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Healthcare
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Participant Handbook



Sector
Healthcare

Sub-Sector
Ayush

Occupation
Ayurveda Therapy

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Panchakarma Technician

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Prime Minister of India



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for

SKILLING CONTENT - PARTICIPANT HANDBOOK

Complying to National Occupational Standards of
Job Role/Qualification Pack: **Panchakarma Technician** QP **NSQF HSS/Q3601 Level 4**

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About this Book

This Participant Handbook is developed to impart training for the skill and knowledge required to work as an Panchakarma Technician in the Healthcare sector. It is designed based on Qualification Pack HSS/Q3601 under the National Skill Qualification Framework and comprises the following NOS/topics:

1. HSS/N3601: Prepare for panchakarma therapy session
2. HSS/N3602: Provide panchakarma therapy as per guidance/prescription
3. HSS/N3603: Carry out post panchakarma therapy procedures
4. HSS/N9617: Maintain a safe, healthy and secure working environment
5. HSS/N9618: Follow biomedical waste disposal and infection control policies and procedures
6. Employability Skills

This book is designed considering the participants' technical needs and educational backgrounds. Each unit starts with learning objectives followed by relevant activities and corresponding training methodology. Thus, special efforts have been made to explain the concepts required for the job, primarily through graphics and illustrations.

Symbols Used


Key Learning Outcomes


Unit Objectives


Notes


Exercise


Summary


Tips

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It is recommended that all trainings include the appropriate Employability skills Module. Content for the same can be accessed https://www.skillindiadigital.gov.in/content/list

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1. Introduction to Panchakarma Technicians and their Key Functions

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Unit 1.1 Roles and responsibilities of Panchakarma Technician

Unit 1.2 Importance of Understanding Medicinal Plants and Herbs in Panchkarma Procedure

Unit 1.3 Instruments and Equipment Required to Prepare the Panchakarma Unit

Unit 1.4 Documentation Related to Panchakarma Procedures

Unit 1.5 Medicaments Used in Panchakarma

Unit 1.6 Quality Control and Quality Assurance at the Panchakarma Unit



HSS/N3601

Key Learning Outcomes

At the end of this module, the trainee will be able to:

1. Describe the roles and responsibilities of Panchakarma Technician
2. Explain about the different instruments and equipment's required to prepare the Panchakarma unit
3. Demonstrate documentation and maintain proper registers related to Panchakarma procedures
4. Discuss about the importance of medicaments used in Panchakarma and its safe use
5. Discuss about the quality control and quality assurance at Panchakarma unit
6. Discuss about the correct method of handling various articles and medicaments in Panchakarma unit
7. Discuss about do's and don'ts related to functions of Panchakarma Technician

UNIT 1.1 Roles and Responsibilities of Panchakarma Technician

Unit Objectives

At the end of this unit, the trainee will be able to:

1. Describe the roles and responsibilities of Panchakarma Technician
2. Discuss about do's and don'ts related to functions of the Panchakarma Technician

1.1.1 Roles and Responsibilities

Panchakarma Technician plays an important role in all the procedures of Panchakarma, whether major procedures or minor procedures. He/She should have basic knowledge of all the Panchakarma procedures along with the drugs, equipment and instruments required for it. Some of the roles and responsibilities are listed below:

- Prepare Panchakarma theatre for each and every procedure.
- Go through the case paper and understand properly the Panchakarma procedure suggested by the physician.
- Provide information to the patient about the Panchakarma procedure advised by physician.
- Explain to the patient about the Panchakarma procedure advised by physician.
- Instruct the patient about their preparation before they come for Panchakarma procedure.
- Instruct the patient about the post procedures.
- Check the availability of required drugs, medicines, equipment's and instruments for prescribed procedure.
- Maintain the cleanliness of room, proper hygiene, ventilation and proper lighting.
- Prepare the patient.
- Make SOP checklist for each and every procedure.

Fig. 1.1 Roles and Responsibilities of a Panchakarma Technician

1.1.2 Do's and Dont's Related to Panchakarma Sessions as Per Prescription/Order

Do's
• Check for all the materials required for Karma (procedure) before starting with the karma. • Inform patient about the procedures you're going to perform and make the patient comfortable. • Take consent of the patient before every procedure. • Look at the face of patient for any discomfort if you find. • Use disposable instruments for each and every patient wherever possible. If metallic instruments are to be reused they should be properly sterilized as per the standard guidelines of infection control.

Don'ts
• Don't leave the patient without observance of any attendant. • Don't fail to check the temperature of medicine on patient before using it.

Fig. 1.2 Do's and Don'ts of a Panchakarma Technician

The do's and don'ts after Panchakarma therapy fall under two categories:

- General
- Specific

General do's and don'ts after Panchakarma therapy:

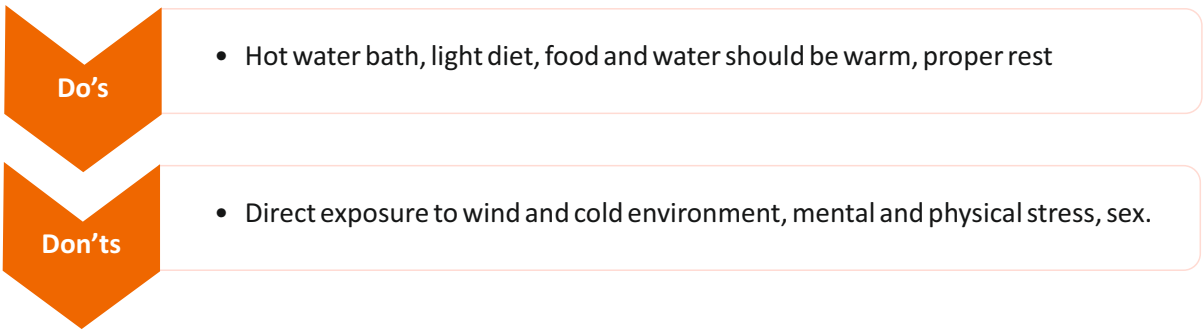


Fig. 1.3 Do's and Don'ts after Panchakarma Therapy

1.1.3 Scope of Work for Panchakarma Technician

Assist all Panchakarma therapies in a clinic or private practice with an emphasis on utilizing the techniques for purposes of pacification.

Assist Panchakarma therapies in connection with a Panchakarma program, under the guidance of a qualified Ayurveda Practitioner or Ayurveda Doctor.

Support and help to deliver the Panchakarma treatment program designed by the Ayurveda Practitioner or Ayurveda Doctor.

Counsel patients regarding Panchakarma therapies/treatments

Under the guidance of a qualified Ayurveda Practitioner or Ayurveda Doctor.

Work at Government/ Private/Corporate hospitals/ mostly to assist in Panchakarma therapies.

Enhance scope for other job roles with the help of additional qualification.

Fig. 1.4 Scope of work of a Panchakarma Technician

1.1.4 Limitations of Panchakarma Technician

A Panchakarma Technician mainly makes all the necessary arrangements for various Panchakarma procedures before the Therapist starts the main procedure. But the technician cannot perform the main procedure and only assist the therapist.Some of the other limitations of a Panchakarma Technician include:

Should adhere to legislation, protocols and guidelines relevant to one's role and field of practice

Should be able to determine the boundaries of work and professional area.

Should be able to work in the limits of competency and authority.

Should not make any changes in the prescribed procedure/drug of a physician.

Cannot diagnose and treat disease.

Should not get involved in personal talk or matter of patient.

Fig. 1.5 Limitations of a Panchakarma Technician

In case of any dispute, he/she should follow the institute's protocol to solve it.

UNIT 1.2 Importance of Understanding Medicinal Plants and Herbs that are Used for Ayurveda Treatments and Medicines

Unit Objectives

At the end of this unit, the trainee will be able to:

1. Explain the use of different herbs and formulations related to Panchakarma

1.2.1 Knowledge of Medicinal Plants and Herbs

It is important for Panchakarma Technician to have the basic knowledge and understanding of the different medicinal plants and herbs (few commonly/frequently utilized) that are used for the Ayurveda treatments. The reasons are:

- Helps for better understanding of Panchakarma procedures prescribed by physician.
- Pre preparations for all the Panchakarma procedures become more easy and logical.
- Proper understanding of medicinal plants helps to identify the adulteration in the drugs.
- Complications due to wrong utilization of drug could be avoided.

Fig. 1.6 Need for knowledge about medicinal plants and herbs

Notes

UNIT 1.3 Instruments and Equipment Required to Prepare the Panchakarma Unit

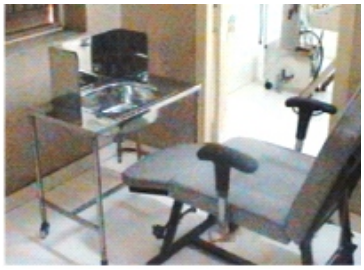
Unit Objectives

At the end of this unit, the trainee will be able to:

1. Explain about the different instruments and equipment's required to prepare the Panchakarma unit

1.3.1 Different Instruments and Equipment to be Used by Panchakarma Technician

Few examples of the different instruments used in Panchakarma are given below:

Equipment	Image
Steam units	
Nadi swedana yantra	
Vamana chair	

Continued...

Equipment	Image
Shirobasti Crown	
Instruments for Kati Basti, Janu Basti, etc	
Basti Netra	
Nasya yantra and kumbha	
Kharal	

Table 1.1 Examples of Different Equipment

1.3.2 The Process of Cleaning/Disinfection/Sterilization of Panchakarma Set Up and Equipment

Instrument	Method of Cleaning
Basti Netra and other metallic instruments and equipment	Autoclaving
Plastic equipment	Chemical disinfection
Disposable rubber catheter and other disposable material	Disposing
Wooden and fibre equipment	Chemical disinfection

Table 1.2 Cleaning Procedures

The important points to be noted with respect to cleaning:

- Sterilize the instruments by Autoclaving.
- Wear cleaning utility gloves and apron.
- Droni/procedure table should be cleaned with a dry towel and disinfectant solution immediately after completing one procedure. When all the procedures are completed in a day, they should be cleaned with soap and water and should be properly disinfected.
- All the metallic instruments should be autoclaved after every procedure.
- Plastic/rubber instruments must be cleaned with soap and water.

1.3.3 Process of Packing and Storing Equipment, Materials and Consumables

- Store all things in a dry place.
- Keep the things in air tight container, if required.
- Carry out regular pest control measures to avoid infestation with insects or rodents.
- Maintain the temperature and humidity of the storage room with regular controlling measures like AC/heater/exhaust fans.

Packing and Storage of Medicines	Storage of Equipments
The medicines should be properly packed and labeled. The medicines in powder form should be kept in air tight containers. Oils/liquids should be packed in clean bottles/containers. It should be properly arranged in allotted racks.	The cleaned/sterilized equipments should be dried and kept in concerned boxes/containers.

Fig. 1.7: Storage Methods

UNIT 1.4 Documentation Related to Panchakarma Procedures

Unit Objectives

At the end of this unit, the trainee will be able to:

1. Demonstrate documentation and maintain proper registers related to Panchakarma procedure

1.4.1 The Process of Record Keeping

The process of record keeping includes multiple tasks.

Should have the knowledge of documents detailing the policies and procedures for registration of patients.	All patients who are assessed in the Panchakarma Clinic shall be registered and unique ID is to be generated for Panchakarma procedures.	Shall ensure that every patient gets a unique number. This number is generated at the end of registration of the first interaction that the patient has with the Panchakarma
Identification of the patients across the Panchakarma Clinic with the help of unique number and ensuring continuity of care across the Panchakarma Clinic.	All records of the patients in the clinic shall have this number. "Unique" implies that this is a one-time affair.	A patient can have only one unique number.
Maintain accurate, legible and complete records	Maintain record of type, duration and details of procedures instructed by the physician	Equipment and consumable maintenance and storage
Once the course of procedure is about to complete, should check for timely renewal or discontinue of procedure.	Maintain the record of various oils, decoctions, drugs and if any other material which is utilized regularly.	At the end of the day, daily total procedures and number of patients should be informed /certified by physician/Head of the department.
Maintenance of records of recurring items	Records pertaining to complaints, suggestions, reviews, donations etc.	Records related to housekeeping and laundry.

Fig. 1.8 Record Keeping Tasks

For easy and smooth handling of Panchakarma theater it is necessary to maintain various records like:

- In stock register
- Receipt of materials
- Issue of materials

In Stock Register	Receipt of Materials	Issue of Materials
A record of all the consumables and non-consumables available in Panchakarma Theater should be maintained in this. It is better to fix an ordering level so that orders can be placed well before the stocks run out.	A record of all the items purchased or received should be maintained in this register. On receipt of items it should be physically verified and entered into the register.	A record of all the items purchased or received should be maintained in this register. On receipt of items it should be physically verified and entered into the register.

Fig. 1.9 Records to be maintained

1.4.2 Importance of Maintaining Digital/ Manual Records of Panchakarma Procedures

It is important to maintain records for smooth functioning of the procedures as every attending person should be aware of the ongoing procedures. So, no problem occurs even during the replacement of the duty.

It can be used as the raw data to extract the values for research or to form new research questions from the observations.

If the records are properly maintained the detailed treatment history of the patient can be referred to any time in the future.

Fig. 1.10 Importance of maintaining digital/manual records of Panchakarma procedures

Records should be maintained for each and every Panchakarma procedure. There should be a main register that includes all the procedures. Sub records like procedure-wise records and Theater-wiserecords also should be maintained. This will help in easy and smooth conduct of procedures.

- Method to clean client body after the procedure
- After every procedure the client's body must be properly cleaned if it is advised by the physician. The assistant must follow proper hand hygiene and take personal protective aids like gloves and apron before cleaning the client.
    - Oily body surface: This should be cleaned with a clean dry towel/napkin.
    - Body surface contaminated with blood/body secretions like mucous/body waste (stool/urine): This should be cleaned with sterilized gauze/cotton. Clean the area again with disinfectants and wipe with a clean napkin.
    - Cleaning methods after procedures like:
- Nasya - clean the areas of face with a napkin.
- Local Basti - clean the area with warm water and wipe with a napkin.
- Raktamokshana - clean the area with cotton and do the proper dressing with a cotton gauze piece (and turmeric if required.)
- The patient should have bath with warm water after every Panchakarma procedure except for local procedures like Kati Basti, Upanaha, Janu Basti, etc. or as directed by Physician.

Notes

UNIT 1.5 Medicaments Used in Panchakarma

Unit Objectives

At the end of this unit, the trainee will be able to:

1. Discuss about the importance of medicaments used in Panchakarma and its safe use
2. Discuss about the correct method of handling various articles and medicaments in Panchakarma unit

1.5.1 Use and Method of Handling Medicaments

The methods of handling medicaments in various therapies are covered in the section "Types of Procedure" in Module 4.

UNIT 1.6 Quality Control and Quality Assurance at the Panchakarma Unit

Unit Objectives

At the end of this unit, the trainee will be able to:

1. Discuss about the quality control and quality assurance at Panchakarma unit

1.6.1 Quality Measures

SWEDANA (All types of Swedana)

- Should have the basic knowledge of Swedana procedure.
- Proper room ventilation, Hygiene and enough light in room.
- Preparation and cleanliness of Swedana table/Swedana unit/equipment.
- Check the availability and proper functioning of all the required equipment's and instruments, enough utensils etc.
- For Swedana check that the pores/pipe/tube from where steam is generated is not blocked.
- All the drugs and materials required (which also includes emergency drugs) for Swedana as prescribed by physician should be available in enough quantity.
- Should have the knowledge to prepare Pottali for Swedana procedures like Patra Pinda, Shashtik Shali, Valuka Swedana, Choorna Pinda Sweda, Jambeera Pinda Sweda etc.
- Safety precautions of different types of Swedana procedures like Pottali Sweda (Patra Pinda Pottali Sweda, Choorna Pinda Sweda, Jambeera Pinda Sweda, Shashtika Shali Pinda Sweda), Drava Sweda, Bashpa Sweda (steam bath), Nadi Sweda, Parisheka Sweda, Avagaha Sweda (tub bath), others like Upanaha Sweda, Valuka Sweda, etc.
- Has knowledge of different types of Swedana procedures and oils/drugs utilized for it.
- There should be arrangement of extra stock of drugs and other materials if required.
- Should be able to assist Panchakarma Therapist/Physician during the whole procedure of Swedana as and when the help is required.
- To confirm that patient has followed all the instructions of pre-procedure properly.
- Should have the knowledge of proper posture for Swedana and able to help the patients in attaining a posture which is appropriate for providing the therapy.
- Be watchful about the patient's safety during therapy session.
- Maintain patient's privacy throughout the procedure.
- In case of any complications (in absence of Physician) Panchakarma Technician should follow the proper method of reporting complications.
- Should have knowledge of management of post procedures.

Summary

- Panchakarma Technician plays an important role in all the procedures of Panchakarma, whether major procedures or minor procedures. He/She should have basic knowledge of all the Panchakarma procedures along with the drugs, equipment and instruments required for it.
- Scope of work of a Panchakarma Technician include:
    - Assist all Panchakarma therapies in a clinic or private practice with an emphasis on utilizing the techniques for purposes of pacification.
    - Assist Panchakarma therapies in connection with a Panchakarma program, under the guidance of a qualified Ayurveda Practitioner or Ayurveda Doctor.
    - Support and help to deliver the Panchakarma treatment program designed by the Ayurveda Practitioner or Ayurveda Doctor.
    - Counsel patients regarding as per doctors instruction.
    - Be self employed by making home visits to needy bed ridden patients.
    - Work at Government/ Private/Corporate hospitals/ mostly to assist in Panchakarma therapies.
    - Enhance scope for other job roles with the help of additional qualification.
- It is important for Panchakarma Technician to have the basic knowledge and understanding of the different medicinal plants and herbs (few commonly/frequently utilized) that are used for the Ayurveda treatments. The reasons are:
- Few examples of instruments and equipment used in Panchakarma are multipurpose table, steam units, nadi swedana yantra, vamana chair, shirobasti crown, basti netra, nasya yantra and kumbha, etc.
- The different methods of cleaning these instruments are autoclaving, chemical disinfection, etc depending on the material.
- It is important to store all things in a dry place, in air tight containers. It is necessary to carry out regular pest control measures to avoid infestation with insects or rodents. The temperature and humidity of the storage room should be maintained properly.
- Cleaning methods should be followed as per standards.

Notes

Exercise

Answer the following questions:

1. Mention two DO's related to Panchakarma session.

   _____
   _____
   _____

2. Mention two DON'TS related to Panchakarma session.

   _____
   _____
   _____

3. State two reasons why a Panchakarma Technician should be aware of use of herbs.

   _____
   _____
   _____

4. List four limitations of a Panchakarma Technician.

   _____
   _____
   _____

5. Name five instruments/tools used in the Panchakarma therapy.

   _____
   _____
   _____

Scan the QR Code to watch the related video

Janu Basti

https://youtu.be/A2fxGnQ18-o

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2. Basics of Human Anatomy and Physiology

Unit 2.1 - Anatomy of the Human Body

Unit 2.2 - Physiology of Blood and its Components



HSS/N3602

Key Learning Outcomes

At the end of this module, the trainee will be able to:

1. Explain about the anatomy of cells, tissues, systems, membranes and glands of human body
2. Describe the anatomy and physiology of the musculo-skeletal system
3. Describe the anatomy and physiology of the digestive system
4. Describe the anatomy and physiology of the respiratory system
5. Describe the anatomy and physiology of the cardiovascular system
6. Describe the anatomy and physiology of the excretory system
7. Describe anatomy and physiology of the endocrine system, sense organs and reproductive system
8. Describe the physiology of blood and its components

UNIT 2.1 Anatomy of Cells, Tissues, Systems, Membranes and Glands of the Human Body

Unit Objectives

At the end of this unit, the trainee will be able to:

1. Explain about the anatomy of cells, tissues, systems, membranes and glands of human body
2. Describe the anatomy and physiology of the human body

2.1.1 Anatomy of the Parts of Human Body

Sharira means human body. In Ayurveda, the two branches of study in detail about sharira are Rachana Sharira (Anatomy) and Kriya Sharira (Physiology).

Rachana Sharira includes study of structure of human body. In modern science it is called as Anatomy.	Physiological functions are being studied in Kriya Sharira which is called Physiology in modern science.

Fig. 2.1 Two branches of study of human body

Human anatomy is the study of the structures of the human body. The word “anatomy” comes from the Greek words “ana,” meaning “up,” and “tome,” meaning “a cutting.” Traditionally, studies of anatomy have involved cutting up, or dissecting, organisms.

Gross Anatomy	• Gross, macro, or topographical anatomy refers to the study of the biological structures that the eye can see. In other words, a person does not need a microscope to see these features.
Microscopic Anatomy	• Microscopic anatomy, also known as histology, is the study of cells and tissues of animals, humans, and plants. These subjects are too small to see without a microscope.

Fig. 2.2 Types of Anatomy

Most people working in healthcare have had training in gross anatomy and histology. Paramedics, nurses, physical therapists, occupational therapists, medical doctors, prosthetics, and biological scientists all need knowledge of anatomy.

Etymology of word Sharira

1. "Shiryte tat Shariram"
2. Human body is continuously undergoing wear and tear from birth till death.
3. Sharira Definition: Human body is composed of five basic element, that is, Prithvi(earth), Aap(water), Agni (fire), Vayu (wind/air) , Akasha (space) and Atma (soul).

Rachana Sharira:

In Rachana Sharira (Anatomy), mainly the structures, numbers, position, measurements of different organs are studied. For example bones, muscles, soft organs like liver, kidney, lungs, heart etc are studied in detail.

Anatomy is studied by surface marking, clinical examination and by dissection of the dead body.

In medical practice, anatomy is more specifically useful for surgery or surgery related branches like ENT, Ophthalmology, and Gynaecology as well as in Panchakarma therapy.

Characteristics of Muscle Tissue	Details
Muscle tissue	Connective tissue which is essential for movement of body.
Features of muscle tissue	Contraction and relaxation
Functions of muscle tissue	• **Motion –** Walking, running, respiratory movements, cardiac movements. • **Maintenance of posture –** partial contraction of skeletal muscles maintains posture of body in stationary positions e.g. standing and sitting. • **Heat production –** Due to contraction of skeletal muscle, heat is produced in the body.
Types of muscle tissue	• Skeletal muscle tissue (Striated muscle tissue). • Cardiac muscle tissue. • Visceral muscle tissue (Non Striated muscle tissue). • Functional Division of Muscle Tissue. • Voluntary Muscle (For example: Skeletal muscles). • Involuntary Muscles (For example: Smooth muscles and Cardiac muscles).

Continued...

Characteristics of Muscle Tissue	Details
Functions of Skeletal Muscles	**Support:** Bones of the skeletal system provide structural support to all parts of the human body. **Protection:** Bony structures protect the soft tissues of the body. (For example: Rib cage protects the heart and lungs.) Skull protects the brain. **Movement:** Bones attached to muscles, cause voluntary movements of the various body parts. **Production of blood cells:** Blood cells are produced in the bone marrow (present in the long bones) **Mineral homeostasis:** Bones store Calcium and Phosphorous and release them into the blood stream when needed by the body.

Table 2.1 Details of Muscle Tissue

2.1.2 Parts of the human body

Human body can be mainly divided into 9 (nine) parts by position:

1. Head
2. Neck
3. Chest
4. Abdomen
5. Pelvis
6. Back
7. Hip
8. Extremity
9. Trunk

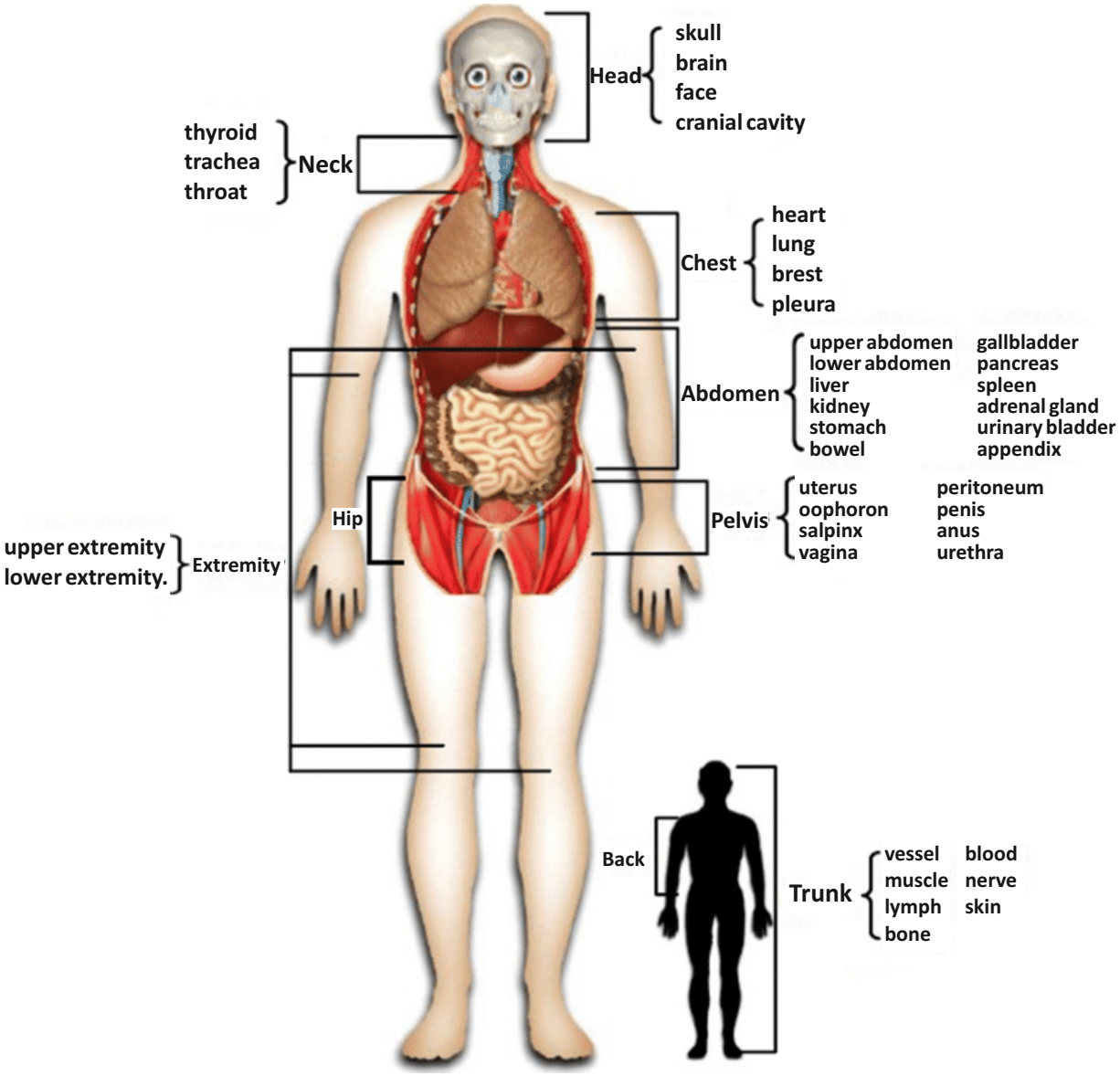


Fig. 2.3 Parts of Human Body (1)

Notes

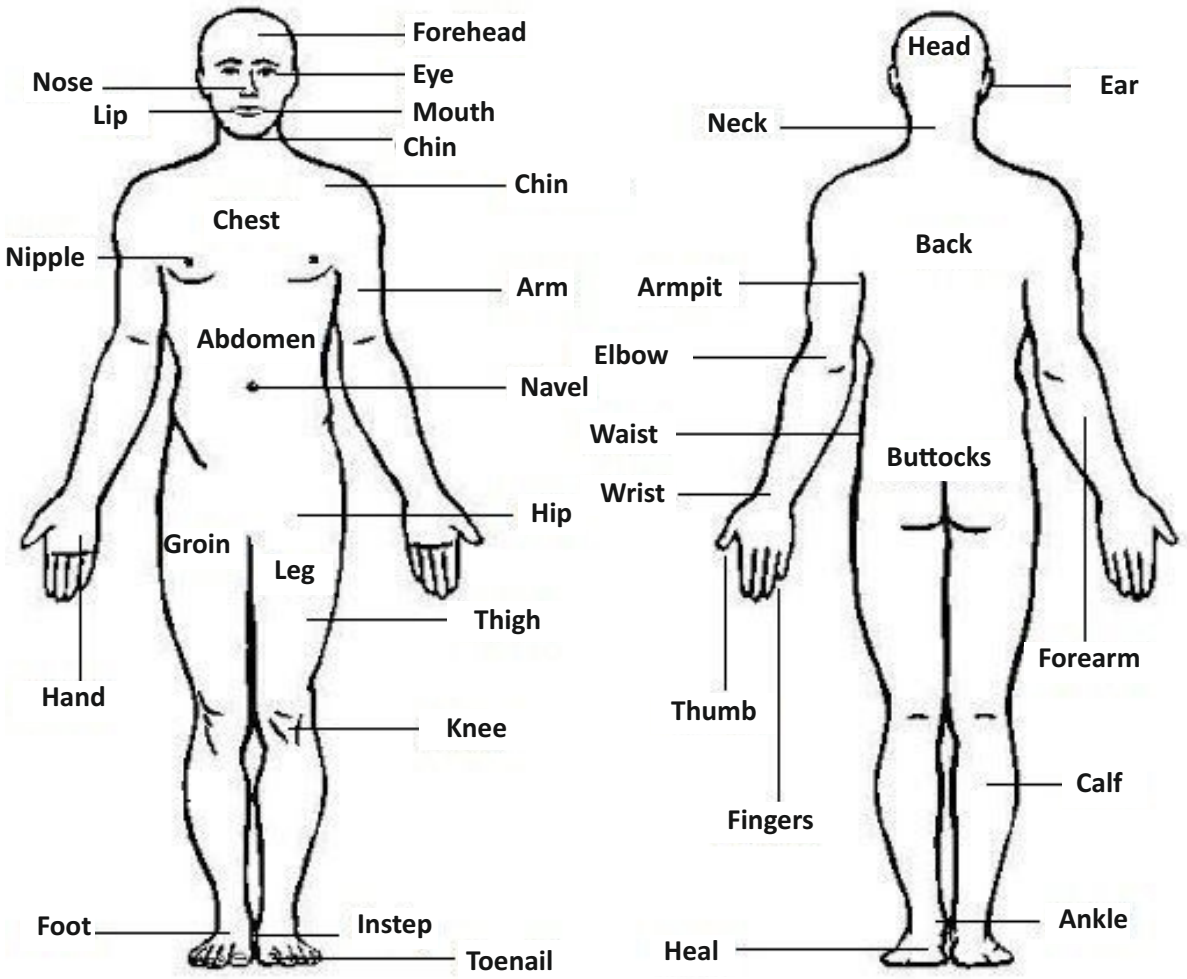


Fig. 2.4 Parts of Human Body (2)

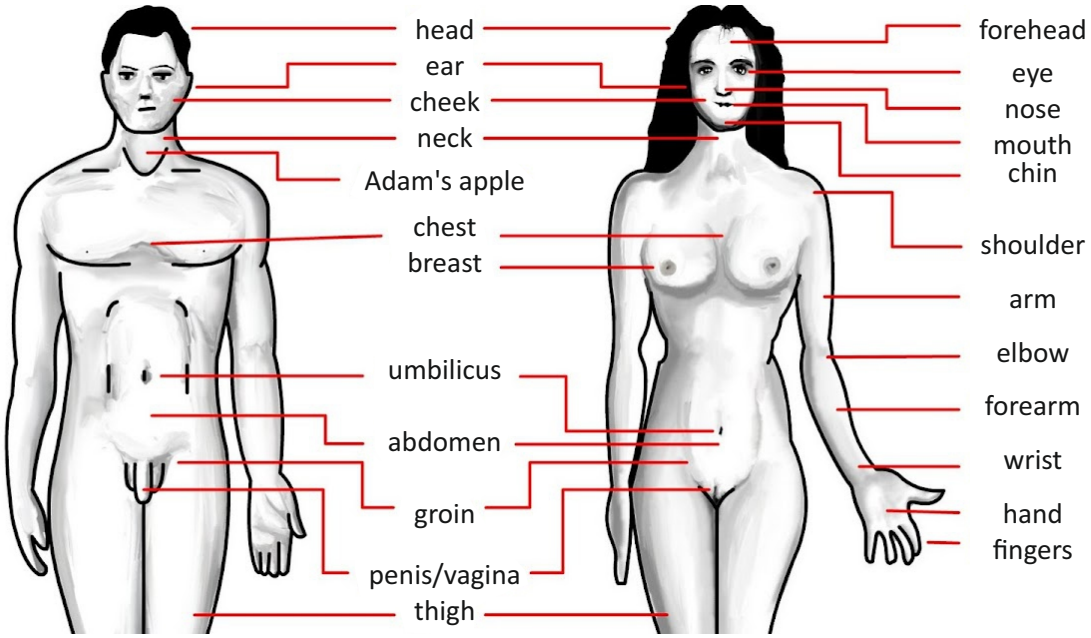


Fig. 2.5 Organs of body

2.1.3 Anatomy and Physiology of the Various Systems of the Body

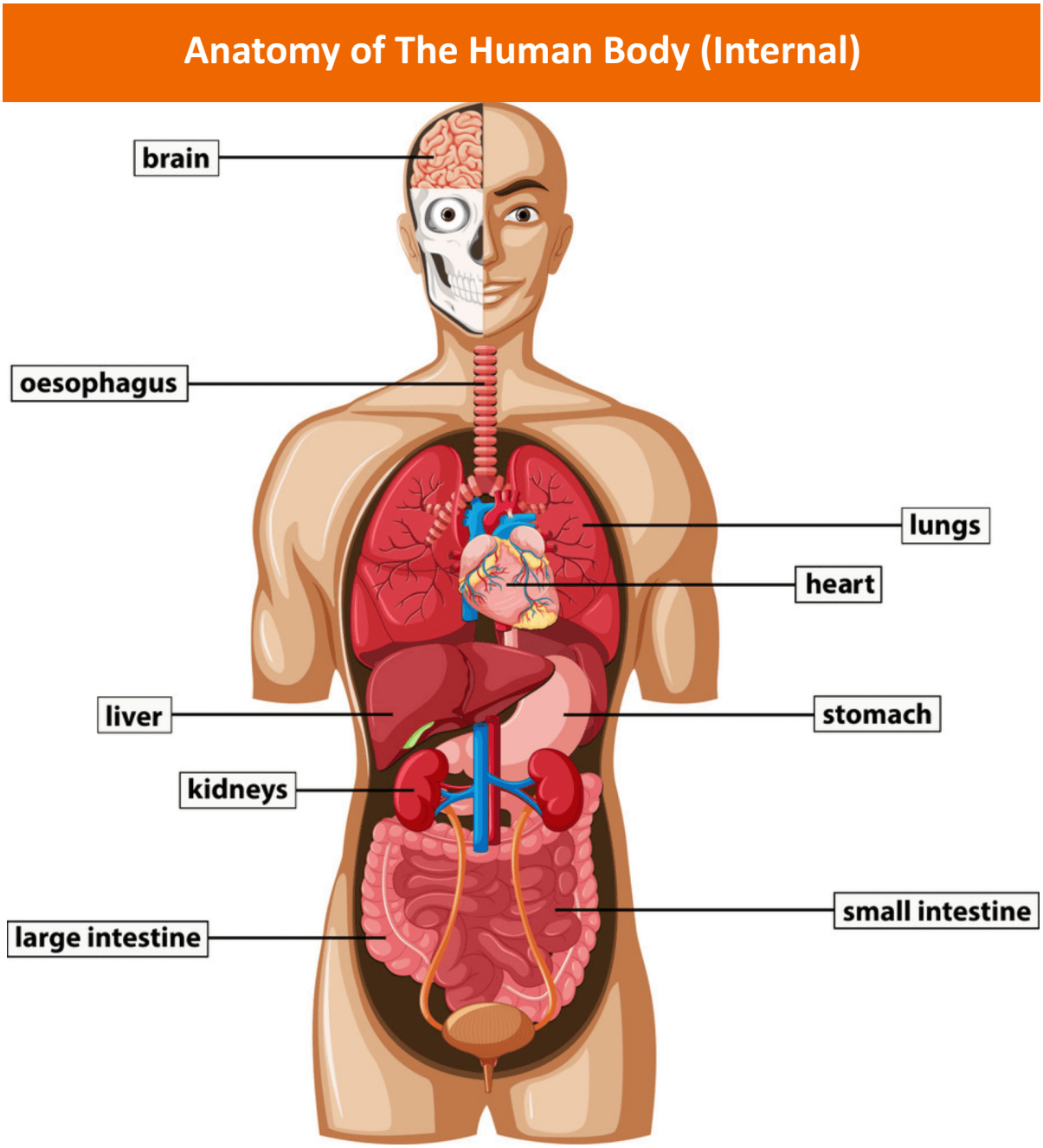


Fig. 2.6 Anatomy of Human Body (Internal)

Concept of Physiology (Kriya Sharira)

- Physiology, is a study of the functioning of living organisms, and of the functioning of their constituent tissues or cells.
- Physiology is a branch of biology that deals with the functions and activities of life or of living matter (such as organs, tissues, or cells) and of the physical and chemical phenomena involved
- The Latin root physio - generally means "physical".
- Human physiology deals with just about everything that keeps us alive and working, and other physiology specialties do the same for other animals and for plants.

