

LECTURE NOTES

For Nursing Students

Basic Nursing Arts



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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.

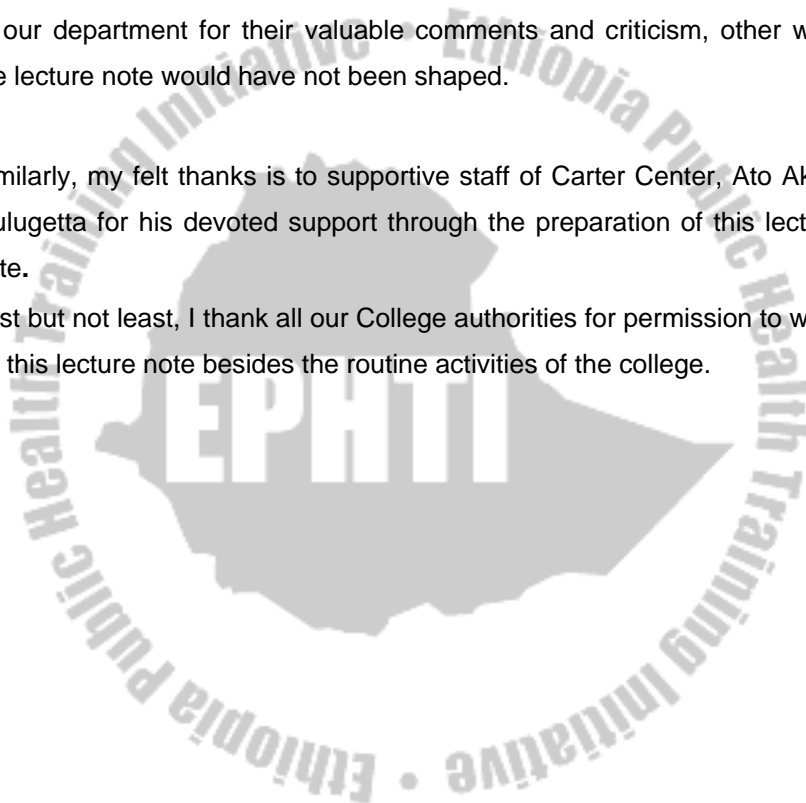
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ABBREVIATIONS & SYMBOLS

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 ₂	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 ₂ 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 as possible (Virginia Henderson 1960).

Nursing is the art and science involves working with individual, families, and communities to promote wellness of body, mind, and spirit. It is a dynamic, therapeutic and educational process that serves to meet the health needs of the society, including its most vulnerable members.

Historical Background of Nursing

In the early ages, much of the practice of medicine was integrated with religious practices. Before the development of modern nursing, women of nomadic tribes performed nursing duties, such as helping the very young, the old, and the sick, care-dwelling mothers practiced the nursing of their time.

As human needs expanded, nursing development broadened; its interest and functions through the social climates created by religious ideologies, economics, industrial revolutions, wars, crusades, and education. In this way modern nursing was born.

The intellectual revolution of the 18th and 19th centuries led to a scientific revolution. The dynamic change in economic and political situations also influenced every corner of human development including nursing. It was during the time of Florence Nightingale that modern nursing developed.

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 the Ethiopian Red Cross, School of Nursing was established at Hailesellasie I hospital in Addis Ababa. The training was given for three years. In 1954 Hailesellasiel Public Health College was established in Gondar to train health officer, community health nurses and sanitarians.

During the regimen of 'Dergue', the former bedside and community health nursing training was changed to comprehensive nursing. An additional higher health professional training institution was also established in 1983 In Jimma.

After the overthrow of the Dergue, the transitional government of Ethiopia developed a health policy that emphasizes health promotion, diseases prevention, and curative and rehabilitative health service with priority to the rural societies. As the result of the policy the training of public health nursing at the diploma level came in to existence since 1995. Additional public health higher training institutions were established at Dilla and Alemaya in 1996. The outputs of these training institutions are providing services all over the country.

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 dust
- Dust with clear duster
- Collect dust at one place to avoid flying from place to place
- Dusting should be done without disturbing or removing the patients from bed
- Dusting should be done from top to bottom i.e. from upward to downward direction
- While dusting, take care not to spoil the beds or walls or other fixtures in the room or hospital ward
- While dusting, wounds or dressing should not be opened by other staff
- There should be a different time for dusting daily

B. Care of Hospital and Health Care Unite Equipments

1. General Instructions for Care of Hospital Equipment

- Use articles only for the purpose for which they are intended
- Keep articles clean and in good condition. Use the proper cleaning method
- Protect mattresses with rubber sheets
- Use protective pillowcases on pillows.
- Do not boil articles, especially rubber articles and instruments longer than the correct time
- Do not sterilize rubber goods and glass articles together - wrap glass in gauze when sterilizing it by boiling

- 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*

- Rinse used equipment in cold water. Remove any sticky material. Hot water coagulates the protein of organic material and tends to make it adhere
- Wash well in hot soapy water. Use an abrasive, such as a stiff-bristled brush, to clean equipment
- Rinse well under running water
- Dry the article
- Clean the gloves, brush and sink

3. *Care of Linen and Removal of Stains*

- Clean linen should be folded properly and be kept neatly in the linen cupboard
- Dirty linen should be put in the dirty linen bag (hamper) and never be placed on the floor
- Torn linen should be mended or sent to the sewing room
- Linen with blood should be soaked in cold water to which a small amount of hydrogen peroxide is added if available
- Linen stained with urine and feces is first rinsed in cold water and then washed with soap
- Iodine stained linen- apply ammonia, rinse and then wash with cold water
- Ink stained linen – first soak in cold water or milk for at least for 24 hrs then rub a paste of salt and lemon juice on the stain and allow the article to lie in the sun
- Tea or coffee stains – wash in cold water and then pour boiling water on the stain

- 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.
 - Explain anything you expect a patient to do in detail. (this helps the patients participate in their care).
 - Introduce other staff and roommates.
4. Perform base line assessment
 - a. Observation and physical examination such as:
 - Vital signs; temperature pulse, respiration and blood pressure

- 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
2. Plan for continuing care of the patient
 - Referral as necessary

- 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
 - Write discharge note
 - Keep special forms for facility

Discharge summaries usually include:

- Description of client's condition at discharge
- Current medication
- Treatment (e.g. Wound, care, O2 therapy)
- Diet
- Activity level
- Restrictions

Reason for referral include the following:

- Any active health problems

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

Discharging a patient against medical advice (AMA)

1. When the patient want to leave an agency without the permission of the physician - unauthorized discharge the following activities are indicated:
2. Ascertain why the person wants to leave the agency
3. Notify the physician of the client's decision
4. Offer the patient the appropriate form to complete
5. If the client refuses to sign the form, document the fact on the form and have another health professional witness this
6. Provide the patient with the original of the signed form and place a copy in the record
7. When the patient leaves the agency, notify the physician, nurse in charge, and agency administration as appropriate
 - Assist the patient to leave as if this were a usual discharge from the agency (the agency is still responsible while the patient is on premises)

Charting

Chart: is a written record of history, examinations, tests, diagnosis, prognosis, therapy and response to therapy

Purpose

- 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

- ◆ Spelling
- ◆ Accuracy
- ◆ Completeness
- ◆ Exactness
- ◆ Legibility
- ◆ Neatness
- ◆ Errors
- ◆ Composition
- ◆ Sentences

Definition of Signs and Symptoms

Objective information (sign):

The health personnel and the patient readily observe those signs such as;

swelling, redness rash, body discharge, vital signs, laboratory results

Subjective information (symptom)

- Felt by the patient only
- Experienced by the patient them selves and made known to the health personnel only through complaints of patient. E.g. Nausea, headache, numbness

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 side of a limb (or part to be immobilized).

6. Splints:

Are rigid supports that help maintain the wrists in hyperextension as a means of

Preventing palmar flexion and constructors.

7. Fracture boards:

- Used to make the bed firm and to prevent bed from sagging.
- They are placed under the mattress of patients with fracture.

