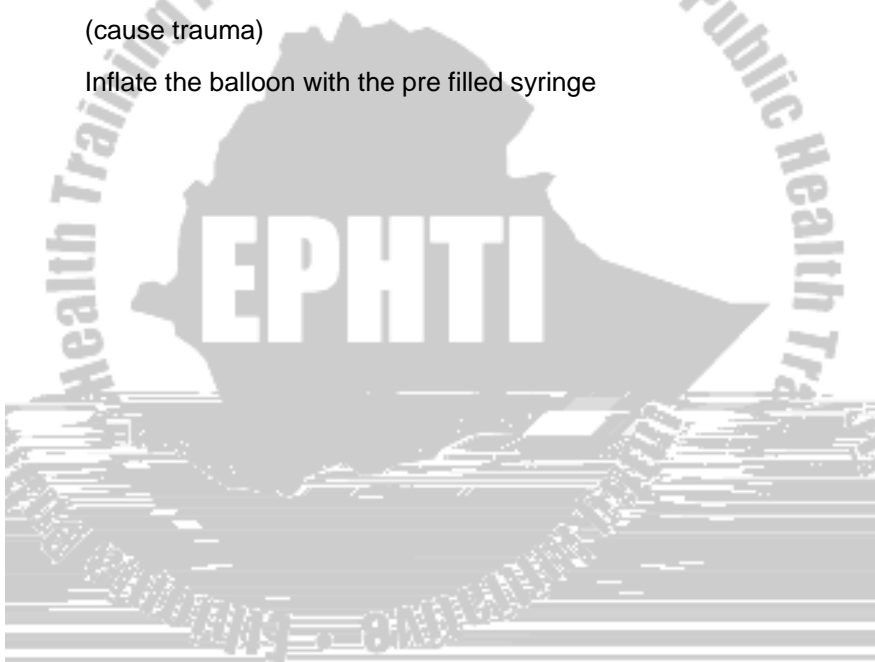
The balloons are sized by the volume of fluid or air used to inflate them 5 ml – 30 ml (15 commonly) indicated with the catheter size 18 Fr – 5 ml.

Test the catheter balloon

Follow steps as insertion straight catheter

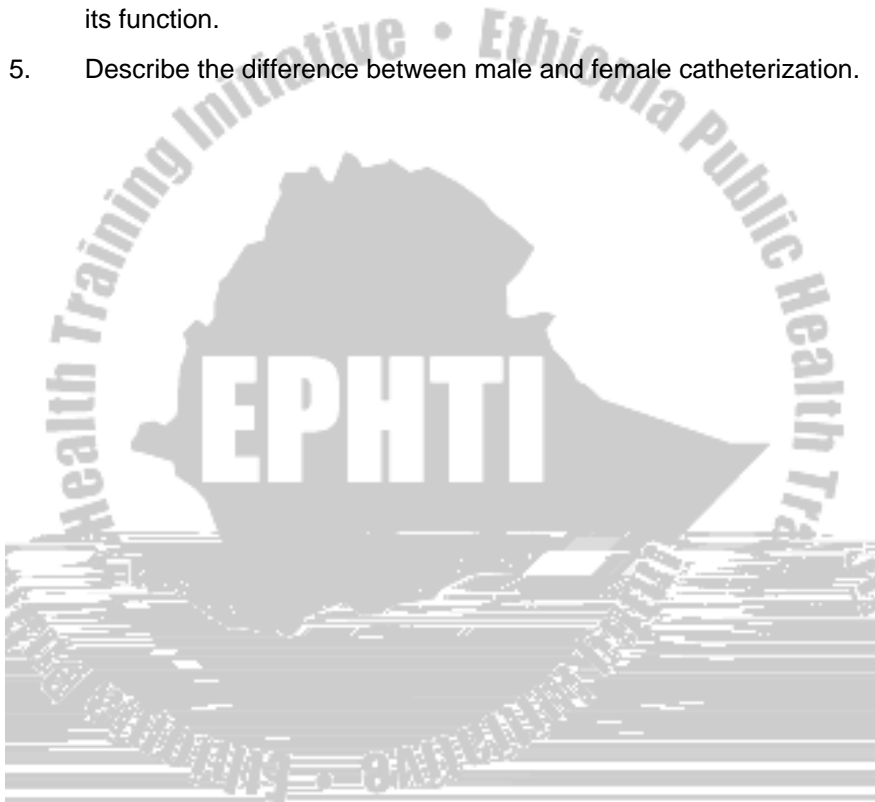
Insert the catheter an additional 2.5 – 5 cm (1-2 in) beyond the point at which urine began to flow (the balloon of the catheter is located behind the opening at the insertion tip) – this ensures that the balloon is inflated inside the bladder and not in the urethra (cause trauma)

Inflate the balloon with the pre filled syringe



## Study Questions

1. Define gastric lavage.
2. Mention indications of gastric lavage.
3. Define Enema.
4. State how the mechanism of action of soap solution enema exerts its function.
5. Describe the difference between male and female catheterization.



## UNIT EIGHT



- b. When prolonged systemic action is desired

***Disadvantages and Contra- indications***

1. For a patient with nausea & vomiting, unconscious patients.
2. When digestive juices inactivate the effect of the drug.
3. When there is inadequate absorption of the drug, which leads to inaccurate determination of the drug absorbed.
4. When the drug is irritating to the mucus membrane of the alimentary canal.

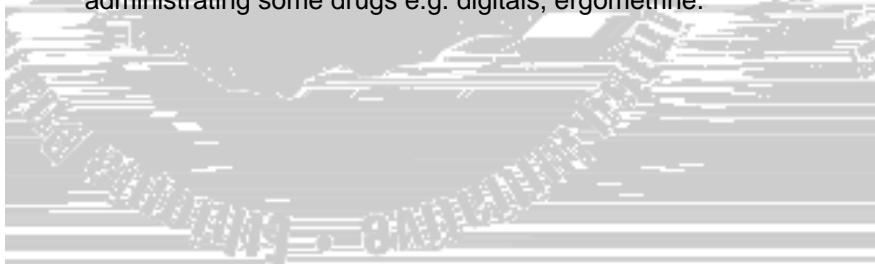
**Type of Oral Medication**

1. Lozenges (troches) - sweet medicinal tablet containing sugar that dissolve in the mouth so that the medication is applied to the mouth and throat
2. Tablets - a small disc or flat round piece of dry drug containing one or more drugs made by compressing a powdered form of drug(s)
3. Capsules - small hollow digestible case usually made of gelatin, filled with a drug to be swallowed by the patient.
4. Syrups - sugar containing medicine dissolved in water
5. Tinctures - medicinal substances dissolved in water
6. Suspensions - liquid medication with undissolved solid particles in it.
7. Pills and gargle - a small ball of variable size, shape and color some times coated with sugar that contains one or more medicinal substances in solid form taken in mouth.



**Note**

1. Remember the 5 R's
  - Right patient
  - Right medication
  - Right route
  - Right dose
  - Right time
2. Always keep the bottle tightly closed.
3. Clean and keep the label of the bottle clear.
4. Keep medication away from light.
5. Check their expiration date.
6. Keep the rim of the bottle clean.
7. Give your undivided attention to your work while preparing and giving medications.
8. Make sure that a graduate nurse checks some potent drugs.
9. Never give medications from unlabeled container
10. Never return a dose once poured from the bottle.
11. Check your patient's vital sign may be necessary before and after administrating some drugs e.g. digitals, ergometrine.