Kriya Sharira:

- Kriya means any movement or activities.
- Any movement or activity done for particular time is called as 'pravritti', Kriya or karma.
- There are several meaning of Kriya e.g. treatment, procedures, Shatkriya Kala means six stages of pathogenesis, various actions like utkshepana, apakshepana, akunchana, pRasarana etc. Other actions of the body like speech, psychological functions etc. and direction and speed i.e Gati of Doshas also include in kriya.
- Kriya Sharira deals with functions of all body entities e.g. TriDosha i.e. Vata, Pitita, Kapha, Sapta Dhatu i.e. Rasa, Rakta, Mamsa, Meda, Asthi, Majja and Shukra, TriMala i.e. Purisha, Mutra, Sweda , Ojas, Pancha Gyanendriya, Mana, Atma, Agni, Koshtha, Nidra, Swapna, Prakriti etc.
- Kriya Sharira is also known as Dosha Dhatu Mala Vijnana.
- Dosha means – which vitiates other body entities by vitiating themselves/itself. Dosha are three in number i.e. Vata, Pitta, Kapha. They are again subdivided into five subtypes each.

Vata Dosha	• Prana Vayu, Udana Vayu, Vyana Vayu, Saman Vayu & Apana Vayu.
Pitta Dosha	• Pachaka Pitta, Ranjaka Pitta, Bhrajaka Pitta, Sadhaka Pitta & Alochaka Pitta.
Kapha Dosha	• Kledaka Kapha, Bodhaka Kapha, Avalambaka Kapha, Shleshaka & Tarpaka Kapha
Dhatu (body tissue)	• Dhatu means which holds or supports the human body. There seven Dhatus present in our body. i.e. Rasa Dhatu, Rakta Dhatu, Mamsa Dhatu, Meda Dhatu, Asthi Dhatu, Majja Dhatu, Shukra Dhatu.
Mala	• Mala means waste products. They are three in number. Purisha (faeces), Mutra (Urine) & Sweda (Sweat)

Fig. 2.7 Types of Dosha

2.1.4 Details of Dosha

Functions of Vata Dosha :

Enthusiasm	**Respiration**	**Movement**	**Reflexes/Natural urges**
Ability of sense to grasp respective knowledge	**Pulsation**	**Circulation**	**Carry nutrients**
	Separation of Sara and Kitta	**To hold body**	

Fig . 2.8 Functions of Vata Dosha

Types of Vata Dosha:

- Prana Vayu
- Udana Vayu
- Samana Vayu
- Vyana Vayu
- Apana Vayu

Functions of Pitta Dosha

Digestion	To maintain body temperature	Vision	Hunger/stimulates hunger
Thirst	Taste	Gives luster to the skin	Grasping power
	Courage	Maintains softness of skin	

Fig.2.9 Functions of Pitta Dosha

Types of Pitta Dosha

- Pachaka Pitta
- Ranjaka Pitta
- Bhrajaka Pitta
- Sadhaka Pitta
- Alochaka Pitta

Functions of Kapha Dosha

Sandhi Samshleshana - Gives stability to the bony joints

Snehana - (Lubrication) tissues destruction is avoided

Ropana - Healing function – (Regeneration)

Purana - (To fill empty space) Replacement or filling function

Strength - Gives strength

Stability - due to heavy and stable property Controls movement

Forgiveness - due to soft, unctuous, cool, stable properties reduces irritation and excess stimulation of mind

Fig.2.10 Functions of Kapha Dosha

Types of Kapha Dosha

- Avalambaka Kapha
- Kledaka Kapha
- Bodhaka Kapha
- Tarpaka Kapha
- Shleshaka Kapha

Notes

Rasa Dhatu (Plasma)

Rasa Dhatu (Plasma)	Dhatu/tissue which is being continuously circulated in the body is called as Rasa Dhatu. **Site -** Heart Twenty four Dhamani emerging from heart **Synonyms** • Soumya Dhatu/having cold nature • Ahara PRasad • Dhatu sara • Ahara Teja • Agni Sambhava • Asrikkar
Panchabautika Constitution	Aap/Jala (Water) Mahabhuta predominantly present in Rasa Dhatu
Formation / Metabolism of Rasa Dhatu	Nutrients of Rasa Dhatu from Ahara Rasa ↓ Rasavah srotas (Agni of Rasa Dhatu) ↓ Formation of Nourishment of formation Dhatu Mala ↓ Rasa Dhatu of Poshaka of UpaDhatu Kapha Rakta Dhatu (Twacha/Vasa) Agni of Rasa Dhatu acts on AharaRasa and poshya Rasa Dhatu is formed, along with its upDhatu and Mala are formed.

Rasa Dhatu (Plasma)

Qualities	Rasa Dhatu is Heavy, cold, smooth, oily in nature.
Functions	**Functions:** • Satisfies metabolic urges. • Nourishes body entities. • Growth, Nutrition, Strength. • Rasa Dhatu is responsible for freshening of individual. • Rasa Dhatu is responsible for nutritional status of human being whether person is thin or obese.
Circulation of Rasa Dhatu	• Circulation of Rasa Dhatu is mainly due to Vikshepana function of Vyan Vayu. • It circulates in entire body at a time. • This is a continuous process (Ceaseless) and is done all the time.
Importance of Rasa Dhatu	Sushruta advises to protect Rasa Dhatu by taking nutritious food and proper regimen.

Table 2.2 Details of Rasa Dhatu

Plasma

Plasma	Plasma is the liquid portion of blood. About 55% of our blood is plasma, and the remaining 45% are red blood cells, white blood cells and platelets that are suspended in the plasma. Plasma is about 92% water. It also contains 7% vital proteins such as albumin, gamma globulin and anti-hemophilic factor, and 1% mineral salts, sugars, fats, hormones and vitamins.
Functions of plasma	• Helps maintain blood pressure and volume. • Supplies important proteins required for blood clotting and immunity. • Carries electrolytes (for example, sodium and potassium)to our muscles. • Assists in maintaining a proper pH balance in the body, which supports cell function

Table 2.3 Details of Plasma



Fig 2.11 Anti-Coagulated Blood

Composition of Blood:

Two tubes of EDTA-anti-coagulated blood. The RBCs have settled at the bottom of the left tube, after standing.

Plasma contains molecules that are transported around the body. Items that get dissolved in plasma include:

- Respiratory gases, such as oxygen and carbon dioxide
- Hormones and nutrients such as glucose, amino acids and proteins, lipids and fatty acids, and vitamins

However, most oxygen is hemoglobin bound, and most carbon dioxide is converted to bicarbonate ions in the plasma. Waste products are carried through the plasma during their removal, including urea and ammonia.

Plasma Proteins

The three important proteins in the largest group of solutes in plasma are albumins, globulins, and clotting proteins.

2.1.5 Concept of Six Regions of Sharira (Shadangatvam)

In physiology, we study the functional activities of the body organs e.g. Circulation, respiration etc.

The study of human body can be done in many ways. System-wise study of organs can be done macroscopically and microscopically, as per location of organs.

Shad means 'six', Anga means 'parts'. As per Acharya Charaka Shad Angas are classified as follows:

Urdhwa Shakha (Upper limbs)– 2	Adho Shakaha (Lower limbs) – 2	Shira & Greeva (Head - & Trunk) 1
Antaradhi -1 – middle part of body or trunk comprising of thorax and abdomen.	As per Acharya Sushruta Shad Angas are classified as follows:	Urdhwa Shakha (Upper limbs)-2
Adho Shakaha (Lower limbs) -2	Madhyam Sharira (middle portion of body)- 1	Shira (Head) -1

Fig 2.9 Shad Angas

Importance of Shadanga

Shadanga Sharira, the human body divided into 6 parts namely four limbs, Head (head and neck) and trunk regionally. These Shadangas are individually called Anga. The Angas further divided into smaller units are Pratyanga. “The different parts or members of the body as mentioned before including the skin cannot be correctly described by one who is not well versed in anatomy. Hence, any one desirous of acquiring a thorough knowledge of anatomy should prepare a dead body and carefully, observe, by dissecting it, and examine its different parts.” Sushruta Samhita provide important surgical and anatomical information of the human body under the description of diseases, surgical procedures and all which are of at most important while dealing with patient. Here we review the Shadanga Sharira in modern anatomy. Human body is divided in to major six parts. It is called as Shadanga.

- **Musculo-Skeletal System**
- **Digestive System**
- **Respiratory System**
- **Cardiovascular System**
- **Excretory System**
- **Endocrine System**
- **Reproductive System**

UNIT 2.2 Physiology of Blood and its Components

Unit Objectives

At the end of this unit, the trainee will be able to:

1. Describe the physiology of blood and its components

2.2.1 Blood and its Components

Blood

Blood is a circulating tissue> It is composed of fluid, plasma, and cells. The cellular components of blood are erythrocytes (red blood cells, or RBCs), leukocytes (white blood cells, or WBCs), and thrombocytes (platelets). By volume, the RBCs constitute about 45% of whole blood, the plasma about 54.3%, and white blood cells about 0.7%. Platelets make up less than 1%. Blood is a tissue as it is a type of extracellular matrix.

Blood enables transport of cells and molecules between parts of the body. Oxygen, carbon dioxide, and glucose are among the most vital molecules transported in blood. Blood cells play a crucial role to ensure normal function of metabolic and immune system.

Erythrocytes (RBCs)

Erythrocytes are of seven to eight micrometers in diameter. RBCs contain hemoglobin molecules which bind to oxygen so it can be transported to tissues. Mature RBCs lack a nucleus and organelles and have no nuclear DNA. Different blood types are defined as per the marking of glycoproteins of RBCs and other blood cells. The ratio of RBCs to blood plasma is referred to as the haematocrit, and is normally about 45%. The combined surface area of all red blood cells of the human body would be around 2,000 times greater than the body's exterior surface.

Leukocytes (WBCs)

Leukocytes are usually larger in size (10–14 micrometers in diameter) than red blood cells. They lack hemoglobin but contain organelles, a nucleus, and nuclear DNA. WBCs are the main functional component of the body's immune system. Old or aberrant cells and cellular debris get destroyed by WBCs. They also attack infectious agents (pathogens) and foreign substances. There are several different types of white blood cells: basophils, eosinophils, neutrophils, monocytes, natural killer cells, B- and T-cell lymphocytes, macrophages, and dendritic cells. All of these perform distinct functions.

Thrombocytes (Platelets)

Thrombocytes measure between one to two micrometers in diameter. These membrane-bound cell fragments lack nuclei and are responsible for blood clotting (coagulation). They result from fragmentation of large cells called megakaryocytes, which are derived from stem cells in the bone marrow. Platelets are produced at a rate of 200 billion per day, a process regulated by the hormone thrombopoietin. Platelets contain mitochondrial DNA, but not nuclear DNA.

The sticky surface of platelets allows them to accumulate at the site of broken blood vessels to form a clot. The help in clotting that occurs during endothelial injury to blood vessels. This process is called hemostatis. Platelets secrete factors that increase local platelet aggregation (e.g., thromboxane A), enhance vasoconstriction (e.g., serotonin), and promote blood coagulation (e.g., thromboplastin, fibrinogen). Platelets are critically important for wound healing, which can only occur once the clot forms and bleeding ceases completely.

Physical Characteristics

Blood is a fluid and is a connective tissue. It is an extracellular matrix in which blood cells are suspended in plasma. It normally has a pH of about 7.4 and is slightly denser and more viscous than water. Blood contains red blood cells (RBCs), white blood cells (WBCs), platelets, and other cell fragments, molecules, and debris. Albumin is the main protein found in plasma, and it functions to regulate the colloidal osmotic pressure of blood.

Blood appears red due to the high hemoglobin content, a molecule found in RBCs. In each hemoglobin molecule there are four heme groups that interact with various molecules, which alters the exact color. In oxygenated blood found in arterial circulation, a distinctive red color is created by hemoglobin-bound oxygen.

Deoxygenated blood is a darker shade of red. It is present in veins and can be seen during blood donation or lab tests. Carbon monoxide poisoning causes bright red blood due to the formation of carboxyhemoglobin. In cyanide poisoning, venous blood remains oxygenated, increasing the redness. Under normal conditions, blood can never truly be blue, although most visible veins appear blue because only blue light can penetrate deeply enough to illuminate veins beneath the skin.

Blood Volume

Blood generally accounts for 8% of the human body weight. The average adult has a blood volume of roughly five litres (1.3 gal). By volume, red blood cells constitute about 45% of whole blood, plasma about 54.3%, and white cells about 0.7%, with platelets making up less than 1%.

Functions of Blood

- Supplying oxygen to cells and tissues
- Providing essential nutrients, such as amino acids, fatty acids, and glucose, to cells
- Removing waste materials such as carbon dioxide, urea, and lactic acid
- Protecting the body from diseases, infections, and foreign bodies through white blood cells
- Regulating body temperature

Notes



Summary

- Human anatomy is the study of the structures of the human body. The word “anatomy” comes from the Greek words “ana,” meaning “up,” and “tome,” meaning “a cutting.” Traditionally, studies of anatomy have involved cutting up, or dissecting, organisms.
- In Rachana Sharira (Anatomy), mainly the structures, numbers, position, measurements of different organs are studied. For example, bones, muscles, soft organs like liver, kidney, lungs, heart etc are studied in detail.
- Physiology, is a study of the functioning of living organisms, and of the functioning of their constituent tissues or cells.
- Shadanga Sharira, the human body is divided into 6 parts namely four limbs, Head (head and neck) and trunk regionally. These Shadangas are individually called Anga. The Angas further divided into smaller units are Pratyanga.
- Plasma is the liquid portion of blood. About 55% of our blood is plasma, and the remaining 45% are red blood cells, white blood cells and platelets that are suspended in the plasma.
- Blood is a circulating tissue. It is composed of fluid, plasma, and cells.
- The cellular components of blood are erythrocytes (red blood cells, or RBCs), leukocytes (white blood cells, or WBCs), and thrombocytes (platelets).
- Blood generally accounts for 8% of the human body weight. The average adult has a blood volume of roughly five liters (1.3 gal). By volume, red blood cells constitute about 45% of whole blood, plasma about 54.3%, and white cells about 0.7%, with platelets making up less than 1%.

Notes

Exercise

Answer the following questions.

1. What are the different types of Vayu?

2. Name the different types of Dosha.

3. What are the three important plasma proteins?

4. What are the smaller units of Anga called?

5. What are the components of blood?

6. Mention four functions of blood.

7. What is plasma?

8. What are the functions of plasma?



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3. Ayurveda and its Fundamental Principles

Unit 3.1 An overview of Ayurveda

Unit 3.2 Concept of Mind, Body and Soul

Unit 3.3 Panchakarma Therapy

Unit 3.4 Guna and its Importance

Unit 3.5 Tridosha, Sapta, Dhatu (Body Elements), Mala (Waste Products), Koshta (Alimentary Tract)

Unit 3.6 Concepts of:Prakriti, Dharniya, Adharaniyavegas, Aadharneeya, Srotas, Aatma and Agni



HSS/N3602

Key Learning Outcomes

At the end of this module, the trainee will be able to:

1. Explain the concept of Ayurveda
2. Discuss in brief the concept of mind, body and soul
3. Explain the importance of panchakarma therapy
4. Explain the importance of Deepana dravya and Pachana helps in the treatment of indigestion or indigested food
5. Explain the concept of Tridosha, Sapta, Dhatu (body elements), Mala (waste products), Koshta (alimentary tract)
6. Explain the concept of Prakruti (body constitution)
7. Explain the concepts of Dharniya (nonsuppressive urges) and Aadharaniyavegas (suppressive urges)
8. Discuss the concept of Srotas (body channels)
9. Explain the concept of Ama and Agni
10. Explain the importance and application of ayurvedic therapies “Shadupakramas (Brimhana, Langhana, Svedana, Stambhana, Rukshna, Snehna), Rasayana, Vajikarana, Samshamna, Samsodhana, Pathya - Apathya”
11. Explain the concept of ayurvedic pharmacology knowledge of Rasa, Guna Karma, Virya, Vipaka and Prabhava of Dravya
12. Explain about the different oils use in medicinal therapy

UNIT 3.1 An Overview of Ayurveda

Unit Objectives

At the end of this unit, the trainee will be able to:

1. Explain the concept of Ayurveda
2. Explain the importance and application of ayurvedic therapies “Shadupakramas (Brimhana, Langhana, Svedana, Stambhana, Rukshna, Senhana), Rasayana, Vajikarana, Samsamana, Samsodhana, Pathya - Apathya”
3. Explain about the different oils used in medicinal therapy

3.1.1 Ayurveda

Ayurveda is an ancient medicine system of India. It is said to have originated in India about 5000 years back. The word Ayurveda is a union of two Sanskrit words 'Ayu' and 'Veda'. “Ayu” means life and “Veda” means science, so Ayurveda means since of life.



Fig. 3.1 Ayurveda

UNIT 3.2 Concept of Mind, Body and Soul

Unit Objectives

At the end of this unit, the trainee will be able to:

1. Discuss in brief the concept of mind, body and soul

3.2.1 Homeostasis

Homeostasis in a general sense refers to stability, balance or equilibrium. It is the body's attempt to maintain a constant internal environment. Maintaining a stable internal environment requires constant monitoring and adjustments as conditions change. This adjusting of physiological systems within the body is called homeostatic regulation.

Homeostatic regulation involves three parts or mechanisms:

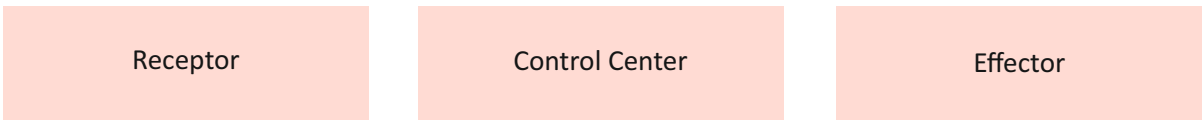


Fig 3.1 Three parts of homeostatic regulation

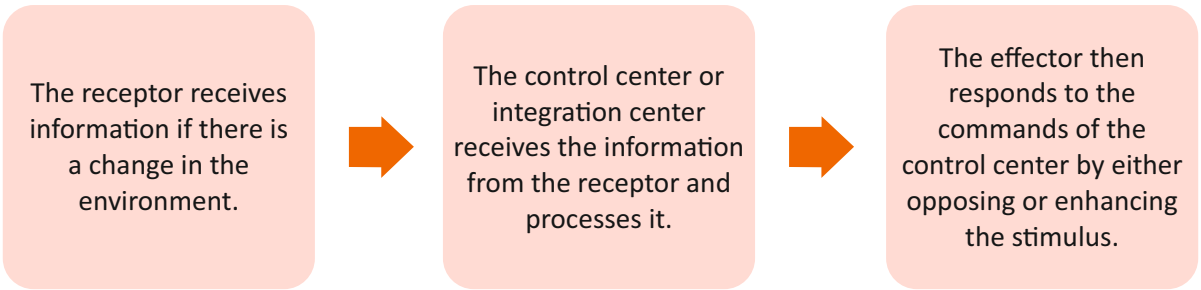


Fig 3.2 Homeostatis Process

This process works continually to restore and maintain homeostasis. For example, temperature receptors in the skin, regulates body temperature. They communicate information to the brain, which is the control center, and the effector is our blood vessels and sweat glands in our brain. Due to the constant changes in the internal and external environment of the body and as adjustments must be made continuously to stay at or near the set point, homeostasis can be considered as a synthetic equilibrium.

3.2.2 Positive and Negative Feedback

When a change of variable occurs, the system reacts to two main types of feedback:

Negative Feedback

Negative feedback is the type of reaction in which the system responds to reverse the direction of change. Since this tends to keep things constant, it allows the maintenance of homeostasis. For instance, when the concentration of carbon dioxide in the human body increases, the lungs are signalled to increase their activity and expel more carbon dioxide.

Thermoregulation is another example of negative feedback. With a rise or fall in the body temperature, receptors in the skin and the hypothalamus sense a change. They trigger a command from the brain. This command, in turn, leads to the correct response.

Positive Feedback

Positive feedback is known as a positive response or a self-reinforcing response to external or internal input. In this case, the effector boosts up the stimulus. This in turn, enhances the product formation for maintaining body stability. Positive feedback promotes a change in the physiological state instead of reversing it.

Fig 3.3 Types of Feedback

Examples:

- At the time of baby birth, the walls of the uterus gets dilated. This causes a contraction that encourages further stretching. This continues until birth.
- When fruits ripen, ethylene is released, which will help to continue the ripening process of fruits.

Homeostasis in Ayurveda

An individual is said to be Swastha whose Dosha, Agni, Dhathu and Mala are in the state of equilibrium along with mind, soul, senses full of bliss, is called a healthy person. It is said “Rogasthu Dosha Vaishamyam Dosha Samyam Arogatha” meaning, if Doshas are not in a state of normalcy, there will be a disturbance in health and otherwise it is health. The meaning of Dhatu can be taken as those which sustain the body. With this understanding, all three viz., Dosha, Dhatu and Mala can be considered under Dhatu. Hence, it can be said that equilibrium state of Dhatus is essential for the maintenance of health and prevention of diseases. It depends on various factors related to food, regimens and activities.

When Dosha, Dhatu, Mala, and Agni can perform their works without any difficulty and, along with that, the soul, sense organs, and mind are also in a pleasant condition then the person may be considered as 'Swastha', that is, healthy.

Amongst all the classics, Acharya Charaka has narrated the traits of a 'Swastha' (Healthy) person in a comprehensive and sensible manner. He has narrated Dhatusamya as 'Karya' which is one of the 10 aspects to be investigated for better development of intellect. Here, 'Karya' means balanced state of all body components. This is characterized by Vikaropashama (subsidence of disease). It may be ensured by Rugupashamana (subsidence of pain), Swaravarnayoga (having original quality of voice and complexion), Shareeropachaya (appropriate nourishment of the body) , etc. characteristics. This is one of the best descriptions defining Health. It includes almost all the linked aspects and levels, that is, physical, sensorial, psychological and spiritual levels of Health. Hence, these features have been accepted as the characteristics of a healthy person.

Notes



UNIT 3.3 Panchakarma Therapy

Unit Objectives

At the end of this unit, the trainee will be able to:

1. Explain the importance of Panchakarma therapy

3.3.1 Panchakarma

Panchakarma is a method of cleansing the body of all the unwanted waste after lubricating it. Panchakarma are 5 (five) in number; hence the term PANCHA (five) – KARMA (procedures). Panchakarma treatment is considered unique because it includes preventive, curative and promotive actions for various diseases.

Five Karmas

The body can be divided on the basis of the parts that need cleansing. Head, GIT (gastro- intestinal system), upper and lower.

The five main Karmas to cleanse the complete body are :

Vamanam (therapeutic emesis) - Induced vomiting helps clear the upper gastro till the duodenum (end of stomach) and part of the respiratory tract.

Virechanam (purgation) - Induced purgation clears the lower gastro from the duodenum (end of stomach) till the exit.

Anuvasana (enema using medicated oil) - Oil enema helps lubricate the rectal area and take out all the lipid soluble waste out through the anus.

Nasyam - Nasal instillation of medicated substances helps clear the respiratory tract and para-nasal sinuses.

Astapana Vasti (Therapeutic Decoction Enema) - Decoction enema cleanses the area from the transverse colon till the anus.

Fig 3.3 Five Karmas

UNIT 3.4 Concept of Guna, Karma, Virya, etc.

Unit Objectives

At the end of this unit, the trainee will be able to:

1. Explain the concept of ayurvedic pharmacology knowledge of Rasa, Guna, Karma, Virya, Vipaka and Prabhava of Dravya

3.4.1 Guna

Etymology and Meanings:

- The word Guna (attribute) is derived from the root "Guna" which means to invite.
- Etymology of this word is given as the features of Dravya (Substance) by which one gets attracted or invited towards.
- Gunas are considered as real entities or ultimate and irreducible subtle substance.
- Although they do not have their own independent existence.
- All things in the world (Mental processes as well as material things) are manifestations of Gunas but the Gunas themselves are not available for secondary apprehension. Only Prajna (intellect) reveals the real nature of Gunas.

Definition of Guna

Guna is that which is located in Dravya (Substance) inherently, is causative agent and devoid of properties and action.

Meaning of Guna:

- Quality
- Property
- Secondary strands of the rope, Thread, Bow String,
- Deliberation
- Merit
- Sense organ etc.
- To change the state of Dravya (substance), it is required to modify the property or energy of that particular Dravya, which is called as Guṇa.

Number of Gunas

- Gurvadi Guna (physic-pharmalogical) - 20
- Paradi Guna (para-pharmacological) - 10
- Sartha Guna (specific) - 05
- Atma Guna (psychological) - 06

Total - 41

Bhautika Guna (Gurvadi Guna)

- Guru (Heaviness) - Laghu (Lightness)
- Sheeta (Cold) - Ushna (Hot)
- Snigdha (Unctuous) - Rooksha (Dry)
- Manda (Dullness) - Tikshna (Sharpness)
- Sthira (Stable) - Sara (Mobile)
- Mridu (Smooth) - Kathina (Hard)
- Vishada (Clean) - Pichchila (Sliminess)
- Shlakshna (Smooth) - Khara (Roughness)
- Sukshma (Subtle) - Sthoola (Gross)
- Sandra (solidity) - Drava (Liquidity)

Shartha/Indriya Guna

- Shabda - (Sound)
- Sparsha - (Touch)
- Rupa - (Vision)
- Rasa - (Taste)
- Gandha - (Smell)

Notes

Gurvadi Guna/ Physical Attributes

Guna	Functions
Guru **(Heavy)**	• Controls all the body movements. • **Example:** Mangoes, Buffalo Milk, Chicken
Laghu **(Lightness)**	• Movement, improves digestion and activeness, providing inspiration • **Example:** Butter, Lemon, Green gram
Sheeta **(Cold)**	• It controls movement, It is responsible for contraction, It induces vaso constriction. • **Examples:** Coconut Water, Wheat, Coral
Ushna **(Hotness)**	• It plays major role in digestion, It controls body temperature , It gives complexion. • **Examples:** Curd, Almond, Mustard
Unctuous **(Oiliness)**	• It preserves moisture of body, provides smoothness, increase activity of organs. • **Examples:** Cow's ghee, Oil, Garlic
Ruksha **(Dryness)**	• It absorbs *Ahara Rasa* (Chyme), Separation of solid and liquid *Mala*, controls unctuousness in *Dhatu*. • **Examples:** Red lentil, Honey, Areca nut
Manda **(Dullness)**	• Gives Stability, Nourishes *Dhatus*, Makes the drug to travel through the body for a long time**.** • **Example:** Curd
Tikshna **(Sharpness)**	• It helps in digestion, Absorption of Dhatus takes place due to Tikshna Guna. • Secretions are secreted due to Tikshna Guna. It causes Burning in body. • **Examples:** Alcohol, Black paper
Sthira **(Stable)**	• Controls movement, Responsible for movement and stability of body. • **Examples:** *Babbul* (Acacia Arabica), Nutmeg
Sara **(Mobility)**	• Removal of waste products, Excretes *Mala*. • **Examples:** Buttermilk, Grapes

Continued...

Gurvadi Guna/ Physical Attributes

Guna	Functions
***Mridu* (Softness)**	• Loosens internally, Gives softness to body • **Examples:** Milk
***Kathina* (hardness)**	• To strengthen the body, gives compactness to tissues, increases stability. • **Example:** Meat
Sliminess	• Gives Sliminess (e.g. To mucous layer of organ), Protective action. • **Examples:** Tamarind, Sesame
Clearness	• To absorb moisture, Provides clear state to tissues. • **Examples :** Barley, Honey, River water
***Shlakshna* (Smoothness)**	• It provides smoothness, responsible for repairing of tissues (wound healing), provides nourishment to tissues, Causes expulsion of waste. • **Examples:** Diamond, Pearl, Cuttlefish bone – used after *Maarana* procedure in herbomineral drugs
Roughness	• Promotes fat reduction and catabolism, reduction of the tissue mass, Reduces quantity of waste products. • **Examples:** Pongamia glabra, Indian Beech
Sushma (small, minute)	• Facilitation of entry to very small structures, Reduces tissue mass, Reduces quantity of waste products. • **Examples:** Salt, Ice, Pyrite
***Sthula* (Large)**	• It nourishes and strengthens the body, causes obstruction to the channels, increases tissue weight, increases quantity of excreta.
***Sandra* (semisolid/ viscous) being dense, formed, firm**	• To give moisture , Sense of gratification, Causes obstruction (relative) to the channels , Nourishment, Increases tissue weight and their functions, Solidifies (relatively) excreta • **Example:** Butter
***Drava* (Liquid)**	• Produces moistness, gives nourishment to tissues, Improvement in *Dhatus*/ tissues which are predominantly in fluid form such as *Rasa*, *Rakta*. Increases quantity of excreta • **Examples:** Milk, Water

Table 3.1 Details of Gunas

3.4.2 Importance of Gunas (Atributes) in Kriya Sharir (Ayurvedic Physiology)

- Gurvadi Gunas are also known as Dwandva Guna. The word Dwandva means a group of two or a pair.
- The pair possesses the qualities which are against each other.
- For example the drugs and diet having heavy attributes provide and increase the heaviness of the tissues and the body.
- To counteract this effect foods and medicines having light/Laghu attributes are prescribed to decrease the symptoms of the heaviness produced due to heavy attributes.
- These 20 attributes are commonly available in body tissues and Doshas so they are also called as Sharir Guna.
- These are found also in drugs and food articles which are useful in eradicating the disease and to maintain body and health.
- Any food / medicine which increases a particular Dhatu or other element is also responsible for the decrease of the Dhatu or other element of opposite attributes, in general.
- Butter increases Kapha – decreases Vata.
- Gunas are very essential to know the functions of Dosha – Dhatu and Mala (It explains - 'how' about their function).
- For example – Function of Vata Dosha movement is due its laghu attribute.
- Ahariya Dravyas i.e. food articles are also classified according to Gurvadi Gunas.
- One can give advice to patient or healthy person for diet as per Prakriti. Generally dietary regimen and daily regimen (Daily routine) of opposite property is advised.
- In condition of Dhatukshaya (qualitative or quantitative tissue loss) one can advise diet and medicines having similar attribute to that particular Dhatu. For example in Rasa Dhatu kshaya we can advise plenty of water or various fruit juices as they are liquid, which is similar in nature to the Rasa Dhatu (Drava)
- In the management of disease we have to think of the properties of that particular drug.

For example – Marich (Piper Nigrum/Black pepper) is hot in nature as well as Tikshna i.e. Sharp/tissue penetrating that is why it can be used in the patients of Kapha Vriddhi (increase) because Kapha is sheet (Cold). Thus Ushna Guna of Black pepper pacifies the increased Kapha Dosha.

UNIT 3.5 Tridosha, Sapta, Dhatu (Body Elements), Mala (Waste Products), Koshta (Alimentary Tract)

Unit Objectives

At the end of this unit, the trainee will be able to:

1. Explain the concept of Tridosha, Sapta, Dhatu (body elements), Mala (waste products), Koshta (alimentary tract)

3.5.1 Deepana-Pachana

Mamsa Dhatu

Third Dhatu formed and nourished by Ahara rasa.