8. Backrest:

Used for elevating and supporting the head and back of the patient.

- Gatch beds have back rest which can be elevated or lowered as desired
- Pillows or boards can be used if gatch bed is not available

9. Foot rest (board):

- Are rigid, vertical structures.
- Are placed at the foot of the bed.
- Help to maintain the ankles in their normal functional position in order to prevent foot drop and also prevent the patient from sliding down.
- Should be padded for support.

- Should be adjusted to the client's height so that the soles rest firmly against it and the ankles are maintained at 90° .

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

- Promotes body musculoskeletal functioning
- Reduces the energy required to move and maintain balance
- Reduce fatigue and decreases the risk of injury
- Facilitates safe and efficient use of appropriate groups of muscles

The center of gravity of a well-aligned standing adult is located slightly anterior to the upper part of the sacrum.

Standing position posture: is unstable because of a narrow base of support, a high center of gravity and a constantly shifting line of gravity.

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:

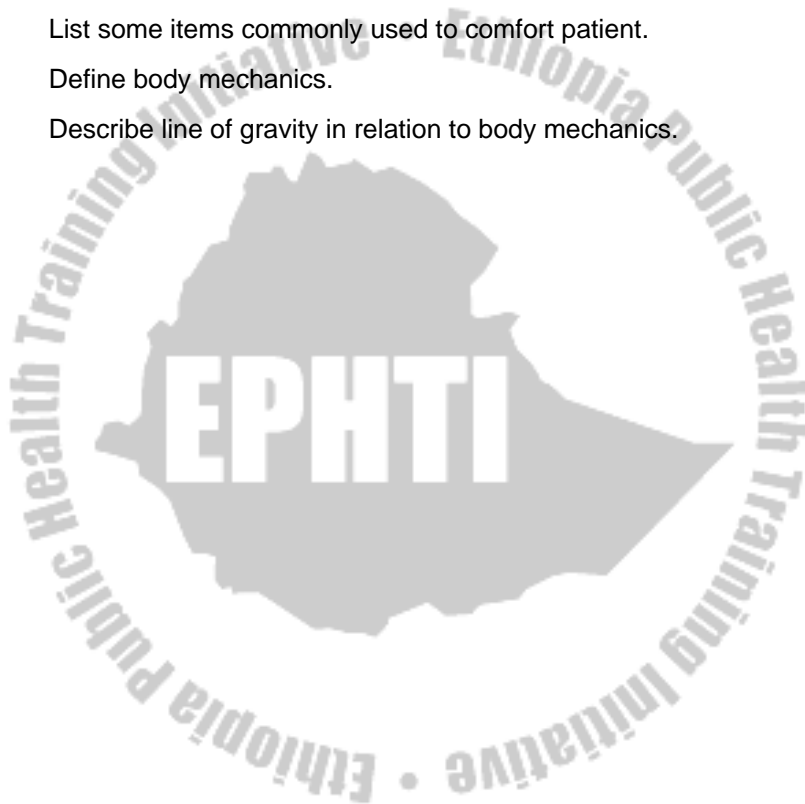
- ⇒ Sit on the side of the bed with legs dangling for 1 minute
- ⇒ Stand with core holding on to the edge or the bed or another non mobile object for 1 minute
- ⇒ Sit up in the bed for one minute

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 against gravity
- Continuous muscle exertion can result in muscle stretch and injury

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.



UNIT THREE

BED MAKING

Learning Objective

- Describe different types of bed making
- Develop understanding about general instruction of bed making
- Develop a skill to make different types of bed.
- Mention purposes of bed making
- List necessary equipment for bed making
- Arrange bed-making equipment in order of their use.

In most instances beds are made after the client receives certain care and when beds are unoccupied. Unoccupied bed can be both open and closed.

Closed bed: is a smooth, comfortable and clean bed, which is prepared for a new patient

- In closed bed: the top sheet, blanket and bed spread are drawn up to the top of the bed and under the pillows.

Open bed: is one which is made for an ambulatory patient are made in the same way but the top covers of an open bed are folded back to make it easier of a client to get in.

Occupied bed: is a bed prepared for a weak patient who is unable to get out of bed.

Purpose:

1. To provide comfort and to facilitate movement of the patient
2. To conserve patient's energy and maintain current health status

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 bed cradle and sand bags

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

Fracture bed: a bed board under normal bed and cradle

⇒ **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 bed 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 clean bed that is prepared for a new patient

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 wrinkles
- Place rubber draw at the center of the bed and tuck smoothly and tightly
- Place cotton draw sheet on top of rubber draw sheet and tuck. The rubber draw sheet should be covered completely
- Place top sheet with wrong side up, center fold of sheet on center of bed and wide hem at head of bed
- Tuck sheet of foot of bed, mitering the corner
- Place blankets with center of blanket on center of bed, tuck at the foot of beds and miter the corner
- Fold top sheet over blanket

- 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 smoothing 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
- Wash hands

Study Questions

1. How many types of bed making do you know?
2. What is the function of bed the cradle?
3. Which types of bed are usually prepared for newly admitted patients?
4. What is the difference between open and closed bed?
5. Define occupied bed.

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.
- Describe the procedure following a logical order
- Demonstrate the ability to perform each of these specific care procedures of general patient care.

Bath (Bathing and Skin Care)

It is a bath given to a patient in the bed who is unable to care for himself/herself.

1. **Cleansing bath:** Is given chiefly for cleansing or hygiene purposes and includes:
 - Complete bed bath: the nurse washes the entire body of a dependent patient in bed
 - Self-help bed bath: clients confined to bed are able to bath themselves with help from the nurse for washing the back and perhaps the face
 - Partial bath (abbreviated bath): only the parts of the client's body that might cause discomfort or odor, if neglected are washed the face, hands, axilla, perineum and back (the

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 43-46 °c (110-115°f)
- The water for a bed bath should be changed at least once

Before bathing a patient, determine

- a. The type of bath the client needs
- b. What assistance the client needs
- c. Other care the client is receiving – to prevent undue fatigue
- d. The bed linen required

Note: *when bathing a client with infection, the caregiver should wear gloves in the presence of body fluids or open lesion.*

Principles

- Close doors and windows: air current increases loss of heat from the body by convection
- Provide privacy – hygiene is a personal matter & the patient will be more comfortable
- The client will be more comfortable after voiding and voiding before cleansing the perineum is advisable
- Place the bed in the high position: avoids undue strain on the nurses back

- 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
- To stimulate circulation
- To produce a sense of well being
- To promote relaxation, comfort and cleanliness
- To prevent or eliminate unpleasant body odors
- To give an opportunity for the nurse to assess ill clients
- To prevent pressure sores

Two categories of baths given to clients

- Cleansing
- Therapeutic

A. Bed Bath**Equipment**

- Trolley
- Bed protecting materials such as rubber sheet and towels
- Bath blanket (or use top linen)
- Two bath towels
- Clean pajamas or gown
- Additional bed linens

- Hamper for soiled cloths
- Basin with warm water (43-46⁰c for adult and 38-40⁰c 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

- ⇒ Change the water after it gets dirty
- ⇒ If possible assist patient to wash own face, hands, feet and genital area by placing the basin on bed.

Assist the patient with grooming

- Apply powder lotion or deodorants (of pt uses)
- Help patient to care for hair, mouth and nails.