To check rectal bleeding

**Equipment**

Suppository (as ordered)

Gauze square

Rectal glove or finger cot

Toilet paper

Receiver for soiled swabs

Bedpan, if the treatment is in order to produce defecation.

Screen

Mackintosh and towel

**Procedure**

Screen the patient

Lie patient on left lateral position or If not possible on dorsal recumbent position.

Towel and mackintosh is placed under the buttocks.

Fold back top linen to the opposite side thus exposing the buttocks only

Put on the glove and insert the suppository into the rectum until it is felt to slip beyond the internal sphincter muscle.

Hold the buttocks together for a few minutes until there is no longer desire to expel the suppository.

Clean the anus with a toilet paper and place it in the receiver for used swabs.

Report the time, type, result of the treatment and the reaction of the patient to the treatment.

Wash and boil glove for 10 minutes and return to proper place.

**Kinds of Suppositories Used:**



1. Bisacodyl (Dulcolax) is commonly ordered for its laxative action. It



Water in the bowel to rinse syringe and needle

**Procedure**

Take equipment to the patient's side

Explain procedure to patient

Get hold of the arm & locate the site of injection.

Clean the skin with swab and inject the drug about 0.1. 0.2 inch in to the epidermis after the bevel of the needle is no longer visible.

Don't massage the site.

Check for the immediate reaction of the skin (10-15 minutes later for tetanus, 20-30 minutes later for penicillin)

If it is for tine test, mark the area

Chart the data and time of the administration of the drug.

Take care of the equipment & return to their places.

Do not forget to do the reading after 72 hours if it is for tine test (tuberculin test)

**B. Sub - Cutaneous Injection**

**Definition:** Injecting of drug under the skin in the sub- cutaneous tissue, (under the dermis)

**Purpose:**

To obtain quicker absorption than oral administration

When it is impossible to give medication orally

**Equipment**

Tray

Sterile syringe & needle

Forceps in a container

Alcohol swabs

Medication

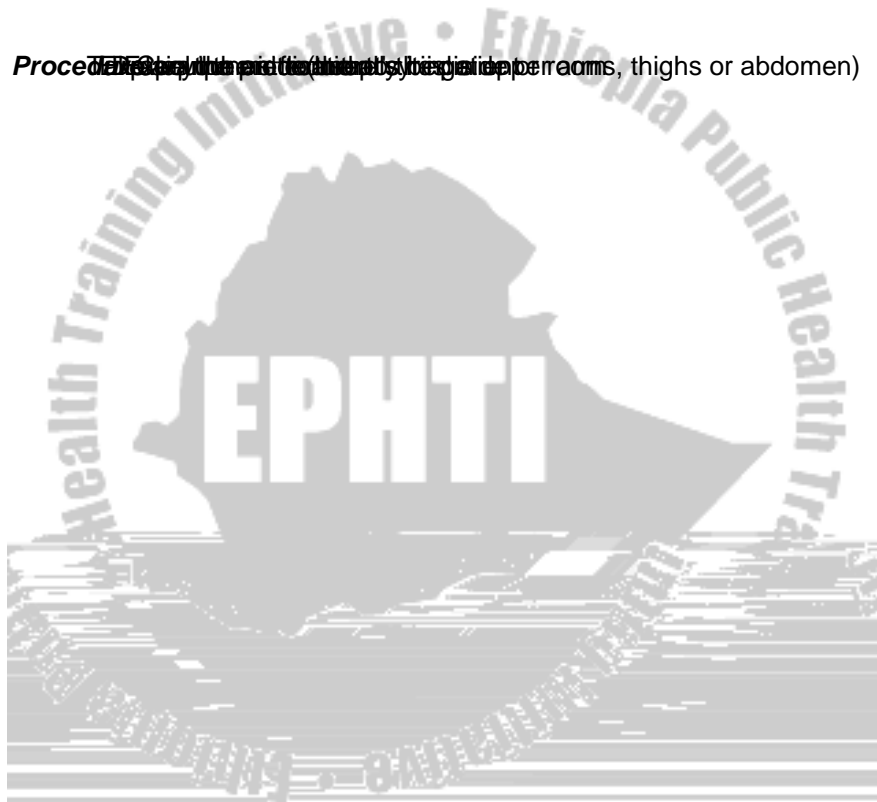
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Medication chart

**Rectal sigmoidoscopy**

**Site of Operation:** One finger of the depth of the sigmoid margin to the iliac crest.

**Procedure:** The patient (Male or female) lie on left side (per rectum, thighs or abdomen)



**Definition:** It is an introduction of a drug into a body's system via the muscles.

**Purpose**

To obtain quick action next to the intra- venous route

To avoid an irritation from the drug if given through other route.

**Equipment**

Tray

Ordered drug (ampoule, vial)

Sterile syringes and needle in a container

Alcohol swab

Receiver

A bowl of water for used syringes and needle

File

Sterile jar with sterile forceps

Chart

**Sites for I.M. Injection**

Ventrogluteal muscle

Dorsogluteal muscle

Deltoid muscle

Vastus Lateralis

**Procedure**

Do the ABC of the procedure.

Prepare tray & take it to the pr's room

Prepare the medication

Draw the medicine

Expel the air from the syringe

Choose the site of injection (the site for intra- muscular)

Using the iliac crest as the upper boundary divided the buttock into four. Clean the upper outer quadrant with alcohol swab:

Stretch the skin and inject the medicine

Draw back the piston (plunger) to check whether or not you are in the blood vessel ( if blood returns, withdraw and get a new needle & reinject in a different spot)

Push the drug slowly into the muscle

When completed, withdraw the needle and massage the area with swab gently to and absorption.

Place the patient comfortably

Take care of the equipment you have used & return to their places

Chart the amount, time route and type of the medicine

Check the patient's reaction

**Note:**

1. The needle for i.m. Injection should be long
2. Other sites for I.M Injection is the deltoid muscle and the outer part of the thigh (quadriceps muscle)
3. Strict aseptic technique should be observed throughout the procedure.

**D. I.V. INJECTIONS**

**Definition:** It is the introduction of a drug in solution form into a vein.

Often the amount

is not more than 10.ml. at a time.

**Purpose**

When the given drug is irritating to the body tissue if given through other routes.

When quick action is desired.

When it is particularly desirable to eliminate the variability of absorption.

When blood drawing is needed (exsanguinations)

### **Equipment**

Tray

Towel and rubber sheet

Sterile needle and syringes in a sterile container

Sterile forceps in a sterile container

Alcohol swabs

File

Medication

Tourniquet

Receivers (2)

Treatment Chart

Glove

### **Procedure**

Prepare your tray & the medication

Explain the procedure to the patient

Position the patient properly

Place rubber and towel under his arm (to protect the bed linen)

Expose the arm and apply tourniquet

Ask pt. To open and close his fist.

Palpate the vein and clean with alcohol swab the site of the injection (Which is mainly the mid cubital vein of the arm)

Clean with a circular motion, proceed from center of the site outward.

Hold the needle at about  $45^{\circ}$  angles in line with the veins.

Puncture the vein and draw back to check whether you are in the vein or not.

(Blood return should be seen if you are in the vein)







Support needle with sterile gauze or sterile cotton balls

If necessary to keep it in proper position in the vein

Anchor the I.V. tubing with the adhesive tape to prevent pull on the needle.