Synonyms:

- Pishita
- Taras
- Palala
- Kravya
- Amisha
- Raktabhava
- Raktateja
- Medaskrit
- Kashyapa

Constitution of Mamsa Dhatu

Mamsa Dhatu predominantly consists of Prithvi (Earth) Mahabhuta

Site of Mamsa Dhatu

- Mamsa vaha Srotas
- Metabolism of Mamsa Dhatu
- Formation of Mamsa Dhatu

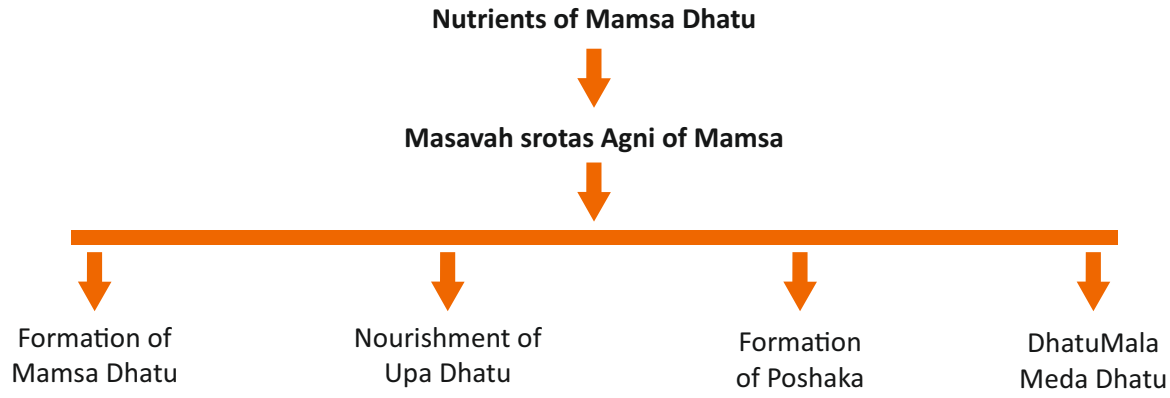


Fig 3.5 Constitution of Mamsa Dhatu

Formation of Mamsa Dhatu

Agni of Mamsa Dhatu acts on Poshaka Mamsa Dhatu and Poshya Mamsa Dhatu is formed, along with it Updhatu and Mala are formed.

Vayu + Ambu + Agni – Rakta Dhatu

Qualities:

- Mamsa Dhatu is slightly cold, heavy and unctuous.
- Functions of Mamsa Dhatu
- Lepana is the most important function
- Nourishment of Medo Dhatu.
- Formation of Peshi in the intra uterine life.
- Fatigue of eye muscles, emaciation of cheeks, buttocks, pain in joints (arthralgia)

Rakta Dhatu:

Rakta is second Dhatu which is being formed and nourished in the human body

Etymology of word Rakta:

Means which gives color to Rasa Dhatu, if white cloth is stained with Rakta, it becomes red in color.

Synonyms of Rakta:

- Rudhira
- Shonita
- Asrika
- Lohita

These are synonyms of Rakta having same meaning i.e red in color

Kshataja means body fluid which oozes from the wound or the injury

Sites of Rakta Dhatu :

Raktavaha srotas, Rakta dhara kala, Raktashaya, hridaya and Raktavaha sira are sites of Rakta Dhatu.

Formation and metabolism of Rakta Dhatu takes place at the moolastahna i.e. roots of the Rakta vaha srotas.

Raktavaha srotas

This statement is given by Acharya Sushruta , which means Yakrit, Pleeha and blood vessels are roots of Raktavaha srotas. But Acharya Charaka added Shonitvaha srotas along with liver and spleen as roots of Rakta vaha srotas.

According to Ayurveda Rakta Dhatu is formed in Pleeha (spleen) and Yakrit (liver). Metabolism of Rakta Dhatu takes place at roots of Raktavaha srotas.

Panchabhautik Constitution of Rakta Dhatu

Rakta consists of Teja Mahabhuta i.e fire element and Jala Mahabhuta i.e water element predominantly. Acharya Sushruta described panchabhautik nature of Rakta Dhatu in 15th chapter of Sutrasthana. Acharya Sushruta stated that Rakta Dhatu is Panchabautik in nature, consists of five Mahabhutas. Further he has mentioned that Rakta is having Visra means fleshy smell, it is fluid , It is red in color, Pulsations are also there in Rakta, and it is light in nature that's why it can easily flow.

Here Acharya Sushruta described qualities of Rakta as per Mahabhuata- smell is a quality of Prithvi Mahabhuta (Earth element), Fluidity is a nature of Jala Mahabhuta, giving color to something or transformation of one form in to another is a characteristic of Agni Mahabhuta, Vayu causes any movement that's why pulsations are due to presence of Vayu Mahabhuta and Lightness is property of Aakash Mahabhuta, so that Rakta can reach everywhere or at smaller structures in the body.

Formation of Rakta Dhatu

During digestion, food is converted in to Ahara Rasa by the action of Jatharagni. Absorption of Ahara Rasa takes place by Vyanvayu, Rasa is formed in the Rasavaha srotas from Ahara Rasa by the action of Rasa Dhatvagni. This Rasa enters circulation. When this Rasa enters liver and spleen, it is converted in to red colored Dhatu due action of Ranjak Pitta (Raktagni) and forms Rakta Dhatu.

Anabolism means formation of new substances and catabolism means destruction of cells these processes are continuously going in human body.

According to Acharya Charaka formation of Dhatu takes place in a sequence. Previous Dhatu gets converted in to next one. According to this principle Rasa Dhatu gets converted in to Rakta Dhatu at sites of Raktavaha srotas i.e in liver and spleen. Though Rasa possess no color, Agni/ fire present in Dhatuvaha srotas acts on colorless Rasa due its hot property Rasa converted in to red colored Rakta Dhatu. There is partial conversion of Rasa Dhatu in to Rakta Dhatu. Only homologus part of Rakta Dhatu gets converted in to Rakta. And remaining part of Rasa Dhatu nourishes body or does its function of gratification, it is called Sthayi Rasa Dhatu or Poshya Rasa Dhatu. Which is precursor of Rakta Dhatu is called as Asthyai Rakta Dhatu or Poshak Rasa Dhatu.

Factors involved in the formation of the Rakta Dhatu are

Panchbhautik Ahara, Samagni or balanced digestive fire, Ranjaka Pitta (Rakta Dhatu Agni)

Colour of Rakta –regarding color of Rakta Acharya Charaka stated that

Color of Rakta resembles with:

- Heated Gold
- Red colored cochineal insect
- Red colored lotus
- Abrus precatorius (Crab's eye)

Guna of Rakta Dhatu:

Rakta is red in color, warm in nature, having sweet and slight salty taste. Rakta is unctuous, Heavy, It has fleshy smell. Abnormal Rakta causes burning sensations.

Functions:

- To give life to the human being is the main function of Rakta Dhatu.
- Rakta carries blood and provides oxygen to every cell.
- Rakta Dhatu gives complexion and it nourishes Mamsa Dhatu.
- Rakta Dhatu carries Prana vayu to every Dhatu/ tissue and every cell of human body.
- Touch sensation is due to proper circulation of Rakta Dhatu.
- Rakta brings luster to color of skin. It nourishes Mamsa Dhatu.
- To keep individual alive is main function of Rakta Dhatu.

Importance of Rakta Dhatu:

Acharya Sushruta while describing importance of Rakta quoted that Rakta Dhatu is extremely important for sustenance of life. It is root of life and thereefore this Dhatu should be protected by every possible measure.

Characteristics of Vishuddha Rakta person:

When Rakta Dhatu is at optimum level person looks cheerful, healthy complexion is there, skin is glowing and fresh, sense organs are active, proper inclination of sense organs towards their subjects, digestion is regular and good, positive attitude is there are unobstructed natural urges and healthy nourishment of body is seen.

Notes



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UNIT 3.6 Concepts of Prakriti, Dharniya, Adharaniyavegas, Aadharneeya, Srotas, Aatma and Agni

Unit Objectives

At the end of this unit, the trainee will be able to:

Explain the concept of :

- Prakruti (body constitution)
- Dharniya (non suppressive urges)
- Aadharaniyavegas (suppressive urges)
- Srotas (body channels)
- Aatma and Agni

3.6.1 Prakrithi

Pra + krithi

Pra - beginning

Krithi - to form

So prakrithi=natural / original form

- Prakrithim ithi swabhavam'
- 'Sukra arthavasthair janmaadou vishenaiva visha krime...
- 'Sukra sonitha samyoge yo bhaveth dosha uthkadah prakrithih jayathe...

Prakrithi determined by doshas in sukra and arthava at fertilisation itself. It is a non pathological doshik status inherent in individual from being to death and is determined by maternal and paternal activities.

Classification

- Deha prakrithi – 7
- Manasa prakriti – 3

Deha Prakriti

1. Vataja - Heena
2. Pittaja - Madhyama
3. Kaphaja - Uthama
4. Vata – pittaja
5. Vata – kaphaja
6. Pitta – kaphaja

} All three are nindya

7. Sama doshaja – Sreshta

Manasa Prakriti

1. Satvika – 7
2. Rajasa – 6
3. Tamasa – 3

Features of Different Prakriti

	Vata	Pitta	Kapha
Body	Tall and thin, Rooksha, Seetha, Prominent siras	Moderate built, Ushna sparsha, More warts, moles and pigmented patches	Stout, well nourished, Snigdha, mandoshma sparsha
Skin	Ruksha, Sphutitha, Khara, Dhoosara (Brownish black)	Goura or Tamra, Ati mrudu	Svetha, Mrudu
Body Hair	Alpa, parusha, ruksha, dhoosara	Madhyama quantity, Mrudu, Tamra	Bahu, smooth, snigdha, black
Scalp Hair	Curved or wavy	Baldness	Firm, curved or wavy
Head	Small	Moderate	Big
Forehead	Small	With folds	Big
Eye Brow	Small, thin	Moderate	Thick with plenty of hairs
Eye lashes	Scarce, dry, firm	Scarce, thin	Plenty, firm, snigdha
Eyes	Small, unpleasant like dirt, unsteady gaze, brownish black	Moderate size, pingala or tamra, unsteady gaze, quickly become red	Wide, White and black clearly visible, likes cold, raktantha, pleasant, steady gaze
Nose	Small	Moderate	Big
Lips	Brownish black, dry, small and thin	Moderate sized, Tamra varna	Big, thick, smooth, glossy
Tongue	Fissured	Red	Moist
Joints	Unsteady, produces sound on movement	Sithila	Strong and firm

Continued...

	Vata	Pitta	Kapha
Actions	Unsteady and quick	Moderate	Steady walk and slow
Mala and Muthra	Less Constipated	Copious Watery	Moderate Khana
Bala	Less Tires quickly	Moderate Klesa asaha	Strong Klesa saha
Body Smell	Nill Less sweat	Puthigandha Excess sweat	Pleasant Less sweat
Voice	Feeble,Broken,Hoarse	High pitched	Pleasant, Gambhira
Speech	Quick, Inconsistent, Talkative	Moderate	Slow and Definite
Food and Drinks	Less quantity, Irregular/Poor appetite, Likes Snigdha, Ushna, Madhura, Amla and Lavana, Dislikes Seetha	Excessive quantity, Too much appetite, Likes madhura, Tikta, Kashaya and Seetha, Dislikes Ushna	Less quantity, Poor appetite, Likes katu, Kashaya, Ushna and Rooksha, Dislikes Madhura
Vihara	Likes roaming, journey, jokes, quarreling, music, dance etc.	Likes cosmetics and scents	Likes cosmetics
Mental Temperaments and Behaviour	Quick grasping, quick forgetting, poor memory, unsteady mind, quick in passion, quick in emotion, coward, sorrowful, stealing habit, jealous, ungrateful, no controll over senses, poor wealth and resource, few friends, less adventurous	Moderate grasping, Intelligent, scholar, quick anger, quick in getting out of anger, brave, cruel towards disobedience and sweet towards obedience, helping mentality, good conduct, highly envious, undefeatable in assemblies.	Slow grasping, good memory, good insight and forethought, scholar, steady mind, courageous, good knowledge of science, faithful, very little anger, fewer desires, calm and righteous, civilized, grateful, truthfulness, wealthy, many friends.

Continued...

	Vata	Pitta	Kapha
Sleep	Less	Moderate	Sound
Dreams	Akasa gamana	Kanaka, Palasa, Karnikara, Lighting etc.	Ponds with flowers and Swans
Libido	Sukra – less, Poor sexual capacity, Few children	Sukra – less, Poor sexual capacity, Few children	Sukra – prabhuta, Great sexual capacity, More children
Lifespan	Short	Moderate	Long

Table 3.2 Features of Different Prakrit

Vegadharana

Vega means "natural urge" and Dharana means "suppression". Therefore, Vegadharana means forceful suppression of natural urges.

There are two types of vega (natural urges).

1. Adharaneeya vegas
2. Dharaneeya vegas

3.6.2 Adharaneeya Vegas

These are the vegas which should not be suppressed by a person. Suppression of these urges will result in various diseases.

Types:

According to Charaka samihta and Susrutha samihta – 13

According to Ashtanga Hridaya – 14

They are:

	Charaka samihta and Susrutha samihta	Ashtanga Hridaya
1	Adho vata	Adho vata
2	Sakrut	Sakrut
3	Mutra	Mutra
4	Udgara	Udgara

Continued...

	Charaka samihta and Susrutha samihta	Ashtanga Hridaya
5	Kshavathu	Kshavathu
6	Trishna	Trishna
7	Kshut	Kshut
8	Nidra	Nidra
9	Sramasvasa/Svasa(Su.)	Sramasvasa/Svasa(Su.)
10	Jrimbha	Jrimbha
11	Chardi	Chardi
12	Sukra	Sukra
13	Bashpa	Bashpa
14	---	Kasa

Table 3.3 Types of Adharaneeya Vegas

Diseases Caused by Supression of Adharaneeya Vegas

VEGAS	DISEASES
Adho vata	Adhovata Vegadharana leads to Purisha Sanga – obstruction of stool, Mutra Sanga – obstruction of the urine, Vata Sanga – obstruction of the flatus, Adhmana – distention of abdomen, Klama - exhaustion, jathara ruja, udara vikaras, gulma – abdominal tumor, Udavarta – upward movement of Vata, Ruk – pain in abdomen, Drushti Vata – blurring of vision, Agni Vata – loss of digestive power, Hrd Gadaha – disease of heart.
Sakrut/Pureesha	Pindikodveshtana (cramp in calf muscle), pratisyaya (running nose), Shiro ruja (Headache), Urdhwa vayu (Upward movement of vata), Parikartika (Cutting pain in anal region, mukhena vit pravrtti - foul breath, feces vomiting, hrudayasya uparodana – stiffening feeling in chest region.
Mutra	Suppression of Mutra Vega leads to , Angabhanga - body pain, Mutra Ashmari - urinary calculi, pain at Basti and Medra - urinary bladder and phallus, Shiro Ruja - headache, Vinama - bending of the body, Anaha in Vangshana Pradhesh - distention in groin, Mutra Krucha - difficulty in micturition

Continued...

VEGAS	DISEASES
Shukra	Shukra Vega Dharana leads to Medhra Vrushana Shula – pain and swelling in penis and testicles, Angamarda – body pain, Hruda Vyadha – discomfort in heart, Jwara – fever, Mutra Vibaddhatha – obstruction in urination, Shukra Ashmari – seminal calculi, Sravanam – oozing of semen, Shwayathu – swelling in genital region, Vruddhi – hernia, Shandatha – impotency
Chardi	Chardi Vegadharana leads to Kandu - itching, Kota – skin eruptions, Aruchi - anorexia, Vyanga – pigmentation on face, Shotha - oedema, Pandu - anemia, Jwara, Kushta – skin disease, Hrullasa - nausea, Visarpa - erysipelas, Akshi Roga – eye disorders, Kasa - cough, Shwasa - dyspnoea, Shwayathu - inflammation.
Kshavathu	Suppression of Kshawathu Vega leads to Manyasthamba – stiffness of the neck, Shirah Shula, Ardita – facial paralysis, ardhavabhedhaka – partial headache, Durbalatha of Indriya – weakness of sensory organs.
Udgara	Udhgara Vega dharana leads Hikka – hiccup, Shwasa-dyspnoea, Aruchi-anorexia, Kampa – tremors, Vibhanda – constipation, Hrdhayo Raso Sthamba – stiffening sensation in chest region, Adhmana - bloating, Kasa – cough.
Jrumbha	Jrumbha Vega Dharana leads to Vinama – bending of the body, Akshepa – convulsions, Sankocha – contraction of the body, Supti – numbness, Kampa – tremor, Manyasthamba – neck stiffness, Pravepanam- shaking of the body.
Kshudha	Kshudha Vegadharana leads to Krushata – emaciation, Daurbalya – weakness of body, Vaivarnyata –discoloration of the skin, Tandra – malaise, Anga marda-pain in body, Aruchi - anorexia, Bhrama - giddiness, Glani - debility, Shula – pain in the abdomen.
Pipasa/Trishna	Pipasa Vegadharana leads to Kanta Shosha – dryness of throat and mouth, Bhadirya – deafness, Sada – exhaustion, Hrda Vyatha– discomfort in chest, Sammoha – loss of consciousness, Bhrama - dizziness
Bashpa	Bhashpa Vegadharana leads to Akshi and Shiro Roga – head and eye related diseases, Prathishyaya- running nose, Aruch - anorexiai, Bhrama-dizziness, Gulma – abdominal tumour, hridroga- heart disease,annorexia, Man Yasthamba.
Nidra	Suppression of Nidra Vega leads to Angamarda - pain in body, Jrumbha - frequent yawning, Moha - delusions, Murdha Gaurava - heaviness of head, Akshi Gaurava - heaviness of eye, Alasya - lassitude
Shrama shvasa	Shrama Shawasa Vegadharana leads to Sammoha - loss of consciousness, Hrd Roga - diseases of heart, Gulma-abdominal tumour
Kasa	Kasa Vegadharana leads to its aggravation, Shosha - emaciation, Hidhma - hiccup, Hrudhamaya – cardiac disorders, Shwasa - dyspnoea, Aruchi – anorexia

Table 3.4 Diseases Caused by Supression of Adharaneeya Vegas

3.6.3 Dharaneeya Vegas

These are the natural urges which have to be controlled or not to be expressed.

Classification - 3 Types

1. Manasika - Relating to thought
2. Vachika - Relating to speech
3. Sareerika - Relating to actions (Cha. Su. 7/26-29)

Manasika - Relating to Thought	Vachika - Relating to Speech	Sareerika - Relating to Actions
Lobha (greed)	Parusha (harsh)	Streebhoga (adultery)
Soka (grief)	Athimatra (Excessive)	Steya (theft)
Bhaya (fear)	Anrutha (lie)	Ahimsa (violence)
Krodha (anger)	Akaala (untimely used)	
Maana (vanity)		
Nairlajja (Shamelessness)		
Eershya (envy)		
Atiraga (excessive attachment)		
Abhidhyaya (desire of taking other's property)		

Table 3.5 Types of Dharaneeya Vegas

3.6.4 Srotas

Etymology

"Sru gatau "dhatu

Root **"sru sravane"**- to ooze, to permeate, to filter, to exude

Defination

Sravanaat srotamsi (cha .soo 30/12)

It is the path helps for transformation of substances

"Srotaamsi khalu parinama apathyamananam

Dhathoonam abhivahini abhibhavanti ayanarethena" (Cha. Vi. 5/3)

Channels carry the transformed dhathus to different destinations through their mess of network to nourish the cells and tissues.

"Moolath khadantaram dehe prasrutham tu abhivahi yath,

Srotastadithi vigneyam sira dhamani varjitham"(su.sa9/13)

That which originate from vacant spaces spread throughout the body and purveys materials- are to be understood as srotas and apart from sira and dhamani.

Structure

"Svadhathu sama varnanivrutta sthulanyanuni cha

Srotamsi deerghanyakrutya pratana sadrushani cha"(ah.sa3/46)

- Colour similar to dhathu which passes through it
- Round stout and minute
- Long and as like prathana

Synonyms

- Sira
- Dhamani
- Rasayani
- Naadya
- Panthana
- Margam
- Sarirachidrani
- Samvritasamvritani
- Sthanani
- Aasaya
- Niketa

Types

- Bahya
- Abhyanthara

Bahya Srotas

Susrutha samihta

Male-9 (nasa, karna, nayana, mehana, guda, vadana)

Female-12 (9+stana, raktapatha)

Ashtanga Hrudaya

Male-9

Female-12

Abhyantara Srotas

Ashtanga Hrudaya - 13

Charaka samihta - 13

Susrutha samihta - 11 pairs

Abhyantara Srotas

Charaka samihta and Ashtanga Hrudaya

1. Pranavaha
2. Udakavaha
3. Annavaha
4. Rasavaha
5. Raktavaha
6. Mamsavaha
7. Medovaha
8. Astivaha
9. Majjavaha
10. Sukravaha
11. Mootravaha
12. Pureeshavaha
13. Swedavaha

Susrutha samihta

Exclude Astivaha
Majjavaha
Swedaaha

Add
Artavavaha

Moola Sthana

Srotas	Charaka	Susrutha
Pranavaha	Hridaya, Mahasrotas	Hridaya, Rasavahi dhamani
Udakavaha	Thalu, Kloma	Thalu, Kloma
Annavaha	Amasaya, Vamaparswa	Amasaya, Annavahi dhamani
Rasavaha	Hrudaya, Dasadhamani	Hrudaya, Rasavaha dhamani
Raktavaha	Yakrut, Pleeha	Yakrut, Pleeha, Raktavaha dhamani

Continued...

Srotas	Charaka	Susrutha
Mamsavaha	Snayu, Twak	Snayu thwak Raktavahi dhamani
Medovaha	Vrukka, Vapavahanam	Kati, Vrkka
Asthivaha	Meda, Jaghanam	
Majjavaha	Asthi, Sandhi	
Sukravaha	Vrushana, Sepha	Sthana , Vrshana
Mutravaha	Vasthi, Vangshana	Vasthi, Medra
Pureeshavaha	Pakwasaya, Sthulaguda	Pakwasaya guda
Svedavaha	Medas, Lomakupa	
Artavavaha		Garbhasaya, Arthava vahadhamani

Table 3.6 Moola Sthana

3.6.5 Aatma

Etymology

- = +
- = Nearer/ Towards
- = poison

That is, poison like substance

Definition

"Eeshath amyathe pachyathe iti Aatma"

Incomplete or partial digestion of food leads to ama

"Amasayastha kayagnerdourbalyadavipachitha

Aadya aharadhathurya sa ama ithi keertitha"Ma Ni 25/1-5 (madhukosham)

If kayagni fails to perform normal functions leads to accumulation of undigested food material inside

amasaya, which is the initial rasa dhathu is called 'ama'.

"Ooshmano alpa balatvena dhathumadyamapachitham

Dushtamamasayagatham rasamamam prachakshathe" (A H su 13/5)

Due to weakness of agni, adya dhathu, that is, rasa dhathu becomes immature, improperly metabolized substance called ama, which manifests in amasaya.

General Symptoms

"Srotorodha balabhramsa gourava anilamoodatha

Aalasya apakti nishteeva malasanga aruchi klama

Lingam malanam samanam...."

- Obstruction in srotuses
- Diminution of strength
- Heaviness
- Disturbance in the normal movement of vata
- Drowsiness
- Indigestion
- Excessive secretions from oral cavity
- Obstruction for urine and stool
- Lack of desire towards food
- Exhaustion

Sama Dosha Lalshana

Sama Vāta Laksana

"Vayu saamo vibandha agnisada stambha antrakoojanai

Vedana sopha nistodai kramaso angani peedayan

Vicharet yugapat chaapi gruhnathi kupitho bhrsam

Snehadyai vrudhimayathi suryameghodaye nisi" Ma Ni (madhukosam)

- Obstruction of mala and muthra
- Diminished function of agni
- Stiffness
- Increased bowel sounds
- Pain all over the body along with swelling gradually manifest malaise all over the body
- The agitated vayu circulates all over the body and produces disease when favourable situation arises
- Anointing body both externally and internally, Sunrise, cloudy season, and night aggravates ama condition

Nirāma Vata Laksana

Niraamo visado ruksho nirvibandho alpavedana

Vipareeta gunai santhim snigdhairyathi visheshatha Ma Ni (madhukosam)

- Clear
- Transparent
- Dry
- Free from obstruction to normal movement of vata
- Mild pain
- Subside by vata alleviating therapies like oleation

Sama Pitta Laksana

"Durgandham haritham syavam pittam amlam ghanam guru

Amilka kantahrut dahakaram samam vinirdiseth" Ma Ni (madhukosam)

- Foul smell
- Colour of either greenish or light blackish
- Sour taste
- Doesn't spread in water
- Heavy
- Sour eructation
- Burning sensation in throat and cardiac region

Nirāma Pitta Laksana

Ataamra peetam atyushnam raso katukamasthiram

Pakwam vigandhi vigneyam ruchipaktibalapradam Ma Ni (madhukosam)

- Slight coppery and yellowish colour
- Markedly increased warmth
- Pungent taste
- Spread and mixes with water easily
- Doesn't yield bad smell
- Enhance taste, appetite and strength

Sama Kapha Laksana

"Aavilasthanthula styana kantadese avatishtathi

Saamo balaso durgandhi kshududgara vighatakrut"Ma Ni (madhukosam)

- Increased turbidity of stool, urine and other waste substances of body
- It will be thready and thick
- Stagnates in the throat

- Foul smell
- Complete lack of appetite
- Obstruct eructation

Nirāma Kapha Laksana

"Phenavan pinditha pandu nissaro agandha eva cha

Pakwa sa eva vigneya chedavaan vaktrasudhikrut"Ma Ni (madhukosam)

- Frothy
- Free from threads
- Pallor
- Clear light substances
- Devoid of any smell
- Clears mouth

Management of Ama

Apatarpana is the line of treatment of ama. Depending upon the quantity of malas anchaya, three kinds of apatarpana appropriate to the condition should be adopted.

Alpa ama - Langhanam

Madhyama ama - Langhana Pachanam

Prabhutha ama - Sodhanam (A.H Su. 8/21)

3.6.6 Agni

- Concept of Agni is unique to Ayurveda
- Covers all the aspects of Metabolism
- One among Dasavidhapareekshas

Importance of Agni

"Rogaa sarve api mandagnou"

All diseases are caused due to agni mandya.

"Agni moolam balam pumsaam"

Agni is the root cause of bala in human.

"Agnireva sareere pitta antargatah" (C.S.12/11)

It is reflected on the concept of Pitta ("Antaraagni").

Types of Agni in Ayurveda

According to Charaka sanhitha, number of Agnis are enumerated as 13.

- Antaraagni: 1
- Bhutagni: 5
- Dhatwagni: 7

Jatharagni

- Principal form of Agni in or body
- Bhutagnis and Dhatwagnis are formed from Jatharagni and are controlled by Jatharagni.
- Hence, Acharya Charaka called it 'Master of all Agnis'

Site: Between amasaya and pakwasaya

Functions:

- Digestion of four varieties of foods and drinks consumed (Asita, Khadita, Peeta and Leedha)
- Separation of Sara from Kitta portion
- Causes the waxing and waning of other forms of Agni in the body

Types of Jadaragni:

- Samaagni - samatha of all dosha
- Mandagni - kapha
- Vishamagni - vatha
- Theekshnagni - pitha

Bhutagni

- The five Bhutagnis are concerned with the separation of minute fractions of Paanchabhoutik consistency.

Dhatwagni

- The seven Dhatwagnis provide nourishment to all the dhatus by assimilating the homologous micronutrients peculiar to dhatus.

Notes



Summary

- Ayurveda is an ancient medicine system of India. It is said to have originated in India about 5000 years back. The word Ayurveda is a union of two Sanskrit words 'ayus' and 'veda'. "Ayus" means life and "Veda" means science, so Ayurveda means science of life.
- Homeostasis refers to stability, balance or equilibrium. It is the body's attempt to maintain a constant internal environment.
- Homeostatic regulation involves three parts or mechanisms: Receptor, Control Center and Effector
- An individual is said to be Swastha whose Dosha, Agni, Dhathu and Mala are in the state of equilibrium along with mind, soul, sensefull of bliss, is called a healthy person.
- When Dosha, Dhatu, Mala and Agni can perform their works without any difficulty and, along with that, the soul, sense organs and mind are also in a pleasant condition then the person may be considered as 'Swastha', that is, healthy.
- Panchakarma is a method of cleansing the body of all the unwanted waste after lubricating it. Panchakarma are 5 (five) in number; hence the term PANCHA (five) – KARMA (procedures).
- The body can be divided on the basis of the parts that need cleansing. Head, GIT (gastro- intestinal system), upper and lower. The five main Karmas to cleanse the complete body are: Vamanam, Virechanam, Anuvasana, Nasyam and Astapana Vasti.
- Guna is that which is located in Dravya (Substance) inherently, is causative agent and devoid of properties and action.
- Plasma is the liquid portion of blood. About 55% of our blood is plasma, and the remaining 45% are red blood cells, white blood cells and platelets that are suspended in the plasma.
- Rakta is second Dhatu which is being formed and nourished in the human body.
- Rakta Dhatu is extremely important for sustenance of life. It is root of life and therefore this Dhatu should be protected by every possible measure.
- Mamsa Dhatu predominantly consists of Prithvi (Earth) Mahabhuta.

Notes

Exercise

Answer the following questions.

1. What is homeostasis?

2. When is an individual said to be in Swastha?

3. What is meant by Panchakarma?

4. What are the five karmas?

5. Name any five Gunas.

6. What are the five Shodanas?

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4. Panchakarma and its Associated Therapy

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Unit 4.1 Pre-Therapy Compliances

Unit 4.2 Types of Procedures

Unit 4.3 Standard Operating Procedures



(HSS/N3602)

Key Learning Outcomes

At the end of this module, the trainee will be able to:

1. Explain the pre procedure compliances of therapy including Right Patient, Right Dose, Right Drug, Right Route, Right Time, Right Documentation, Right to Know and Right to Refuse
2. Demonstrate various patient positioning used to conduct different therapies
3. Measure the vital parameters of patient to assess general state before conducting procedure
4. Demonstrate standard procedure for medicament dosage calculation
5. Explain about the standard operating procedures for Snehana Karma (oleation treatment)
6. Demonstrate the different types of massages
7. Demonstrate the types of procedures such as Shirodhara, Shirobasti, Shirobhyanga, Padabhyanga, Udwartana, Udgharshana, Mardana, Samvahana, SiroPichu and Sthanik Pichu, Lepa, Kavala and, Gandoosha (gargling)
8. Explain about standard operating procedures for Sweda Karma (fomentation) and its benefits
9. Demonstrate the Tapa Sweda (fomentation), Upanaha Sweda (poultice), Ushma Sweda (herbal steam and Bolus bags)
10. Organize work and prioritize the activities as per the instructions of the doctor
11. Assist the patient in home visits also
12. Explain about do's and don'ts related to each therapy
13. Demonstrate standard procedure for medicaments formulations
14. Explain about do’s and don’ts while preparing the medicaments
15. Discuss about various side effects that arise due to incorrect calculation of dosage and its composition
16. Discuss about the plant, animal and mineral origin drugs and compound formulations.
17. Demonstrate the standard procedure for primary and Secondary preparations of medicament and their uses

Unit 4.1 Pre-Therapy Compliances

Unit Objectives

At the end of this unit, the trainee will be able to:

1. Explain the pre-procedure compliances of therapy including Right Patient, Right Dose, Right Drug, Right Route, Right Time, Right Documentation, Right to Know and Right to Refuse
2. Demonstrate various patient positioning used to conduct different therapies

4.1.1 Pre-Procedure Compliances of Panchakarma Therapy

The Panchakarma process consists of three steps.

- Poorva Karma: This is the preparatory procedure required before the main procedure. This procedure enables a person to receive the full benefits of the main treatment. It consists of two main processes – Snehan (oleation) and Swedan (fomentation). These methods help to remove the accumulated poisonous substances in the body, thus preparing them for their complete removal.
- Pradhan Karma or the main procedure: After completing the first step, it is decided which of these has to be done. This depends upon the proximity of the waste. Vamana is done if there is an increased level of upper respiratory tract waste. If there is a lower gastro accumulation of waste, a Virechanam is done.
- Paschaat Karma: This is the post-therapy dietary regimen to restore the body's digestive and absorptive capacity to its normal state.

4.1.2 Patient Care

- Patient care has to be continuous and regular.
- Patients have the right to know about the treatment, its effects and benefits.
- Communication with the patients is essential and has to be transparent.
- The Panchakarma unit requires to follow documented policies for registration and treatment of patients.
- Care plan has to be documented and it should also include preventive actions.
- Patients with special needs and disabilities should be identified and treated accordingly.
- Pain management should be as per policies and procedures.
- The nutritional needs of the patient has to be planned well.
- Clinical protocols should be maintained specially with respect to people having diabetes, asthma, arthritis, etc.
- Implementation of pathaya/apathaya ahara and vihara after assessment and reassessment of patient needs should be as per documented policies and procedures.

Please Note:-

Panchkarma technician should confirm timing from the physician for the procedure and should inform to the patient the previous night.

Unit 4.2 Types of Procedures

Unit Objectives

At the end of this unit, the trainee will be able to:

1. Measure the vital parameters of patient to assess general state before conducting procedure
2. Demonstrate the different types of massages
3. Demonstrate the types of procedures such as Shirodhara, Shirobasti, Shirobhyanga, Padabhyanga, Udwartana, Udgharshana, Mardana, Samvahana, SiroPichu and Sthanik Pichu, Lepa, Kavala and, Gandoosha (gargling)

4.2.1 ABHYANGA (Includes Pada Abhyanga and Shiro Abhyanga)

Abhyanga is a Sanskrit word which means application of oil all over the body. In Ayurveda, Abhyanga is recommended as a daily routine to all who wish good health and longevity of life.

It is one of the types of Bahya Snehana. It is also an important and integral part of Panchakarma procedure as pre-operative procedure. Here, the oil is applied to the entire body with a particular type of massage which helps the toxins to move towards the gastro-intestinal tract or otherwise it may act as a prime therapy for many diseases.

Indication:

- Pain and stiffness of muscles
- Paralysis
- Frozen shoulder
- Swelling or oedema in the body
- Generalized weakness
- Fatigue
- Rehabilitation after surgery
- Headache
- Disturb sleep

Contraindications:

In spite of the therapeutic benefits of Abhyanga, it is not ideal to perform in following conditions:

- Kaphagrasta - person suffering from Kaphaja diseases.
- Ajirni - person suffering from indigestion
- Krita Samshuddha - who has undergone Shodhana therapies.

- Amapidita – suffering from Ama
- Navajvara – acute fever
- Nirudha – who has undergone Niruha therapy
- Santorpanottha Vyadhi – diseases produced due to over nourishment.

Ayurvedic Oils used in Abhyanga

Generally, the oil is used according to the Dosha involved in the diseases

- Vata Dosha – Tila Taila, Mahanarayana Taila, Dhanvantaram Taila etc.
- Pitta Dosha – Ksheera Bala Taila, Chandanbalalaxadi Taila etc.
- Kapha Dosha – Sahachara Taila, Triphaladi Taila etc.