5. Recomfort the patient

- Change linen if soiled
- Arrange the bed
- Put pt in comfortable position
- Remove the screen

6. Give proper care of materials used for bathing

- Document and report pertinent data
- Observation of the skin condition
- General appearance or reaction of the pt
- Type of bath give

Report any abnormal findings to the nurse in charge

B. Therapeutic Baths

- Are usually ordered by a physician
- Are given for physical effects, such as sooth irritated skin or to treat an area (perineum)
- Medications may be placed in the water
- Is generally taken in a tub 1/3 or 1/2 full, about 114 liters (930'gal)
- The client remains in the bath for a desired time, often 20-30 min
- If the clients back, chest and arms are to be treated, immerse in the solution
- The bath temperature is generally included in the order, 37.7-46°C (100-115 °F) for adults and 40-50 °c (105 °F) for infants

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) NCHCO₃ to 500 ml (1 pt) water, bicarbonate or 120-360 ml 120 liters
 - Has a cooling effect
 - Relieves skin irritation
3. Potassium permanganate (Kmn₄): 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 lotion (oil) before massaging.
- Massage the back using appropriate technique

Technique for Back Rub (massage)

- Rub towards the neck line using long, firm, smooth strokes
- Pause at the neckline, using your fingers to massage the side of the neck.
- With a kneading motion, rub out along the shoulders continue the kneading motion and move down on each side of the trunk with both hands until you are again at the sacral area.
- Then, placing your hands side by side with the palms down, rub in figure of 8 pattern over the buttock and sacral area.
- Next, again using the kneading motion, move up the sides (about the vertebra) through the intrascapular space towards the shoulder.
- Ask the pt if there is any area that he/she would especially like to be rubbed.

- 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

- Assess: signs of relaxation and /or decreased pain (relaxed breathing, decreased muscles tension, drowsiness, and peaceful affect)
 - ⇒ Verbalizations of freedom from pain and tension
 - ⇒ Areas or redness, broken skin, bruises, or other sings of skin breakdown

Note

- *The duration of a massage ranges from 5-20 minutes*
- *Remember the location of bony prominence to avoid direct pressure over this areas*
- *Frequent positioning is preferable to back massage as massaging the back could possibly lead to subcutaneous tissue degeneration.*

Mouth Care**Purpose**

- To remove food particles from around and between the teeth
- To remove dental plaque to prevent dental caries
- To increase appetite
- To enhance the client's feelings of well-being
- To prevent sores and infections of the oral tissue
- To prevent bad odor or halitosis
- Should be done in the morning, at night and after each meal
- Wait at least for 10 minutes after patient has eaten

Equipments

- Toothbrush (use the person's private item. If patient has none use of cotton tipped applicator and plain water)
- Tooth paste (use the person's private item. If patient has none of use cotton tipped applicator and plain water)
- Cup of water

- Emesis basin
- Towel
- Denture bowl (if required)

Procedure

1. Prepare the pt:
 - Explain the procedure
 - Assist the patient to a sitting position in bed (if the health condition permits). If not assist the patient to side lying with the head on pillows.
 - Place the towel under the pt's chin.
 - If pt confined in bed, place the basin under the pt's chin
2. Brush the teeth
 - Moisten the tooth with water and spread small amount of tooth paste on it
 - Brush the teeth following the appropriate technique. Brushing technique
 - Hold the brush against the teeth with the bristles at up degree angle.
 - Use a small vibrating circular motion with the bristle at the junction of the teeth and gums use the same action on the front and the back of the teeth.
 - Use back and forth motion over the biting surface of the teeth.
 - Brush the tongue last
3. Give pt water to rinse the mouth and let him/her to spit the water into the basin.
 - Assist patient in wiping the mouth
4. Recomfort the pt

- 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. KMNO₄ – in crystal form
4cc or KMNO₄ 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: ¼ - ½ TSF of thymal in one cup of water (100-150 cc of water)
6. Lemon juice: 2TSF lemon juice in a cup of water - an improvised method for mouth wash

Flossing

It removes residues particles between the teeth

Technique

1. Wrap one end of the floss around the 3rd finger of each hand
2. To floss the upper teeth. Use the thumb and index finger to stretch the floss. Move the floss up and down between the teeth from the tops of the crowns to the gum
3. To floss the lower teeth, use your index fingers to stretch the floss

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

- ⇒ Are useful for people who are
- a. Paralyzed or who cannot be turned safely (e.g. Spinal injury)
 - b. Confined in a body or long leg cast
 - c. Immobilized by some types of fracture
 - d. Very thin or emaciated

3. The pediatric bedpan

- Are small sized
- Usually made of a plastic

Offering and Removing Bed Pan

- If the individual is weak or helpless, two peoples are needed to place and remove bed pans
 - If a person needs the bed pan for a longer time periodically remove and replace the pan to ease pressure and prevent tissue damage
 - Metal bed pans should be warmed before use by:
 - Running warm water inside the rim of the pan or over the pan
 - Covering with cloth
 - Semi-Fowler's position relieves strain on the client's back and permits a more normal position for elimination
- Improper placement of the bedpan can cause skin abrasion to the sacral area and spillage
- Place a regular bed pan under the buttocks with the narrow end towards the foot of the bed and the buttocks resting on the smooth, rounded rim
 - Place a slipper (fracture) pan with the flat, low end under the client's buttocks
 - Covering the bed pan after use reduces offensive odors and the clients embarrassment

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

Perineal Care (Perineal – Genital Care)

Perineal Area:

- Is located between the thighs and extends from the top of the pelvic bone (anterior) to the anus (posterior)
- Contains sensitive anatomic structures related to sexuality, elimination and reproduction

Perineal Care (Hygiene)

- Is cleaning of the external genitalia and surrounding area
- Always done in conjunction with general bathing

Patients in special needs of perineal care

- Post partum and surgical patients (surgery of the perineal area)
- Non surgical patients who unable to care for themselves
- Patients with catheter (particularly indwelling catheter)

Other indications for perineal care are:

1. Genito- urinary inflammation
2. Incontinence of urine and feces
3. Excessive secretions or concentrated urine, causing skin irritation or excoriation
4. Presence of indwelling urinary (Foley) catheter
5. Post partum care
6. Care before and after some types of perineal surgery

Purpose

- To remove normal perineal secretions and odors
- To prevent infection (e.g. when an indwelling catheter is in place)
- To promote the patient's comfort

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*

Male Perineum

- The penis contains pathways for urination and ejaculation through the urethral orifice (meatus)
- At the end of the penis is the glans covered by a skin flap (fore skin or prepuce)
- The urethral orifice is located in the center of the penis and opens at the tip
- The shaft of the penis consists of erectile tissue bound by the foreskin's dense fibrous tissue

Care

- Hold the shaft of the penis firmly with one hand and the wash cloth with the other – to prevent erection – embarrassment
- Use a circular motion, cleaning from the center to the periphery
- Use a separate section of the wash cloth

For Both Sex**Position**

- Lying in bed with knee flexed to clean the perineal part and side lying cleaning the perineal area
- The urethral orifice is the cleanest area and the anal orifice is the dirtiest area – always stroke from front to back to wash from 'clean' to 'dirty' parts

Note: *Entry of organisms into the urethral orifice can cause UTI*

Hair Care

Hair care usually done after the bath and as daily hygienic activities in a daily base. Hair care includes combing (brushing of hair), washing/shampooing of hair and pediculosis treatment.

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
- Lubricant/oils (if required)

Procedure

1. Prepare the patient
 - Position the patient in either sitting or semi-fowler's or flat, if the pt is weak to seat or unconscious.
 - Place the towel over the patient's shoulder, if in sitting position or over the pillow if pt is in semi-fowler or lying position.
 - Remove any pins and ribbons
2. Comb the hair by dividing the hair
 - Hold a section of hair 2-3 inches from the end and comb the end until it is free from tangles. Move towards the scalp by combing in the same manner to remove tangles.
 - Continue fluffing the hair outward and upward until all the hairs combed.
 - Arrange the hair as neatly and simply as possible according to the patient's preference of style.