Place arm board or splint under the arm and bandage around.

Adjust the rate of flow

Rate of flow is regulated by the following formula.

**Number of ml. of sol's number of drops in a ml.**

**Number of hrs. over which sol. is to be administered x 60 minutes**

1ml = 15 drops

**E.g.** if 1000ml of 5% D/w is to run for 24 hrs, how many drops per minutes should it run?

$$\frac{1000 \text{ ml.} \times 15 \text{ gtt/ml.}}{24 \times 60 \text{ min.}} = \frac{1000 \times 15 \text{ gtt.}}{24 \times 60 \text{ min.}} = 10 \text{ gtt/min}$$

**Note:**

1. The arm board should be long enough to extend beyond the wrist and elbow joint.
2. Board should be padded
3. Infusion bottle should be labeled with the date, time infusion is started, drops per minute, and any added medications. If more than one bottle as u re .x6ure .x.3ls. If more

**Definition:** It is the giving of blood to a patient through a vein

**Propose**

To counteract severe hemorrhage and replace the blood loss.

To prevent circulatory failure in operation where blood loss is considerable, such as in rectal resection hysterectomy and arterial surgery.

In severe burns to make up for blood lost by burning but only after plasma and electrolytes have been replaced.

For severe anemia from cancer, marrow aplasia and similar conditions.

To provide clotting factors normally present in blood, which may be absent as a result of disease.

**Equipment**

Bottle containing blood, with the patient name, blood group and Rh. Factor.

Blood giving set

Sterile forceps in a sterile jar

Sterile syringes and needle

Alcohol swabs

Sterile gauze

Rubber sheet and towel

Tourniquet

Arm splint

Bandages and scissors

Adhesive tape

Receiver for dirty swabs

I.V pole (stand)

Patient's chart.

**Procedure**





Dressing forceps (1)  
Cotton balls in a gallpot  
Solution for cleansing  
Gloves  
Hole sheet (Fenestrated towel)  
Syringe and needle  
Scalpel (surgical knife)  
Mosquito forceps (3)  
Aneurysm needle (1)  
Silk  
Intravenous cannula or vein flow (2)  
Small, straight scissors (1)  
Small, curved scissors (1)  
Needle holder (1)  
Round needle (1)  
Cutting needle (2)  
Tissue forceps (1)  
Gauze (slit at one end)  
Probe  
Fine dissecting forceps (1)  
Local anesthesia

**Clean**

Receiver of dirty swab  
Stand light, if available  
Adhesive tape (plaster)  
Dressing scissors

**Procedure**

Bring equipment to the bedside of the patient  
Explain procedure to the patient  
Shave the area, if needed  
Position the patient properly

The nurse will then open the set and pour the cleaning lotion in to the galipot for the doctor

The doctor then scrub his hands, put on gloves, clean and drape the area, he will insert the I.V

The channel is securely tied with silk and skin is closed

The nurse dresses the site and secure it with adhesive plaster

Remove all equipment, wash and send for sterilization

## H. Inhalation

**Definition:** Inhalation is the act of drawing in of gas vapor or steam into the lungs for therapeutic purposes It could be in dry, moist or vapour form.

### i. Oxygen Administration:

#### Purpose

To provide and maintain a normal supply of  $O_2$  for blood, and tissues  $O_2$  may be administered in three ways.

1. By mask
2. Nasal Catheter
3. Tent.

#### 1. Giving $O_2$ by mask

There are many kinds of masks used for  $O_2$  administration the common ones are:

1. The venture mask
2. The B.L.B. mask ( Boothby. Lovelace & Bulbulain)

The venture mask gives a controlled amount of  $O_2$  i.e. it is not high to cause respiratory depression & it is sufficient to relieve anoxia. It gives 24-35% of  $O_2$

The B.L.B mask provides an oxygen concentration of 90% with the flow meter set at 7 liters/minute. This kind of mask allows the patient to eat,

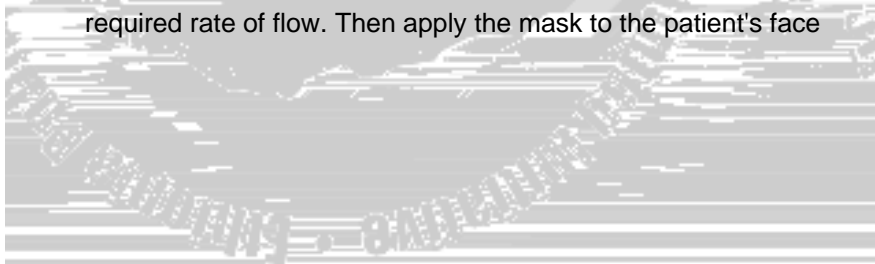
drink and to expectorate. If the patient cannot breath through his nose, the B.L.B mask should not be used.

### **Equipment**

- A cylinder of O<sub>2</sub> with a reducing value and pressure tubing to be connected with the O<sub>2</sub> cylinder.
- Mask
- Safety pin to secure the tubing to the bed linen
- Tissue paper to clean the nostrils with. If the patient is unconscious, a tray containing a galipot of saline or water, wooden applicator and receiver for soiled applicator is necessary in order to clean the nostrils

### **Procedure**

1. The adjustment is turned on before bringing the cylinder to the bedside.
2. Explain treatment to pt.
3. Bring equipment to the bedside
4. Ask him to clean his hostels to avoid obstruction (if well enough)
5. Connect the mask to tubing and open the fine adjustment to the required rate of flow. Then apply the mask to the patient's face



- c) Two soft rubber catheters connected by y shaped connection to the tube on O<sub>2</sub> apparatus.

### **Equipment**

- Oxygen cylinder with regulating valve and pressure tubing
- Wolf's bottle
- Glass connection
- Fine catheters, lubricant, plaster
- Safety pin
- Tray containing a. galipot of saline or water. Receiver for soiled applicators.

### **Procedure**

1. Procedure is the same as giving oxygen by mask: (procedure 1-4)
2. Connect the fine catcher with the pressure tubing. Turn on the fine adjustment to the required rate of flow the maximum liter flow being 6-7 litter /minute.
3. Catheter is lubricated preferably with water and passed backward into pharynx till the tip of the catheter is opposite the uvula. The catheter can also be inserted by measuring the distance from the patient's nose to his ear lobe. It is then taped in place. Never force catheter against an obstruction.

### **Note:**

Oxygen catheter are removed every 8 hrs. and a clean catheter is inserted into the other nostril. Pt.'s receiving oxygen by catheter requires special mouth and nose care since a membrane. There which stimulating secretions must remove.

Oxygen dries and vesicles membrane, therefore, should be passed through water (Humidified) before it is administered by ca526 -2 sT o.



The advantage of administration of oxygen by catheter is the freedom of movement that it gives to patients receiving oxygen.

By this method patient can obtain about 50% concentration of oxygen.

### 3. Oxygen tent

#### **Purpose:**

- a) To keep patient in high oxygenation environment.
- b) Whenever the other means are not possible.