If the person is suffering from any disease, oil is selected accordingly as below:

- Muscular and neurological diseases – Mahanarayana Taila, Mahamasha Taila, Dhanvantaram Taila
- Ischemic limb disease – Pinda Taila
- Sciatica – Karpooradi Taila, Mahanarayana Taila
- Rheumatoid Arthritis – Mahavishagarbha Taila, Kottamchukkadi Taila
- Kushtha and other skin disease – Marichyadi Taila
- Respiratory disease – Lavana Taila, Panchaguna Taila
- Paralysis – Mahanarayana Taila, Bala Taila, Sahachara Taila, Masha Taila, etc

Seven positions of Abhyanga

Sarvanga Abhyanga is carried out in 7 posturers:

- Sitting position with both legs extended
- Lying position (Supine Posture)
- Left lateral position
- Lying position (Prone Position)
- Right lateral position
- Again, lying position (Supine Position)
- Sitting position with both legs extended

Direction of Abhyanga:

Generally, the direction of Abhyanga should be Anulomana i.e., towards the direction of body hair. In case of muscle fiber, the direction should be from origin to insertion.

For spinal massage, direction towards coccyx should be Anulomana, though in specific conditions opposite direction is also adopted.

In abhyanga over abdomen, direction towards large intestine is Anulomana.

In umbilical area circular movement is carried out.

In upper and lower limbs, movement from upward to the tip of the fingers is Anulomana.

Over different joints Abhyanga should be done in circular movement.

Duration:

For the desired effect one should perform the Abhyanga about 5 to 7 minutes in each position So, total duration of Sarvanga Abhyanga is 35 to 45 minutes though the time duration may be adjusted to the need of the patient.

Poorva Karma

- The therapist or the practitioner should explain the entire procedure to the patient in a simple language.
- Make sure that the patient has evacuated their bowel and bladder.
- Apply a little bit of therapeutic oil on their vertex and do 2-3 minutes massage.

Pradhana Karma

- The main therapy comprises seven stages, and in each stage, the therapist performs massage on the patient while the patient adopts a sitting or lying posture.
- The procedure starts with therapist performing massage while the patient is seated upright on a massage table. Apply massage oil to the head, face, ear canal, the front of the neck, back and feet and massage in a gentle fashion for about ten to fifteen minutes.
- The patient then changes the posture to lying left sideways, lying face down, lying right sideways, lying face up and finally the upright position to complete the cycle.



Fig 4.1 Massage

- Perform massage in each posture for about 5 to 7 minutes. The whole process can take about 35 to 45 minutes or more depending on the particular situation. Depending on the health of the patient, the duration of this treatment can be increased or decreased.

Paschat Karma

After Abhyanga generally the patient may be subjected to Swedana procedure. Otherwise wipe the patient's body with a dry and clean towel. Ask the patient to rest for 30 minutes and then to take bath with warm water. Use of soap is avoided: alternatively patient can use the green gram powder for cleaning.

Benefits of Abhyanga

- Jarahara - it rejuvenates the body
- Shramahara - relieves fatigue
- Vatahara - pacifies Vayu
- Drashtiprasadkara - provides better vision
- Promotes long life
- Enhance good sleep
- Improves complexion and luster of the skin
- Increase physical strength
- Should have the basic knowledge of Abhyanga procedure
- Proper room ventilation, Hygiene and enough light in room
- Preparation and cleanliness of Abhyanga table
- Covering Abhyanga table with disposable sheets/plastic sheets
- Check the availability and proper functioning of all the required equipment's and instruments, enough utensils etc.
- All the drugs and materials required (which also includes emergency drugs) for Abhyanga as prescribed by physician should be available in enough quantity
- Has knowledge of different types of oils/drugs utilized for Abhayanga
- There should be arrangement of extra stock of drugs and other materials if required
- Should be able to assist Panchakarma Technician during the whole procedure of Abhyanga as and when the help is required
- To confirm that patient has followed all the instructions of pre-procedure properly
- Should have the knowledge of proper posture for Abhyanga and able to help the patients in attaining a posture which is appropriate for providing the therapy
- Be alert towards the patient's safety during therapy session
- Maintain patient's privacy throughout the procedure
- In case of any complications (in absence of Therapist/Physician) Panchakarma Technician should follow the proper method of reporting complications
- Should have knowledge of management of post procedures

The above guidelines are also applicable for Udwartana, Murdha Taila which includes Shiro Abhyanga, Shirodhara, Shiro Pichu and Shiro Basti

4.2.2 Kati Basti, Oils Used in this Massage Process, its Description and Uses

Kati Basti

The word Kati Basti is formed by combining two letter 'Kati' and 'Basti'. As per authentic scriptures, the meaning of Kati is determined as lumbar part of the body. Kati Basti is a modified form of Snehana (oleation), Swedana (sudation) and Mardana (massage) therapy. Thus, Kati Basti can be defined as the process in which the oil is retained locally upon the lumbar part of the body, by means of 'Masha Pishti'.

Kati Basti is used for all types of back problems. It is useful for individuals with:

- All sorts of musculoskeletal and neurological back injuries
- Lower backache
- Lumbar spondylitis
- Spondylosis
- Slip disc
- Intervertebral disc protrusion
- Nerve compression, sciatica etc.

Healthy individuals can choose this procedure to prevent back and spine problems. Because it gives more strength to the back muscles and nourishment to the nerves. It can be performed for all people who have back problems.

Indications of Kati Basti:

- Low back pain
- Lumbar spondylosis
- Sciatica
- Sacroiliac joint pain or dysfunction
- Slip disc
- Disc degenerative diseases
- Spondylolisthesis
- Lumbar canal stenosis

Contra Indications:

- Acute fever
- Acute stage of Rheumatoid Arthritis
- Infective condition
- Haemorrhagic diseases

Benefits of Kati Basti:

- Relieves pain in the low back and lower limbs
- Relieves swelling and inflammation in the low back

- Brings lightness and sense of health in the lower portion of the body
- Improves movement of the back muscles
- Gives strength to the low back (bones, muscles and soft tissues)
- Enhance blood supply to the low back area

Oils used for Kati Basti

- BalaTaila
- Ksheerabala Taila
- Dhanvantaram Taila
- Nirgundi Taila
- Mahamasha Taila
- Mahanarayana Taila
- Balashwagandhadi Taila
- Chandanbalalakshadi Taila
- Pinda Taila
- Tila Taila (sesame oil) etc.

Purvakarma

Materials needed for the treatment are collected beforehand. They are:

- Taila (medicated oil), Ghee (medicated ghee) or both, suitable to the disease and patient are collected and stored beforehand. These are also used for conducting Abhyanga (massage) after the completion of Kati Basti procedure.
- Flour of black gram (udad dal atta)
- Water
- Stove, bowls, vessels, spoons, etc.

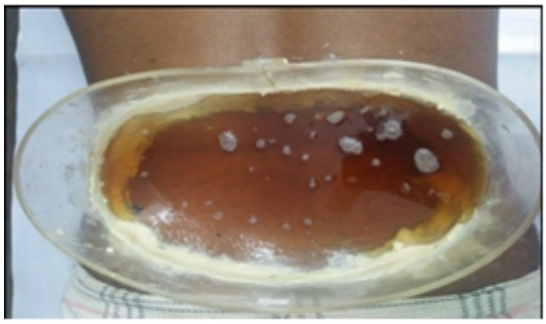
Preparation of the black gram paste and ring

- Black gram flour is finely pounded and taken in a sterile bowl or vessel
- Water is added to it (preferably warm water) and kneaded well so as to prepare a paste
- This paste is rolled and make a ring like structure about two inches height and four inches diameter

Pradhana Karma

- Kati Basti is generally done in the morning then also the convenience of the patient is taken into consideration.
- The patient is asked to come or attend the treatment on an empty stomach because while doing Kati Basti, the patient has to sleep in a prone position (on their stomach).
- The patient is made to lie on her/his belly, in a proper position, on a comfortable massage table or similar one.
- It should be ensured there is no leakage at the base of the walls of the ring before starting Kati Basti.

- Ring is placed on the lumbosacral area and to be filled with medicated Taila using cotton piece and is allowed to retain there for 20 – 30 minutes.
- The temperature should be kept uniform throughout the procedur.
- For this to happen, the oil from the ring is removed at regular intervals (leaving some oil in it and replaced by warm oil. The oil should not be completely removed.



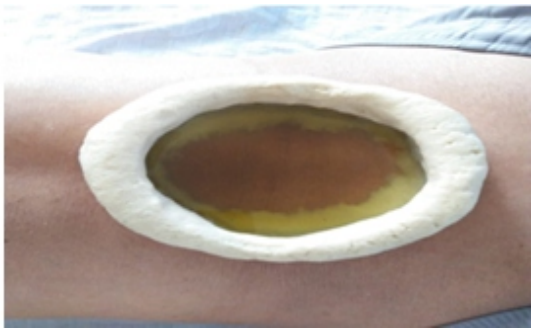


Fig 4.2 Oil in the ring

Paschat Karma:

- At the end of the procedure the oil is slowly removed from the ring and stored in a container or bottle.
- Whilst it is ideal to use new oil every day, practically it becomes unaffordable from the patient's and practitioner's perspective.
- On the next day, the same oil will be reused after adding some more oil to replace the quantity consumed for treatment procedures on the previous day.
- On the fourth day of the treatment, the entire oil needs to be replaced.
- The Kati Basti ring is also removed thoroughly.
- The patient is then allowed to take rest. They are instructed to lie down in supine position without having any contact with external environment.

Duration : 30 minutes

Precautions:

- During the course of treatment, patient should keep complete rest.
- The patients should not be allowed forward and backward bending.
- Patient is advised to avoid lifting heavy objects.
- Patient should be advised conscious while sitting and standing.

Merits:

- As in the case of Parisheka and Abhyanga it doesn't cause the spreading of medicated oil.
- Accumulation of the medicated oil on the affected area can be availed through this process.
- Maintenance of the temperature throughout can be attained since the re-heated oil is transferred to the well.

Padabhyanga

In Sanskrit "Pada" means "foot" and "Abhyanga" means "massage". Together, it means foot massage using oil or ghee. Sesame oil is most commonly used for Padabhyanga.

Padabhyanga refers to **foot massage (Pada=foot and Abhyanga = massage)** using herbal oil. It comes under Abhyanga but it is separately mentioned because of its special benefits to the body. It is a daily ritual and followed especially before going to sleep at night. It stimulates some special points on the feet that lead to mental relaxation. It focuses on vital pressure points to balance the Doshas.

Ayurveda says that five Marmas (vital areas) out of 107 Marmas are located in each foot. The feet are very important part in our body as they contain many nerve endings. Padabhyanga releases negative energy from these Marmas. So, it is obvious that all the effect of Snehana in relation to the feet can also be obtained by Padabhyanga.

Indications: Gridhrasi (sciatica), Pada Suptata (numbness in legs), Sira Sankocha (constricted blood vessels), Snayu Sankocha (spasm or constricted muscle, ligaments, tendons), Kharatva – Roughness of soles, Stabdhata – Stiffness of feet, Raukshyam – Excessive dryness of feet, Sphutanam – Crack feet, Shrama – Strain or exhaustion of feet, Supti – Numbness of the feet , Gridhrasivata – Sciatica, Sira - Snayu Sankocha – Cramps

Contraindication: Ajeerna (Indigestion), Krit Samshudhi (Immediately after any type of Shodhana), Kapha grasta (Suffering from Kaphaj disorders),

Benefits of Padabhyanga:

- It provides quick relief of roughness, stiffness, dryness, fatigue and numbness of the legs.
- It makes the legs soft, strong and stable.
- It promotes eyesight
- It controls Vata and is good for Gridhrasi (Sciatica).
- It prevents cracks over the feet
- Relaxes and revitalizes the central nervous system
- Promotes quality sleep
- Improves peripheral circulation
- Removes contraction of the ligaments, vessels and muscles of the feet
- Provides sturdiness to the limbs
- Stimulates internal organs and improves vitality. Stimulation of vital points on the feet induces deep mental relaxation and faster body revitalisation.
- Helps to calm and maintain the "Vata Dosha" which, when present in excess, is regarded as the major cause of illness

Oil used for Padabhyanga:

In healthy persons oil is used according to the Prakriti of the person and specific oil is used according to the disease which is listed below:

- Vata Prakriti – Sesame Taila, Mahanarayana Taila, Himsagara Taila
- Pitta Prakriti – Chandanadi Taila, Ksheerbala Taila
- Kapha Prakriti – Triphaladi Taila
- Crack foot – Vipadikahar Taila, Madhuyashtiyadi Taila
- Eczema feet – Marichyadi Taila
- Fungal infection – Chakramardadi Taila
- Joint disease – Karpooradi Taila
- Planter faceitis – Vishagarbha Taila, Karpooradi Taila

Procedure:

It can be done at any time but it is more effective when it is done at the end part of the evening or at night before going to bed.

Requirements:

- ✓ Vessels
- ✓ Oil for Padabhyanga

Purvakarma (Preparation of the patient):

- Taila or Ghrita according to the disease
- Table for Abhyanga
- Stove for heating oil
- Bowl, vessels, water, etc

Patient is asked to complete his daily routine like evacuation of natural urges etc. then ask the patient to sit on a comfortable knee height chair. The Technician should stand behind the patient to carry out the Shiro-Abhyanga.

Oil for Padabhyanga is heated.

Pradhanakarma (Main procedure):

- Heated Oil is gently applied over the feet including soles, heel and ankle joint. Then soothing massage in downward direction from heel to toe is done with exerting mild pressure.
- Oil is rubbed on the whole ankle joint including the Achilles tendon. Knead and stroke the tendon repeatedly.
- Slowly give a soothing massage from the ankle joint moving downwards towards the toes.
- Massage the spaces between each of the tendon while supporting the heel with other hand.
- Apply linear movement between the joints and circular movement on the joints of the toes.
- For cleaning the oil, one should use Bengal gram powder and soap is avoided.
- Patient is asked to dip the feet in hot water according to the condition.

Time duration: 15-20 minutes in each foot.

Shiro-Abhyanga is performed at any time of the day but the morning time is ideal for the procedure. The technique of Shiro-Abhyanga includes smearing the lukewarm oil to the scalp (surface of the head) followed by doing a specific gentle massage.



Fig 4.3 Application of Oil

Time duration: 20-30 minutes

Paschatkarma (After procedure):

The excess of oil should be removed with the help of cotton piece. The patient is asked to rest on the chair/table for 10-15 mins.



Fig 4.4 Application of Oil on Feet

Shirodhara

In Sanskrit "Shiras" means head and "Dhara" means to flow.

Shirodhara consists of a continuous, rhythmic pouring of warm medicated oil/decoction or other liquids on the forehead head/scalp for a fixed duration of time. The vessel used for Shirodhara is known as Dharapatra (hanging pot). It may be made up of metal or clay.

The medicated oil used is selected according to the patient's condition.

General Indications:

Arunshi (dandruff), Shirahtoda (headache), Anidra (insomnia) etc. practically it is also utilized for stress, fatigue, over thinking, lack of focus, hypertension, mental exhaustion etc.

Procedure detail:

Requirements:

- ✓ Dhara table (table for Shirodhara)
- ✓ Cotton for covering eyes and ears
- ✓ Dhara Patra (hanging pot)
- ✓ Medicated/ Non medicated oil -1-2 liters
- ✓ Vessels to warm the oil

Purva Karma (pre procedure):

Preparation of the patient:

The patient is subjected to gentle head massage (Shiro-Abhyanga) with lukewarm oil. Then he is made to lie-down on Dhara table. His/her eyes and ears are covered with cotton. This will help to prevent spread of oil into the eyes and ears during the procedure of Shirodhara. Dharayantra is placed at the head end of the table and hanging above the head of the patient with its wick pointing towards the center of his forehead. A distance of 4 Anguli (appx. 3 inches) is maintained between free end of wick and patient's forehead.

Pradhana Karma (Main procedure):

- Warming the oil/decoction/other liquids

  Liquid used for Shirodhara should be heated to make it lukewarm.

- Filling the Dhara pot

  About 1-2 liters of liquid medicine is poured into the Dhara pot. Technician should make sure that, the position of the Dhara pot is adjustable in such a way that the stream of liquid medicine is poured on the center of the forehead.

- Moving stream from the Dhara pot

  Dhara pot starts flowing steadily on to the forehead of patient. Dhara pot is then moved back and forth rhythmically and regularly.

- Refilling

  The liquid medicine poured on forehead should be collected in a vessel and again make it lukewarm. Then it is refilled in to the Dhara pot. And the same procedure should be continued.



Fig 4.5 Shirodhara

Time duration: 30-40 minutes

Paschat Karma (After procedure):

After completion of Shirodhara procedure the excess of oil from head is wiped off with the help of cotton pieces. The patient is asked to take rest for 10-15 minutes.

Patient is advised to take head wash after 1 hour.

Udvartana:

The word "Udvartana" means massaging the body with powders of herbs in a Pratiloma (upward) direction.

Types of Udvartana:

- Udgharshana- only dried powders of herbs rubbed against the body.
- Utsadana- paste of herbs moistened with oil is rubbed during massage.

Procedure detail:

Requirements:

- Table
- Vessels
- Medicated Powder used for Udvartana

Purvakarma (pre-procedure)

- Warming the medicated powder
- Preparation of patient

Pradhanakarma (main procedure)

- Application of the warmed herbal powder on the body in following positions,
- Sitting position on table with leg extended
- Supine position
- Left lateral position
- Prone position
- Right lateral position
- Again, in supine position
- Again, in sitting position

In each position massage is to be done in a Pratiloma direction (opposite to that of the hair) by exerting some pressure is the procedure of Udvartana.

Time duration: 30-40 minutes

Lepa application:

Lepa is a procedure in which the topical applications of medicaments are applied over the skin. Medicated drugs are made in to paste by grinding or crushing them. If it is in the form of powder. It can be mixed with proper bases as per the condition of the disease.

Types of Lepa:

- Doshaghna (pacifies Dosha)
- Vishaghna (pacifies Visha)
- Varnya (cosmetic purpose)

Method of application of Lepa:

For applying Lepa, the drug should be mixed with a proper base. It should be applied in the reverse direction of the hairs in the skin. The base may be either hot water, ghee, Gomutra etc.

Time for application of Lepa:

Usually day time is preferred for doing Lepa Kalpana.

Precautions of Lepa Kalpana:

- Stale Lepa material should not be used for application
- Lepa used once, shouldn't be reused.
- Lepa applied should be washed, before it gets dry.

Indications of Lepa kalpana:

- any type of swelling
- insect bites

- joint diseases
- ligament injury
- as Mukhalepa for improving the complexion.

Commonly used Lepa preparations:

Dasanga lepa, Kottamchukkadi Lepa etc.

Mardana:

Mardana Karma is defined as the application of oily substances over body with certain amount of pressure in Anulomana direction i.e., in the direction of hairs.

- It is almost similar to Abyanga procedure, only difference is in the amount of pressure applied in the body.
- It is applied either locally or whole body.
- It is indicated in healthy as well as diseased individuals.

Indications of Mardana

- Sarvangamardana after Vyayama.
- Hemantha Ritu (seasonal)
- Vatavyadhi

Unmardana

It is a Bahya Snehaprayoga in which application of oily substances over the body with certain amount of pressure in the direction opposite to that of Abhyanga and Mardana (i.e., opposite direction of hair growth).

- It can be applied over whole body or locally.
- The pressure applied on body is greater when compared to Abhyanga.

Samvahana Karma:

It is a pleasurable touch without pressure or with very little pressure in the direction of the hairs. It can be applied either locally or whole body. It can be performed with or without oily substances.

- Benefits of Samvahana Karma:
- Preetikara (generates pleasure)
- Nidrakaraka (induce sleep)
- Shramahara (relieves fatigue)
- Sukhakara (gives happiness)
- Rasayana (rejuvenation)

Indications:

- Vatarakta
- Nidravegavarodhajanya Vyadhi

Padaghata:

Padaghata is a type of Bahya Snehana (external application of oil) in which the therapist uses his feet to apply the pressure for massage after applying the oil over the body of patient. In this procedure, more pressure is exerted than Mardana.

Positions: Sitting, supine, left lateral, prone, right lateral, sitting, supine.

Pre procedure:

- Firstly, allow patient to sit for few minutes to make himself/herself comfortable with the surroundings if patient is coming from a distance.
- Ask the patient to remove his clothes and footwear.
- Give patient some cotton to keep it in ears.
- Patient is to be seated on the massage table, with legs extended.
- Keep the lukewarm oil ready by using passive heat such as water bath.
- Check the temperature of oil by putting one drop on dorsum of hand. The temperature of oil is to be just above the room temperature.

Procedure:

- A rope is tied to the ceiling for support.
- With minimum cloth, patient is advised to lie in the supine position.
- Oil is taken in a vessel and placed near the patient.
- The oil with optimum temperature is to be applied to head, first on top of the head and then the whole scalp.
- Then oil is to be applied on ears, palm and both the foot prior to the main process.
- The oil heated should be applied uniformly by two therapists on both sides of the massage table.
- Therapist should stand on the side of the patient and should hold the rope firmly.
- Therapist firstly dip his feet in the oil and apply the oil with certain pressure.
- Start massaging scalp, head and move down to neck, upper back, shoulders, upper arms, forearms and hands; then chest, abdomen, low back, lower limbs.
- Massage is to be done in sitting, supine, right lateral, prone, left lateral positions and again in sitting position by assessing comfort of patient.
- The massage is generally to be done in the direction of hair follicles of body.
- Upper back is to be massaged in upward down direction.
- Limb joints have to be massaged in a circular manner and muscles in linear manner.
- Umbilical region is massaged in circular manner.
- After completing the massage in supine position, go on for prone position.
- After completion of procedure, patient is made to take rest for few minutes, later on bath in hot water.
- Total duration of the procedure is usually 45-60 minutes.

Features of therapist:

- Should have moderate built
- Should have uncracked feet
- Should have well control in applying pressure.

Benefits of Padaghata:

- Pacifies Vata
- Provides softness of body.
- Provides Bala

Post procedure:

- Ask the patient to come down the table and wear the clothes.
- Patient is to be made sit for some time in a room where direct sunlight or air entry is not there.
- Patient can take bath after approximately 45 minutes with lukewarm water and then he/she can take food.

Udwartana, oils used in this massage process, its description and uses:

Udwartana is a dry powder massage recommended by Ayurveda. Ayurveda explain this procedure as a daily routine. It helps to treat several health problems to restore the body's balance. Triphala powder and other Kaphahara dravya is used for performing the dry massage. Udwartana is done in an upward direction (Pratilom Gati) i.e., opposite to the hair growth. The therapist rubs the powder all over the body and allows the paste to penetrate into the skin. This is particularly helpful in reducing obesity as well as other allied health problems.

Types of Udwartana:

According to Acharya Sushruta:

- Snigdha or Sneha (Unctuous or Oily)
- Ruksha (Dry)

Snigdha Udwartana

Snigdha means with Sneha or Taila. In this type of Udwartana the powder is mixed with medicated oil and made into paste. This herbal paste is rubbed over the body in reverse direction (from below to upwards) after doing Abhyanga. This type of Udwartana helps in improving skin texture, complexion, glow and tone. The main purpose of Snigdha Udwartana is to exfoliate and rejuvenate the skin and to prevent skin diseases.

According to Charaka Samhita, Snigdha Udwartana is useful in weak people. It also includes people with sensitive skin who cannot tolerate rubbing of the dry herbal powders.

Ruksha Udwartana

Ruksha means Dry. No oil is used in this procedure. Dry powders of herbs are directly rubbed or stroked over the body in upward direction after conducting Abhyanga. Moreover powder of drugs which naturally has dry properties like Lodhra, Triphala etc are used in this type. According to Charaka Samhita, Ruksha Udwartana is useful in obese people.

According to Acharya Sushruta, it is mainly three types:

- Utsadana
- Udgharshana
- Udwartana

Utsadana

Utsadana and Snigdha Udwartana are same. In this, medicated oils are used for preparing herbal paste. It has same benefits as described in Snigdha Udwartana.

Udgharshana

Udgharshana and Ruksha Udwartana is a same thing. However, Sushruta Samhita has specially described the ingredients of Udgharshana, which includes brick powder, Reetha (Soap nut) powder etc. This procedure may not suit people with sensitive skin. The common side effect of using brick powder is rashes and fine cuts on the skin, which may cause pain and burning sensation. It is safer to use Reetha powder or Triphala powder instead of brick powder.

Udwartana

According to Sushruta Samhita, Udwartana is that which brings about Pravilapanam (liquification and destroying fat). Thus, in this, herbal powders are rubbed on the body in an upward direction so as to cause dissolution of the unwanted and undesired elements of the body, mainly fat and excess Kapha. Actually, it is a sub-type of Snigdha Udwartana with unique herbs having strengthening and fat reducing properties.

Drugs used for Udwartana

Selection of herbs should be made according to the body type of a person. Here are some herbs, which are used in Ayurvedic powder massage or Udwartana.

Herbs for Weight Loss

- Triphala powder
- Kolakulathadi Choorna
- Kottamchukkadi Choorna

Medicated Oils used in Udwartana

The oil is choosen according to the body type and requirement as per disease.

For Weight Loss

- Triphala Taila
- Kottamchukkadi Taila
- Dhanwantharam Taila
- Karpasasthyadi Taila
- Lavana Taila

For Glowing Skin

- Chandanadi Taila
- Kumkumadi Taila
- Sandalwood Massage Taila

Indications of Udwartana

- Obesity – highly beneficial for fat reduction
- Cellulite breakdown
- Preventing loosening of skin under weight loss program
- After childbirth, if you are get some extra weight
- Muscular weakness
- Diabetic neuropathy
- Decrease mobility to joints due to excess Kapha, Ama or Rheumatoid arthritis. Removing dead cells from the skin and increasing glow of the skin
- Paralysis
- Sclerosis of blood vessels
- Sciatica of Kapha origin

Contra Indications

- Ayurvedic powder massage is contraindicated in following conditions:
- Dry skin (Ruksha Udwartana is contraindicated)
- Wounds, cuts and burns
- Eczema
- Psoriasis
- Pregnancy
- Children under age 10
- After Panchakarma detoxification



Fig 4.6 Procedure of Udwartana

The herbal powder is warmed by heating. The massage is done in the opposite direction to hair follicles by two therapists. The procedure is performed in seven postures. In case of over sensitive skin, sesame or olive oil is mixed with the herbal powder. In this way, the massage is done with wet or dry medicated herbal powders by a massage therapist for around 15 to 45 minutes. After completion of the procedure, the person is advised to take rest for 30 minutes, followed by a shower with warm water. Lastly, a bit, moisturizing of the skin is done after bath.

Duration of treatment: 45 minutes to 60 minutes

Benefits

- Pacifies the aggravated Kapha dosha
- Reduces the excess fat accumulated in the subcutaneous tissues
- Softens and exfoliates dead skin cells, thereby giving a lustrous glow to skin
- Detoxification, purification, toning the skin
- Eliminates bad body odour

- Improves mobility of joints
- Strengthens and tones up the muscles
- Refreshes and rejuvenates the body
- Takes care of conditions due to improper blood supply
- Improves the circulation; opens up the body channels (Srotas) increasing the basal metabolic rate
- Tones up the skin and muscles after the child birth
- Removes cellulite and helps in weight reduction
- Improves the sense of touch
- Makes the body and mind alert; gives a sense of lightness of the body

Murdhni Taila:

Murdhni Taila is specific type of external application of Sneha. The word Murdhni Taila is composed of two words –Murdha and Taila. Murdha denotes Shira and Taila means oil. Thus application of the Taila on the head is known as Murdhni Taila. It consists of three different procedures.

- Shiroabhyanga
- Shiroseka
- Shiropichu

It is a type of Murdhni Taila, in which a cotton/gauze soaked with oil is kept on the vertex of head by tying it for a prescribed time.

Indications:

- Most of the Shirorogas.
- Hair loss.
- Graying of hair
- Psychological diseases.

Pre procedure:

- Ask the patient to sit comfortably.
- Do Abhyanga over head, neck and shoulder.
- Wipe off the oil with clean dry towel.
- Tie a cloth band around forehead.
- Warm the oil up to lukewarm.
- Procedure:
- Take the cotton pad, cover with gauze and dip well in the warm oil.
- Pad is then placed over the vertex.
- Time duration is mainly 30-90 minutes.

Post procedure:

- Remove cotton pad and the cloth band
- Wipe off the oil
- Do gentle massage over the shoulder, back, neck and forehead
- Advise rest for one hour

Shirobasti:

It is considered to be the best among the Murdhni Taila. In this procedure oil is allowed to be retained on the head for a certain period.



Fig 4.7 Shirobasti

Indications of Shirobasti:

- Facial paralysis
- Insomnia
- Headache
- Dandruff
- Dryness of nose and mouth.
- Vision problems.

Pre Procedure:

Shirobasti is usually carried out during afternoon period.

- Ask patient to take food before 2 hrs
- Remove the hair of the patient, if possible.
- Ask the patient to sit in the chair comfortably.
- Do Abhyanga and mild Swedana on the head, neck and shoulder using cloth dipped in warm water.
- Wipe the oil and sweat over the head.

Procedure:

- One strip of cloth band applied with blackgram paste and wrap around the head just above the ears tightly.
- Another layer of rexin sheath wrapped around the head and the junction are properly covered with black gram paste.
- Again second strip of cloth band cover as a third layer above the rexin sheath.
- This 3 layers are tightly covered enough to hold the Taila without leakage.
- Warm oil is poured to the vertex at a height of two Angula, through the index finger as a uniform stream.
- It should be hold at head till watering appears from mouth and nose or 35-40 minutes.
- Post procedure:
- Remove Taila from head by soaking with cotton.
- Remove all layers of rexin and cotton band.
- Wipe all the Taila and ask the patient to take rest for one hour.

Shiroabhyanga

Shiro Abhyanga is a Sanskrit term with two words: Shiro (head) and Abhyanga (massage). Shiro Abhyanga essentially means a massage of the head with Ayurvedic medicated oils.

The medicated oil is selected according to the condition of the patient and is applied with a variety of massage techniques for fixed duration of time.

Indications: Shirahshool (headache), Khalitya (scalp hairfall), Palitya (greying of scalp hairs), Shirokandu (itching in scalp), Shiroroga (disease related to head), Nidralabh (induces sound sleep) etc.

Procedure:

Requirements:

- Comfortable knee height chair/table
- Luke warm oil (plain/medicated)
- Cotton

Notes



Unit 4.3 Standard Operating Procedures

Unit Objectives

At the end of this unit, the trainee will be able to:

1. Explain about the standard operating procedures for Snehana Karma (oleation treatment)
2. Explain the different types of massages
3. Explain about standard operating procedures for Sweda Karma (fomentation) and its benefits
4. Demonstrate the Tapa Sweda (fomentation), Upanaha Sweda (poultice), Ushma Sweda (herbal steam and Bolus bags)
5. Organize work and prioritize the activities as per the instructions of the therapist/doctor
6. Demonstrate standard procedure for medicament dosage calculation
7. Demonstrate standard procedure for medicaments formulations
8. Explain about do's and don'ts while preparing the medicaments
9. Discuss about various side effects that arise due to incorrect calculation of dosage and its composition
10. Discuss about the plant, animal and mineral origin drugs and compound formulations.
11. Demonstrate the standard procedure for primary and Secondary preparations of medicament and their uses

4.3.1 Snehana Karma

Snehana (oleation therapy):

It is one of the major Poorvakarma of Panchakarma and is done before Swedana(steam therapies). Snehana means the one which gives unctuousness, softness and one which dissolves or liquifies the vitiated Doshas. It is done mainly by use of medicated ghee or oil.

This oleation is done in two ways :

a) Bahya Snehana (oleation by external route-skin)

b) Abhyantara Snehana (internal oleation)

Bahya Snehana involves procedure like :

- Abhyanga (massaging with oil)
- Lepa (local application)
- Akshi Tarpana (retention of Sneha over eyes)
- Karna Poorana (pouring medicated oil/ghee in ears)

- Shirobasti (retention of Sneha over head)
- Shiropichu (oleation by cotton or gauze dipped in oil)
- Shirodhara (oscillatory oil pouring over forehead) etc.
- Abhyantara Snehana involves giving Sneha (fats) by oral route.

For the purpose of Shodhana (cleansing), Sneha is given orally in morning time when patient is not hungry, in an increasing dose for a period of 3-7 days. This is followed by Bahya Snehana and Swedana therapy.

Swedana:

It is one of Poorvakarma after Snehana. The process of sudation (steam) or which increases perspiration is called Swedana. It removes stiffness, cold and makes body perspire.

It mainly acts on Vata and Kapha Dosha.

It is done by various methods :

- Tapa -This method involves direct conduction by a pre-heated solid materials like iron ball, rock or brick.
- Ushma-This method involves sudation by vapours.
- Drava-This method involves sudation by medicated liquids.
- Upanaha- This method involves tying hot medicated bolus over affected part.

Sarvanga Bashpa Swedana



Fig 4.8 Nadi Swedana



Fig 4.9 Shashtik Shali Pinda Swedana

Shashtik Shali Pinda Swedana



Fig 4.10 Shashtik Shali Pinda Swedana

Upanaha



Fig 4.11 Patra Pinda Swedana

Snehapana (Indication-Contraindication-Anupana- knowledge of timings of Sneha consumption)

Snehapana means internal administration of Sneha (fats) which are mainly divided into four types.

- Ghrita (Ghee)
- Taila (Oil)
- Vasa (Muscle fat)
- Majja (Bone marrow)

General indications of Snehapana :

- Those who have to undergo Swedana
- Those who have to do Shodhana
- Those having dryness, Vata diseases
- Those exercising daily
- Those having stress
- Vision related diseases

General Contraindications of Snehapana :

- Those who need dryness therapy.
- Those having excess Kapha and adipose tissue
- Those having impaired digestion
- Excessive thirst and giddiness
- In pregnancy
- Dryness of mouth
- Vomiting
- Those having aversion towards Sneha
- Undergoing Nasya or Basti Karma

Indication of Ghrita (ghee)

1. Those having Vata-Pitta Prakriti
2. In Vata Pitta disorders
3. For better vision
4. For recovery from injury
5. Those who are desiring good immunity, complexion and memory.
6. In infertility
7. Those who desire to improve voice quality.

Indication of Taila (oil)

1. Obesity
2. Pain related diseases or joint disorders
3. Vata prakriti
4. In worm infestation

Indication of Vasa (muscle fat)

1. Those who having strenuous work
2. Decreased semen
3. Malnourished
4. Disorders of bones, joints and ligaments.
5. Those who are used to taking muscle fat.

Indication of Majja (bone marrow fat)

1. Excessive hunger
2. Severely constipated
3. Those who are regularly have intake of fat.

Sneha	Anupana
1. Ghrita	Ushnodaka (luke warm water)
2. Taila	Yusha (green gram soup)
3. Vasa	Manda (rice water)
4. Majja	Manda (rice water)
5. All types of Sneha	Ushnodaka (lukewarm water)

Table 4.1 Anupana

Timings of different types of Sneha:

Any medicine given at different time of the day has different effect. Likewise, Snehapana also is divided into three types based on desired effects:

1. Shamana Sneha (palliative)
2. Shodhana Sneha (cleansing)
3. Brimhana Sneha (nourishing)

- Shamana Snehapana is given for balancing Doshas without removing them out of the body. This is given to the patient when the patient feels hungry after digestion of previous meals. Hence, instead of meals the fat is given as meal.