3. Recomfort the pt
 - Remove the towel
 - Put patient in comfortable position
4. Care of equipment
5. Documentation

Shampooing/Washing the Hair of Patient Confined to Bed

Purpose

- Stimulate blood circulation to the scalp through massaging
- Clean the patients hair so it increase a sense of well-being to the pt

Equipments

- Comb and brush
- Shampoo/soap in a dish
- Shampoo basin
- Plastic sheet
- Two wash towels
- Cotton balls
- Water in basin and pitcher
- Receptacle (bucket) to receive the used water
- Lubricants/oil as required

Procedure

1. Prepare the patient
 - Assist patient to move to the working side of the bed
 - Remove any hair accessories (e.g. pins, ribbons etc)
 - Brush and comb the hair to remove tangles
2. Arrange the equipments
 - Place the plastic sheet under patient's head and shoulder
 - Remove the pillows from under the pt's head and place it under pt's shoulder (to hyper extend the neck)

- 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 H₂O then it should be repeated after a week

4. Gcmmaxine (Gamma Bengenhexa Chloride)

- Emphasize the need for treatment of sexual partner
- After complete bathing wash linen available as a cream, lotion, and a shampoo
- 1.5% solution of Gammaxine effective to kill the adult lice in one application
- Does not kill nits
- Should be repeated to kill the newly hatched nits, for complete elimination
- The lotion is applied over scalp after a clean soapy wash of hair
- After 12-24 hrs the scalp is washed with soap to remove the lotion
- Avoid contact with lice
- Can also be used for pubic and body lice

Feeding a Helpless Patient

During illness, trauma or wound healing, the body needs more nutrients than usual. However, many peoples, because of weakness, immobility and/or one or both upper extremities are unable to feed themselves all or parts of the meal. Therefore, the nurse must be knowledgeable, sensitive and skillful in carrying out feeding procedures.

Purpose

- To be sure the pt receives adequate nutrition
- To promote the pt well-beings

Procedure

1. Prepare pt units
 - Remove all unsightly equipments; remove solid linens and arranging bedside tables.

- 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
 - Washing face and hands
 - Giving oral care
 - Back massage care (PRN)

As needed (PRN) Care

- Is provided as required by client
E.g. a client who is diaphoretic (sweating profusely) may need bathing and changes of clothes and linens frequently.

Study Questions

1. Explain the purpose of bed bath, mouth care, and perineal care.
1. Describe therapeutic bath.
2. State the three types of massage strokes used in back care.
3. Which position is appropriate to give perineal care in both sexes?

UNIT FIVE

OBSERVATION AND LABORATORY DIAGNOSIS

Learning Objectives

At the end of the unit the learner will be able to:

- Assess sign and symptoms of the patients.
- Assist the patient in laboratory diagnosis.
- Collect specimen with accuracy as indicated.
- Take vital signs and interpret the finding.
- Record, maintain and communicate the finding.
- Give appropriate care based on the finding.

I. Observations and Recording of Signs and Symptoms of the Patient

1. Objective Symptoms (signs):

Are symptoms, which could be seen by the health personnel?

E.g. swelling, redness, rash, body discharges (defecation, diaphoresis, emesis,)

2. Subjective Symptoms

Are symptoms, which are felt by the patient?

E.g. decrease of appetite, dizziness, deafness, burning sensation, nausea, etc

3. Charting

Definition: it is a written record of history, examination, tests, diagnosis, and prognosis response to therapy

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

Chart carefully consult if in doubt avoid using of chemical formulas

- Sentences
Need not be complete but must be clear, avoid repetition
- Time of charting
Specific time and date
- Color of ink
Black or blue (red for transfusion, days of surgery)

It should be recorded on the graphic sheet

All orders should be written and signed. Verbal or telephone orders should be taken only in emergency verbal orders should be written in the order sheet and signed on the next visit.

Orders of Assembling Patients Chart

- a. Order sheet
 - b. Doctor's progress notes
 - c. Nurses notes
 - d. Graphic
 - e. Laboratory reports
 - Patients or relatives and friends of patients are not allowed to read the chart
4. Intake and out put
- a. Intake: all fluids that is taken in to the body through the mouth, n/g tube or parentrally
 - b. Output: all fluid that is excreted or put out of the body through the mouth. N/G tube, urethra, drainage tube or other route

Purpose:

- To replace fluid losses
- To provide maintenance requirements

- 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.

2. Diurnal variations (circadian rhythms)
 - Body temperature varies through out the day
 - The point of highest body temperature is usually reached between 8:00 p.m. and midnight and lowest point is reached during sleep between 4:00 and 6:00 a.m.
3. Exercise
 - Hard or strenuous exercise can increase body temperature to as high as 38.3 – 40 c – measured rectally
4. Hormones
 - In women progesterone secretion at the time of ovulation raises body temperature by about 0.3 – 0.6°c above basal temperature.
5. Stress
 - Stimulation of skin can increases the production of epinephrine and nor epinephrine – which increases metabolic activity and heat production.
6. Environment
 - Extremes in temperature can affect a person's temperature regulatory systems.

Alterations in Body Temperature

Normal body temperature is 37° C or 98.6 °F (Average) the range is 36-38 °c (96.8 – 100 °F)

Pyrexia: a body temperature above the normal ranges 38 °c – 41° c (100.4 – 105.8 F)

Hyper pyrexia: a very high fever, such as 41° C > 42 °c leads to death.

A client who has fever is referred to as febrile; the one who has not is a febrile.

Hypothermia: – body temperature between $34^{\circ}\text{C} - 35^{\circ}\text{C}$, $< 34^{\circ}\text{C}$ is death

Common Types of Fevers

1. **Intermittent fever:** the body temperature alternates at regular intervals between periods of fever and periods of normal or subnormal temperature.
2. **Remittent fever:** a wide range of temperature fluctuation (more than 2°C) occurs over the 24 hr period, all of which are above normal
3. **Relapsing fever:** short febrile periods of a few days are interspersed with periods of 1 or 2 days of normal temperature.
4. **Constant fever:** the body temperature fluctuates minimally but always remains above normal

Measuring Body Temperature

There are Two Kinds of Body Temperature

1. **Core Temperature**
 - Is the Temperature of the deep tissues of the body, such as the cranium, thorax, abdominal cavity, and pelvic cavity
 - Remains relatively constant
 - Is the Temperature that we measure with thermometer
2. **Surface Temperature:**
 - The temperature of the skin, the subcutaneous tissue and fat

Sites of Measure Temperature

Most common are:

- Oral
- Rectal
- Axillary
- Tympanic membrane

Thermometer: is an instrument used to measure body temperature

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°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 client's 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 not detectable in a peripheral pulse far from the heart

Peripheral Pulse: is a pulse located in the periphery of the body e.g. in the foot, and or neck

Apical Pulse (central pulse): it is located at the apex of the heart

The PR is expressed in beats/ minute (BPM)

Pulse Deficit

Factors Affecting Pulse Rates

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 4th, 5th, 6th 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 2nd 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

Pulse Volume: the force of blood with each beat

- A normal pulse can be felt with moderate pressure of the fingers and can be obliterated with greater pressure.
 - Full or bounding pulse forceful or full blood volume obliterated with difficulty
 - Weak, feeble or thready readily obliterated with pressure from the finger tips
- Elasticity of arterial wall
- A healthy, normal artery feels, straight, smooth, soft and pliable, easily bent after breaking
 - Reflects the status of the clients vascular system
- If the pulse is regular, measure (count) for 30 seconds and multiply by 2
If it is irregular count for 1 full minute

III Respiration

Respiration is the act of breathing (includes intake of O_2 and CO_2)

Ventilation is another word, which refer to the movement of air in and out of the lungs.

Hyperventilation: very deep, rapid respiration

Hypoventilation: very shallow respiration

Two Types of Breathing

1. Costal (thoracic)
 - Involves the external muscles and other accessory muscles (sternocleidomastoid)
 - Observed by the movement of the chest up ward and down ward
2. Diaphragmatic (abdominal)
 - Involves the contraction and relaxation of the diaphragm, observed by the movement of abdomen.

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, within 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 palpatory 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
 - Repeat the above step once or twice as necessary to confirm the accuracy of the reading.
 6. Remove the cuff from the client's arm
 7. For initial determination, repeat the procedure on the client's other arm, there should be a difference of no more than 5 to 10 mmHg between the arms. The arm found to have the higher pressure, should be used for subsequent examinations
 8. Document and report pertinent assessment data, report any significant change in client's blood pressure to the nurse in charge. Also report these finding:
 - A. Systolic blood pressure (of adult) above 140 mmHg.
 - B. Diastolic blood pressure (of an adult) above 90 mmHg
 - C. Systolic blood pressure of (an adult) below 100mmHg

III. Specimen Collection

Specimen collection refers to collecting various specimens (samples), such as, stool, urine, blood and other body fluids or tissues, from the patient for diagnostic or therapeutic purposes.