#### **Equipment**

1. Transparent oxygen tent and its apparatus fitted with oxygen
2. Ice if the apparatus is with out refrigerator device.
3. Hanger for the tent
4. Room thermometer if needed
5. No smoking sign for the unit

#### **Procedure**

1. Remove all electrical appliance from the room as this may produce sparks.
2. Post sign of no smoking on many places in the unit
3. Prepare and check if the applicator is working properly.
4. Bring the oxygen unit to the bedside and fix the tent on the hanger.
5. Close all appliances of the tent: place ice if the apparatus is without refrigeration device.
6. Tuck the side of the hold of tent under the mattress as far as they will go.
7. Fill the tent with 12-15 liters of oxygen 40-60% concentration for the first half hour.
8. After the first half hour regulate the flow of oxygen to 6-10 liters or as ordered by the doctor until the treatment is completed.
9. Check temperature indicator frequently and adjust to 18<sup>0</sup>C-22<sup>0</sup>C.
10. Record state of patient and time

### Precautions to be Taken When Oxygen is Used

1. Oxygen supports combustion. There fore it is essential for the patient's safety their is no smoking within 3 meters of oxygen equipment. Lighted matches, cigarettes, electric lights, nylon clothing, electric pads, bells mechanical toys should be forbidden.
2. Alcohol must not be applied to the pt's skin
- 3 The catheter tip and the cylinder itself must not be lubricated with Vaseline or oil or any kind
6. Cylinders must be handled carefully as the oxygen is under pressure.
7. The fine adjustment should always be closed when the main tap is turned on.
8. Check that there is no obstacle in the pt's airway before firing oxygen in order to prevent pt. From suffocation.
9. The doctor will order the rate of flow. A rate of 2-liters/ minute is commonly used when oxygen is used in case of emergency minute is commonly used when oxygen is used in case of emergency instead of free air. In the case of asphyxia liter/min may be needed.

Protect pt. from asphyxia ion inspecting regularly pressure gauge and flow meter and noting pulse, respiration, color, mental state and necrosis from carbon dioxide.

### ii. Steam Inhalation

**Definition:** It is the intake of steam alone or with medication through the nose or mouth

### Purpose

1. In order to produce a local effect on the upper respiratory passage during cold, sinusitis, laryngitis, bronchitis etc. common drugs used are frier balsam (tincture of benzoin compound, eucalyptus. Menthol, camphor)
2. To allay spasm e.g. Asthma, angina pectoris

3. To increase circulation in the lungs by increasing or decreasing the secretion of the bronchi.  
E.g. ammonia inhaled in cases of fainting and syncope stimulated the respiratory center and heart action.
4. To moisten secretions e.g. Tracheotomy

### **There are two Types of Inhalation**

1. Intermittent (interrupted) e.g. Nelson's inhaler.
2. Continues method e.g. steam tent.

#### **1. Nelson's Inhaler**

##### ***Equipment***

Nelson's inhaler with the mouth piece  
 Cover for the inhaler (blanket or towel)  
 A bowl or saucepan to carry the inhaler with  
 Face towel to wipe the face as patient required  
 Gauze can be use around the moth piece to prevent burning of the lips.  
 A tray. Large enough, to carry the inhaler to take it to the bedsides.  
 A measuring jug with water which is 82°C  
 The drug ordered might be eucalyptus, tincture of benzene (about 4 cc) or a few systoles of method to 600 cc of water Graduated measure

##### ***Procedure***

Inhaler should be warmed and glass mouth piece boiled measure the drug as ordered. Either point in the graduate measure 90<sup>0</sup> cc of cold water and 500 cc of boiled water to bring the temperate 82<sup>0</sup>c or half by half or pour half point (300cc) of boiling water into the inhaler than 5 co of



**Emergency tray and Trolley****List of Emergency Drugs.**

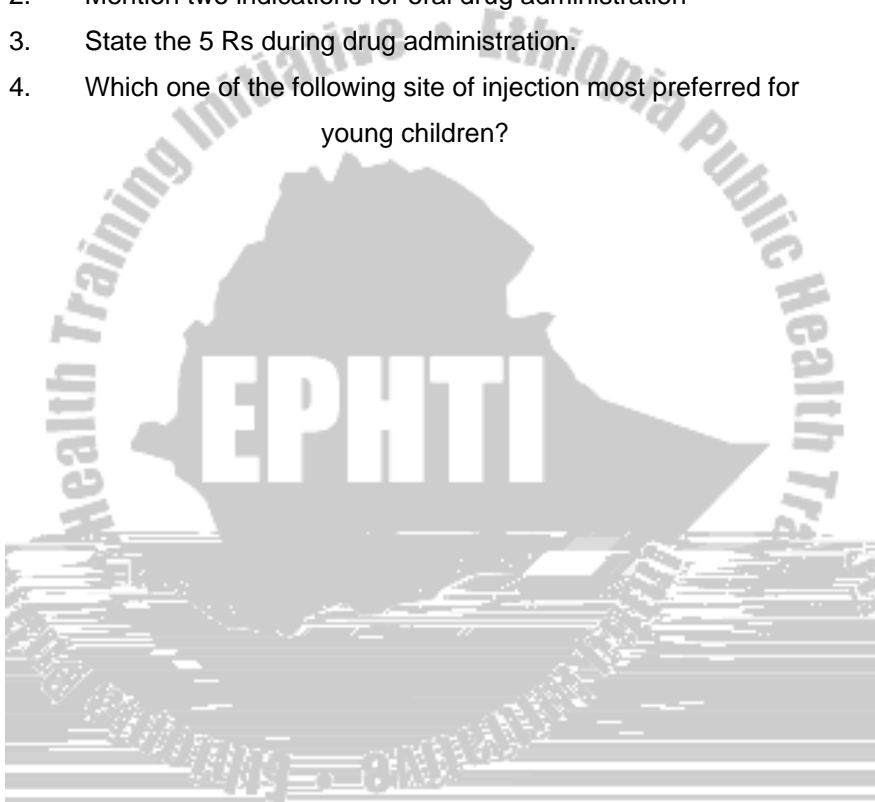
O<sub>2</sub>  
 Morphine sulfate  
 catheter  
 Aramine  
 Adrenalin( Epinephrin.)  
 Levophed  
 Phanergan  
 Aminophylline  
 Allerour  
 Nor adrenaline  
 Carmine (Nikethamide)  
 Lasix  
 Syringes and needles  
 Digoxin  
 N<sub>a</sub> HCO<sub>3</sub> (Sodium bicarbonate)  
 Swabs  
 Vitamin k  
 .9 Normal Saline  
 5% D/w with complete et  
 Largatil  
 Ergometrine  
 Kcl (potassium chloride)  
 40% dextrose

**List of Emergency Equipment**

. Tourniquet  
 - O<sup>2</sup> mask or nasal  
 - plaster  
 - Dressing scissors  
 -Arm Board  
 - Small makintosh  
 " towel"  
 - Tongue depressor  
 - Mouth gag  
 - Air way  
 - suction machine  
 - Files  
 - Container with alcohol  
 - Receiver  
 - Bandage  
 - Levin's tube  
 - Ned blacks

## Study Questions

1. Which one of the following route of drug administration has fastest action?
  - a. Oral
  - b. Subcutaneous
  - c. Intravenous
  - d. Rectal
2. Mention two indications for oral drug administration
3. State the 5 Rs during drug administration.
4. Which one of the following site of injection most preferred for young children?



# UNIT NINE

## WOUND CARE

### Learning Objectives

- Differentiate types of wounds.
- Explain the purpose of wound care.
- List important equipment needed to provide wound care.
- Perform dressing of clean and septic wounds.
- Provide care for the patient with draining wound.
- Demonstrate skill of wound suturing and irrigation.
- Apply clip and remove it when indicated.