- Shodhana Snehapana is given in an increasing dose early in the morning when previous night's meal is digested but the patient is not feeling hungry.
- Brimhana Snehapana is given along with meals.

Sneha	Timing (season)
Ghrita	Sharada Rutu (autumn)
Vasa Majja	Madhava (spring)
Taila	Pravruta Rutu (monsoon)

Table 4.2 Types of Sneha

Summary

- Panchakarma is a method of cleaning the body of all the unwanted waste after lubricating it. Panchakarma are 5 (five) in number; hence the term PANCHA (five) – KARMA (procedures). Panchakarma treatment includes preventive, curative and promotive actions for various diseases.
- Medicated oils are used in Panchakarma. These help in eliminating the impurities from the human body.
- The Panchakarma process consists of three steps - Poorva Karma, Pradhan Karma and Paschaat Karma.
- Patient care is of prime importance especially with respect to their health conditions, services that would match with a patient, and continuous assessments. Communication with the patients is essential and has to be transparent.
- The Panchakarma unit requires to follow documented policies for registration and treatment of patients. Clinical protocols should be maintained specially with respect to people having diabetes, asthma, arthritis, etc.
- Various procedures such as Abhyanga, Kati Basti, Udvartana, Lepa, Mardana Karma, samvahana karma, padaghata, etc.
- Abhyanga is a Sanskrit word which means application of oil all over the body. It includes Pada Abhyanga and Shiro Abhyanga.
- Kati Basti is a modified form of Snehana (oleation), Swedana (sudation) and Mardana (massage) therapy. Kati Basti is used for all types of back problems.
- Padabhyanga refers to foot massage (Pada=foot and Abhyanga = massage) using herbal oil.
- Shiro-Abhyanga is performed at any time of the day but the morning time is ideal for the procedure. The technique of Shiro-Abhyanga includes smearing the lukewarm oil to the scalp (surface of the head) followed by doing a specific gentle massage.

- "Udvartana" means massaging the body with powders of herbs in a Pratiloma (upward) direction.Types of Udvartana include Udgharshana and Utsadana.
- Lepa is a procedure in which the topical applications of medicaments are applied over the skin.
- Types of Lepa:
  - Doshaghna (pacifies Dosha)
  - Vishaghna (pacifies Visha)
  - Varnya (cosmetic purpose)
- Mardana Karma is defined as the application of oily substances over body with certain amount of pressure in Anulomana direction i.e., in the direction of hairs.
- Unmardana is a Bahya Snehaprayoga in which application of oily substances over the body with certain amount of pressure in the direction opposite to that of Abhyanga and Mardana.
- Samvahana Karma is a pleasurable touch without pressure or with very little pressure in the direction of the hairs. It can be applied either locally or whole body, with or without oil.
- Padaghata is a type of Bahya Snehana (external application of oil) in which the therapist uses his feet to apply the pressure for massage after applying the oil over the body of patient.
- Shiro Abhyanga essentially means a massage of the head with Ayurvedic medicated oils.
- Snehana (oleation therapy) is one of the major Poorvakarma of Panchakarma and is done before Swedana (steam therapies).It is done mainly by use of medicated ghee or oil. Swedana is one of Poorvakarma after Snehana.The process of sudation (steam) or which increases perspiration is called Swedana. It removes stiffness, cold and makes body perspire.
- Snehapana means internal administration of Sneha (fats).

Notes



Exercise

Answer the following questions:

1. Explain the following:
   - Poorva Karma
   - Pradhan Karma
   - Paschaat Karma

2. What is Abhyanga?

3. Name five oils used in Abhyanga.

4. What are the seven positions of Abhyanga?

5. Explain Kati Basti.

6. Name five oils used for Kati Basti.

7. What is padhabhyanga?

8. What is head massage called?

9. Name two oils used in head massage.

10. What is oleation?

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Unit 4.2 Pada Abhyanga

https://youtu.be/8W3W-1toxsg

Unit 4.2 Kati Basti

https://youtu.be/ZE0J2y1nwHI

Unit 4.2 Shiro-Abhyanga

https://youtu.be/qhNgXXLQDxQ

Unit 4.2 Shirodhara

https://youtu.be/ebq8bkqeRAU

Unit 4.3 Patra Pinda Swedana

https://youtu.be/uRRWodZXbtc

Unit 4.3 Shashtik Shali Pinda Swedana

https://youtu.be/_W3NjS5Yt3c

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5. Major Procedures of Panchakarma

Unit 5.1 Pharmacodynamics

Unit 5.2 Indications and Contraindications of various Panchakarma Procedures

Unit 5.3 Concepts of Samyak Yoga, Ati Yoga and Ayoga, Lakshanas

Unit 5.4 Vyapads (complications) in Vamana, Virechana, Nasya, Basti and Raktamokshana



HSS/N3602

Key Learning Outcomes

At the end of this module, the trainee will be able to:

1. Explain about the pharmacodynamics,indications, contra indications of various panchakarma procedures such as Vamana Karma (therapeutic emesis), Virechana Karma (purgation), Basti Karma (enema), Nasya Karma (nasal administration of oils and herbal derivatives), Rakta Mokshana (therapeutic bloodletting)
2. Explain about the concepts of Samyak Yoga, Ati Yoga and Ayoga, Lakshanas
3. Discuss about the Vyapads (complications) in Vamana, Virechana, Nasya, Basti and Raktamokshana

UNIT 5.1 Pharmacodynamics

Unit Objectives

At the end of this unit, the trainee will be able to:

1. Explain about the pharmacodynamics

5.1.1 Pharmacodynamics

Pharmacodynamics is the study of biochemical, molecular and physiologic effects of drugs on the body. It involves receptor binding, post receptor effects and chemical interactions. Pharmacodynamics and pharmacokinetics are two main branches of pharmacology.

- Pharmacodynamics can be described as 'what a drug does to the body'.
- Pharmacokinetics can be described as 'what the body does to the drug'.

Both of these together explain the relationship between the dose and response or the drug's effect. The binding of the drug to its target depends on the pharmacologic response. The drug's effect is influenced by the concentration of the drug at the receptor site.

The pharmacodynamics of a drug can be affected by physiologic changes due to:

A disease or disorder can affect the pharmacodynamic responses. For example, disorders like malnutrition, genetic mutations, Parkinson disease, thyrotoxicosis, myasthenia gravis, diabetes, etc. These diseases or disorders can change the receptor binding, alter the level of binding proteins or decrease the receptor sensitivity.

Aging process affects the pharmacodynamic responses through alterations in post receptor response sensitivity or receptor binding.

Drug to drug interactions result in competition for receptor binding locations or change post receptor response.

Fig. 5.1 Factors affecting pharmacodynamics of drugs

UNIT 5.2 Indications and Contraindications of Various Panchakarma Procedures

Unit Objectives

At the end of this unit, the trainee will be able to:

1. Indications, contraindications of various Panchakarma procedures such as Vamana Karma (therapeutic emesis), Virechana Karma (purgation), Basti Karma (enema), Nasya Karma (nasal administration of oils and herbal derivatives), Rakta Mokshana (therapeutic bloodletting)

5.2.1 Vamana (therapeutic vomiting or emesis)

This cleansing method involves elimination of Doshas (mainly Kapha and Pitta) through the oral route with the help of vomiting induced by Ayurvedic medications.

The following are the requirements for Vamana:

Should have the basic knowledge of Vamana procedure.
Room should have proper ventilation, hygiene and enough light.
Preparation and cleanliness of Vamana chair should be ensured.
Check the availability and proper functioning of all the required equipment and instruments, enough utensils etc.
All the drugs and materials required (which also includes emergency drugs) for Vamana as prescribed by physician should be available in enough quantity.
There should be arrangement of extra stock of drugs and other materials if required.
To confirm that the pre-procedure of Vamana i.e Snehana and Swedana is done properly.
Should be able to assist Panchakarma Therapist/Physician during the whole procedure of Vamana as and when the help is required.
Should have proper knowledge of assisting patient during Vamana.

Continued...

Should have the knowledge of proper posture for Vamana and able to help the patients in attaining a posture which is appropriate for providing the therapy.

Be alert towards the patient's safety during therapy session.

Maintain patient's privacy throughout the procedure.

Sould have proper skill to fill the Vamana proforma during the procedure should be there.

In case of any complications (in absence of Therapist/Physician) Panchakarma Technician should follow the proper method of reporting complications.

Should have knowledge of management of post procedures.

Make necessary arrangements for Dhoompana like- Dhoiomvarti, Dhoom Netra etc.

Improving the digestion by using medicines.

Starting oleation by asking the patient to drink Ghee/oil in increasing dose daily for 3 to 7 days, which is decided by the physician after examination.

Oil massage and sudation (using steam for causing perspiration) for two days after the completion of oleation. The oil massage and sudation on the 2nd day should be done early in the morning just before Vamana.

Foods like Udad (black gram) Wada/Lassi/Khichadi etc. are advised to be taken the day before Vamana.

Fig. 5.2 Requirements for Vamana



Fig. 5.3 Patient undergoing Vamana

5.2.2 Pradhana Karma (Main Procedure)

The patient should be given some semisolid food items like rice gruel prepared in milk.

This is followed by intake of liquids like milk, sugarcane juice, etc. as advised by the treating doctor till the patient's stomach feels more than full.

Patient is then given the prescribed medicine for Vamana.

Wait for 30-40 minutes after the intake of medicine for vomiting reflex to get started.

If vomiting doesn't start by 40 minutes, medicinal decoction i.e., Yashtimadhu Kwatha which induces and helps in easy vomiting is given till the patient feels light and free of distress.

Fig. 5.4 Vamana Pradhana Karma

5.2.3 Paschat Karma (Post Procedural Advice)

Dhoomapana

It should be carried out for 5-10 minutes after proper Vamana, the patient is asked to inhale the medicated smoke thrice through one nostril, thrice through the other nostril and thrice from the mouth.

Each time, the patient should exhale from his mouth only.

Samsarjana Krama

The patient is advised the specific graduated diet protocol according to the intensity of Vamana.

The diet advised is rice water, rice gruel, soups prepared from pulses, soups prepared from non-vegetarian foods (if applicable); before starting with the regular diet.

It takes 3 to 7 days for the complete diet protocol.

Fig. 5.5 Vamana Paschat Karma

Common Indications:

This process is generally advised for:

Common Indications of Vamana
Indigestion-related problems like reduced digestive fire for a long time
Bad eating habits
Concurrent vomiting and diarrhoea
Loss of taste and appetite
Sour belching, nausea, hyperacidity
Respiratory problems like allergic and recurrent cold, cough, asthma or other respiratory problems
Metabolic disorders like hypothyroidism or any other swellings in upper half of body, diabetes
Psychosomatic issues
Skin problems
Bleeding in rectum, i.e., blood with stools or just blood through urine/rectum
Inflammations
Breastmilk problems

Fig. 5.6 Common Indications of Vamana

Contra-Indications:

The process is to be avoided in problems like:

Contra-Indications of Vamana
Hyper obesity
Very lean and weak
Cardiac Issues
Very young age (<18 years)
Old age (>60 years)
Weak and/or tired
Polydipsic/Excessive thirst
Polyphagia/Excessive hunger
Person who exercises excessively
Pregnant lady

Continued...

Contra-Indications of Vamana
Any types of stricture/spasm in upper digestive tract
Oliguria
Prostatomegaly
After Niruha Basti
After Anuvasana Basti
Bleeding through upper orifices like nose, mouth, ears, etc.

Fig. 5.7 Contra-Indications of Vamana

5.2.4 Virechana (therapeutic purgation)

The process of extracting and excreting morbid and excess Dosha/toxins through the rectal route, by the passage of stools, is known as Virechana. The patient generally has to go 10-30 times a day to pass stools.

The following are the requirements for Virechana:

- Should have the basic knowledge of Virechana procedure.
- Room should have proper ventilation, hygiene and enough light.
- Check the availability and proper functioning of all the required equipment and instruments, sufficient utensils etc.
- All the drugs and materials required (which also includes emergency drugs) for Virechana as prescribed by physician should be available in enough quantity.

Continued...

There should be arrangement of extra stock of drugs and other materials if required.

Should have the knowledge of various drugs utilized in Virechana process.

To confirm that the pre-procedure of Virechana i.e Snehana and Swedana is done properly

Should be able to prepare various Virechana formulations as prescribed by physician.

Should have proper skill to fill the *Virechana* proforma during the procedure

In case of any complications (in absence of Therapist/Physician) Panchakarma Technician should have the knowledge of protocol for reporting complications.

Fig. 5.8 Requirements of Virechana

Notes



5.2.5 Purva Karma (Preparation of the patient)

The following steps have to be taken to prepare the patient before Virechana:

- Improving digestion by using medicines.
- Starting oleation by asking the patient to drink ghee/oil in increasing doses daily for 3 to 7 days, as decided by the physician after examination.
- Oil massage and sudation (using hot vapor for causing perspiration) daily for 3 days after the completion of oleation and on the day of Virechana, i.e., 4 days consecutively after intake of ghee/oil.
- Advise the patient to have a spicy, hot, liquid diet the day before Virechana like soups and hot lime water.

5.2.6 Pradhana Karma (Main Procedure)

The patient is given medicine by 10:30-11:00 am in the morning for Virechana.

5.2.7 Paschat Karma (Post procedural advice)

Samsarjana Krama - The patient is advised the specific graduated diet protocol according to the intensity of Virechana. The diet advised is – Rice water, Rice gruel, soups prepared from pulses, soups prepared from non-vegetarian foods (if applicable); before starting with the regular diet. It takes 3 to 7 days for the complete diet protocol.

Common Indications:

This process is advised for:

Common Indications of Virechana
Haemorrhoids
Concurrent vomiting and diarrhoea like symptoms
Worm infestations
Chronic constipation
Vomiting
Reduced digestive fire
Diabetes
Thyroid disorders
Anaemia

Continued...

Common Indications of Virechana
Ascites
Jaundice
Inflammatory disorders
Asthma
Chronic coughing
Herpes
Gynaecological issues, etc

Fig. 5.9 Common Indications of Virechana

Contra-Indications:

This process is not advised for:

Contra- Indications of Virechana
Reduced digestive fire
Polydipsic/excessive thirsty
Polyphagia/Excessive hunger
Very old Age
Very young age
Weak person
Person busy with schedule
Pregnancy
Person who does over-exercise
During fever
Hyper-obesity
Very weak and lean
Anal Injury
Rectal prolapse
Bleeding per rectum
After Niruha Basti, etc.

Fig. 5.10 Contra- Indications of Virechana

5.2.8 Basti (per rectal administration of drug)

This method involves introduction of medications (oil or decoction) through the rectal route for a while and then eliminates Doshas, mainly Vata.

Basti is mentioned as one of the five Panchakarma procedures which aims for detoxification of the morbid Doshas from the body. It is a process of administering medicated decoction or oil enemas through anal, vaginal or urinary pathway.

Basti is considered to be the most effective treatment for Vata disorders and Vata Dosha being the most significant Dosha to control the other two Doshas. There are two types of Basti which can be administered on the basis of predominant Dravya used in Basti.

- Anuvasana Basti
- Niruha/Kashaya Basti

The following are the requirements for Basti:

Should have the basic knowledge of Basti procedure.

Should have knowledge of different types of Basti preparations and proper method of Basti administration.

Basti room should have proper ventilation, enough light, hygiene and cleanliness.

Check the availability and proper functioning of all the required equipment and instruments, sufficient utensils etc.

All the drugs and materials required (which also includes emergency drugs) for Basti as prescribed by physician should be available in enough quantity.

There should be arrangement of extra stock of drugs and other materials if required.

Continued...

Should be able to assist Panchakarma Therapist/Physician for preparation of various Basti.

Prepare the table for Basti, covering it with the plastic sheet/disposable sheet.

To confirm that the pre-procedure of Basti i.e Snehana and Swedana is done properly.

Should have the knowledge of proper posture for Basti and able to help the patients in attaining a posture which is appropriate for providing the therapy.

Be alert towards patient's safety during therapy session.

Maintain patient's privacy throughout the procedure.

Fill Basti Putaka (instrument for holding Basti drug) with Basti drug, apply oil on the anterior portion of Basti Netra/Catheter and also apply oil in anus region of patient.

Assist the Therapist/Physician while Basti is inserted in the anus.

Ask the patient to take deep breathing during the procedure.

Continued...

After insertion of Basti , arrange patient in supine position and ask the patient to remain in same position for some time.

Remain near the patient till patient feels comfortable and normal.

In case of any complications (in absence of Therapist/Physician) Panchakarma Technician should follow the proper method of reporting complications.

Should have knowledge of management of post procedures.

Fig. 5.11 Requirements for Basti

5.2.8.1 Anuvasana Basti

In this procedure, Snehas are administered in to the colon through the anal canal.



Fig. 5.12 Patient undergoing Basti

Classification of Anuvasana Basti
Sneha Basti [1/4th amount of Niruha in form of Sneha, approx 300ml]
Matra Basti [Hraswa Matra (low dose) of Sneha, approx 75ml]
Anuvasana Basti [Madhyama Matra (medium dose) of Sneha, approx 150ml]

Fig. 5.13 Classification of Anuvasana Basti

Common Indications:

This process is advised for:

Common Indications of Anuvasana Basti
Shosha (emaciated)
Marmavikaras (vata disorders in Marma Pradesha)
Pleehavikaras (spleen disorders)
Mutrakrichra (decreased urine output)
Pakwasayashula (pain in lower abdomen)
Kukshi Vata (pain in abdomen)
Udavartha (upward gati of vayu)
Apatanaka (convulsion disorders)
Sandhi Graham (stiffness of joint)
Vatavikaras (vitiated vata condition)
Nashtapushpa (amenorrhea), etc.

Fig 5.14 Common Indications of Anuvasana Basti

Notes

Contra-Indications:

This process is not advised for:

Common Indications of Anuvasana Basti
Abhuktabakta (empty stomach)
Navajwara (acute fever)
Arshas (haemorrhoids)
Arochaka (lack of interest in food)
Mandaagni (weak digestive powder)
Pratishyaya (cold)
Atisara (diarrhoea)
Visha Peeta (person who has consumed Visha)
Slipada (filariasis)
Krimikoshta (worm infestations)
Shotha (oedema)
Bhagandhara (fissures), etc.

Fig 5.15 Contra- Indications of Anuvasana Basti

Notes

5.2.8.2 Niruha Basti

In this type of basti, Kashaya is the chief constituent of the Bastidravya along with Madhu (honey), Saindhava (rocksalt), Kalka (paste of herbal medicines) and Snehadravya (oily substances). It eliminates vitiated doshas from the body, there by promoting health and increased life span.

Common Indications:

This process is advised for:

Common Indications of Niruha Basti
Sarvanga Roga (disease of whole body)
Kukshiroga (disease of abdomen)
Mala and Mutrasanga (retention of flatus and urine)
Balakshaya (loss of strength)
Adhmana (distension of abdomen)
Angasupti (numbness of organs)
Krimikoshta (worm infestations)
Pleeha Dosha (disorders of spleen)
Ashmari (kidney stones)
Katishoola (back pain)
Anga Gourava (heaviness of body)
Parikarthika (fissures)
Shosha (emaciated)
Mamsakshaya and Balakshaya, etc.

Fig 5.16 Common Indications of Niruha Basti

Contra-Indications:

This process is not advised for:

Contra-Indications of Niruha Basti
Ajeerna (indigestion)
Alpagni (weak digestive fire)
Atikrisha (emaciated)
Bhuktabhakta (person who has taken food)
Vamana, Virechana, Nasyakrit (those who have undergone Sodhana procedures)

Continued...

Contra-Indications of Niruha Basti
Unmada (lunacy)
Krodha, Bheeta (mentally stressed)
Prasakthachardi (have vomiting tendency)
Udararoga (ascites), etc.

Fig 5.17 Contra- Indications of Niruha Basti

Benefits of Basti:

Basti treatment has the following benefits:

Benefits of Basti
It helps to eliminate out the vitiated Doshas from the body.
It helps to pacify the aggravated Doshas.
It helps in Vajikarana (rejuvenation therapy).
It promotes health, immunity and strength.
It helps in Brimhana i.e., nourishment as well as Langhana i.e., emaciation.
It helps in cleaning the intestine and maintains the health of gut.
It promotes quality and quantity of life.
It is beneficial in diseases like osteoarthritis, rheumatoid arthritis, cervical and lumbar spondylosis, musculoskeletal disorders, paralysis, obesity, constipation, infertility, etc.

Fig 5.18 Benefits of Basti

5.2.8.3 Pre procedure of Basti

- Snehana and Swedana are the pre procedures for doing Basti Karma.
- Localized oleation at the regions of both legs, lower back region, lower abdominal region, followed by sudation therapy with Nadi (pipe).

5.2.8.4 Procedure of Basti

- Patient is advised to lie down in a left lateral position.
- Patient's body should be straight and use the folded left hand as a pillow.
- Patient should flex the right leg and keep the left leg straight (fully extended).
- After anal examination, the anus of the patient and the nozzle of Basti Yantra should be lubricated by applying little quantity of oil.
- The nozzle should be gently inserted in to the anal canal up to the specific length and Bastiputaka containing the mixture should be pressed with a uniform pressure.
- The pressure should be continued till only a small quantity of fluid remains in the bag.
- Then the nozzle has to be removed gently.

5.2.8.5 Post procedure of Basti

- After the introduction of medicine, the patient should be asked to lie in the supine position.
- In the case of Anuvasana Basti, pat on the buttocks of the patient and flex the knees.
- Ask the patient to evacuate the bowels, when the patient feels urges.

5.2.9 Nasya (nasal medication)

The process of instilling medicated oils/powders/ghee through the nasal route is known as Nasya. This process is carried out for one of the following three purposes:

- To remove excess morbid Dosha or toxins from the head region.
- To increase the strength of the upper extremity, specifically the shoulder joint.
- To reduce the strength of morbid Dosha.

Notes



The following are the requirements for Nasya:

- Should have the basic knowledge of Nasya procedure.
- Should have knowledge of different types of Nasya preparations and proper method of Nasya administration.
- Nasya room should have proper ventilation and enough light
- Preparation and cleanliness of Nasya chair/Nasya table should be ensured.
- Check the availability and proper functioning of all the required equipment and instruments, sufficient utensils etc.
- All the drugs and materials required (which also includes emergency drugs) for Nasya as prescribed by physician should be available in enough quantity.
- There should be arrangement of extra stock of drugs and other materials if required.
- Should be able to assist Panchakarma Therapist/Physician during the whole procedure of Nasya as and when the help is required.
- To confirm that the pre-procedure of Nasya i.e Snehana and Swedana is done properly.
- Should have the knowledge of proper posture for Nasya and able to help the patients in attaining a posture which is appropriate for providing the therapy.
- Be alert towards patient's safety during therapy session.

Continued...

Maintain patient's privacy throughout the procedure.

In case of any complications (in absence of Therapist/Physician) Panchakarma Technician should follow the proper method of reporting complications.

Should have knowledge of management of post procedures.

Fig 5.19 Requirements for Nasya

5.2.9.1 Purva Karma (Preparation of the patient)

- The patient's face must be massaged with warm oil. Later, sudated with warm towel/warm hand.
- Patient must be asked to lie down in supine position with a pillow under the head and shoulder region; with the head slightly tilted downwards from the pillow and chin upwards.

5.2.9.2 Pradhana Karma (Main Procedure)

- To install Bindu in the right nostril, the left nostril should be closed and 2-8 Bindu of warm medicine as prescribed by the Panchakarma expert should be instilled through the right nostril.
- To install Bindu in the left nostril, the right nostril should be closed and 2-8 Bindu of warm medicine as prescribed by the Panchakarma expert should be instilled through the left nostril.
- Patients should be asked to inhale the medicine.
- Whenever the patient feels the presence of medicine/secretions in the throat, ask to spit it out and caution never to ingest it.



Fig 5.20 Patient undergoing Nasya

5.2.9.3 Paschat Karma (Post Procedural Advice)

- The patient should be asked to inhale hot medicinal vapours, i.e., Dhoomapana.
- Later the patient should be asked to gargle with warm water.

Common Indications:

This process is advised for:

Contra-Indications of Nasya
• Indigestion • After eating food • After or before drinking Ghee/oil/water/alcohol • After or before washing hair • Hungry/thirsty/tired • Unconscious • Injury • Fever • Emotionally disturbed • Pregnant • Recent cold/rhinorrhoea/rhinitis • After Anuvasana, etc.

Fig 5.22 Contra- Indications of Nasya

5.2.10 Raktamokshana (Blood-Letting)

This cleansing method involves removing impure blood by process of Siravedha(vein puncturing), Prachhana(small cuts made through sharp instruments), Jalauka Avacharana (leech application), Sringavacharana (blood-letting by horn), Alabu-Avacharana (blood- letting by gourd method), and Ghatiyantra Avacharana (blood-letting by pot method).

Ancient Ayurvedic texts have quoted Raktamokshana (blood-letting) as one of the five Panchakarma procedures. Rakta means blood and Mokshana means letting, it is used for removing or displacing impure blood from the diseased area/body. There are seven Dhatus (bodily tissues) and Rakta is the second of them. Rakta in its healthy state improves one's complexion and nourishes the muscles and other tissues. It also has Jeevana (life) as its important function. When Rakta is vitiated, it results in several diseases. Raktamokshana is considered as half treatment for the body along with internal medications.

Raktamokshana is of two types:

Shastravisravana (Use of sharp instruments)	Prachhana (scraping or scarification) Siravedha (vein puncture)
Anushastra Visravana (Without use of sharp instruments)	Jalaukavacharana (leech application Shringavacharan (horn application) Alabu Avacharana (Lagenaria Siceraria Standl.) Ghati Yantra (Small pot)

Fig 5.23 Types of Raktamokshana

The following are the requirements for Raktamokshana:



Fig 5.24 Tools used in Raktamokshana



Fig 5.25 Requirements of Raktamokshana

Common Indications:

This process is advised for:

Common Indications of Raktamokshana
Erosion in oral cavity
Redness in the eyes
Foul smell sensation
Foul smell from mouth
Inflammatory condition of abdomen
Bleeding gums
Hemorrhagic disorders
Metabolic disorders

Common Indications of Raktamokshana
Abscess
Blood discharge along with urine
Vaginal discharge
Gout
Dislocation
Loss of appetite
Thirst
Heaviness in body
Febrile conditions
Belching with bitter and acidic taste
Excessive anger
Confusion
Excessive sweating with/without foul odor
Bleeding disorders
Tremors
Itching and skin disorders

Fig 5.26 Common Indications of Raktamokshana

Contra-Indications:

This process is not advised for:

Contra-Indications of Raktamokshana
Generalized edema
Anemic patients
Individuals with hemorrhoids
Individuals with tuberculosis
Pregnant ladies
Delirium
Unconsciousness
In case of exertion
Sleepiness
Fearful individual,
Person on empty stomach.

Fig 5.27 Contra-Indications of Raktamokshana

5.2.10.1 Pre-Procedure of Raktamokshana

- Make the patient Snigdha, by means of Snehapana with Go Ghrita or medicated oil/ghee prior to the Raktamokshana.
- Advise the patient to shave the hair from the part where the procedure is to be performed.
- Keep the kidney tray ready with turmeric, bowls with clean water, gauze pieces applied with turmeric and/or borax powder and surgical tape cut in appropriate sizes.
- Advise patient to sit or sleep in a comfortable position or as prescribed by physician.
- Clean the affected or selected part with cotton gauze.

5.2.10.2 Procedure

- Make the patient aware about the procedure and measure the vitals.

Jalauka

- Make the Jalauka bite at the affected part by holding it gently.
- Once bitten, note the sign of the horse shoe shape of Jalauka and peristaltic movement of blood through the body of Jalauka.
- Cover the Jalauka with wet cotton and let it suck the blood till it loosens the bite or itching felt by the patient over the area of the bite.
- For manual removal of Jalauka, sprinkle turmeric or rock salt over its face.
- Press and bandage with the gauze applied with turmeric and borax.



Fig 5.28 Patient undergoing Jalauka

5.2.10.3 Post- Procedure

- Press and bandage turmeric and/or borax contained gauze over the bleeding site.
- Jalauka is to be made vomited by means of turmeric in a separate kidney tray. Then Jalauka is to be kept in a clean glass of water vessel with a facility for air through holes.
- Patient is to be instructed to take a Ghee/oil rich diet after assessing the appetite.

The above procedures are aggressive and major Panchakarma. Apart from these, there are other procedures which are included under pre-procedures or also known as minor procedures.

Notes

UNIT 5.3 Concepts of Samyak Yoga, Ati Yoga and Ayoga, Lakshanas

Unit Objectives

At the end of this unit, the trainee will be able to:

1. Explain about the concepts of Samyak Yoga, Ati Yoga and Ayoga, Lakshanas

5.3.1 Samyak Yoga Lakshanas

Swedana is a treatment in which sweat is induced in the body. It is a remedy for several diseases and also has a preventive role. It can be carried out individually or in combination with other treatments.

Samyak Yoga of Swedana are signs of proper sudation or Samyak Swinna Lakshanas. The below mentioned signs indicate that sudation is done in a proper way.

Sheetoparama	Pacification of feeling of abnormal coldness in the body
Shuloparama	Pacification of pain
Stambha nigraha	Reduction of stiffness or tightness in the body parts
Gaurava nigraha	Reduction of feeling of heaviness in body parts
Maardava or mridutva	Smoothness of the body parts
Sweda praadurbhaava	Sweating of body or body parts which have been subjected to swedana
Roga lakshana prashamanam	Reduction of the symptoms of the disease for which swedana is administered
Sheetaartitvam	Craving for cold food and comfort

Fig 5.29 Samyak Yoga Lakshanas

5.3.2 Ati Yoga Lakshanas

Ati Yoga are signs of improper sudation and these are often due to negligence, lack of care or supervision or due to faulty administration of Swedana.

Types of improper sudation:

Heena Yoga	It is insufficient or deficit administration of sudation. It is also known as Asamyak or Aswinna Swedana.
Ati Yoga	It is excessive administration of sudation. It is also known as Atiswinna Swedana.

Fig 5.30 Asamyak Yoga Lakshanas

Both Heena Yoga and Ati Yoga are harmful to the body. Care should be taken to see that the patient is not subjected to either of them.

Following are the signs of Heena Yoga or less sweating or deficit administration of sudation:

Sheeto anuparama	No relief from feeling of coaldness in the body
Shula anuparamam	No reduction in of pain
Stambha nigraha	No relief from stiffness or tightness in the body parts
Gaurava nigraha	No relief from of feeling of heaviness in body parts
Amaardavam	No feeling of smoothness of the body parts
Aswedam	Sweating of body or body parts in not shown
Alaghutvam	Lightness of body is not experienced
Vyadhi anupashama	No relief from the disease for which sudation has been administered

Fig 5.31 Heena Yoga Lakshanas

Following are the signs of Ati Yoga or over sweating or excessive administration of sudation:

Pitta prakopa	Aggravation of pitta
Murcha	Fainting or loss of consciousness
Anga sadana	Body weakness
Sarva Anga Daurbalya	Weakness in all parts of the body
Sandhi peeda	Pain in bony joints
Sphota utpatti	Manifestation of blisters
Rakta prakopa	Aggravation of rakta
Bhrama	Vertigo
Trushna	Excessive thirst
Klama	Fatigue
Svara sadana	Hoarseness of voice
Jwara	Fever
Chardi	Vomiting

Fig 5.32 Ati Yoga Lakshanas

UNIT 5.4 Vyapads (complications) in Vamana, Virechana, Nasya, Basti and Raktamokshana

Unit Objectives

At the end of this unit, the trainee will be able to:

1. Discuss about the Vyapads (complications) in Vamana, Virechana, Nasya, Basti and Raktamokshana

5.4.1 Vyapads in Vamana

Vyapads in Vamana or complications after a Vamana procedure arise due to excess or inadequate administration of the treatment.

Vyapads in Virechana

- Abscess
- Gastritis
- Nausea and vomiting
- Skin disorders

Fig 5.34 Vyapads in Virechana

5.4.3 Vyapads in Nasya

The following are the complications that can arise after Nasya treatment:

Vyapads in Nasya

- Nasal blockage
- Headache
- Rhinitis
- Heaviness in head
- Nasal irritation and dryness
- Nasal bleeding
- Fainting

Fig 5.35 Vyapads in Nasya

5.4.4 Vyapads in Basti

The following are the complications that can arise after Basti treatment:

Vyapads in Basti

- Fatigue
- Burning sensation
- Pain in the chest and heart region
- Delusion
- Colic
- Heaviness of body

Fig 5.36 Vyapads in Basti

5.4.5 Vyapads in Raktamokshana

The following are the complications that can arise after Raktamokshana treatment:

Vyapads in Raktamokshana

- Fainting
- Itching at the site of bite (in leech therapy)
- Allergic reactions (in leech therapy)
- Secondary infections at the site of puncture
- Non-healing of the wound

Fig 5.36 Vyapads in Raktamokshana

Notes

Summary

- Pharmacodynamics is the study of biochemical, molecular and physiologic effects of drugs on the body. It involves receptor binding, post receptor effects and chemical interactions. Pharmacodynamics and pharmacokinetics are two main branches of pharmacology.
    - Pharmacodynamics can be described as 'what a drug does to the body'.
    - Pharmacokinetics can be described as 'what the body does to the drug'.
- Both of these together explain the relationship between the dose and response or the drug's effect.
- Various Panchakarma procedures include vamana, virechana, basti, nasya, raktamokshana, etc.
- Swedana is a treatment in which sweat is induced in the body. It is a remedy for several diseases and also has a preventive role. It can be carried out individually or in combination with other treatments. Samyak Yoga of Swedana are signs of proper sudation or Samyak Swinna Lakshanas.
- Ati Yoga are signs of improper sudation and these are often due to negligence, lack of care or supervision or due to faulty administration of Swedana.
- Vyapads in Vamana or complications after a Vamana procedure arise due to excess or inadequate administration of the treatment.