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

Procedurei) 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)

Procedurei) 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. 1st, 2nd, 3rd 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

C. Collecting sputum specimen

Sputum is the mucus secretion from the lungs, bronchi and trachea, but it is different from saliva. The best time for sputum specimen collection is in the morning upon the patient's awaking (that have been accumulated

during the night). If the patient fails to cough out, the nurse can obtain sputum specimen by aspirating pharyngeal secretion using suction.

Purpose

Sputum specimen usually collected for

- Culture and sensitivity test (i.e. to identify the microorganisms and sensitive drugs for it)
- Cytological examination
- Acid fast bacillus (AFB) tests
- To assess the effectiveness of the therapy

Equipments Required

- Disposable gloves
- Specimen container
- Laboratory requisition form
- Mouth care (wash) tray

Procedure

1. Patient preparation
 - Before collecting sputum specimen, teach pt about the difference between sputum and saliva, how to cough deeply to raise sputum.
 - Position the patient, usually sitting up position and splinting may help. Also postural drainage can be used.
 - Give oral care, to avoid sputum contamination with microorganisms of the mouth. Avoid using tooth past because it alter the result.
2. Obtain sputum specimen
 - Put on gloves, to avoid contact with sputum particularly if hemoptysis (blood in sputum) present.

- 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
 - Withdraw the required amount of venous blood specimen
 - Withdraw the needle and hold the sites with dry cotton (to apply pressure)
 - Put the blood into the specimen container
 - Made sure not to contaminate outer part of the container and not to distract the blood cells while putting it into the container
4. Recomfort the patient
 5. Care of the specimen and the equipment
 - Label the container
 - Shake gently (if indicated to mix)
 - Send immediately to laboratory, accompanying the request
 - Give care of used equipments
 6. Documentation and reporting

Study Questions

1. Differentiate between signs and symptoms.
2. Explain vital signs and list what it includes.
3. Identify important times to assess vital signs.
4. Mention some of the factors affecting body temperature.
5. What does pulse deficit mean?
6. Define arterial blood pressure.
7. Explain the two methods of assessing blood pressure.

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 H₂O remove patient's gown
- Take the patient temperature, sponge the body using the wash cloth alternately, sponge each part 2-3 min. changing the wash cloth
- Heat loss is by conduction or vaporization
- Check pulse frequently and report any change

Local Application of Heat and Cold

Heat and cold are applied to the body for local and systemic effects

Heat Application

Purpose

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, and other substances at the site of injury by inhibiting the inflammatory processes
- To reduce swelling and inflammation: by decreasing the blood flow to the area (vasoconstriction effect)
- Reduce raised body temperature due to fever

Cold can be applied in moist (cold compress 18-27 c) and dry form (ice pack (bag) <15 oc)

Systemic effects of cold – extensive cold application can increase blood pressure

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

- Has systemic and local effect
- Can be applied to the body in two ways
 1. Moist
 2. Dry

Purpose: (Indication)

- To reduce body to during high fever and hyper pyrexia or sun stroke
- To relieve local pain
- To reduce subcutaneous bleeding e.g. in sprain and contusion
- To control bleeding e.g. epistaxis
- To relieve headache
- To provide comfort to a patient in extreme hot weather if desired

1. Moist Cold

- Cold compress
- A cloth (padded gauze) is immersed in cold water and applied in area where we get large superficial vessels E.g. axilla and groin
- Change the cloth when it becomes warm
- Applied for 15-20 min

2. Dry Cold (Ice Bag)

- Ice kept in a bag
- Covered with cloth and applied on an area
- Temperature <15 C

Application of Heat

Purpose

- 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°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 ½ the tube with water and add the ordered medication

In a bowel – fill 2/3 of it with water – add the ordered medication and dilute

The medication to Rx the perineum in KMNO₄ sol. 250 mg KMNO₄ 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

3. To relieve congestion, there by stimulating peristalsis e.g. Pyloric stenosis

4. For diagnostic purposes

1. Gastric Lavage Using a Simple Rubber Tube

Equipment:

Clean trolley.

- Bowl containing large esophageal tube in ice (cold water)
- Rubber tubing with screw or clip and glass connection
- Metal or plastic funnel
- Large Jug (5 liter)
- Solution as prescription/usually to care for acidic poisoning. We use sodium bicarbonate 1 teaspoon to 500 cc. of water at a temperature of 37⁰c - 38⁰c.)
- Small jug to carry solution to the funnel
- Lubricant e.g. liquid paraffin
- Bowl for gauze swabs
- Cape or protective material to put around the patient chest
- Pail to receive returned fluid
- Mackintosh or paper to protect the floor beneath the pail
- Receiver for used esophageal tube
- Paper bag for waste material
- A tray for mouth wash after lavage
- Denature cup.
- A receiver for pt's dentures. If any, and should be labeled with the pt's name
- A receiver containing mount gag, tongue depressor, and tongue forceps if patient is unconscious
- Mackintosh to protect bed linen
- Litmus paper
- Specimen bottle. If laboratory test is requires
- Measuring jug

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 with drawn 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 and 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 respiration

N.B.

Record

- *Time of treatment*
- *Amount & kind of solution used*
- *Nature of returned fluid*
- *Reaction of patient during and after procedure*

II. GASTRIC ASPIRATION

- Aspiration is to withdrawal of fluid or gas from a cavity by suction

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
2. Low enema
 - Is administered to clean the rectum and sigmoid colon only

Guidelines

Enema for adults are usually given at 40-43°C and for children at 37.7 °C

High – cause injury to the bowel mucous

Cold – uncomfortable and may trigger a spasm of the sphincter muscles

The amount of solution to be administer depends on:

- Kind of enema

- The age of the person and
- The persons ability to retain the solution

Purpose

- To stimulate peristalsis and remove feces or flatus (for constipation)
- To soften feces and lubricate the rectum and colon
- To clean the rectum and colon in preparation for an examination.
E.g. Colonoscopy
- To remove feces prior to a surgical procedure or a delivery
- For incontinent patients to keep the colon empty
- For diagnostic test

E.g. before certain x-ray exam – barium enema
Before giving stool specimen for certain parasites

Age	Amount
18 month	50-200 ml
18 mon-5 yrs	200-300 ml
5-12 yrs	300-500 ml
12 yrs and older	500-1,000 ml

The rectal tube should be appropriate: is measured in French scale

Age	Size
Infants/small child	10-12 fr
Toddler	14-16 fr
School age child	16-18 fr
Adults	22-30 fr

Solution used:

1. Normal solution

2. Soap solution – sol. Soap 1gm in 20 ml of H₂O
3. Epsom salt 15 gm – 120 gm in 1,000 ml of H₂O

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 H₂O, 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)

(Colon irrigation or colonic flush)

- Also called enterolysis
- Is the process of introducing large amount of fluid into large bowel for flushing purpose and allow return or wash out fluid

Purpose

- To prepare the patient for x-ray exam and sigmoidoscopy
- To prepare the patient for rectum and color operation

Solution Used

- Normal saline

- Soda-bi-carbonate solution (to remove excess mucus)
- Tap water
- KMNO₄ 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 H₂O) 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
- Reinsert the rectal tube Q 2-3 hrs if the distention has been unrelieved or reaccumulates – allows gas to move in the direction of the rectum.