### 1. *Dressing of a Clean Wound*

#### **Purpose**

- To keep wound clean
- To prevent the wound from injury and contamination
- To keep in position drugs applied locally
- To keep edges of the wound together by immobilization
- To apply pressure

#### **Equipment**

- Pick up forceps in a container
- Sterile bowl or kidney dish
- Sterile cotton balls
- Sterile galipot
- Sterile gauze
- Three sterile forceps
- Rubber sheet with its cover
- Antiseptic solution as ordered
- Adhesive tape or bandages

Scissors  
Ointment or other types of drugs as needed  
Receiver  
Spatula if needed  
Benzene or ether.

### **Technique**

Aseptic technique to prevent infection

### **Procedure**

Explain procedure to the patient

Clean trolley or tray; assemble sterile equipment on one side and clean items on the other side. Make sure it is covered.

Drape and put patient in comfortable position.

Place rubber sheet and its cover under the affected side.

Remove the outer layer of the dressing e.g. adhesive tape bandage.

Remove the inner layer of the dressing using the first sterile forceps and discard both the soiled dressing and the forceps.

Take the second sterile forceps. Clean wound with cotton balls soaked in antiseptic solution, starting from inside to the outside.

Again use the second forceps to clean the skin around and remove adhesive with benzene or ether.

Apply medication if any and dress the wound with sterile gauze.

### **Method of Application**

Ointment and paste must be smeared with spatula on gauze and then applied on the wound.

Solutions or powder can be applied direct on the wound.

Make sure that the wound is properly covered.

Fix dressing in place using adhesive tape or bandage.

Leave patient comfortable and tidy

Record state of wound



Clean and return equipment to proper place

**N.B.**

The above-mentioned equipment can be prepared in a separate pack if central sterilization department is available.

**2. Dressing of Septic Wound**

**The purpose is to**

- Absorb materials being discharge from the wound
- Apply pressure to the area
- Apply local medication
- Prevent pain, swelling and injury

**Equipment**

- Sterile galipot
- Sterile kidney dish
- Sterile gauze
- Sterile forceps 3
- Sterile test tube or slide
- Sterile cotton- tipped application
- Sterile pair of gloves, if needed, in case of gas gangrene rabies etc.
- Rubber sheet and its cover
- Local medication if ordered
- Spatula
- Receiver with strong disinfectant to immerse used instrument
- Probe and director if required
- Scissors
- Benzene or ether
- Bandages or adhesive tape
- Bucket to put in soiled dressing

**Procedure**

Explain procedure to the patient

Clean trolley or tray and assemble sterile equipment on one side and surgically clean items on the other side. Make sure the tray or trolley is covered.

Drape patient and position comfortably.

Place rubber sheet and its cover under the affected part

First remove the outer layer of the dressing

Wear gloves if necessary. Use forceps to remove the inner layer



Immerse used for cape. Scissors and other instrument in strong antiseptic solution before cleansing and discard soiled dressing properly.

In a big ward it is best to give priorities to clean wounds and then to septic wounds, when changing dressings, as this might lessen the risk of cross infection.

Consideration should be given to provide privacy for the patient while dressing the wound.

Wounds should not be too tightly packed in effort to absorb discharge as this may delay healing.

#### **4. Dressing with Drainage Tube**

##### **Purpose**

Aids to prevent haematoma or collection of fluid in the affected area.

##### **Equipment**

Sterile kidney dish

Sterile galipot

Sterile Scissors

3 Sterile forceps

Sterile cotton balls

Sterile gauze

Anti Sterile solution as ordered

Sterile safety pins if needed

Cotton wool or absorbent

Receiver

Rubber sheet and its cover

Adhesive tape or bandage

Plastic scissors

Ointment paste or paraffin gauze

Spatulas if needed

One pair sterile gloves if available.

### **Procedure**

Explain procedure to the patient

Cleanse tray or trolley and organize the needed equipment and make sure it is covered.

Drape and position the patient according to the need and put rubber sheet and its cover under the part to be dressed

Remove the outer layer of the dressing

Use sterile forceps and remove the inner layer of the dressing (pay attention so that the drainage tube is not pulled out with the old dressing)

Observe the wound for the type and amount of discharge

Clean the wound with cotton balls soaked in antiseptic solution.

Grasp the top of the drainage tube with sterile forceps. Pull it up a short distance while using gentle rotation and cut off the tip of the drain with sterile scissors (the length to be cut, depends on the instruction. order.

Place sterile safety pin through the drainage tube close to the wound using sterile gloves or sterile gauze, if it is in the abdomen to stop the drainage tube slipping down out of sight.

Make sure the wound and the skin around are properly cleaned.

Apply ointment or paste to the skin with spatula directly around to prevent irritation and excoriation (if the excoriation exists use paraffin gauze to prevent further complications).

Cut the gauze towards its center to fit around rubber drainage.

Tube, so that it fits properly around the tube thus preventing discomfort.

Use adhesive tape or bandages to secure the dressing in place.

Record state of wound and the drainage.

**Note.**

Safe method should be used for disposing old dressing. Gauze and cotton used for cleaning wound.

Take preventive measures to avoid skin irritation and excoriation. If drainage tube is attached to the bottle precaution must be taken to secure the tube in place and avoid the risk of Gross infection.

**Wound Irrigation****Purpose**

To cleans and maintain. Free drainage of infected wounds.

**Equipment**

- Sterile galipot or kidney dish
- Sterile cotton balls
- Sterile gauze
- 3 Sterile forceps
- Sterile catheter
- Sterile syringe 20 cc
- 2 receiver
- Rubber sheet and its cover
- Rubber sheet and its cover
- Solutions (H<sub>2</sub>O<sub>2</sub> or normal sullen are commonly used)

Remove the inner layer of the dressing using the first sterile forceps.

Put the receiver under patient to receive the out flow

Use syringe with desired amount of solution fitted with the catheter.

Use syringes with forceps to direct the catheter into the wound.

First inject the solution such as H<sub>2</sub>O<sub>2</sub> at body temperature gently and wait for the flow. This must be followed by normal saline for rinsing.

Make sure the wound is cleaned and dried properly.

Dress the wound and check if it is covered completely

Secure dressing in place with adhesive tape or bandage

Leave patient comfortable and tidy

Record the state of the wound

Clean and return equipment to its proper place.

**Note:**

Keep patient in a certain position. According to the need so that solution will flow from wound down to the receiver.

Use sterile technique and warm solution for irrigating the wound.

**Suturing**

**Definition:** The application of stitch on body tissues with the surgical needle & thread.

**Purpose**

- To approximate wound edges until healing occurs
- To speed up healing of wound
- To minimize the chance of infection
- For esthetic purpose

**Equipment**

- Tray or trolley covered with a sterile towel
- Sterile needle holder

Sterile round needle (2)  
Sterile cutting needle (2)  
Sterile silk  
Sterile cat- gut  
Sterile tissue forceps  
Sterile suture scissors  
Sterile cotton swabs in a galipot  
Sterile solution for cleaning  
Sterile dressing forceps  
Sterile receiver  
Sterile gauze  
Sterile plaster  
Dressing scissors  
Local anesthesia  
Sterile needle & syringes  
Sterile gloves  
Sterile hole- towel (Fenestrated towel)

**Procedure**

Explain procedure to patient  
Adjust light  
Wash your hands  
Clean the wound thoroughly  
Wash your hands again  
Put on sterile gloves

Drape the Wound with the hold- sheet

Infiltrate the edges of the wound to be sutured with local anesthesia.