Notes

Exercise

Answer the following questions:

1. What is Basti procedure used for?

   _____
   _____
   _____

2. What are the two types of Basti?

   _____
   _____
   _____

3. Mention two benefits of Basti.

   _____
   _____
   _____

4. Mention some complications that can arise post therapy.

   _____
   _____
   _____

5. What is the name of the treatment where sweat is induced in the body?

   _____
   _____
   _____

Scan the QR Code to watch the related video

Unit 5.2 Udvartana
https://youtu.be/ikI2-Am2FGg

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6. Ayurvedic Diet (Ahara) and its Concepts Related to Panchakarma

Healthcare
Sector
Skill Council

Unit 6.1 Overview of Ahara

Unit 6.2 Anupama

Unit 6.3 Concept of Peyadi, Tarpanadi Krama and their preparation

Unit 6.4 Preparation of Swarasa, Kalka, Kwath, Hima, Phanta, Tandulodaka, Mantha, Avaleha, Dhanyamla, Kshirapaka, Panaka, Mamsarasa, Lepa



HSS/N3602

Key Learning Outcomes

At the end of this module, the trainee will be able to:

1. Discuss the importance of Ahara in health and disorders
2. Explain the importance of Hita Avam and Ahita Ahara based on Doshika Prakriti
3. Explain about Ritucharya Avam and Ahara and its preparation
4. Explain about Dinacharya Avam and Ahara and its preparation
5. Explain about the importance of Anupama with respect to panchakarma
6. Discuss the concept of Peyadi, Tarpanadi Krama and its preparation
7. Explain the preparation of Swarasa, Kalka, Kwath, Hima, Phanta, Tandulodaka, Mantha,Avaleha, Dhanyamla, Kshirapaka, Panaka, Mamsarasa, Lepa
8. Explain about the importance of diet according to panchakarma procedure

Unit 6.1 Overview of Ahara

Unit Objectives

At the end of this unit, the trainee will be able to:

1. Discuss the importance of Ahara in health and disorders
2. Explain about the importance of diet according to Panchakarma procedure
3. Explain the importance of Hita Avam and Ahita Ahara based on Doshika Prakriti
4. Explain about Ritucharya Avam and Ahara and its preparation
5. Explain about Dinacharya Avam and Ahara and its preparation
6. Explain about the importance of diet according to Panchakarma procedure

6.1.1 Ahara

Ahara is anything (food) which is consumed or ingested with the help of tongue, mouth and throat is called Ahara.

Types of Ahara

The different types of Ahara are:

Ashita	The one which can be eaten, eg., Krishra (Khichdi).
Peeta	The one which needs to be drunk, e.g.,Takra (Buttermilk).
Lehya	The one which needs to be licked, e.g, Madhu (Honey), Avaleha (lickable).
Khadita	The one which needs chewing, e.g., Chapati.

Fig 6.1 Types of Ahara

Ahara is prime important in everyone's life as Hitakara Ahara causes the growth of human beings whereas Ahitakara Ahara is the cause for the growth of diseases.

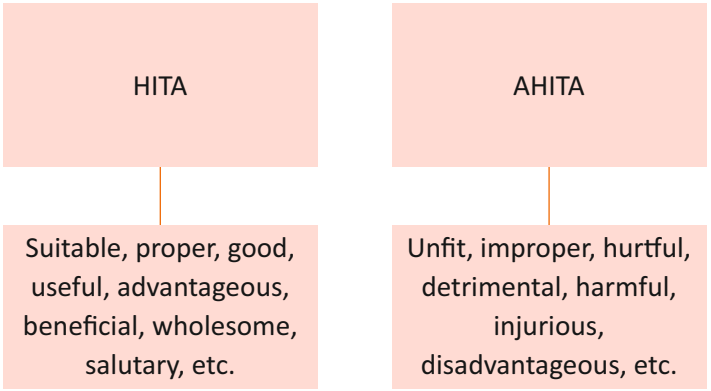


Fig 6.2 Hita and Ahita

6.1.2 Importance of Balanced Diet and Sleep

Balanced diet

A balanced diet is one that is nutritious to the body, bodily elements and vital forces. It increases the strength, gives the required energy for a healthy living, gives lustre to skin, etc. It should be easily digest able and contain all kinds of taste that will fulfil the requirements of the body. Milk is an ideal drink for the aged and children. Food is the medicine to the body.

Sleep

A sound sleep is necessary for energy restoration, metabolic regulation, brain maturation and immunity boosting. A sound sleep gives pleasure, strength, vigour and is necessary for life.

6.1.3 Samsarjana Krama

The graduated form of dietetic protocol in which, the form of food is graduated from liquid to solid form; from semisolid to solid form and normal food after Panchakarma procedures to kindle the tired digestive fire (Agni) is known as Samsarjana Krama.

Preparation:

Manda–Peya	Rice and water in the proportion of 1:14 is boiled till the rice is cooked. After cooking of rice, the filtered liquid portion when obtained is known as Manda. The rest portion which is loose watery in consistency is known as Peya.
Vilepi	Rice and water in the proportion of 1:4 is boiled and the rice is cooked. The thick paste obtained is known as Vilepi.
Yusha (Akruta and Kruta Yusha)	Akruta Yusha is prepared by taking pulse and water in the proportion of 1:18, soaked for 3 hours, cooked well and the water is strained. SAlt and pepper may be added for taste. Kruta Yusha is obtained by tempering Akruta Yusha with oil, pepper, mustard seeds and salt.
Mamsa Rasa	Meat is chopped and water is added in the quantity of 2 or 4 or 6 or 8 times the meat. The meat is then boiled and cooked.

Fig 6.3 Preparation Steps of Different Foods

Indications

Samsarjana Krama should be performed in the following circumstances:

Indications for Samsarjana Karma
• As part of after procedure of Panchakarma procedure. • As Pathya in diseases or in healthy individuals. • in diseases where the digestive fire is reduced. • After prolonged fasting.

Unit 6.2 Anupama

Unit Objectives

At the end of this unit, the trainee will be able to:

1. Explain about the importance of Anupama with respect to Panchakarma

6.2.1 Samashana, Adhyashana and Vishamashana

1. **Samashana** - The type in which healthy and unhealthy food diets are eaten together. For example: Vegetables on a pizza base/bun for burger
2. **Adhyashana** - The type in which food is taken before the previous food is digested.
3. **Vishamashana** - Any type of food eating habits, which are without feeling hungry or in excess amount than hunger.

Anupana and its importance

Anupana is defined as the drink which is taken before, along with or after food and medicines. It enhances the properties of medicines along with it is taken.

Swarupa- It is a substance which can administer in the form of drinking. For example, water, milk, butter milk, juice, ghee etc.

Benefits of Anupana:

- Provides nourishments, satisfaction, pleasing, energy, strength and improves the body mass.
- Easy breaking down of hard food particles.
- By softening the food particles, it helps in easy digestion and assimilation.
- Enhances the qualities of food.
- Enhance the bioavailability of food nutrients in blood vessels and body tissues.

Examples of Anupana:

- Cold water is advised while eating food articles prepared with barley, wheat, while consuming curds, wine and honey.
- Hot water is ideal Anupana for ghee, oil, fats, green gram dishes and legumes.
- Meat soup is good for people who have shrunk and become tired.

6.2.2 Dinacharya and Ritucharya

Dinacharya is a daily regimen that is to be followed according to Ayurveda. Dinacharya commences from the early morning waking up and spans the entire day till the individual falls asleep.

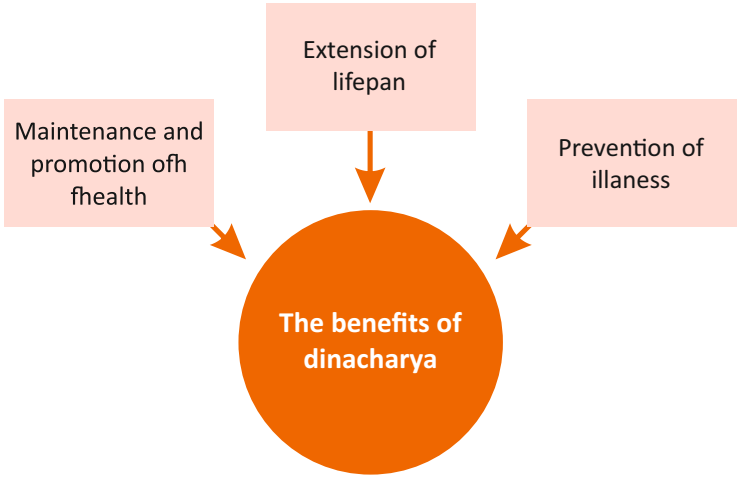


Fig 6.4 The Benefits of Dinacharya

Dinacharya includes:

Awakening early in the morning	Sipping of water	Brushing of teeth	Tongue cleaning	Gargling/Mouth wash	Collyrium (Anjana)
Nasal drops	Medicated smoking	Oil application	Massage	Exercise/Yoga	Pranayama
Bath	Anointments (Anulepana)	Food	Breakfast	Lunch	Dinner
Snacks	Drinks	Job/work	Sexual act	Sleep	

Fig 6.5 Inclusions of Dinacharya

Other protective measures:

- Washing feet
- Wearing cloth
- Wearing perfumes/garlands
- Wearing footwear
- Holding stick
- Wearing protective covering
- Wearing head turban & umbrella

Ritucharya is a specific dietary and lifestyle regimen in accordance with the changing of the seasons. There are six seasons as per ancient Indian thought. These are:

- Vasanta ritu – spring
- Grishma ritu- summer
- Varsha ritu – monsoon
- Sharad ritu – autumn
- Hemant ritu – prewinter
- Shishira ritu – winter

The individuals needs and capabilities change in accordance with the changes in the external environment and the ritucharya prescriptions give us a guideline as to how to adapt one's diet and lifestyle in accordance with thee transitions.

Procedure:

- Observe the seasonal changes happening in weather conditions and nature in terms of qualities, food products and one's bodily behaviors.
- Do modifications in diet, lifestyle and Dinacharya components.
- Seasonal detoxification and rejuvenation guidelines.

Benefits of Ritucharya:

- Prevents diseases that occurs due to seasonal changes
- Maintains and promotes health
- Extends healthy lifespan

Notes



Unit 6.3 Concept of Peyadi, Tarpanadi Krama and their Preparation

Unit Objectives

At the end of this unit, the trainee will be able to:

1. Discuss the concept of Peyadi, Tarpanadi Krama and its preparation

6.3.1 Peyadi and Tarpanadi Krama

Samsarjana Krama is a special type of dietic regimen explained in Ayurveda. It is a graduated form of dietetic protocol. In this, food is gradually graduated from liquid to semisolid form and from semisolid to solid and normal food. In other words, Samsarjana krama is the process of administration of food in an orderly manner, from laghu aahara (light diet) to guru aahara (heavy diet) in order to increase agni.

The different varieties of samsarjana krama are peyadi, tarpanadi, rasa samsarjana krama, mamsa samsarjana krama, yavagvadi samsarjana krama and yushadi samsarjana krama. Tarpanadi and peyadi come under anna samsarjana.

Peyadi Samsarjana Krama

Peyadi Samsarjana KrAatma	It includes administration of peya (thin gruel), vilepi (thick gruel), akruta yusha (soup without seasoning), kruta yusha (soup with seasoning), akruta mamsarasa (meat soup with seasoning) and kruta mamsarasa (seasoned meat soup). The duration of administration of peyadi krama depends on type of shodhana, person has attained i.e. Pravara shuddhi, madhyama shuddi and avara shuddhi. Based on this shuddhi (clearance of dosha), peyadi samsarjana krama is advised for 12 anna kala, 8 anna kala and 4 anna kala respectively.
Purpose of Peyadi Samsarjana krama	Due to the elimination of doshas from body after samshodhna karma (purification procedures), agni (digestion capacity) becomes weak. So, to restore the strength of agni peyadi samsarjana krama should be followed.

Fig 6.6 Peyadi samsarjana krama

Tarpanadi Samsarjana Krama

Acharya indu in astanga sangraha sutra sthana comments that tarpana means laja saktu (flour of puffed paddy. Swaccha tarpana and ghana tarpana are used instead of peya and vilepi.

Following of tarpanadi samsarjana krama is similar to that of peyadi samsarjana krama annakala. The only difference is instead of peya and vilepi, swacccha tarpana and ghana tarpana are used respectively in tarpanadi krama.

Purpose of Tarpanadi Samsarjana Krama

The laja used for preparation of swaccha tarpana and ghana tarpana are devoid of abhishyandana guna. Therefore, the stroto avrodha which might be caused by abhishyandana guna of peya and vilepi can be prevented by administration of tarpanadi samsarjana krama in case of alpa vishuddhi of kapha and pitta (incomplete explusion of doshas), vata pittaja madya vikara (madya vikara-diseases caused due to alcoholism), madhya nitya (regular consumption of alcohol) after shodhana karma.

Notes

Unit 6.4 Preparation of Swarasa, Kalka, Kwath, Hima, Phanta, Tandulodaka, Mantha, Avaleha, Dhanyamla, Kshirapaka, Panaka, Mamsarasa, Lepa

Unit Objectives

At the end of this unit, the trainee will be able to:

1. Explain the preparation of Swarasa, Kalka, Kwath, Hima, Phanta, Tandulodaka, Mantha, Avaleha, Dhanyamla, Kshirapaka, Panaka, Mamsarasa, Lepa

6.4.1 Panchavidha Kashaya Kalpana

Formulations are divided into Ahara kalpana and Oushadha Kalpana. Panchavidha Kashaya Kalpana are primary formulations. They are swarasa, Kalka, Kwatha, Hima and Phanta. In this the most potent formulation is swarasa and the least potent formulation is phanta.

1. **Swarasa**

It is freshly extracted juice of a plant. They are of two types.

a) Agnisidha b) Anagnisidha

Methods for Preparation of Swarasa

Type of Drug	Method of Preparation
1. For freshly collected drugs	Fresh drugs that are not infested by any insects, worms etc are collected, cleaned then pounded and strained through cloth. The obtained product is called swarasa.
2. For dry drugs	One part of the coarsely powdered drugs are soaked overnight in double the quantity of water and next day morning it is macerated well and filtered through cloth to obtain swarasa.
3. In case of very hard drugs	To one part of coarse powdered drugs 8 times of water is added and is boiled and reduced to 1/4th on moderate fire, filtered to obtain swarasa.
4. For fibrous drugs	Paste of the drugs are taken and they are covered with medicinal leaves like Palasa, Vata, Gambharietc, tied with a thread. Over this mud is smeared to an angula thickness, dried in shade and baked over charcoal till it becomes red hot. After it's cooled, the mud and leaves are removed and strained through cloth to get putapakaswarasa.

Table 6.1 Methods of Preparation of Swarasa from Different Drugs

Dose:

Agnisidha- 1 pala(48ml)

Niragni siddha- ½ pala(24ml)

Prakshepakadravya and their dose:

Honey, Sugar candy, Jaggery, Kshara, Jeeraka, Lavana, Ghrutha, Taila and Churna in quantity of 6 grams

Expiry Period: Shelf life

Has to be used instantly

Examples: Ardrakaswarasa, Tulasiswarasa, Vasa Putapaka etc.

2. Kalka Kalpana

Soft paste obtained by grinding the drugs inkhalwa is called kalka.

Method of preparation

The required drug is taken, it is cleaned and grinded in a clean khalwayantra to get soft paste and no fibrous part is felt in it.

Dose

1 karsha(12 gram)

Prakshepakadravya and its quantity

Madhu, ghrutha, taila – double quantity; Sugar candy, jagerry – equal quantity; Liquid substance – Four times

Shelf life

Instant use

Examples: Nimbakalka, Rasonakalka

3. Kwatha Kalpana

Formulation prepared by boiling drugs in water. It is called as decoction.

Method of preparation:

Kwatha is prepared by boiling 1 part of the coarsely powdered drug along with 16 times of water in mandagni and reducing it to 1/8th part. This is then filtered to obtain the kwatha.

N.B – Depending on the nature of the drug the ratio of water added varies.

1. Soft drugs – 4 times of water
2. Hard drugs – 8 times of water
3. Very hard drugs – 16 times of water

All these has to be reduced to 1/4th quantity

Points to be noted while preparing the medicine

1. Powder should be coarsely powdered
2. Vessel should be chemically inert (preferably mud pot)

3. Mild heat should be given

4. Vessel should be kept open throughout the process

5. It should be stirred in between.

Dose: 2 pala (96 ml)

Pakshepakadravyas and quantity

A.

	Diseases of Vata	Diseases of Pitta	Diseases of Kapha
Sugar	1/4th	1/8th	1/6th
Honey	1/16th	1/8th	1/4th

B. Jeeraka, Guggulu, Kshara, Lavana, Silajatu, Hingu, Trikatu – 3g

C. Milk, Ghee, Oils etcliquids , Powder, Paste of drugs – 12 g

Shelf life period

Has to be used instantly after the preparation

Examples of Kashaya:

a. Rasnadikashaya

b. Amruthotharamkashayametc

4. Hima Kalpana

It is the cold infusion.

Method of preparation

One part of the coarse powder of the drug is soaked overnight in 6 parts of pure water in an inert vessel. Next day morning it is macerated well and filtered through a clean cloth . The filtrate obtained is Hima.

Dose: 2pala (96ml)

Shelf life: Has to be used instantly

Examples: a. Dhanyakahima b. Sarivadihima

5. Phanta Kalpana

It is called the hot infusion.

Method of preparation

One part of the coarsely powdered drugs are to be added to 4 parts of boiling water and it has to be taken out from fire and kept close. Later when the mixture is still warm macerate it and filter it. The filtrate obtained is Phanta.

Dose: 2 pala (96 ml)

Shelf life: Has to be instantly used after the preparation

Examples: a) Panchakolaphanta, b) Sudarshanaphanta

6. Tandulodaka

Rice is pounded and soaked with 8 times of water for half to one hour. Then this is macerated and filtered. The filtrate obtained is called as tandulodaka.

It is mainly used as an adjuvant. Also it is used in upanahasweda to prepare the lepa.

7. Mantha Kalpana

One part of drug is pounded well and is added to 4 parts of cold water taken in a mud pot and churned well, till it attain medium consistency. Then this has to be filtered and the filtrate is called as manthakalpana.

Dose: 2 pala(96ml)

Example: Kharjuradimantha

8. Avaleha Kalpana

Avalehakalpana is the preparation that has lickable consistency.

Ingredients:

1. Liquid portion in the form of milk, kashaya ,swarasa.
2. Sweetening agent in the form of sugar, sugar candy, Jagerry
3. Medicinal portion in the form of Certain fruit pulp like indian gooseberry(amalaki) or herbal powders
4. Ghee and honey

Method of preparation:

1. The liquid portion if it is Kwatha or swarasa then it has to be prepared as per classical methods
2. The sweetening agents like sugar, sugar candy or Jagerry are dissolved in these liquid preparation and then it is filtered.
3. The filtrate is boiled in mild fire till 1-2 thread consistency is achieved.
4. Then ghee is added.
5. Then it has to be taken from fir and the herbal powder has to be added little by little and mixed well
6. Once the preparation is cooled it has to be mixed well with honey.

Confirmatory tests for avalehakalpanathat has to be observed during the preparation

a. Tests during the preparation

1. Tantumatva – As the liquid gets thicken on boiling with addition of a sweetening agent, when it is taken in between thumb and index finger , pressed and released there will be appearance of fine threads. Two thread consistency has to be achieved.
2. Apsumajjathi – When this thickened liquid is dropped into water taken in a vessel it should sink and settles at the bottom.

b. Tests at the end of the preparation

1. Rough and stable – after the complete preparation when the product is taken in hand it should be rough and stable
2. Finger prints should be imparted – When the end product is pressed between fingers the prints of the fingers are imparted over it.

3. Proper colour, odour and taste should be achieved by product as that of the ingredients used.

Dose: 1 pala (48 gram)

Anupana- adjuvant: milk, sugarcane juice, any kashaya, warm water

Shelf life: 12 months

Examples: a) Chyavanaprasavaleha, b) Kushmandavaleha

9. Dhanyamla

Dhanyamla are prepared by fermenting cereals. Synonyms of Dhanyamla are aranala, kanjika etc.

Method of preparation:

Sl no:	Ingredients	Quantity
1	Tandula (rice)	5 parts
2	Pruthuka (pressed rice)	5 parts
3	Kulatha (horse gram)	5 parts
4.	Laja (puffed rice)	20 parts
5.	Kangubeeja	4 parts
6	Kodravam	2 parts
7.	Nagara	1 part
8	Nimbuka	4 parts
9.	Dipyaka	2 parts
10.	Water	100 parts

This reference is as per sahasrayoga. On an auspicious day after the rituals all the necessary drugs that are needed for the preparation of Dhanyamla are to be collected. Place a large earthen pot and pour the mentioned quantity of boiled water. The ingredients are to be added to it by tying in different potalis (bundles). It has to be loosely covered and has to be heated in mandagni for 7 days. Care has to be taken that the temperature should not rise above the boiling point and get spilled off. On the 8th day the required amount of dhanyamla can be taken out and can be replaced with boiled water. Uninterrupted supply of heat has to be maintained. It has to be carried out with proper care and cleanliness.

Uses:

Dhanyamla can be used for Dhara, Swedana, Lepa, Parisheka.

10. Ksheerapaka

Ksheerapaka is a type of decoction where the main solvent is milk. Here the drugs are processed in milk so that it has both water soluble and fat soluble extractives in it.

General method of preparation:

One part of the drug is boiled in 8 times of milk and 32 times of water in mandagni and is reduced to the quantity of milk. Then this is filtered and the obtained filtrate is ksheerapaka. The vessel taken for preparation should be inert.

Dose: Generally used in 2 pala (96 ml) , it can be decide by considering the patient (rogi-rogabala) .

Shelf life: Has to be used instantly.

Examples : Arjunaksheerapaka, Shuntiksheerapaka, Lasunaksheerapaka

11. Panaka Kalpana

Medicated syrups are called panaka.

Method of preparation:

This formulation is prepared with any sour or non-sour fruits. These fruits are to be rubbed in cold water to extract its juice. This has to be added with sugar, pepper and salt and other required spices. This preparation relieves thirst, tiredness.

N.B- Anubhutha Yoga- Agnisidha method.

This is prepared with Swarasa, Kwatha, Hima, Phanta or Arka as the liquid portion (dravadravya) and added with double the quantity of Jagerry or sugarcandy and is boiled in mandagni till thread consistency is attained. This can be flavoured with pepper etc. Once it is cooled it can be stored in clean containers. It can diluted according to the need.

Dose: 2 pala(96ml)

12. Mamsa Rasa

Mamsa rasa is meat soup. This is a soup prepared by boiling chopped meat along with bone by adding two, four, six or eight times of water depending upon the nature of the meat over mild fire to get the desired consistency.

It is of two types

a. Krtamamsa rasa – Prepared with out adding spices and oily substances.

b. Akrtamamsa rasa – Prepared by adding oily substances. Lavana, jeeraka, maricha, Shuntietc spices.

13. Lepa Kalpana

Lepakalpana are topical medicaments (applying medication to the skin or mucous membranes allows it to enter the body).

The wet drugs are pounded to fine paste and dry drugs are pounded to fine powder form and mixed with any liquid media like swarasa, kwatha, ghrta, taila, go-dugdha, go-mutra, jala etc. according to condition of the disease. This paste is applied as lepa.

Types:

- Pralepa –
  - o It is prepared with cold nature drug (sheetavirya).
  - o It is thin lepa (tanu) , It is of two types
    - a. Vishoshi – leaving it even after its dried (after drying up the lepa tightens the skin and there will be squeezing action, helps in the treatment of vranasopha).
    - b. Avishoshi – removing it before it dries up over the applying surface.
- Pradeha –
  - o It can be hot or cool drugs (sheetha – ushnadravyas)
  - o The application should be as thick as buffalo skin.
  - o This has to be removed the lepa gets fully dried off.
- Alepa –
  - o This application is n
  - o Neither too thick nor too thin.

General rules for the application of lepa

1. Lepas are to be prepared for instant and single use.
2. Wet drugs are to be made to fine paste and for dry drugs fine powder has to be used.
3. Lepas are to be applied against the hair follicles, it helps in quick and better absorbtion.
4. It has to be removed before it gets dried fully (except vishoshi)
5. Previous lepa should not be covered by fresh ones.
6. Lepa should not be applied during night hours.
7. Examples:- a) Dashangalepa b) Kesavardhanalepa etc.

Notes

Summary

- Ahara is anything (food) which is consumed or ingested with the help of tongue, mouth and throat is called Ahara. The different types of Ahara are Ashita, Peeta, Lehya, and Khadita.
- Ahara is prime important in everyone's life as Hitakara Ahara causes the growth of human beings whereas Ahitakara Ahara is the cause for the growth of diseases
- A balanced diet is one that is nutritious to the body, bodily elements and vital forces. It increases the strength, gives the required energy for a healthy living, gives lustre to skin, etc.
- The graduated form of dietetic protocol in which, the form of food is graduated from liquid to solid form; from semisolid to solid form and normal food after Panchakarma procedures to kindle the tired digestive fire (Agni) is known as Samsarjana Krama.
- Anupana is defined as the drink which is taken before, along with or after food and medicines. It enhances the properties of medicines along with it is taken.
- Swarupa- It is a substance which can administer in the form of drinking. For example, water, milk, butter milk, juice, ghee etc.
- Dinacharya is a daily regimen that is to be followed according to Ayurveda. Dinacharya commences from the early morning waking up and spans the entire day till the individual falls asleep.
- Ritucharya is a specific dietary and lifestyle regimen in accordance with the changing of the seasons.
- Samsarjana Krama is a graduated form of dietetic protocol. In this , food is gradually graduated from liquid to semisolid form and from semisolid to solid and normal food.
- The different varieties of samsarjana krama are peyadi, tarpanadi, rasa samsarjana krama, mamsa samsarjana krama, yavagvadi samsarjana krama and yushadi samsarjana krama. Tarpanadi and peyadi comes under anna samsarjana.

Notes

Exercise

Answer the following questions:

1. What is a balanced diet?

2. What is Samsarjana Krama?

3. Explain Samashana, Adhyashana and Vishamashana.

4. What is Anupama? What are its benefits?

5. Give three examples of Anupama.

6. Explain Dinacharya and Ritucharya.

7. What is peyadi krama?

8. What is tapanadi krama?

9. What is the importance of sleep?

10. What is vilepi?



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7. Provide Support to the Patient throughout the Therapy Session

Healthcare
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Unit 7.1 Post Therapy Compliances

Unit 7.2 Standard Cleaning Procedures and Hygiene Practices

Unit 7.3 Maintenance of Records for Consumables and Non-Consumables Items



HSS/N3603

Key Learning Outcomes

At the end of this unit, the trainee will be able to:

1. Plan suitable time of appointment to the individual in consultation with doctor or concerned authority
2. Identify limitations or comfort areas of patient basis on preferences considering factors such as gender, religion, culture, language, etc
3. Explain do's and don'ts to patients during therapy as per orders from a doctor with respect to a specific therapy
4. Maintain records of grievances and escalate to the concerned authority as per organizational policies and procedures
5. Identify the needs of the individual post therapy sessions and record it as per organizational policies
6. Explain the importance of taking and recording feedback from patients post therapy as per organizational process

Unit 7.1 Post Therapy Compliances

Unit Objectives

At the end of this unit, the trainee will be able to:

1. Explain do's and don'ts for patients post therapy including precautions to be taken at home settings as per orders from a therapist/doctor with respect to a specific therapy
2. Apply safe practices while cleaning articles and other related components
3. Inspect the functionality of required articles for next session
4. Identify faulty articles and report in line with relevant requirements, policies and procedures

7.1.1 Do's and don'ts for patients post-therapy

The do's and don'ts for patients therapy have been covered in the sections under the "Role of Panchakarma Technician".

The details of cleaning practices have also been covered in the earlier sections.

7.1.2 Maintenance of articles

- All articles and equipment should be maintained and kept in a hygienic way with proper cleansing before and after use.
- They should be stored in such a way they do not get contaminated in any way.
- Any damaged articles, medicines or oils that have expired, should not be used.
- These should be replaced as per the norms of the organization.
- Requisitions for procurement of any item should be in line with the standard operating procedures of the organization.

Notes

Unit 7.2 Standard Cleaning Procedures and Hygiene Practices

Unit Objectives

At the end of this unit, the trainee will be able to:

1. Identify the suitable cleaning agent and method/procedure for cleaning
2. Apply hygiene and infection control associated with handling of linen
3. Explain the correct methods for handling, segregation and transport of used and unused linen
4. Apply standard operating procedures for maintenance of Panchakarma unit

7.2.1 Cleanliness

Cleanliness in Panchakarma unit means that there is no dirt, no dust, no stains, no bad smell in procedure room and waiting area where maximum chances of medicine and oil usages. The goals of cleanliness are health, beauty, absence of offensive odour and to avoid the spreading of dirt and contaminants to Panchakarma staff and patient

Importance of maintaining cleanliness and orderliness in Panchakarma Unit

- Maintenance of hygiene and cleanliness of health facilities is not only related to aesthetics and satisfaction of the patient satisfaction. It also reduces the incidence of Hospital Acquired Infections (HAI).
- Cleanliness plays an important role in Panchakarma unit. It prevents dangerous diseases like Dengue, typhoid, hepatitis, and other diseases caused by mosquito bite, etc. It is important to maintain the procedure room clean.
- If we not follow rule of isolation of patient in procedure room and wards Diseases like Jaundice, Cholera, Ascariasis, Leptospirosis, Ringworm, Scabies, Schistosomiasis, Trachoma, etc. Can be spread if we eat contaminated food, drink contaminated water or live in an unhygienic condition.
- Trash also spread bad odour which is difficult to tolerate. There will also be an accumulation of trash and dirt if cleanliness measures aren't taken in wards bathroom and procedure room of Panchakarma.
- With the help of cleanliness, one can keep his/her physical and mental health clean, which will make feel good not only for patient but Panchakarma staff also.
- Cleanliness gives rise to a good character by keeping body, mind, and soul clean and peaceful.
- Maintaining cleanliness is the essential part of healthy living because it is the cleanliness only which helps to improve our personality by keeping clean externally and internally.
- Thus, It is responsibility of Hospital staff, patient and their accompanying person that one should keep themselves and their surroundings clean and hygienic. It also brings good and positive thoughts in the mind which slows down the occurrence of diseases.
- Hygiene is very important when you massage, especially in this time where the threat of the new flu is hanging over us. So, Panchakarma therapist should be aware of the situation and take necessary precautions.

7.2.2 Maintaining Hygiene During Panchakarma Procedure

- Wash own hands before and after a procedure/massage.
- Always wears Apron, Gloves, mask and cap during each procedure tp protect yourself from contamination.
- Change sheets and towels, so every patient will always have fresh clean sheets and towels.
- Oil contaiDo'sner should be closed so that it does not spoil the surrounding.
- Change your apron if it came in contact with the patient.
- Wiping massage table/chair with an antiseptic cloth between patients.
- Making sure the environment is clean and tidy, as well as ourselves

The tools used for a massage also needs to be disinfected and cleaned properly between massages to avoid the spreading of especially skin-related diseases. This is more important for hot stone massage because hot water can provide for a very good environment for bacteria. So, disinfect them with boiled water as high as 95-degree temp.

To ensure proper hygiene of the stones used in massage, we do the following:

Sanitation tablets or other antiseptic products is the water of the heater. This way we ensure that bacteria can't survive in the warm water and be transferred in to the next patient.

Sanitation of the cold stones before they return to the cooler. Ethanol (pure alcohol) is one of the best, but other products with antiseptic properties can be used.

By the end of the day, all the stones are carefully washed with dish washing soap, including the cooler and heater, and left out to dry out during the night.

Thus, any well-trained massage therapists know these hygiene rules and follow them, keeping the well-being and health of their clients first in mind. It is part of their training and will be incorporated into their daily routines.

Orderliness is as important as cleanliness because if everything that is material used during procedure is kept in order and all necessary things used in procedure if well organised then it is easier for health worker to use it without spoiling unnecessary things.

Maintaining orderliness is paramount to the effectiveness and productivity of workers. conversely, clutter or dirt causes problems such as loss of time, delay in meeting the goals or even risk of accidents at work.

Unit 7.3 Maintenance of Records for Consumables and Non-Consumables items

Unit Objectives

At the end of this unit, the trainee will be able to:

1. Explain the relevance and maintenance of records for consumables and non-consumables items
2. Inspect articles during and after processing

7.3.1 Maintenance of Records for Consumables and Non-Consumables items

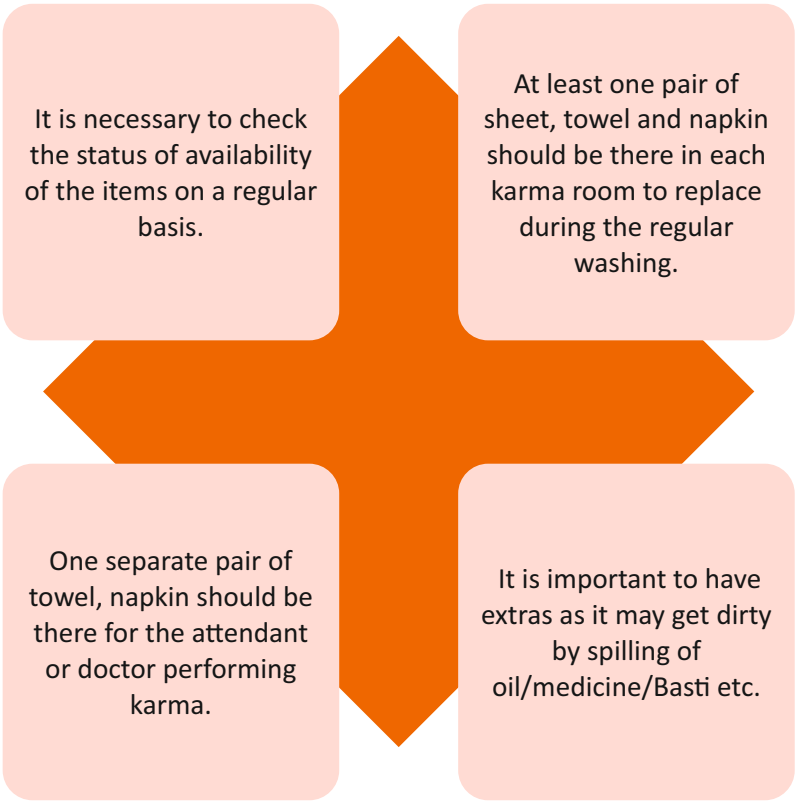


Fig. 7.1 Records for Consumables and Non Consumables

Summary

- All articles and equipment should be maintained and kept in a hygienic way with proper cleansing before and after use. They should be stored in such a way they do not get contaminated in any way.
- Cleanliness in Panchakarma unit means that there is no dirt, no dust, no stains, no bad smell in OPD, wards and particularly in procedure room and waiting area where maximum chances of medicine and oil usages. The goals of cleanliness are health, beauty, absence of offensive odour and to avoid the spreading of dirt and contaminants to Panchakarma staff and patient.
- It is important to maintain hygiene during panchakarma procedure. This includes following washing protocols, using clean and fresh items, and ensuring that the environment is clean and tidy.
- The tools used for a massage also needs to be disinfected and cleaned properly between massages to avoid the spreading of especially skin-related diseases.
- Orderliness is as important as cleanliness because if everything that is material used during procedure is kept in order and all necessary things used in procedure if well organised then it is easier for health worker to use it without spoiling unnecessary things.
- Records for consumables and non-consumables items have to maintained properly to ensure timely procurement and availability at the time of need.