IV. Urinary Catheterization

Definition of catheterization: Is the introduction of a tube (catheter) through the urethra into the urinary bladder

- Is performed only when absolutely necessary
- Fear of infection and trauma

Note. *Strictly a sterile procedure, i.e. the nurse should always follow aseptic technique*

Catheter: is a tube with a hole at the tip

Equipment

I. Sterile

- Kidney dish
- Gall pot
- Gauze
- Towel
- Solution
- Lubricant
- Catheter
- Syringe
- Water
- Specimen bottle
- Gloves

II. Clean

- Waste receiver
- Rubber sheet
- Flash light
- Measuring jug
- Screen

Selecting an appropriate catheter:

- May be made of
 - ← Plastic – for 1 week
 - ← Latex – 2-3 (rubber)
 - ← Silicon – for 2-3 month
 - ← Pelyvinylchloride (PVC) – 4-6

1. Select the type of material in accordance with the estimated length of the catheterization period:

- Are sized by diameters of the lumen

- 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
 - For adult male – 40 cm catheter
 - For adult females – 22 cm catheter
 4. Select appropriate balloon size
 - 5 ml – for adults
 - 3 ml – for children

Types of Catheter

1. Straight (plain or Robinson)
2. Retention (Foleys, indwelling)

Catheterization Using a straight catheter

Purpose

- To relieve discomfort due to bladder distention
- To assess the anti of residual urine
- To obtain a urine specimen
- To empty the bladder prior to surgery

Procedure

- Prepare the client and equipment for perennial wash
- Position the patient – dorsal recumbent (pillows can be used to elevate the buttocks in females).

- 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 comes
- Collect the urine – for specimen (about 30 ml)
- Pinch previous leakage
- Empty or drain the bladder and remove the catheter
- For adults experiencing urinary retention an order is needed on the amount to urine to be expelled

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)

Inserting a Retention (Indwelling) Catheter**Purpose**

- To manage incontinence
- To provide for intermittent or continuous bladder drainage and irrigation
- To prevent urine from contacting an incision after perineal surgery (prevent infection)
- To measure urine output needs to be monitored hourly

Procedure

- Explain the procedure to the patient
- Prepare the equipment like the straight catheterization and retention catheter
 - ↳ Syringe
 - ↳ Sterile water
 - ↳ Tape
 - ↳ Urine collection bag and tubing

Retention (Foley) Catheter

- Contains a second, smaller tube through out its length on the inside – this tube is connected to a balloon near the insertion tip.
- After catheter insertion, the balloon is inflated to hold the catheter in place within the bladder.
- The outside end of the catheter is bifurcated i.e, it has two openings, one to drain the urine, the other to inflate the balloon.

- 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
- Apply slight tension on the catheter until you feel resistance: resistance indicates that the catheter balloon is inflated appropriately and that the catheter is well anchored in the bladder
- Release the resistance
- Tape the catheter with tape to the inside of a females thigh or to the thigh or a body of a male client
 - ⇐ Restricts the movement of the catheter and irritation in the urethra when the client moves
 - ⇐ When there is increased risk of penile scrotal excoriation
- Establish effective drainage
- The bag should be off the floor – the emptying spout does not become grossly contaminated
- Document pertinent data

Removal

- Withdraw the sol. From the balloon using a syringe
- And remove gently

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

MEDICATION ADMINISTRATION

Learning Objectives

At the end of this unit the students will be able to:

- ❖ Describe various routes of drug administration.
- ❖ Mention the general rules & care of administering medications.
- ❖ Identify the parts and types of syringes and needles.
- ❖ List the necessary equipments required for drug administration.
- ❖ Locate the different sites of parenteral drug administration.
- ❖ Demonstrate essential steps of medication administration.
- ❖ List precautions for medication administration.

Different Routes of Drug Administration

- ❖ Oral
- ❖ Topical
- ❖ Parenteral
 - Intradermal
 - Subcutaneous
 - Intramuscularly
 - Intravenous
- ❖ Rectal
- ❖ Vaginal
- ❖ Inhalation

I. Oral Administration

Definition: Oral medication is drug administered by mouth

Purpose

- a. When local effects on GI tract are desired

- 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.

8. Effervescence - drugs given of small bubbles of gas.
9. Gargle - mildly antiseptic solution used to clean the mouth or throat.
10. Powder - a medicinal preparation consisting of a mixture of two or more drugs in the form of fine particles.

Equipment

- Tray
- Towel
- A bowl of water for used medication cup
- Measuring spoon
- A Jug of water (boiled water)
- Chart and medication card
- Ordered medication
- Straw if necessary

Procedure

- Prepare your tray and take it to the patient's room
- Begin by checking the order
- Read the label 3 times
- Place solution and tablets in a separate container.
- If suspension, shake the bottle well before pouring
- Take it to the pt's bedside
- Keep the medication in site at all time
- Identify the pt. carefully using all precautions. (Pt's name, bed number...)
- Remain with the pt. until each medicine is swallowed
- Offer additional fluid as necessary unless contra-indicated
- Record the medication given, refused or omitted immediately.
- Take care of the equipment & return them to their proper places.
- Wash your hands.

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.
12. Never give medicine that some one poured or drawn.
13. Never leave medicine at bed side of a patient and within reach of the children

II. Suppository***Purpose***

- To produce a laxative effect. (bowel movement),suppository is used frequently instead of enema since it is inexpensive.
- To produce local sedative in the treatment of hemorrhoids or rectal abscess.
- To produce general sedative effects when medications cannot be taken by mouth

- 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 stimulates the rectum and lubricates its contents. Normally 15 minutes is needed to produce bowel movement.
2. Glycerin or suppository for bringing about bowel movement. If soap suppository is used cut a splinter of soap 2-6 cm. long and wash it in hot water to smooth the rough edges before administration.
3. Bismuth - for checking diarrhea.
4. Opium, sodium barbital etc. for sedation

III. Parenteral Drug Administration

A. Intradermal Injection

Definition: It is an injection given into the dermal layer of the skin (corneum)

Purpose

For diagnostic purpose

- a. Tine test (mantoux test)
- b. Allergic reaction
- c. Intradermal injection may also be given for therapeutic purpose

Site of Injection

- The inner part of the forearm (midway between the wrist and elbow.
- Upper arm, at deltoid area for BCG vaccination

Equipment

- Tray
- Syringe & needle (sterile)
- Receiver
- Drug (to be injected)
- File - Alcohol swab
- Marking pen

- 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
- File
- Medication chart

- Receiver
- Water in a bowel
- Disposing box

Site of Injection

- Outer part of the upper arm
- The abdomen below the costal margin to the iliac crest.
- The anterior aspect of the thigh

Procedure

- Take equipment to the pt's bed side or room
- Explain the procedure to the patient
- Draw your medication
- Expel the air from the syringe
- Clean the site (usually it is in upper arms, thighs or abdomen)
- Grasp the area between your thumb & forefinger to tense it.
- Insert the needle elevate about 45° - 60° angle.
- Pierce the skin quickly & advance the needle
- Aspirate to determine that the needle has not entered a blood vessel
- Inject the drug slowly.
- After injecting withdraw the needle and massage the area with alcohol swab.
- Chart the amount and time of administration immediately.
- Take care of the equipment- wash, sterilize and return to its place
- Watch for undesired reaction (side effect of the drug) etc.

Note.

If repeated injections are given, the nurse should rotate the site of injection so that each succeeding injection is about 5 cm away from the previous one.

C. Intra- Muscular Injection

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° 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)

- Once you know that you are in the vein, release the tourniquet and gently lower the angle of the needle
- When it is nearly paralleled to the vein and instill the medications. Give very slowly unless there is an order to give it fast (Normally 40-60 drops is given in 1 minute).
- Check the pt's pulse in between. Any complaint from the patient should not be ignored.
- Apply pressure over the site after removing the needle to prevent bleeding. Tell patient to flex his elbow.
- Watch the patient for few minutes before leaving him.
- Remove your equipment
- Put the pt. In a comfortable position
- Wash, sterilize and place the equipment in order.
- Chart the medication given the amount, time & the reaction of the pt.

Note:

1. Have a bowl of water to rinse the needle used immediate
2. Make yourself as well as the pt. Comfortable before giving injection.
3. It is the fastest way of drug administration
4. Never recap a used needle

E. Intravenous Therapy

Definition: It is the administration of a large amount of fluid into the system through a vein.