Approximate the edges of the fascia with the help of the tissue forceps and using the round needle and cat- gut. Suture the fascia layer first.





Place sterile gauze to receive pleases or sutures.

Take a pair of scissors in the right hand.

Take a dissecting forceps in the left hand.



### **Equipment**

Sterile gauze  
Sterile cotton balls  
Sterile kidney dish  
Sterile forceps 3  
Sterile clip removal forceps  
Antiseptic solution (Savalon 1% and iodine)  
Receiver  
Benzene or ether  
Adhesive tape or bandage

### **Procedure**

Explain procedure to the patient and organize the needed equipment

Drape and position patient

Protect bedding with rubber sheet and its cover

Remove old dressing and discard.

Cleans wound with antiseptic solution starting for he cleanest part of the wound to the most contaminated part and discard the cotton ball.

Place sterile gauze to receive removed clips.

Take clip remove with the right hand and dissecting forceps with the seft hand.

Insert the lower blade of the clip remove below the middle of the clip using the dissecting forceps as a support of old the clips in place, and close the blade firmly as this will cause disagreement of the clips from the skin.

Receive clips on sterile gauze

Apply iodine on the skin punctures if required

Dress the area if required

Secure dressing in place with adhesive tape

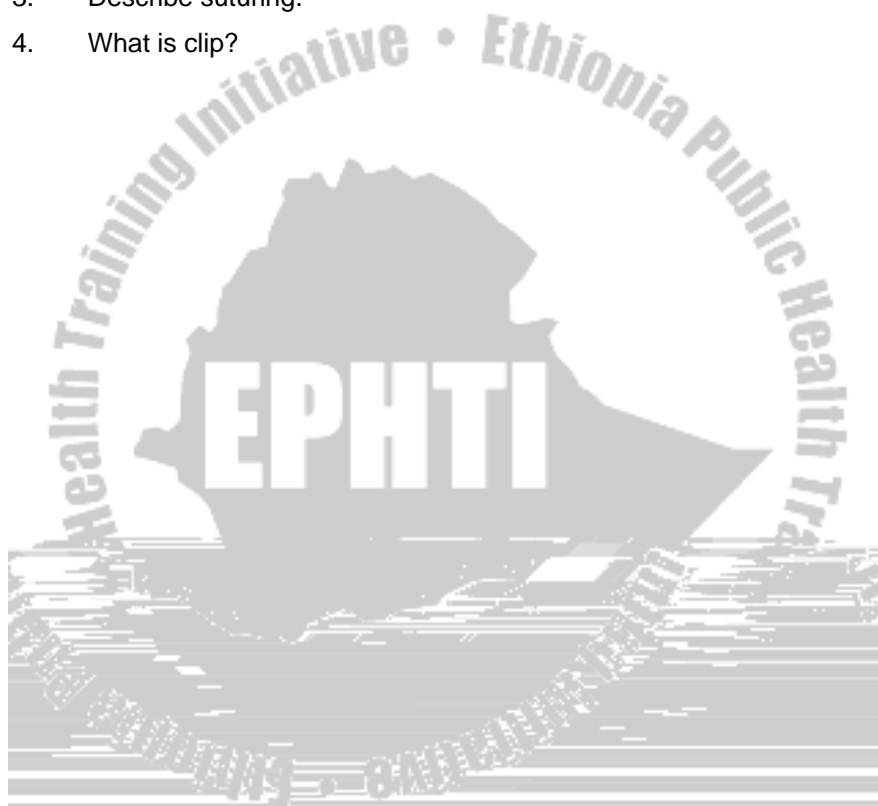
Leave patient comfortable and tidy

Record the state of scare

Clean and return used equipment to its proper place.

### Study Questions

1. Identify different types of wound care.
2. Mention the purposes of septic wound dressing.
3. Describe suturing.
4. What is clip?



## UNIT TEN

### PRE & POSTOPERATIVE NURSING CARE

Learning objectives:

- List steps in pre operative preparation.
- Identify the high-risk surgical patients.
- Describe the major assessment skills, needed in the pre operative, intra operative, and postoperative stages.
- Explain the purpose of informed consent.
- Perform general postoperative measures such as: obtaining vital sings, assessing level of consciousness, assessing surgical pain.
- Report and document post operative complication.
- Assess for patient air way.

#### **Pre-operative**

##### **Purpose**

- To prepare the patient emotionally, mentally and physically for surgery.
- To prevent any complication before, during and after surgery.

##### **Equipment**

As necessary

It is important that the patient be in a good state of physical health before he has surgery. Unless it is an emergency operation.

He should have balanced diet, fluid, sleep and rest before his surgery.

The patient's mental state is important to his recovery. Try to relieve his fears about the operation and any fear of death: explain to him what will be done and that every measure will be taken for his safety.

## **Procedure**

### **The day before surgery:**

Give the patient a complete bed bath to keep the body clean before surgery. Give special attention to the umbilicus and other areas of the body. Keep the fingernails and the nails of the toe short and clean.

Be sure the patient's hair is clean. If the surgery is on the face, neck, shoulders or upper chest, the hair should be roughly washed, combed and tied up to keep it from touching the operative area. If the surgery is on the head the area must be shaved and the hair washed.

If an enema has been ordered the night before surgery. Be sure this is given and is effective. Chart the results.

If the patient does not yet understand what will be done. Explain briefly what the operation is and how it will help him. Avoid telling him anything that would make him worry.

It is important that the patient has a good sleep the night before his operation. Make him comfortable and turn out the light in his room early. If he is unable to sleep report to the doctor.

Have patient or relative sign consent for the operation

Instructs patient about deep breathing and enough exercise

### **Day of Surgery:**

If the surgery is in the morning be sure the patient is prepared early. Any thing abnormal



### **Equipment**

Basin of warm water  
Washcloth  
Towel  
Soap  
Blade and razor holder, if available  
Scissors  
Rubber sheet and towel

### **Procedure**

Prepare the equipment and bring it to the bedside.  
Fold the top linen and cover the patient with the bath blanket ( if available)  
Screen bed  
Make the patient comfortable in the best position for the procedure.  
Place the rubber sheet and towel under the part to protect the bed linen.  
Wash the area well with soap and water.  
Leave the soap on the area while you have.  
When all the hair has been shaved off, rinse the skin with clear water. (If hair is long it could be shortened before shaving)  
Wash it again with soap, and water. Use enough soap to make lather.  
Be sure to wash all creases and folds very well.  
Rinse with clean water  
Repeat washing until the area is clean.  
Dry the skin well and examine it to see if bed linen.  
Make the patient comfortable and replace the bed linen.

### **Specific Area to be Shaved:**

#### **Head Operations**

Explain the reason for having the head to the patient

If the hair is long, it must be cut short

Wash the head and hair well

Shave the area of the operation as directed. If it is a major operation, the whole head should be shaved.

### **Eye Operation**

Cut the eyelashes as close as possible on both sides.

Use some Vaseline on the blades of the scissors before you begin to prevent the eyelashes from falling into the eye.