Notes

Exercise

Answer the following questions:

1. Mention two cleaning procedures to be followed at the Panchakarma unit.

   _____
   _____
   _____

2. Mention two hygiene practices to be adopted by the client.

   _____
   _____
   _____

3. How are stones sanitized?

   _____
   _____
   _____

4. What are the consequences of not maintaining cleanliness or following hygiene practices in a Panchakarma unit?

   _____
   _____
   _____

5. How can you keep tools and equipment clean?

   _____
   _____
   _____

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8. Soft Skills

Unit 8.1 Communication Skills

Unit 8.2 Application of various Soft Skills

Unit 8.3 Interpersonal Relationship with Colleagues and Others

Unit 8.4 Patient Service and Service Excellence in Medical Service

Unit 8.5 Objection Handling

Unit 8.6 Analysis, Application and Evaluation of Information Gathered

Unit 8.7 Planning and Organization of Work



Bridge Module

Key Learning Outcomes

At the end of this module, the trainee will be able to:

1. Explain the significance of effective communication
2. Demonstrate the use of effective communication with patients and family without using jargons and colloquial terms
3. Apply effective communication skills with colleagues using appropriate terminology in communication
4. Apply basic reading and writing skills
5. Apply goal setting, team building, teamwork, time management, thinking and reasoning and communicating with others
6. Apply problem solving and decision-making skills
7. Describe the need for patient service and service excellence in medical service
8. Explain work ethics in hospital set up
9. Discuss objection handling
10. Analyse the information gathered from observation, experience, reasoning, or communication to act efficiently
11. Apply the information gathered from observation, experience, reasoning, or communication to act efficiently
12. Evaluate the information gathered from observation, experience, reasoning, or communication to act efficiently
13. Identify rapidly changing situations and adapt accordingly
14. Discuss planning and organization of work

Unit 8.1 Communication Skills

Unit Objectives

At the end of this unit, the trainee will be able to:

1. Explain the significance of effective communication
2. Demonstrate the use of effective communication with patients and family without using jargons and colloquial terms
3. Apply effective communication skills with colleagues using appropriate terminology in communication
4. Apply problem solving and decision-making skills
5. Identify rapidly changing situations and adapt accordingly
6. Discuss the importance of effective communication amongst colleagues
7. Maintain a positive work friendly milieu

8.1.1 Significance of Effective Communication & Interpersonal Skills

Effective Communication is essential for each employee in the organization to perform the basic functions of management and helps them to perform their jobs and responsibilities. No matter what industry one works in, the ability to communicate effectively at work is essential. Effective communication entails more than just exchanging information; it also involves comprehending the emotion and intentions underlying the facts and conveying a message. Therefore, communicating more clearly and effectively requires learning some essential skills. Learning these skills can help employees develop stronger bonds, gain more trust and respect, improve teamwork, problem-solving, and overall social and emotional health. As a result, we can state that "effective communication is a foundational component of successful organizations."

Build strong professional relationships with co-workers and clients	Helps to express thoughts and convey clear message	Manage and assist the team where required
Motivate and boost teamwork and lead to better project collaboration	Enhance leadership and negotiation skills	Bridge gaps between clients, colleagues, and partners

Continued...

Recognize each others' good work and give constructive feedback

Resolves issues and conflicts

Improve productivity by sharing information and ideas

Fig 8.1 Importance of Effective Communication and Interpersonal Skills

8.1.2 Process

The process of communication is a dynamic structure that explains how a message is transmitted between a sender and a receiver via various communication channels. its purpose is to ensure that the receiver accurately decodes the message and can provide feedback with precision and convenience.

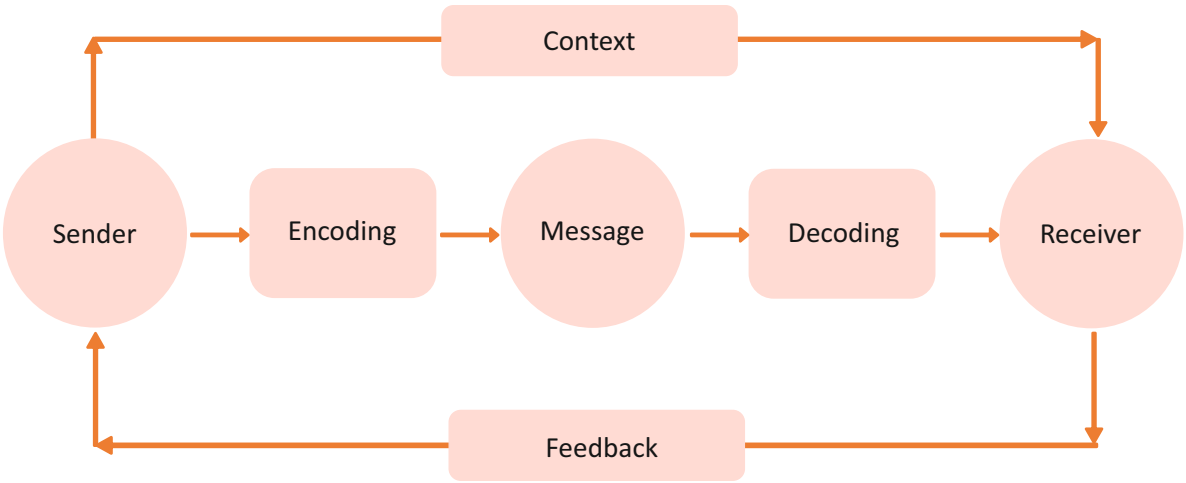


Fig.8.2 Process of Communication

There are 8 elements of communication:



Sender
Who sends the message or is the source of the message.



Encoding
Transferring the message into a format that can be shared. It includes the language or tone chosen.



Message
The idea being communicated by the sender.



Channel
The mode chosen for communicating. Example : phone, oral, text, gestures, or writing.

Continued...



Decoding
It means how the sender comprehends and understands the message that sender has communicated



Receiver
The idea being communicated by the sender



Feedback
The revert or the response communicated by the receiver to the source/sender after having decoded the message



Context
The environment, situation, or the circumstances in which the communication is happening

Fig. 8.3 Elements of Effective Communication

8.1.3 Effective Communication with Superior and Colleagues

Effective communication with your supervisor is crucial to your professional development and career advancement. Refer to the exhibit below for tips on communicating with the supervisor effectively.



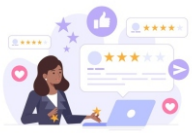
Listen to your supervisor carefully and understand the goals and requirements



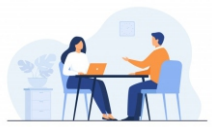
Report the facts and problems and ask for possible solutions if necessary



In case of an unsuccessful attempts, highlight it to the supervisor rather than covering it up



Stay open to feedback and keep a positive attitude



Inform immediately about any situation that needs attention



Follow the code of conduct that has been established by the organization



Greet the supervisor with a smiling face



Don't argue with the supervisor in front of other employees



Concisely put your point of view, concerns, and requests in a polite and respectful manner



A loud voice tone suggesting impatience, sarcasm or taunt, is not acceptable by anyone



I Avoid words and topics which may offend someone



Communicate regularly with your supervisor to develop and maintain a successful professional relationship

Fig. 8.4 Tips for Effective Communication with Superior

Following proper communication, rules are critical to keeping a healthy relationship with colleagues and co-workers. The quality of the relationship with colleagues and co-workers will depend on the behavior you demonstrate while interacting with them. A relationship built on trust, excellent, clear communication, polite language, and appropriate behavior helps you succeed at work.



Fig. 8.5 Tips for Effective Communication with Relatives, Client, Colleagues

8.1.4 Seven C's of Effective Communication

The 7 C's of communication are important as they give a checklist for making sure that your communication with the co-workers is so effective that your co-workers get your message. According to the 7 C's, communication needs to be:

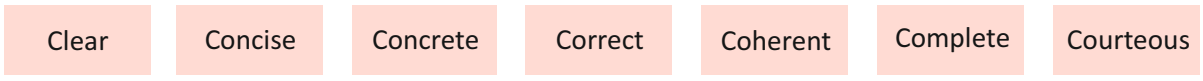


Fig. 8.6 7Cs of Communication

Clear

When talking to someone, be clear and concise about the message you want to convey. For e.g. instead of saying

"The client's condition is not well, maybe there is some problem with breathing or some problem with pulse rate, or any other reason.", you can say "The client condition is not well due to increase in the breathing rate."

Concise

Always keep your communication short and sweet. Stick to your point and keep it brief. For e.g. instead of saying "We are thinking to provide medical care for the client in ward 101. He has some problem with the bed settings. We need to rectify it. He needs more elevated settings at the head side." One can say that, "Client in ward 101 needs elevated head side settings in his bed."

Concrete

Be specific, so that the receiver understands your message clearly. Your message should be definite and sensible. For e.g. "Report for duty in ward no. 16 at 6.00 am sharp."

Correct

When you communicate be true to the facts. Always use appropriate words that a person can understand easily. Avoid using slang or too many technical words. For e.g.: "The IV fluid is inserted in the body of the client". Here the IV fluid is not generally used in the day-to-day life, more commonly used word is drip.

Coherent

What you communicate with your words should be meaningful. Make sure you don't speak too fast or repetitive. Let your communication be logical.

Complete

Make sure that your entire communication as a whole is complete. The person who receives the message should know exactly what to do. Make sure that you have included all the relevant information in the message.

Example: when telling a colleague about transferring a client from one place to another you need to give complete information regarding the same. By complete information here it would mean the number of the ward, the bed on which the client has to be transferred, whether the client has to be taken on a wheel chair or a bed etc.

Courteous

Always be respectful to others while communicating. Do not use rude and impolite language in your speech. Use a friendly approach while conveying a message. Be Courteous friendly, open, and honest.

8.1.5 Speaking Skills

Speaking is the most important skill required in the professional environment. How successfully a message gets conveyed depends entirely on how effectively you are able to get it through. An effective speaker is one who enunciates properly, pronounces words correctly, chooses the right words and speaks at a pace that is easily understandable.

Importance of speaking for your job role

As a Yoga Trainer, it is very important to be effective at speaking. So, how you speak to the participants creates an image in the mind of the participants. You have to speak politely with them so that they do not get hurt. But if you want to give some instructions to them without hurting them, you have to speak effectively. Practice is the key for effective speaking.

Components of Speaking Skills

The important components of speaking skills are:

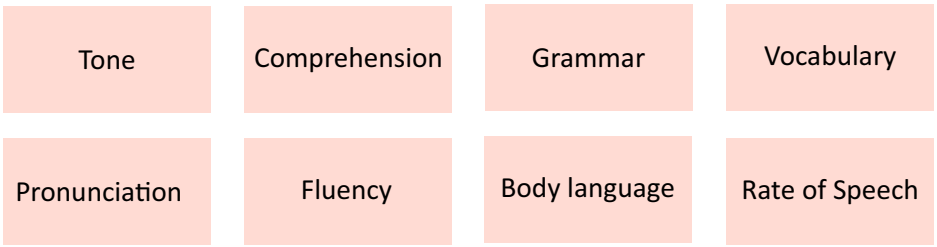


Fig. 7.7 Components of Speaking Skills

Tone: Tone includes the volume you use while speaking, the level and the type of feeling or emotion that you convey and the emphasis that you put on the words that you select. If you speak with lack of energy and in a monotonous tone, then certainly the client will get bored.

Awareness: For the verbal communication, it surely needs a subject to respond, to speak and to commence it.

Grammar: It is required that you speak a correct sentence in the conversation. The usage of grammar is mandatory to learn in the correct way to gain expertise in the language in both verbal and written form.

Vocabulary: One can't convey adequately or express their thoughts both oral and written form if they don't have adequate vocabulary. Without an adequate vocabulary nothing can be passed on.

Pronunciation: Pronunciation is the best approach to speak clearer language when you talk. It manages the phonological procedure that refers to the part of a grammar made up of the components and rule that decide how change and pattern in a language sounds. Pronunciation is the knowledge of learning about how the words in a specific language are produced clearly when individuals speak.

Fluency: It is the one's ability to speak fluently and accurately. Fluency means speaking at a normal speed without hesitation, repetition and self-correction. To be fluent it's important, that you don't use fillers like "you know", "I mean", "ums", "ers", "aaahhhh", etc.

Body language: Body language means communicating through body posture, gestures, facial expressions and tone of voice. Body language must be in sync with your words; otherwise it is likely to confuse the customers. Positive body language is important in supporting your words and ensuring that your message is understood correctly.

Rate of speech: A slow rate of speech makes the conversation disinteresting. Speak at a moderate pace and with appropriate volume. A general duty assistant should match his rate of speech with that of the client.

8.1.6 Attributes of a Team Player

A team player is someone who actively contributes to their group in order to complete tasks, meet goals or manage projects. Team players actively listen to their coworkers, respect ideas and aim to improve the product or process at hand.

For a Yoga trainer to be a team player, he/she has to collaborate and communicate with the other trainers, participants, the guardians or care workers of the participants and all other members working in the institution or the Yoga centre.

8.1.7 Qualities of Outstanding Team Players

Committed to the team	Flexible	Engaged	Reliable and responsible	Actively listen
Communicate within their team	Lend a helping hand	Problem solvers	Recognize and acknowledge when they are wrong	Respectful

Fig. 8.8 Qualities of Team Players

8.1.8 Confidentiality and Privacy

The participants will be sharing personal details like information about their health, personal problems etc. The Panchakarma Instructor should maintain utmost privacy and confidentiality with regard to these. Even indirect references about one's personal problems should be made in the course of a session. The trust which a participant has on a Panchakarma Instructor should never be broken.

Participants should be asked to give their feedback about the sessions after the course is over. The atmosphere should be such that they should feel free to express their opinion about the class to the Instructor. This will also help the Instructor to sharpen his/her skills. A proper format for getting the feedback should be developed and circulated among the participants after the session. Proper feedback given after the sessions will help us to improve ourselves. Written feedback forms will enable a person to give his true opinions without any inhibitions. We must ensure that such feedback should also be kept under strict privacy and confidentiality. Leaking the confidential details mentioned in the form may result in irreparable damage to the individual. We should take utmost care in maintaining its confidentiality.

UNIT 8.2 Application of Various Soft Skills

Unit Objectives

At the end of this unit, the trainee will be able to:

1. Apply basic reading and writing skills

8.2.1 Reading Skills

Reading requires the skills of decoding and understanding the written message. Decoding and understanding the written language are the required skills for an effective reading.

Therefore, reading is a complicated skill.

Importance of reading skills

Good reading skills help you to comprehend ideas, follow arguments, and detect implications. You can make out your exact task if you can read the documents detailing your roles and responsibilities. As a general duty assistant, you need to:

- Read thoroughly and follow the instructions specified in the patient file.
- Read the instructions given by a doctor/nurse and interpret them accurately and then cross-check with the ward nurse/supervisor for correct understanding. For e.g. If a patient is asked to move from one place to another, you have to make sure that the patient is transferred to the right place.



Fig. 8.9 Reading

8.2.2 Writing Skills

Written communication is the form of communication which is transmitted through words. Effective writing skills are required to write documents such as reports, letters, memos and emails. Written communication is more important than oral communication because it creates a permanent record of one's work, and it can be referred to at any point of time. Only practice can perfect the writing skill.

Importance of writing skills

As a general duty assistant, you will be using your writing skills in assisting nurses in recording the observation. At suitable times you will be needed to mark the template as per the observation.

UNIT 8.3 Interpersonal Relationship with Colleagues and Others

Unit Objectives

At the end of this unit, the trainee will be able to:

1. Apply goal setting, team building, teamwork, time management, thinking and reasoning and communicating with others
2. Apply appropriate and timely communication between inter and intra departments

8.3.1 Individual and Team goals

Goal setting is undoubtedly one of the most effective motivational tools in the organization. Almost every organization requires employees to set goals regularly. Even when times change, continuously updating and setting goals is necessary to keep your business on track. Goals in each organization should be **S.M.A.R.T: specific, measurable, actionable, realistic, and timely.** It helps you and your team feel a stronger sense of purpose and direction. In addition, setting goals in place will help you and your team feel productive with each bit of accomplishment and ensure that more significant production stays on track.

Individual goals are significant because they give direction to the employees. While team goals are great for the overall guidance, personal goals will allow your team members to take distinct paths to digest the larger plan and turn it into action.

Team goals are necessary to guide the entire organization. It includes broad objectives that can be broken down into team projects and initiatives with individual key results. In addition to helping the organizations achieve their objectives, setting team goals also **boost employee engagement, productivity and retention by ensuring that every team member has a complete understanding of their role in the overall approach.**This also **saves time and improve efficiency.** In addition, setting team goals also offers organizations the following benefits:



Fig. 8.10 Benefits of Team Goals in an Organisation

8.3.2 Significance of Effective Communication with Team Members

It is significant to convey information as per defined protocols to the authorized person's/team members, as it reduces communication gaps, strengthens alignment with all levels of leadership, and ensures that employees receive consistent messages. The Communication Protocol specifies the types of information to be communicated to the organization, as well as the person(s) in charge of communicating specific topics. The audience, frequency, and suggested communication vehicles are also discussed. The Protocol, which is prominently displayed in all common areas such as lobbies and conferences, and is distributed to all new hires, ensures that communications align with the company's key strategic priorities.

8.3.3 Communication Between Inter and IntraDepartments and Colleagues

Communication within the same department means inter department communication. Communication with the different departments in the organisation means intra department communication.

It is important to have good inter and intra department communication to ensure proper workflow, foster collaboration among everyone, and build a strong bond between the members of the organisation.

Notes



UNIT 8.4 Patient Service and Service Excellence in Medical Service

Unit Objectives

At the end of this unit, the trainee will be able to:

1. Describe the need for patient service and service excellence in medical service
2. Explain work ethics in hospital set up

8.4.1 Service Excellence

Service excellence in the healthcare industry is defined as a way of going about daily work practices with a focus to understand the needs of patients and deliver care in the best manner possible. It is important that the patients, their families and caregivers are treated keeping in mind their welfare.

The service providers should be enthusiastic, display an attitude of love and care, and be polite and nice. They should have the patience to listen to the concerns and issues of the patients, and execute any action in a genuine and trustworthy manner. Any non-verbal communication, body language and facial expressions should convey genuine feelings.

Service excellence is the ability of the provider to consistently meet and manage patient expectations. Clinical excellence must be the priority for any health care system. However, the best healthcare systems combine professional service excellence with outstanding personal service.

8.4.2 Quality Care

Emphasis on quality of care improvement has been in focus over the past decades. There has been a large scale increase in the number of service providers in the market giving options to the patients. But the cost also been on a high rise leading to higher expectations of service by the patients.

Measuring patient satisfaction is an indirect measure of quality, and can pose some difficult challenges to individuals attempting to assess quality. The parameters affecting satisfaction may vary from patient to patient and will also depend on the outcome after they have received a service. Service failures can also occur if the patient does not achieve the expected results in spite of a quality service.

Every patient has a basic assumption that the healthcare services they seek, and pay for, will meet their expectations. If these expectations are met then they are satisfied. Moreover, if these expectations are exceeded the patient is delighted, and much more likely to recommend the healthcare institution to friends and family members. However, when these expectations are not met the patient is much more likely to share this disappointment with more than just their immediate circle. This will affect the business of a health care provider.

Organisations work towards establishing policies and procedures and quality parameters prevent, identify, and correct any and all service failures.

Patient satisfaction is an important and commonly used indicator for measuring the quality in health care. Patient satisfaction affects clinical outcomes, patient retention, and medical malpractice claims. It affects the timely, efficient, and patient-centered delivery of quality health care.

8.4.3 Work Ethics in a Hospital Setup

Work ethics are the morals or principles that govern a person's or group's behavior, whereas etiquette is a set of rules indicating the proper and polite way to behave at work. Both contributes positive energy and influence to the growth of an organization. Workplace etiquettes inspire healthy and interactive communication among employees and promote honesty, integrity, and respect for each other in the organization.

Stand straight, maintain eye contact, and smile	**Follow proper dress code**	**Arrive on-time and be prepared for important meetings**	**Show respect to co-workers**
Avoid Gossip	**Keep the space neat and clean**	**Respect each others' personal space**	**Don't come to work sick**

Fig. 8.10 Workplace Etiquettes

Notes

UNIT 8.5 Objection Handling

Unit Objectives

At the end of this unit, the trainee will be able to:

1. Discuss objection handling

8.5.1 Dealing with Objections

At workplace, where different people work together, difference of opinions may arise during communication. There may not be acceptance always of all the instructions given or any decisions taken.

When objections are raised by any member taking a project-based approach to any decision will help you to organize your team and open up discussion before a decision is made. The best way to overcome objections is to create scope for open communication and ensure listening to others.

The standard steps to deal with any objections include:



Fig 8.11 Steps for Object Handling

Notes

UNIT 8.6 Analysis, Application and Evaluation of Information Gathered

Unit Objectives

At the end of this unit, the trainee will be able to:

1. Analyse the information gathered from observation, experience, reasoning, or communication to act efficiently
2. Evaluate the information gathered from observation, experience, reasoning, or communication to act efficiently
3. Apply the information gathered from observation, experience, reasoning, or communication to act efficiently

8.6.1 Information Processing

The mental process of active and skillfull perception, analysis, synthesis and evaluation of collected information through observation, experience and communication that leads to a decision for action, is called critical thinking.

While working with information, the following play a part of the entire process of collecting, evaluating and applying the information:



Fig 8.12 Elements of Information Processing

UNIT 8.7 Planning and Organization of Work

Unit Objectives

At the end of this unit, the trainee will be able to:

1. Discuss planning and organization of work

8.7.1 Planning and Organisation

Planning, Organizing and Coordinating involves proactively planning, establishing priorities and allocating resources. It is expressed by developing and implementing increasingly complex plans. It also involves monitoring and adjusting work to accomplish goals and deliver to the organization's mandate.

Workplace organization is a system that organisations can use to organize their offices. This system allows managers to build structural processes to sort and organize files, documents, storage and other factors of the workplace to reduce waste, increase efficiencies and enhance productivity levels

Few tips to be organised include:

- Arrange tasks in a logical order
- Establish priorities systematically
- Differentiate between urgent, important, and unimportant tasks
- Use a "to do" list, task plan, or similar planning devices
- Monitor and adjust priorities and/or eliminate tasks regularly

Fig 8.13: Tips for Being Organised

Summary

- Effective Communication is essential for each employee in the organization to perform the basic functions of management and helps them to perform their jobs and responsibilities. Effective communication entails more than just exchanging information; it also involves comprehending the emotion and intentions underlying the facts and conveying a message. Learning essential communciation skills can help employees develop stronger bonds, gain more trust and respect, improve teamwork, problem-solving, and overall social and emotional health. Effective communication is a foundational component of successful organizations.
- The process of communication is a dynamic structure that explains how a message is transmitted between a sender and a receiver via various communication channels. its purpose is to ensure that the receiver accurately decodes the message and can provide feedback with precision and convenience.
- The elements of communication are sender, encoding, message, channel, decoding, receiver, feedback and context.
- Communication barriers are factors that prevent a message from being received in the way the sender sent it. People frequently face the problem of the message being received in an assumed manner when communicating.
- Effective communication with your supervisor is crucial to your professional development and career advancement. Refer to the exhibit below for tips on communicating with the supervisor effectively.
- Following proper communication, rules are critical to keeping a healthy relationship with colleagues and co-workers. The quality of the relationship with colleagues and co-workers will depend on the behavior you demonstrate while interacting with them.
- Effective communication with your supervisor is crucial to your professional development and career advancement. Refer to the exhibit below for tips on communicating with the supervisor effectively.
- Following proper communication, rules are critical to keeping a healthy relationship with colleagues and co-workers. The quality of the relationship with colleagues and co-workers will depend on the behavior you demonstrate while interacting with them.
- The 7 C’s of communication are important as they give a checklist for making sure that your communication with the co-workers is so effective that your co-workers get your message.
- Speaking is the most important skill required in the professional environment. How successfully a message gets conveyed depends entirely on how effectively you are able to get it through. An effective speaker is one who enunciates properly, pronounces words correctly, chooses the right words and speaks at a pace that is easily understandable.
- The important components of speaking skills are tone, comprehension, grammar, vocabulary, pronunciation, fluency, body language and rate of speech.
- A team player is someone who actively contributes to their group in order to complete tasks, meet goals or manage projects For a Panchakarma trainer to be a team player, he/she has to collaborate and communicate with the other trainers, participants, the guardians or care workers of the participants and all other members working in the institution or the Panchakarma centre.
- The Panchakarma Instructor should maintain utmost privacy and confidentiality with regard to the information shared by the participants.

- Participants should be asked to give their feedback about the sessions after the course is over. A proper format for getting the feedback should be developed and circulated among the participants after the session.
- Reading requires the skills of decoding and understanding the written message. Decoding and understanding the written language are the required skills for an effective reading.
- Written communication is the form of communication which is transmitted through words. Effective writing skills are required to write documents such as reports, letters, memos and emails.
- Goals in each organization should be S.M.A.R.T: specific, measurable, actionable, realistic, and timely. It helps you and your team feel a stronger sense of purpose and direction. In addition, setting goals in place will help you and your team feel productive with each bit of accomplishment and ensure that more significant production stays on track.
- It is important to have good inter and intra department communication to ensure proper workflow, foster collaboration among everyone, and build a strong bond between the members of the organisation.
- Service excellence in the healthcare industry is defined as a way of going about daily work practices with a focus to understand the needs of patients and deliver care in the best manner possible. It is important that the patients, their families and caregivers are treated keeping in mind their welfare.
- Patient satisfaction is an important and commonly used indicator for measuring the quality in health care. Patient satisfaction affects clinical outcomes, patient retention, and medical malpractice claims. It affects the timely, efficient, and patient-centered delivery of quality health care.
- Work ethics are the morals or principles that govern a person's or group's behavior, whereas etiquette is a set of rules indicating the proper and polite way to behave at work. Both contributes positive energy and influence to the growth of an organization.
- Dealing with objections has to be done in a careful and effective manner. The best way to overcome objections is to create scope for open communication and ensure listening to others.
- The mental process of active and skillfull perception, analysis, synthesis and evaluation of collected information through observation, experience and communication that leads to a decision for action, is called critical thinking.
- Planning, Organizing and Coordinating involves proactively planning, establishing priorities and allocating resources. It is expressed by developing and implementing increasingly complex plans. It also involves monitoring and adjusting work to accomplish goals and deliver to the organization's mandate.
- An organizational structure is a system that defines how specific activities are directed in order to achieve an organization's goals.
- Workplace organization is a system that organisations can use to organize their offices. This system allows managers to build structural processes to sort and organize files, documents, storage and other factors of the workplace to reduce waste, increase efficiencies and enhance productivity levels.

Exercise

Answer the following questions.

1. Explain the process of communication.

2. What are the 7Cs in communication?

3. What are the elements in communication?

4. What are the components of speaking skills?

5. State two tips for effective communication with colleagues.

6. Mention two attributes of a team player.

7. What is the difference between team goals and individual goals?

8. List three benefits of having team goals in an organisation.

9. Explain the importance of work etiquettes.

10. Share a few tips to be organised at work place.

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9. Inventory Control and its Management

Unit 9.1 Maintenance of Inventory of Stock

Unit 9.2 Stock/Inventory Management

Unit 9.3 Record Keeping



HSS/N3603

Key Learning Outcomes

At the end of this module, the trainee will be able to:

1. Maintain inventory of stock
2. Explain the importance of keeping record of manufacturing and expiration dates
3. Report any loss of commodities or consumables.
4. Discuss inventory replenishment and distribution systems
5. Identify stock not complying with inventory control guidelines
6. Remove stock not complying with inventory control guidelines.
7. Re-process or discard stock not complying with inventory control guidelines

UNIT 9.1 Maintenance of Inventory of Stock

Unit Objectives

At the end of this unit, the trainee will be able to:

1. Maintain inventory of stock
2. Discuss inventory replenishment and distribution systems

9.1.1 Inventory

Stock control or inventory control, is the process of maintaining the appropriate quantity of stock, so that a business can meet customer demand without delay while keeping the costs of holding stock to a minimum.

Proper maintenance and control of inventory ensures a lot of benefits to any business. It allows to consistently meet increases in demand without having to wait for a full production cycle to finish before receiving more product. It allows to fill orders quickly and efficiently. Understanding stock trends facilitates good inventory management.

The purpose of stock control is to ensure that the business always has enough stock for their customers, while balancing the amount spent on acquiring and storing stock.

Stock control is important because it can be the determining factor of loss or profit in a business.

Some of the stock control methods are:

Just-in-time (JIT)	FIFO	Economic Order Quantity	Vendor-managed inventory	Batch control

Fig 9.1 Stock Control Methods

Notes

UNIT 9.2 Stock/Inventory Management

Unit Objectives

At the end of this unit, the trainee will be able to:

1. Report any loss of commodities or consumables
2. Discuss inventory replenishment and distribution systems
3. Identify stock not complying with inventory control guidelines
4. Remove stock not complying with inventory control guidelines
5. Re-process or discard stock not complying with inventory control guidelines

9.2.1 Overview of Inventory Management

Inventory management is a systematic approach to sourcing, storing, and selling inventory—both raw materials (components) and finished goods (products).

In business terms, inventory management means the right stock, at the right levels, in the right place, at the right time, and at the right cost as well as price.

Inventory management is a crucial determinant for business longevity, profitability, and customer experience. It creates a buffer between supply-demand uncertainty.

Here are a few tips for proper inventory management.

Prioritizing inventory	Tracking all product information	Auditing the inventory	Analyzing supplier performance	Practicing the 80/20 inventory rule
Being consistent in receiving stock	Tracking sales	Ordering restocks by oneself	Investing in inventory management technology	Using technology that integrates well

Fig 9.2 Inventory Management Tips

9.2.2 Managing Stock

If there is a loss of any commodity or consumables, it is treated as an expense and it is written off as an expense in the books of accounts.

Any stock that are not in compliance with inventory control guidelines should be identified, removed and discarded. For all discard items, entries have to made in the books of accounts.

Inventory loss or shrinkage, is a measure of how much inventory doesn't make it into customers' hands. While it's nearly impossible to eliminate shrinkage entirely, accountants and managers should keep track of shrinkage in an effort to manage it.

9.2.3 Inventory Replenishment and Distribution Systems

An inventory replenishment system is the solution that helps manufacturers, retailers and distributors to have more balanced product levels, according to demand, avoiding shortages and excesses of stored items.

Inventory replenishment is an important aspect of inventory management. It ensures that the right stock items are being reordered to meet customer demand. Inventory replenishment is the process of moving items along the supply chain so they are ready to be picked and shipped, thus fulfilling orders on time.

An efficient stock replenishment process involves:

- Accurate demand forecasting
- Optimizing inventory levels
- Purchasing at the right time and in the right quantities
- Tracking and reporting kpis for inventory analysis
- Continuous improvement

Fig 9.3 Efficient Stock Replenishment Process

9.2.4 Inventory Control Guidelines

Inventory control ensures carrying the optimal amount of inventory. It creates a balance between carrying too little inventory and carrying too much inventory. Inventory control guidelines helps to keep track of inventory inflows and outflows. It helps to identify which inventory items sell quickly and which ones stay on the shelves for too long. The guidelines combined with the tracked data as well the market conditions help to follow good inventory buying habits.

Any stock that is not maintained as per compliance with the guidelines needs to be identified, removed and discarded. Unless this is done, holding of unnecessary inventory will lead to higher maintenance costs with respect to storage and safety.

Notes

UNIT 9.3 Record Keeping

Unit Objectives

At the end of this unit, the trainee will be able to:

1. Explain the importance of keeping record of manufacturing and expiration dates

9.3.1 Manufacturing and Expiry Dates

Manufacturing date is the date when the product was manufactured. Expiration date is the date when the product expires and should not be used.

It is the responsibility of the manufacturers to ascertain the shelf life for products, as part of their responsibility to validate product safety. According to Food & Drug Administration (FDA), failure to do so may cause a product to be adulterated or misbranded.

9.3.2 Importance of Expiration Dates

Drug expiration dates reflect the time period during which the product is known to remain stable. Stability of drugs means retention of their strength, quality, and purity when stored according to their labeled storage conditions.

FDA regulations require drug applicants to provide stability testing data with a proposed expiration date and storage conditions when they submit an application for FDA approval of their drug. This testing is designed to provide confidence that the product will meet the applicable standards of strength, quality, and purity throughout its shelf-life. The FDA verifies that an applicant's proposed expiration date is supported by appropriate studies that the applicant has conducted.

9.3.3 Consequences of Using Expired Medicines

Consumption of an expired medicine can cause potential harm. Medicines may also become degraded if not stored as per labelled conditions. Expired or degraded medicines would have lower strength or may yield toxic compounds. These could result in side effects to consumers. Patients with serious and life-threatening diseases may be particularly vulnerable to potential risks from drugs that have not been stored properly.

9.3.4 Documentation

Good Documentation and Record Keeping is the key to Good Manufacturing Practices (GMP) compliance.



Fig 9.1 Good Documentation and Record Keeping Practices

Following are a few steps for maintaining good documentation in an organization.