Purpose

- To maintain fluid & electrolyte balance
- To introduce medication particularly antibiotics.

Equipment

- IV fluid as ordered

- Sterile syringe & needle
- Rubber & towel
- Receiver
- Alcohol swabs
- Arm board
- Bandage & scissors
- Tourniquet
- I.V pole
- Adhesive tape
- Medication chart

Preparation of the Patient

Since an infusion therapy takes several hours to complete, the patient should first be made conformable.

Procedure

- Take equipment to the patient's bedside
- Explain to the chart. Be sure you have right patient.
- Remove air form the tubing
- Place rubber & towel under the arm
- Apply tourniquet about 3 c.m.above the intended site of entry.
- Observe & palpate for suitable vein
- Cleanse the skin with alcohol swabs thoroughly & place the swab used thumb the retract down the vein & soft tissue 4 c.m. below the intended site of injection.
- Hold needle at 45^o angle line with the vein
- Pierce the skin and puncture the vein
- Check if you are in the vein by drawing back with the syringes.
(blood returns if you are in the vein)
- Release the tourniquet gently
- Start the flow of solution by opening the clamp.

- 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 used in 24 hrs, it should be labeled as bag 1,2,3, and so on.
4. Extend the arm in the most comfortable position.
5. Usual areas used for intravenous infusion are:
 - a) The median basilica vein on the inner surface of the arm.
 - b) A vein on top of the foot
 - c) In an infant the jugular vein and the scalp vein

F. Blood Transfusion

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

- Before blood transfusion is administered the nurse has to check the blood group & RH- factor, if cross match of the donor's & the recipient's blood is done and is compatible. Also check for HIV.
- Prepare the tray with necessary items
- Before taking it to the patient's room check the patient's name, hospital number, bed number, blood group, Rh. Factor and the expiration date with a 2nd number, blood group, Rh-factor and the expiration date with a 2nd nurse or a doctor.
- (Blood should be used within 21 days of its withdrawal date)
- Take it to the pt's room
- Explain procedure to patient
- Hang the bottle & remove the air from the tubing
- Put pt. in a comfortable position.
- Place rubber & towel under the arm
- Check the vital signs before administering
- Choose the vein
- Apply tourniquet
- Clean the skin & feel for a distended vein & clean again.
- Puncture the vein with the needle (the needle here should be short and wide so that it does not cause occlusion easily)
- After you make sure that you are in the vein release tourniquet & open the lamp.
- The drop/minute at the beginning should be very slow
- Watch patient closely for any reaction
- If there is no reaction from the patient regulate the rate of flow according to the patient's conditions & the order.
- Splint the arm & position it comfortably.
- Remove the equipment you have used, wash and return to its proper place.
- Record the time you started the blood & any other pertinent information.

- Check pt. frequently.

Note:

1. Always member to have anti- histamine injection ready in case a patient has reaction from the blood.
2. Be familiar with the most usual symptoms of blood reactions which are:-

Immediate Reaction:

- a) Headache
- b) Backache
- c) Chills
- d) Pyrexia
- e) Rash of the skin (urticaria)

Late Reaction

- a) Dyspnea
- b) Renal shut down in severe cases
- c) Heamaturia
- d) Chest pain
- e) Rigor (rigidity)

G. Cut Down

Definition - Dissection of a vein for inserting I.V cannula or needle.

Purpose

- When vein puncture is difficult
- When pro longed, continuos infusion is needed
- When a secure infusion is essential
- When rapid infusion is important
- When emergency situation combine these indications.

Equipment**Sterile**

- 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 O₂ with a reducing value and pressure tubing to be connected with the O₂ 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 making sure that it rests comfortably on the pt's face. See that the tubing is secured to the bed linen by means of safety pin. Stay with the patient till he is reassured if it is his first time to be on oxygen therapy.

2. Giving oxygen by nasal catheter.

There are different kinds of catheters,

- a) A fine catheter
- b) A spectacle frame, which carries two, places of rubber tubing and is worn by the pt.

- c) Two soft rubber catheters connected by y shaped connection to the tube on O₂ 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 the catheter tends to irritate the mucous membrane. There which stimulating secretions must remove.

Oxygen dries and irritates mucous membrane, therefore, should be passed through water (Humidified) before it is administered by catheter.

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 18⁰C-22⁰C.
10. Record state of patient and time started and the flow of the oxygen.

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 82⁰C
- 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 90⁰ cc of cold water and 500 cc of boiled water to bring the temperate 82⁰c or half by half or pour half point (300cc) of boiling water into the inhaler than 5 co of

tincture of benzene or any other drug ordered. Then add another 300 cc water making sure that the temperature of water in the inhaler comes to

82°C. This is done in order to have a good mixture of the drug. The level of the fluid should not be above the spout.

Fix the mouthpiece firmly in the inhaler in direction opposite to the air inlet and cover the inhaler with blanket or towel. Close windows.

Prepare the patient usually in a sitting - up position making sure that he is well supported. Then put inhaler on a saucepan on the tray. Place the tray on the over- bed table or on his knees in such a way that he can bend over the inhaler easily.

Put the spout for the escape of steam away from him. Cover his head with blanket. Tell the patient to breath in by putting his lip to the mouth piece which may be protected by a piece of gauze, and breath out by removing his lips for a moment from the mouth piece.

The treatment can take from 5-10 minutes after which the patient should be kept warm and comfortable for some time.

N.B :

1. If a Nelson's inhaler is not available a wide- mouthed jug may used. The patient should be covered up to the waist with a balance from a canopy, or the mouth of the jug may be covered with a towel to make the opening small enough for the patient to put his nose and mouth (not eyes) on it.
2. For irrational, helpless patients, stay with them throughout the procedure.
3. Report the amount and nature of any sputum or discharge.

Care of Equipment after use

- Pour out the water from the inhaler (not onto a sink)
- Wash the inhaler with hot water
- Boil the mouth piece

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

- O₂
- Morphine sulfate catheter
- Aramine
- Adrenalin(Epinephrin.)
- Levophed
- Phanergan
- Aminophylline
- Allerour
- Nor adrenaline
- Carmine (Nikethamide)
- Lasix
- Syringes and needles
- Digoxin
- Na HCO₃ (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
- O² 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?
 - a. Vastus lateralis
 - b. Ventrogluteal
 - c. Deltoid muscle
 - d. Dorsogluteal
5. Explain the difference between intravenous injection and intravenous infusion.
6. List at least three immediate complications of blood transfusion.
7. Define inhalation

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 of the dressing smoothly and discard there for caps.
- Observe wound and check if there is drainage rubber or tube.
- Take specimen for culture or slide if ordered (Do not cleanse wound with antiseptic before you obtain the specimen.)
- Start cleaning wound from the cleanest part of the wound to the most contaminated part using antiseptic solution.
- (H₂O₂ 3% is commonly used for septic wound). Discard cotton ball used for cleaning after each stroke over the wound.
- Cleanse the skin around the wound to remove the plaster gum with benzene or ether
- Use cotton balls for drying the skin around properly
- Dress the wound and make sure that the wound is covered completely
- Fix dressing in place with adhesive tape or bandages
- Leave patient comfortable and tidy
- Cleanse and return equipment to its proper places and discard
- Soiled dressings properly to prevent cross infection in the ward.

N.B.

- If sterile forceps are not available, use sterile gloves

- 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 (H₂O₂ or normal sullen are commonly used)
- Adhesive tape or bandage
- Bandage scissors
- Receiver for soiled dressings

Procedure

Explain the procedure to the patient and organize the needed items.

- Drape position patient
- Put rubber sheet and its cover under the part to be irrigated
- Remove the outer layer of the dressing

- 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 H₂O₂ 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.

- Using the cutting needle and silk, suture the outer layer of skin approximating the edges with the help of the tissue forceps.
- Clean with iodine and cover with sterile gauze.
- Remove the hole- Sheet
- Make patient comfortable
- Remove all equipment, wash & return to its proper place or send for sterilization.