They should stick to the Vaseline

Shave the eyebrows on both sides if ordered only.

Be very care full not injure the eye or let any hair fall into the eye.

### **Face Operation**

Shave the side of the face there the operation will be

If the patient is a man, make sure that the face is completely free from beard.

Wash face

Be careful not to get soap into the patient's eyes.

### **Anterior Neck Operations:**

Wash the patient's head and neck

If the patient is a woman, tie her hair, and keep it away from her neck, or cut it short.

Shave the front and sides of the neck from the chin to the end of the sternum, and out to the shoulders.

The area must be clean.

### **Posterior Neck Operations:**

The head and neck should be washed. Cut the hair short or tie out of the way.

Shave at least 15cm. and around the place of incision.



### **Spinal-Operations**

Ask the doctor where the concession will be

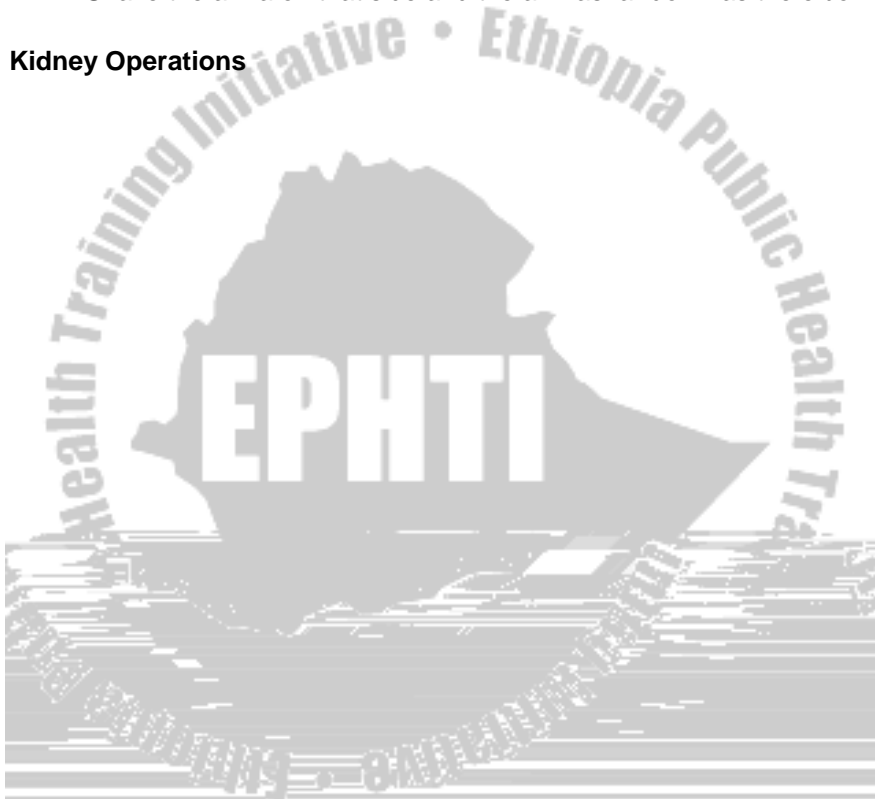
Shave at least 15-25cm. all around the area of incision.

### **Breast Operations**

Shave the anterior and posterior chest from neck to the waist line  
on the side where the surgery will be

Shave the axilla on that side and the arm as far down as the elbow.

### **Kidney Operations**



## **Post- operative Care**

### **Purpose**

- To prevent any complication from anesthesia
- To detect any sign of post- operative complications
- To rehabilitate the patient.

### **Equipment**

- Anesthetic bed
- Oxygen
- Sphygmomanometer
- Stereoscope
- Suction machine (as needed)
- Extra rubber sheet (as needed)
- I.V stand
- Emergency drugs (to be ready in wards)
- Bed blocks (as needed) for shock

### **Procedure**

- Prepare anesthetic bed (see section on bed making)
- Assist operating room nurse or health assistance in planning patient in bed. An unconscious patient may be placed on either his right or left side unless his right or left side unless specifically
  - o Orders.
- Check post- operative orders.
- Take blood pressure, pulse and respiration as ordered (usually every 15 minutes until stable)
- Encourage patient cough and breath deeply every 15 minutes for two hours, and then every two hours until able to be up, unless other orders are written.
- Check dressing for any excessive bleeding or drainage.
- Check for tubes to be connected to drainage bottle- no kinks in tubing. Secure tubing bedding.

If patient vomits, turn his head to the side to prevent aspiration and checking.

Observe patient closely for any signs of shock and hemorrhage.

Report any untoward symptom immediately.

### **Charting**

Time of return

General condition and appearance

State of consciousness

Color of skin

Temperature of skin to touch

Skin- moist or dry

Blood pressure, pulse and respiration

Any unusual condition such as bleeding drainage, Vomiting etc.

### **Generals Instructions**

If patient shows any signs of shock immediate action should be taken and then be reported to the doctor. The head of the bed should be lowered (If no gatches on bed, bed blocks may be used)

Do not leave unconscious patient alone.

Keep patient flat in bed with the head to the side (no pillows) and avoid chilling.

Watch color of skin, lips, and fingernails carefully,

If there is any bleeding carry out the necessary measures and report immediately.

The patient is having pain after he is awake. Analgesics may be given according to orders.

Limit visitors in the patient's room

Carry out post-operative orders carefully]

Carry out post-operative orders carefully

Place patient in a comfortable position



Thyroidectomy



# UNIT ELEVEN

## POST MORTEM CARE

### Learning Objectives

At completion of the unit the student will be able:

Define death

Identify sign of death.

Confirm death in collaboration with.

Reassure relatives of the dying patient.

Provide care for the dead body with respect ion.

Transferee the dead body to morgue or his house.

### A. Care of the Dying

**Death:-** Is the end of life and all the vital processes. Legal death is the total absence of brain activities as assessed and pronounced by the physician.

1. Death may come to all of us. We must try to make the patient comfortable and free from pain till the end.
2. Tell the patient's family about his serious condition.
3. If the dying patient is in a ward, move him to a room where there are no other patients, if possible, if this is impossible, put screen around his bed. Try not to disturb other patients.
4. Do not leave a dying patient alone. He may appear unconscious but he may hear and understand all that is being said.

### Care After Death

**Definition: -** This is the care given to the body after death. Also called post-mortem care.

### *Purpose*

1. To show respect for the dead
2. To prepare the body for burial

3. To prevent spread of infection
4. To show kindness to the family

### **Equipment**

Basin for water, wash cloth and towel  
Cotton  
Gauze  
Dressings and tape if necessary  
Clean sheet  
Stretcher  
Forceps  
Name tag  
Gloves, if necessary

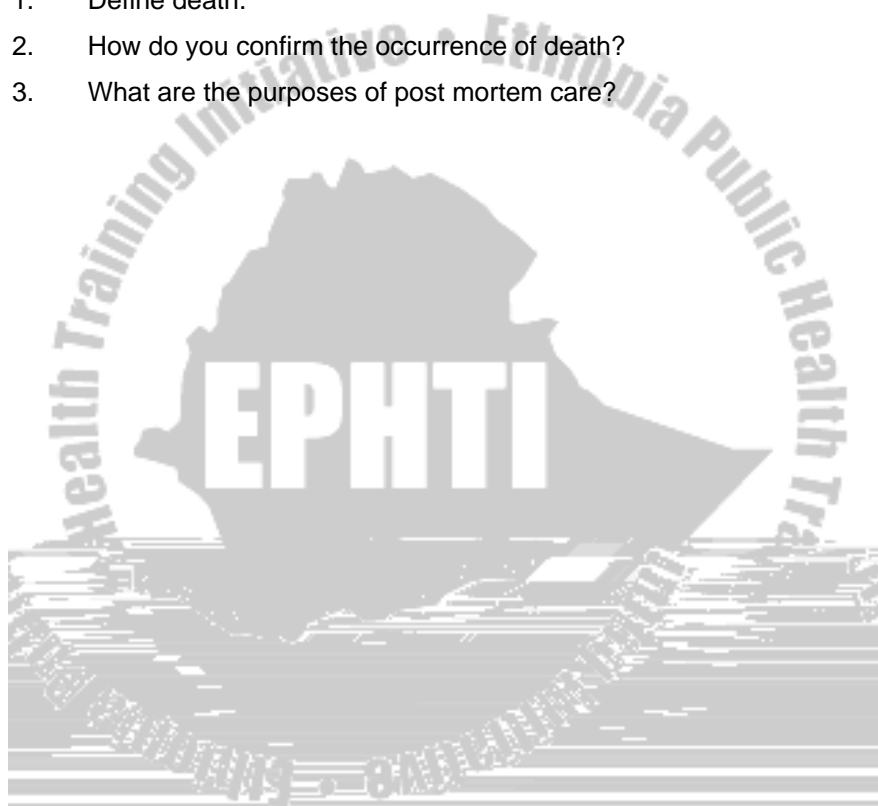
### **Procedure**

Note the exact time of death and chart it  
If the doctor is present call him to pronounce death  
If the family members are not present, send for them  
Wash hands and wear clean gloves according to agency policy  
Close doors to room or pull curtain  
Raise bed to comfortable working level (when necessary)  
Arrange for privacy and prevent other patients from seeing in to room.  
Close patient's eyes and nose if necessary  
Remove N.G. tubes and other devices from patient's body  
Place patient in supine position  
Replace soiled dressing with clean ones when possible  
Bath patients as necessary  
Brush or comb hair  
Apply clean gown  
Care for valuable and personal belongings and document dispersement

Allow family to view patient and remain in room  
Attach special level if patient had contagious disease  
Await arrival of ambulance or transfer to morgue  
Remove gowns and wash hands  
Document the procedure

### Study Questions

1. Define death.
2. How do you confirm the occurrence of death?
3. What are the purposes of post mortem care?





## GLOSSARY

Ambulatory	Walking
Aspiration	Inhalation of foodstuff, vomitus or saliva into the lungs.
Axilla	Armpit (under arm).
Autoclave	Equipment that decontaminates materials by exposing them to steam under pressure.
Apnea	Absence or lack of breathing
Anoxia	Lack of oxygen in the tissue.
Asphyxia	A condition produced by prolonged lack of oxygen
Asepsis	Absolute freedom from all microorganisms
Antiseptic	Harmless chemicals that can kill microorganisms or prevent them from multiplying.
Aplastic anemia	Anemia resulting from destruction of bone marrow cells.
Aseptic technique	Procedure used to prevent microorganisms from reaching the operation site.
Bed cradles	A wire or wooden frame placed over the patient's body or feet to support the weight of the bedclothes.
Blood pressure	The force exerted by the heart to pump the blood around the body
Bradycardia	Abnormally slow heartbeat.
Bounding pulse	Stronger than normal heartbeat.
Catheter	A soft rubber tube which is used for passage of fluid.
Contaminated	Area that contains germs or disease-producing material.
Cyanosis	Bluish color of lips, tip of the nose, and ear lobes due to lack of or shortage of oxygen in the blood.

Cast	A material that supported an injured part of the body and makes it immobilize.
Clips	Metallic materials that keep the skin together.
Congestion	Hyperemia, accumulation of blood in a part of blood or fluid in a part of the body e.g., lung.
Decontamination	The process of rendering an item free from infection.
Defecation	Act of excreting feces from the rectum.
Detergent	A substance usually dissolved in water used as an aid for cleaning purposes.
Diagnosis	The decision regarding the nature of an illness, arrived at by clinical assessment of the patient and result of investigation.
Diastole	The resting phase of the heart during which it fills with blood.
Digitalis	A drug given to slow and strengthen the heartbeat.
Disinfectant	A chemical used to kill microorganisms.
Dry heat	Air heated to high temperature by electricity and used for sterilizing purposes.
Dyspnea	Difficulty in breathing.
Edema	Swelling due to water accumulation in body cells
Enema	An injection of fluid into the colon or rectum.
Exhalation	Breathing out.
Fahrenheit	System of measuring heat
Fever	Body temperature elevation above 37 <sup>0</sup> C
Flatus	Gas in the intestines.
Foot board	A board placed at the foot of the bed to support

	nourishment through a tube directly into the stomach.
Hypertension	High blood pressure.
Hypo tension	Low blood pressure.
Incontinence	Loss of bladder or bowel control.
Infection	Invasion of the body by germs.
Inflammation	Reaction of the body to infection or injury, characterized by redness, heat, pain, and swelling at the site.
Inhalation	Breathing in.
Intake	Fluid taken into the body.
Irrigation	Injecting fluid into a cavity without interrupting its return.
Isolation	The act of setting apart. An isolation room or ward is one kept for contagious or infectious diseases.
Microorganism	Bacteria, virus, fungi, and spores.
Mitered corner	A triangular fold made in bedclothes to hold them in place at the corners.
Necrosis	Death of tissue.
Nits	The eggs of a louse.
Output	All fluid lost from the body.
Orthopnea	A condition in which one breathes easier in a sitting position
Pediculosis	Human louse infestation
Postural drainage	Position adapted to facilitate expectoration of material in patients with lung disease.
Postoperative	After an operation.
Preoperative	Before an operation
Pulse	The beat of the heart felt in the arteries.
Pulse deficit	The difference between apical pulse and radial pulse.

Respiration	Breathing rate.
Retention enema	An injection of fluid that is retained in the rectum for absorption into the blood stream.
Restraints	Devices that limit the patient's ability to move in order to protect him/her from injury.
Septic wound	Infection wound; a wound containing infective microorganisms.
Sitzbath	A warm soaking of the rectum and perineal area.
Splint	A device for immobilizing part of the body
Spore	The seeds of microorganisms, which are resistant to drying, heat, and disinfectants
Sterile	Specially treated so that all microorganisms are destroyed
Stethoscope	Instrument for magnifying sound
Specimen	A small amount of body excretion or body fluid that is sent to a laboratory for examination.
Sphygmomanometer	Blood pressure apparatus.
Suppository	Rectally administered cones containing a medication in the base that is soluble at body temperature.
Sutures	Materials that keep broken skin together.
Systole	Blood pressure period during the beating phase of the heartbeat during which blood is expelled from heart.
Sepsis	Presence of microorganisms.
Temperature	Degree of heat.
Tachycardia	Abnormally fast heartbeat.
Thermometer	An instrument used to measure temperature.
Transfusion	Injection of blood into a vein.
Unconscious	Not aware of or responding to surroundings.
Vital signs	Signs of life (e.g., temperature, pulse rate, respiration rate, blood pressure).

## REFERENCES