Note:

- Do not suture wounds that are over 12 hrs old. However, such wounds have to be seen by a doctor since excision of all dead & devitalized tissue and eventual suturing may be required.
- Check that the patient gets his order for T.A.T before he leaves the hospital.
- Do not you puncture (deep) wound.
- Before you suture any wound, make sure it is free of any foreign bodies.

Removal of the Stitch

Technique: Use aseptic technique

Principles

- Sutures may be removed all at a time or may be removed alternatively.
- Do not cur stitches in more than one place as a part of it may be left behind and may cause infection.
- Suture is lifted slightly by the knot to allow scissors to go under and one part of the suturing from the cleanest part of the wound to the most contaminated part.
- Cleanse the skin around with antiseptic. Remove – gum with benzene or ether and discard the forceps

- 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.
- Pull-up gently the knot resting against the skin with the forceps, pass the point of the scissors under the do not then cut the stitch on one side and remove.
- Receive pieces of stitches on a sterile gauze
- Inspect the scar for wound healing and apply iodine on the skin punctures if patient is not sensitive to iodine.
- Apply dressing
- Keep patient comfortable and tide
- Record the state of the wound
- Clean and return equipment to their proper places.

Clips

Definition: Metal suture used to stitch the skin

Purpose

Some as suturing with stitch

Equipment

- Michel clip applier
- Tissue forceps (toothed dissecting forceps)
- Cleaning material- same as stuttering with stitch.

Procedure

The first part of procedure is the same as for suturing with stitch Except that instead of suturing the skin with thread and needle you would apply clips with the applier.

Removal of Clips

Technique

Use aseptic technique

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 such as pain, fever cough rapid pulse or elevated blood pressure must be reported immediately. The surgery may have to be canceled or delayed until the patient is well.
- If the surgery is in the morning, nothing should be taken by mouth after midnight (N.P.O.) if the surgery is in the afternoon., fluids and food should not be taken in the morning depending on the orders

- Check the cleanliness of body areas, umbilicus, nails and hair.
- Shave the hair from the skin of the operative area thoroughly.
Some one should check to see if all the hair has been removed.
Wash the skin well with soap and water before and after shaving.
- Check the orders for preoperative treatment, such as enema, catheterization of foley catheter.
- The patient's temperature, pulse, respiration's and blood pressure should be taken and recorded on the chart just before surgery.
- Give the premeditation as ordered, being careful to give the tight amount at the right time to the right patient and record.

Just before surgery

- Just before it is time to take the patient void, if he is unable to void inform the doctor.
- Have the patient Void, if he is unable to void inform the doctor.
- Assist patient to move to the stretcher. The patient may be very sleepy or dizzy from the preoperative medications and may hurt himself. Support the stretcher to keep it from rolling as the patient moves onto it.
- Make sure his elbows are close to his sides or over his chest prevent them from being pumped as the stretcher passes through doorways.
- Reassure him as you take him to the operating room
- Make sure the chart is complete and take to the theater with the patient.

Shaving

Purpose

- To minimize the danger of infection by decreasing the number of bacteria on the skin.

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

- Turn the patient on his side with the operative side upward.
- Shave from the sternum to the groin and across the side the same width up to the spinal column.
- Shave the axilla on that operation is a long one, so a large area must be prepared.

Abdominal operations

- Shave the whole abdomen from the end of the sternum down to the pubes.
- The umbilicus must be clean

Perennial and Rectal Operations

- The pubic and perinea hair must be shaved from the pubes to the anal area.
- Shave at least 15 cm. down the inside of the thighs both sides

Limb Operations

- The whole limb should be washed well
- Shaved at least 15 cm all around the operative area.
- If the operation is on the upper arm or the upper leg. The axilla or perineum should be shaved as well.
- If the operation is near the hand or foot cut the nails very short and clean them well.

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
 - 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.

General 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

Post-operative Care of Specific Surgeries

Brain Surgery

- Patient must lie on his back with out pillows unless ordered otherwise.
- Room should be dark and quit to prevent irritation to the brain.

Breast Surgery

- Encourage deep breathing often, because of danger of pneumonia
- Special arm exercises should be given

Abdominal Surgery

- Encourage deep breathing
- Turn from side to side often
- Sit patient on edge of bed 1st day postoperatively and
- Start walking second day post operatively (unless contra-indicated)
- Intake and output should be recorded
- If gastric suction is present make sure it is working properly
- Frequent mouth care for patients who are not allowed to drink.

Eye Surgery

- Must lie very still because the incision and sutures can be damaged by pulling on the eye muscles. Both eyes may be covered.
- Room may be quiet and dark
- Patient must be fed.

Spinal Surgery

- Must lie on abdomen of back with bed flat, and supported by fracture board mattress.
- Patient may be in a body cast. Care must be given to prevent bed scares where the cast rubs.

Thyroidectomy

- Place in high lowers position. This will make it easier to breathe since the pressure of dressing and swelling may give choking feeling.
- An emergency tracheotomy set should always be at the bedside or nurses office for first three days, in case of hemorrhage or swelling trachea.
- The complication “Thyroid crisis” must be reported immediately as death can occur if condition is not treated quickly.

Tonsillectomy

Child

- Lie on abdomen or side to prevent blood drainage into throat, lunge or stomach.
- Watch carefully for excessive bleeding.

Adult

- If conscious, he may sit in semi- fowler’s positron in order to spit the blood more easily.
- Watch carefully for excessive bleeding.

Study Questions

1. Mention the purposes of preoperative nursing care.
2. Why shaving is indicated before surgery?
3. State purpose of postoperative nursing care.
4. List some important equipment to provide care for immediate postoperative patients.
5. Why informed consent is required before surgery?

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

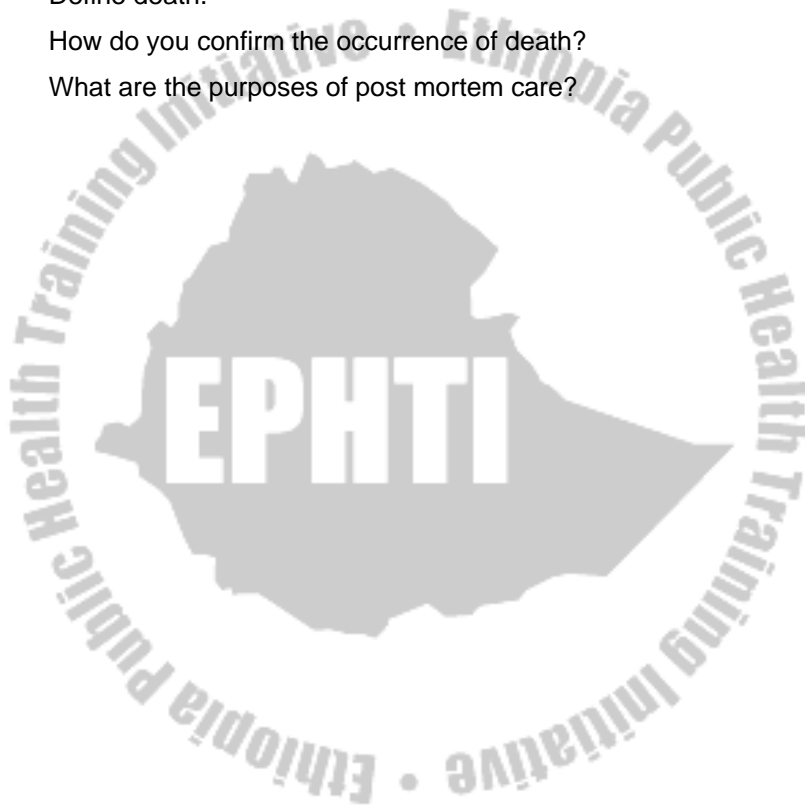
Procedure

- 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 ⁰ C
Flatus	Gas in the intestines.
Foot board	A board placed at the foot of the bed to support the feet
Gastrostomy	Making an artificial opening into the stomach through which the patient is fed by pouring

	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).

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