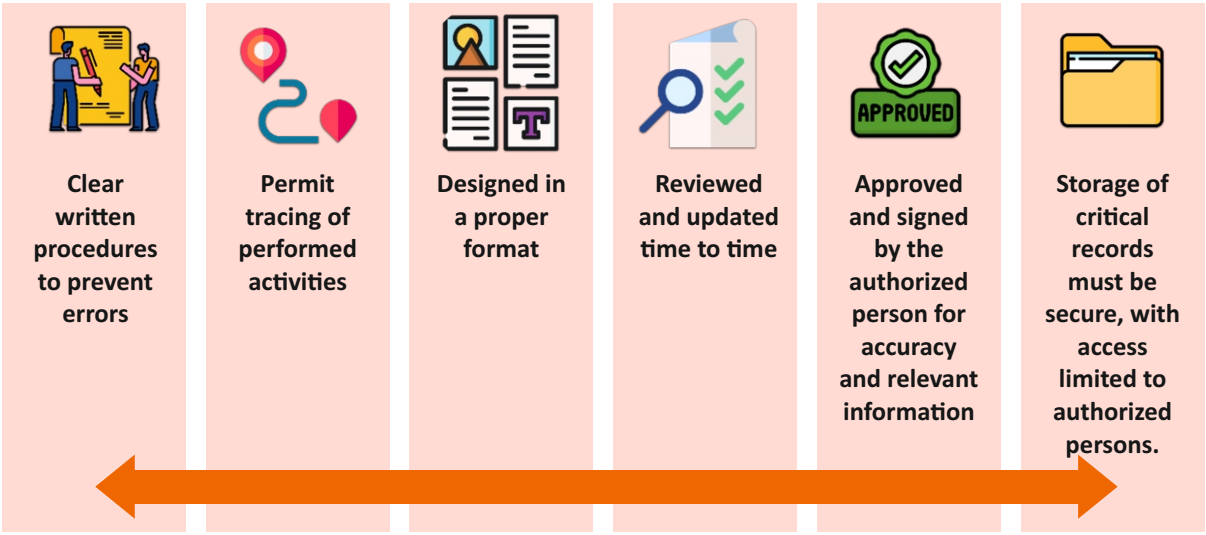


Fig 9.2 Steps for Maintaining Good Documentation

Summary

- Stock control or inventory control, is the process of maintaining the appropriate quantity of stock, so that a business can meet customer demand without delay while keeping the costs of holding stock to a minimum.
- Some of the stock control methods are:
  - Just-in-time (JIT)
  - FIFO
  - Economic Order Quantity
  - Vendor-managed inventory
  - Batch control
- Inventory management is a systematic approach to sourcing, storing, and selling inventory—both raw materials (components) and finished goods (products).
- In business terms, inventory management means the right stock, at the right levels, in the right place, at the right time, and at the right cost as well as price.
- An inventory replenishment system is the solution that helps manufacturers, retailers and distributors to have more balanced product levels, according to demand, avoiding shortages and excesses of stored items.
- Inventory replenishment is an important aspect of inventory management. It ensures that the right stock items are being reordered to meet customer demand. Inventory replenishment is the process of moving items along the supply chain so they are ready to be picked and shipped, thus fulfilling orders on time.
- Manufacturing date is the date when the product was manufactured. Expiration date is the date when the product expires and should not be used.
- FDA regulations require drug applicants to provide stability testing data with a proposed expiration date and storage conditions when they submit an application for FDA approval of their drug. This testing is designed to provide confidence that the product will meet the applicable standards of strength, quality, and purity throughout its shelf-life. The FDA verifies that an applicant's proposed expiration date is supported by appropriate studies that the applicant has conducted.
- Good Documentation and Record Keeping is the key to Good Manufacturing Practices (GMP) compliance.

Exercise

Answer the following questions.

1. What is stock control?

2. What are the benefits of following stock control process?

3. What are the different methods of stock control?

4. Explain what is inventory management?

5. Describe a few methods which will help to maintain a good inventory.

6. What is inventory replenishment?

7. What are the aspects of an efficient inventory replenishment?

8. What is the difference between manufacturing date and expiration date?

9. What is the importance of expiration date?

10. List five good documentation and record keeping practices.

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10. Maintain Professional and Medico-Legal Conduct

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Unit 10.1 Rules and Policies of the Organization

Unit 10.2 Code of Conduct



(HSS/N3603)

Key Learning Outcomes

At the end of this module, the trainee will be able to:

1. Apply rules and policies of organization
2. Apply code of conduct and demonstrate best practices
3. Explain the importance of carrying out one's duties and responsibilities and effects of non-compliance
4. Maintain relationship with other departments and seek support if required
5. Reduce risks associated with quality and safety measures

Unit 10.1 Rules and Policies of the Organization

Unit Objectives

At the end of this unit, the trainee will be able to:

1. Apply rules and policies of organization
2. Reduce risks associated with quality and safety measures

10.1.1 Organization's Policy on Code of Conduct

A professional code of conduct establishes an organization's ethical guidelines and best practices for maintaining honesty, integrity, and professionalism. Violations of the code of conduct can result in situations like termination of employees, poor work environment, issues with customers, loss of business and other problems. The below figure explains the standard practices and professional code of conduct followed in every organization.

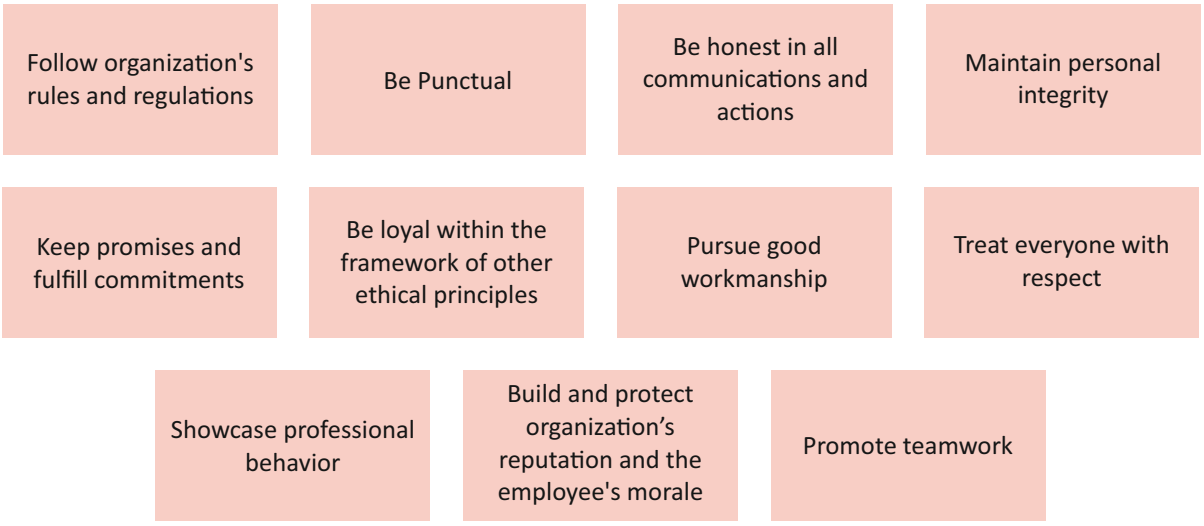


Fig.10.1 Organizational Code of Conduct

refered to module 8 for details on workplace etiquettes.

Unit 10.2 Code of Conduct

Unit Objectives

At the end of this unit, the trainee will be able to:

1. Apply code of conduct and demonstrate best practices
2. Explain the importance of carrying out one's duties and responsibilities and effects of non-compliance
3. Maintain relationship with other departments and seek support if required

10.2.1 Application of Code of Conduct

The code of conduct is to ascertain that self-esteem and respect of the patients is sustained and compassionate treatment is given to them. It also states that home health aide should ensure that their conduct remains as per the defined standards.

- At all times treat clients in the best way possible, in terms of courtesy, respect, dignity and individuality. Client and their families are, at all times, to be treated in a courteous and respectful manner. Address clients as “Mr.”, “Miss”, “Mrs.”, or “Ms” as applicable. Refrain from using a client's first name unless specifically requested to do so.
- Hold accountability of your actions and be answerable for any lapses.
- Maintain and support the health, privacy, respect, rights and general wellbeing of people who utilize the health and care services.
- Coordinate with colleagues to give high quality productivity, safe and secure healthcare and support is provided.
- Communicate efficiently to support the health, safety and general well-being of people using the health and care services.
- Respect a patient's right to confidentiality.
- Make genuine efforts to promote the quality of healthcare and support given to the patients through regular professional progress.
- Exhibit good practices, both as a person as well as a team member.

10.2.2 Building Working Relationships

Building good working relationships is a crucial foundation for success of any organization. Good working relationships lead to better teamwork and will helps all employees to be happy, engaged, and more productive at workplace. Here are a few tips:

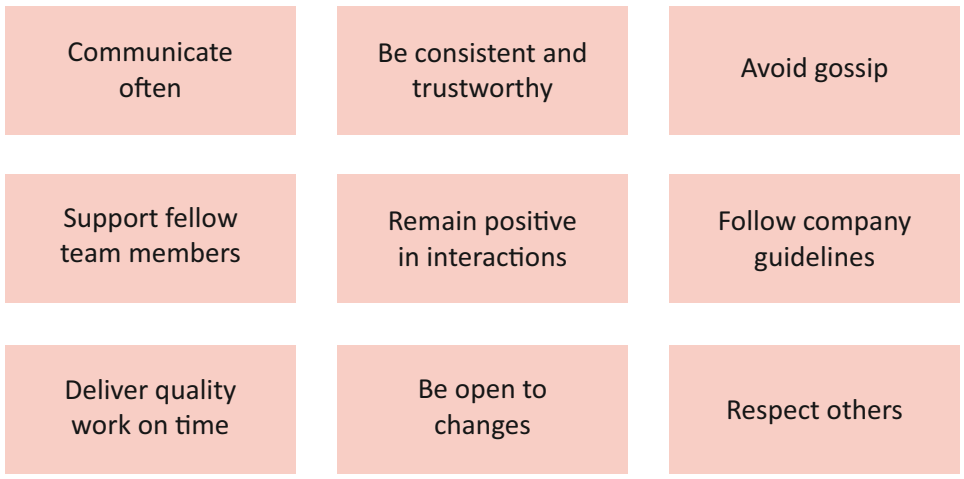


Fig 10.3 Tips for Good Working Relationships

10.2.3 Coordination with Other Departments

Coordination with all departments and working together enables to achieve the objectives of all the departments and also the quality of services and products. A diversified workforce bring their individual work styles, skills, and perspectives to other projects. Collaborative work culture helps to take advantage of these skills and improve productivity. It also empowers organisations to deal with challenges and embrace new possibilities.

10.2.4 Tips to Encourage Collaboration across Departments

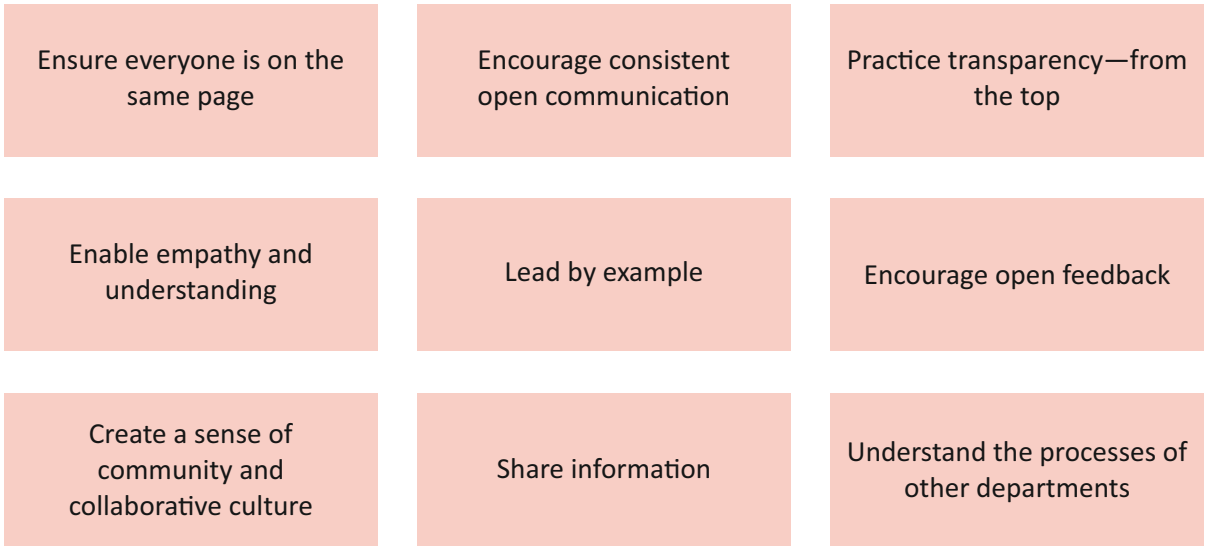


Fig 10,4 Tips for Collaboration Across Departments

Summary

- A professional code of conduct establishes an organization's ethical guidelines and best practices for maintaining honesty, integrity, and professionalism. Violations of the code of conduct can result in situations like termination of employees, poor work environment, issues with customers, loss of business and other problems.
- The code of conduct is to ascertain that self-esteem and respect of the patients is sustained and compassionate treatment is given to them. It also states that home health aide should ensure that their conduct remains as per the defined standards.
- Building good working relationships is a crucial foundation for success of any organization. Good working relationships lead to better teamwork and will helps all employees to be happy, engaged, and more productive at workplace.
- Coordination with all departments and working together enables to achieve the objectives of all the departments and also the quality of services and products.

Notes

Exercise

Answer the following questions.

1. What is meant by code of conduct?

   _____
   _____
   _____

2. What are the common practices followed as code of conduct in an organisation?

   _____
   _____
   _____

3. Mention few best practices to deal with clients.

   _____
   _____
   _____

4. Explain ways to ensure good working relationships.

   _____
   _____
   _____

5. Share one advantage of working in coordination with other departments.

   _____
   _____
   _____



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11. Maintain a Safe, Healthy and Secure Working Environment

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Skill Council

Unit 11.1 Health, Safety and Security
Unit 11.2 Emergency Situations
Unit 11.3 Potential Hazards
Unit 11.4 Infection Control and Use of PPE



(HSS/N3602)

Key Learning Outcomes

At the end of this module, the trainee will be able to:

1. Enhance awareness of the responsibilities to maintain health safety and security
2. Enhance awareness for performing basic first aid in case of emergencies
3. Identify potential hazards in the hospital and hospital colour coding system
4. Demonstrate documentation related to safety and security
5. Identify the suspicious package or items
6. Follow the policy and rules of the organisation
7. Demonstrate the skills of infection control and use of personal protective equipment (PPE)

Unit 11.1 Health, Safety and Security

Unit Objectives

At the end of this unit, the trainee will be able to:

1. Enhance awareness of the responsibilities to maintain health safety and security
2. Explain rules and policies of organisation
3. Demonstrate documentation related to safety and security
4. Identify the suspicious package or items

11.1.1 Organizational Health and Safety Procedure

Workplace safety is one of the most significant concerns for any organisation or facility. Getting it right can improve the overall performance of the operation and lead to growth. On the other hand, jeopardizing safety may result in lost time, money, occupational injuries, and even reputational harm. Though every employer is required by law to follow workplace safety standards established by governments to ensure the safety of its employees and workers, it must be understood that safety is everyone's responsibility. Nobody wants to be injured at work. As a result, employees/workers must be aware of the safety procedures in place and adhere to them religiously.

It is the responsibility of everyone, whether employer or employee, to keep the workplace clean, healthy, and safe. Everyone in a workplace must be extremely cautious and follow the safety guidelines that have been established.

Some of the health and safety guidelines are as follows:



Fig. 11.1 Health and Safety Guidelines

Ensuring the safety of each patient in a hospital is one of the most important aspects of patient care. It is impossible to prevent accidents completely. However, there are ways to prevent accidents from occurring that may cause injury to the patient or Healthcare personnel and the unnecessary loss of equipment.

11.1.2 Promoting a Safe Working Environment

To promote a safe working environment, you need to know your organisation's health, safety and security procedures and follow them while you work. Before you begin work always:

- Report anything that might pose a health and safety risk.
- Work as per your role and responsibilities in health and safety.
- Examine the areas wherever you're employed and any equipment you utilize to make sure that they are safe.
- Take account of your patient's needs and selections while caring about your own safety and the safety of patients, staff and others when working.

11.1.3 How to Reduce Risk

To reduce risk, you must:

- Make sure that your own health and hygiene does not pose a risk to others.
- Make sure that your seniors know where you are.
- Check for health, safety and security risks when working and report if you see any hazards.
- Report strangers seen loafing around the hospital.
- Use approved procedures when carrying out work that could be dangerous including:
    - Correct moving and handling techniques.
    - Appropriate hygiene procedures.
    - Correct protective clothing for the situation, environment and activities.
    - Storing equipment and materials and dealing with spillages and getting rid of waste.
- Take immediate and appropriate action to deal with emergencies, including:
    - Security problems
    - Accidents
    - Fire

- Use your skills and experience until appropriate help arrives: You must:
  - Call for the appropriate help.
  - Continue to provide help until someone who is qualified to deal with the emergency is available.
  - Support patients and others including family carers who may be affected by the emergency.
  - Record and report incidents and emergencies accurately and fully in line with your organisation's policies.
  - If any suspicious packets or items are found, immediately report to the concerned authorities.

11.1.4 Electrical Safety Measures

Follow electrical safety measures by doing the following:

- Use electrical equipment for the intended purpose only.
- Test all tiny appliances before use to see that they are in smart operating order. guarantee periodic service checks of all electrical equipment.
- Ensure that televisions, phones, radios, hair dryers, electric shavers, and other electrical equipment are kept away from water sources.
- Remove a plug by holding the plug and not cord.
- Do not bend electric cords as they may break.
- Do not use faulty equipment. If an equipment overheats, gives a shock or an odour during use, remove it from the area.

11.1.5 Fire Safety Measures

Fire safety measures are very important and must always be followed. Take a look at some of the important fire safety measures:

1. Despite the use of fire retardant material, and compliance with fire regulations, fires still occur. Healthcare facilities should have regular fire drills so that all personnel know exactly what to do.
   - Healthcare personnel should be trained and drilled in:
   - Fire prevention
   - Location and use of fire alarms
   - Location and use of fire extinguishers
   - Location of emergency exits
   - Evacuation procedures.

2. Oxygen supports combustion. Post signs to show that oxygen is in use where applicable. If a patient is on oxygen for his treatment, ensure that the patient, their roommates, and visitors know that smoking is prohibited.
3. If a fire occurs, follow these steps:
    - Activate the fire alarm procedures.
    - Turn off oxygen, lights, and any electrical equipment in the vicinity of the fire.
    - Remove patients who are in immediate danger.
    - Notify the hospital "switchboard" of the location of the fire.
    - Close windows and doors to reduce ventilation.
    - Using the fire extinguisher, attempt to extinguish the fire.
    - Return patients who are not endangered to their rooms.
    - Post a guard to direct the fire department.

11.1.6 Environment Safety Measures

Environment safety measures to be followed for patient care are:

1. Identify the patients who are at a risk for injury. A few of them are:
    - Patients with impaired vision or hearing.
    - Elderly or confused patients.
    - Patients with a history of falls.
    - Patients with reduced mobility (if on wheelchairs, using walkers, or partially paralyzed).
    - Patients with a history of substance abuse.
    - Patients getting the medication that obstructs with reasoning or motor functions.
2. Secure the patients who are at a risk for injury. Falls can be prevented by:
    - Putting the bed in a lower position.
    - Raising the side rails up when the patient is not getting any bedside care.
    - Suggesting the patient to wear a low-heeled well fitted shoe while walking.
    - Ensuring that anti slippery strips or mats are tacked at the bottom of bathtubs and the shower floors.
    - Ensuring that bathtubs have stiff handrails and shower stool is in place when needed.
    - Warning the patients and their visitors when the floors are wet and slippery. Additionally check that signs are posted.

3. Prevent burns and scalds by:
    - Putting tea, coffee, soup and other hot liquids where the patient can reach them effortlessly and securely
    - Assisting the patient when he cannot safely control the temperature of water.
    - Carefully following policy when using hot-water bags or heating pads. Because of the danger of burning patients, many Healthcare facilities do not allow their use.

Notes

Unit 11.2 Emergency Situations

Unit Objectives

At the end of this unit, the trainee will be able to:

1. Enhance awareness for performing basic first aid in case of emergencies

11.2.1 Emergencies

Everyone plans for emergencies. That is the reason why we keep a first aid kit with ourselves. At work, however one is exposed to a lot of stress and physical activity. This could lead to certain medical emergencies. It's better to be prepared with the first aid measures and knowledge of implementing them on ourselves and on others. The medical emergency procedures listed below will help you to understand how to deal with these crucial moments. Understand and following these will help to save your own and your friend lives.



Fig.11.2 Medical Emergency

A medical emergency is an accidental injury or a medical crisis that is severe. These could be situation where:

- The person is not breathing
- Stroke or heart attack
- Severe bleeding
- Shock
- Poisoning
- Burns

A medical emergency requires your immediate attention, sometimes even before you call emergency services for help.

It is crucial that you know the Emergency Medical Service (EMS) number, for your own safety and the safety of others.

DO Not

- Give the victim anything to eat or drink.
- Hold the victim.
- Splash or pour any liquid on the victim's face.
- Shift the victim to another place (unless it is the only option to safeguard the victim from the injury).

Bleeding

- Put pressure to the wound with a pressure bandage. Raise the wounded portion to slow the bleeding.
- Pressure the associated points if necessary then apply an additional pressure to reduce the bleeding.

Fainting

- Fainting is a loss of consciousness which is caused by a momentary reduction of the blood flow to the brain.
- A small loss of consciousness can cause the person to fall.
- A very slow pulse.
- Cold skin with sweat and pale appearance.

Causes of fainting

- Taking in too little quantity of foodstuff and liquids (dehydration).
- Low BP.
- Deprivation of sleep.
- Fatigue.

First Aid for Fainting

Place the victim lying on his/her back and raise his/her legs above the heart level.

Check the victim's airway to ensure it is clear.

Check for the indications of breathing, coughing, or movement.

Loosen clothing (neck ties, collars, belts etc.).

If consciousness is not regained within one minute Call EMS.

Shock

Shock occurs with the failure of the circulatory system due to which insufficient oxygen reaches the tissues. If this condition is not treated immediately, important organs can fail, which can ultimately lead to death. Fear and pain makes effect of shock worse.

First Aid for shock

- Place the victims resting down (if feasible).
- Raise the legs 10-12 inches, unless you doubt for a back injury or broken bones.
- Cover the victim to preserve the body temperature.
- Give the victim room for fresh air.
- If victim wants to vomit then- position him/her on his/her left side.
- Loosen restrictive clothing.

Muscle Cramps

- Stretch out the cramped muscle to neutralize the cramp.
- Give massage to the cramped muscle rigidly.
- Apply hot water bottle to the affected area.
- Seek medical help if the cramp continues.
- Avoid unnecessary movements and activities which can cause pain.
- Apply some ice which will help in reducing pain and swelling.
- Apply light pressure with an elastic wrap or a bandage which can also help in reducing the swelling.
- Raise the cramped limb at the level of the heart which further reduces pain and swelling.

Fractures

A fracture is a break or crack in the continuity of the bone

Dislocation

A dislocation is the displacement of one or a lot of bones at a joint. It usually happens in the shoulders, elbow, thumb, fingers and also the lower jaw.

First Aid for Dislocations & Fractures

- Immobilize the effected part.
- Stabilise the effected part
- Use a cloth as a sling.
- Use board as a sling.
- Carefully transfer the victim on a stretcher.
- Call a doctor.

Notes



Unit 11.3 Potential Hazards

Unit Objectives

At the end of this unit, the trainee will be able to:

1. Identify potential hazards in the hospital
2. Identify hospital colour coding system

11.3.1 Safety Hazards, Risks and Accidents

A hazard or risk is something or someone that has the possibility of causing, serious harm, damage, or negative health effects. It has the potential to cause human injury or illness, property damage, environmental damage, or a combination of these effects. The figure below depicts the most common on-site hazards, risks, and accidents:



Fig. 11.3 Hazards and Risks at Workplace

It is significant to ensure a high level of safety that no machine/equipment should be used unless the risk management process outlined below is understood and applied by the user:

1. Determine the potential hazard(s) that the machine/equipment may produce.
2. Using the Risk Assessment Matrix, determine the likelihood and severity of the hazard(s). The following individuals have risk acceptance decision authority for the risk levels:
   a. very high
   b. very high
   c. moderate and low
3. Determine the risk-control measures that will eliminate or reduce the hazard(s). Then, implement risk control measures before and during machine/equipment use to eliminate threats or mitigate their risks.
4. Monitor and evaluate the process. Enforce the established standards and risk management procedures. Evaluate the effectiveness of the control measures and make any necessary adjustments/updates.

Notes



11.3.2 Organizational Safety Procedures

An organizational safety procedure is a step-by-step instruction manual for carrying out a work procedure. It is used when a deviation from the procedure could result in injury or an accident.

When working with machinery, tools and equipment, employees are exposed to a variety of hazards and risks that can result in a variety of injuries. The following are the most common hazards in handling tools, hazardous materials and machining work:

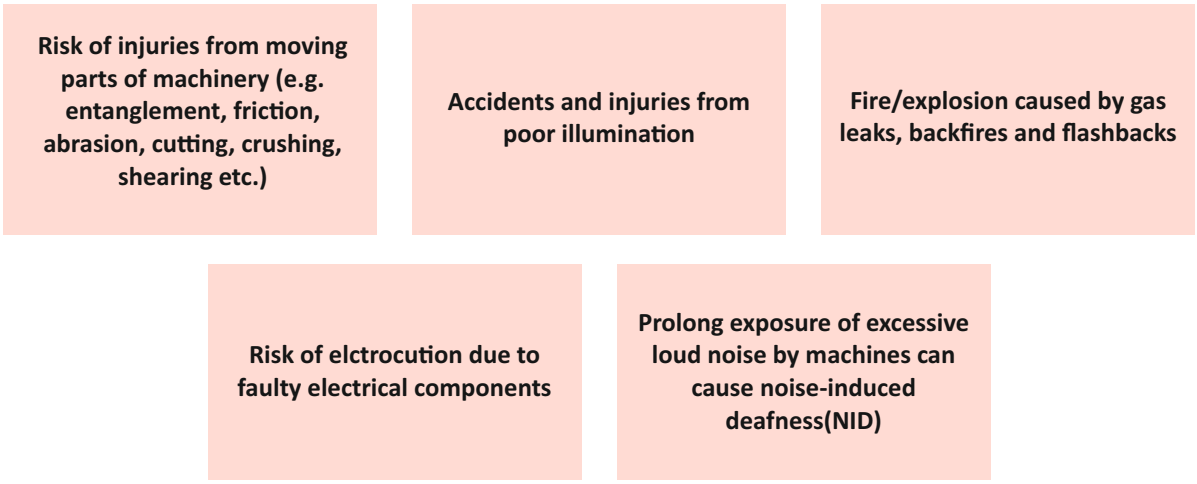


Fig. 11.4 Machine Hazards

Therefore, when working with tools and equipment in the workplace, specific safety procedures must be followed to prevent these hazards and accidents:

1. SOPs (Standard Operating Procedures) must be followed and maintained for all machinery and equipment being used.
2. SOPs must be based on manufacturer recommendations and must include specific hazards associated with the machine as well as safe use recommendations.
3. SOPs (standard operating procedures) must be accessible at or near the machine or equipment.

Electricity is widely recognized as a serious workplace hazard that can cause electric shock, burns, fires, and explosions. Every year, many employees suffer pain, injuries, and even death as a result of electric shocks. To keep yourself and others safe, it is critical to adhere to electrical safety-related work practices.

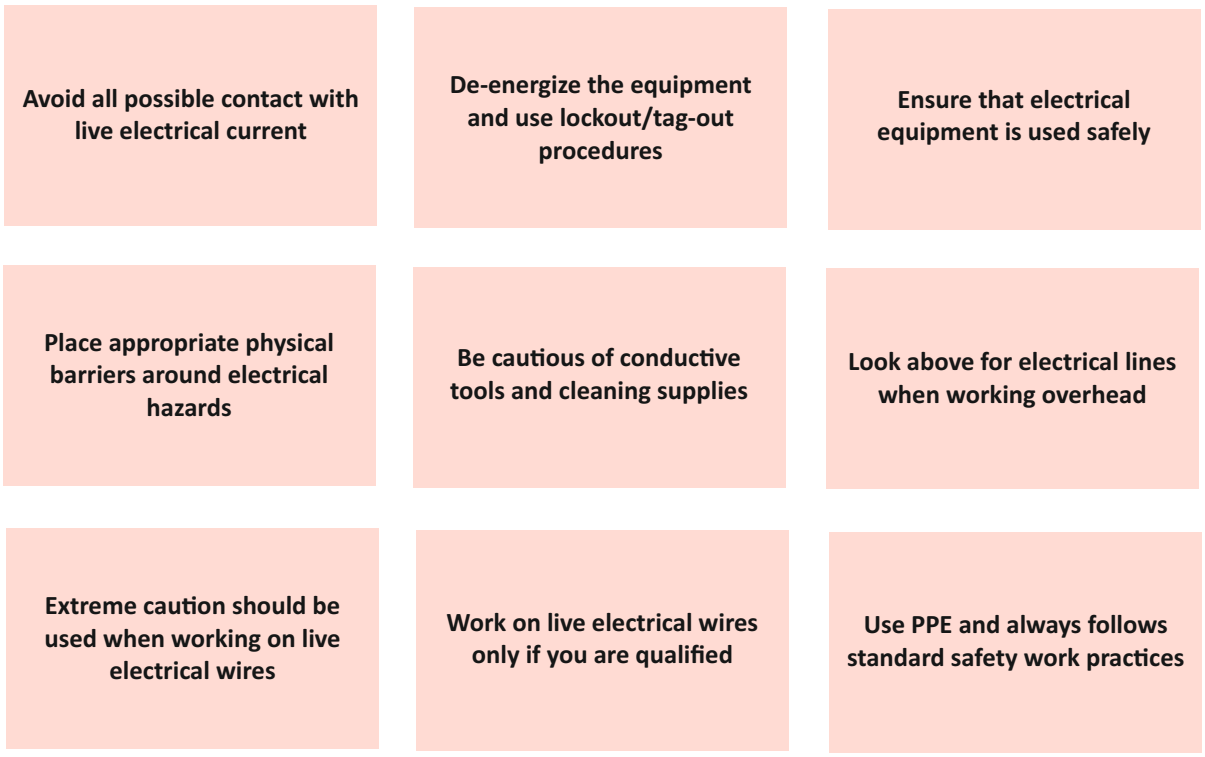


Fig. 11.5 Standard Procedures for Electrical Safety at Workplace

The following are some basic rules who work with or near hazardous materials should know and follow:

1. Pay close attention while working with or around hazardous materials.
2. Always wear the appropriate PPE.
3. Ensure that all containers are properly labeled and that hazardous materials are stored in an appropriate container.
4. Report damaged containers or illegible labels to your supervisor as soon as possible.
5. Read labels and the Safety Data Sheets (SDSs) before using any material to make sure you understand hazards and precautions Use hazardous materials solely for their intended purpose.
6. Never eat or drink while working with hazardous materials.
7. Store all hazardous materials properly, separate incompatibles, and keep them in well-ventilated, dry, and cool locations.
8. After handling any hazardous material, employees must keep themselves and the work area clean.
9. Gain knowledge about first-aid, emergency procedures, and evacuation procedures for dealing with fires or spills/leaks.
10. It also entails knowing what to do if a coworker is injured or poisoned by chemicals.

11.3.3 Significance of Maintaining Appropriate Postures While Lifting Heavy Objects

Lifting heavy objects is one of the leading causes of workplace injury. The main causes of these injuries were overexertion and cumulative trauma. Bending is the most frequently cited movement that resulted in back injuries, followed by twisting and turning.

Lifting loads incorrectly or carrying loads that are either too large or too heavy are common hazards associated with manually moving materials. Employees who use safe lifting techniques are less likely to sustain back sprains, muscle pulls, wrist injuries, elbow injuries, spinal injuries, and other injuries as a result of lifting heavy objects. The following figure explains on safe lifting and material handling at workplace.

When lifting heavier or awkward loads, use mechanical means (e.g., hand trucks, pushcarts, etc.)	Before using a forklift, make sure to have proper training and authorization.	Keep loads as close to the body as possible and avoid twisting while lifting, carrying, or setting down a load. The nose, shoulders, hips, and toes should all be pointing in the same direction.
Reduce your reaching. Bend at the knees, not the hips, as a general rule.	Get assistance as needed. Lift or carry anything that makes you uncomfortable, no matter how light the load is.	Plan ahead of time for all aspects of the lift, including lifting, carrying, and lowering. While lifting, try to use proper handholds.
If an item lacks a good handhold, consider alternatives such as placing the item in a container with good handholds, creating a safe and proper handhold with an appropriate tool, and so on.	Wear personal protective equipment, such as gloves with a good grip and steel-toed boots, as needed.	For frequent and/or heavy lifting, use rest breaks and job rotation.
	Place the items to be lifted within the "power zone." The power zone is close to the body, between the person doing the lifting's mid-thigh and mid-chest.	

Fig. 11.6 Tips for Maintaining Appropriate Postures While Lifting Heavy Objects

11.3.4 Color Codes

Color coding in health sector refers to the systematic process of displaying information using different colors for providing assistance in classification and identification.

Colour Coding and Type of Container Schedule II

Colour code	Type of container	Waste Category	Treatment Options
Yellow	Plastic bags	1,2,3 & 6	Incineration
Red	Disinfected container/ plastic bag	3,6 & 7	Autoclaving/MicroWaving/chemical treatment,
Blue/white transparent	plastic bag/puncture proof container	4&7	Autoclaving/MicroWaving/chemical treatment,Destruction& Shredding
Black	plastic bag	5,9 & 10 (solid)	Disposal in secured land fills

Table 11.1 Colour Coding and Type of Container Schedule II

Notes

Unit 11.4 Infection Control and Use of PPE

Unit Objectives

At the end of this unit, the trainee will be able to:

1. Demonstrate the skills of infection control and use of personal protective equipment (PPE)

11.4.1 Infection Control

Infection control prevents or stops the spread of infections in healthcare settings.

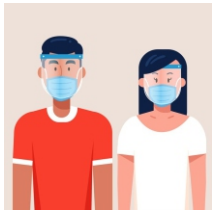
There are five key infection control procedures include:

- Hand hygiene
- Wearing appropriate PPE
- Environmental cleaning
- Waste management
- Transmission-based precautions

11.4.2 PPE and its Uses

PPE refers to the clothing or equipment designed to protect the workers/employees from shop floor hazards. It consists of items for example; hard hats, safety boots, coveralls, gloves, safety glasses, earplugs, high visibility clothing and lifejackets, fall protection, and respirators.

Common types of PPE include the following:



Eye and Face Protection



Hand Protection



Head Protection



Hearing protection



Foot Protection



Body Protection



Fall Protection



Respiratory protection

Fig. 11.7 Types of Personal Protective Equipment

Maintaining PPE - Proper maintenance of PPE is necessary to ensure that the equipment continues to provide the level of protection for which it is designed. Periodical inspection of the PPE for any breaks, tears, and visible signs of stress or damage is essential. Maintenance may include visual inspection, dusting, replacement, restoration, and functional testing.

The following figure represents the responsibilities of an employee regarding PPE:

PPE must be worn and used in accordance with the instructions provided	**Employees must take all reasonable steps to ensure that PPE is returned to proper storage after it has been used**	**PPE must be examined before use**
Any loss or obvious defect must be immediately reported to their supervisor	**Employees must take reasonable care of any PPE provided to them**	**Employees must not carry out any maintenance or repair of PPE unless trained and authorized to do so**

Fig. 11.8 Responsibilities of the Employees Regarding PPE

Only fresh PPE should be used. Once used, they should be properly discarded and disposed off at the relevant disposable bins. Avoid disposing them off in open places which leads to a scope for contamination.



Fig. 11.9 Steps to put on PPE

The guidelines for use of PPE are given in the following figure:

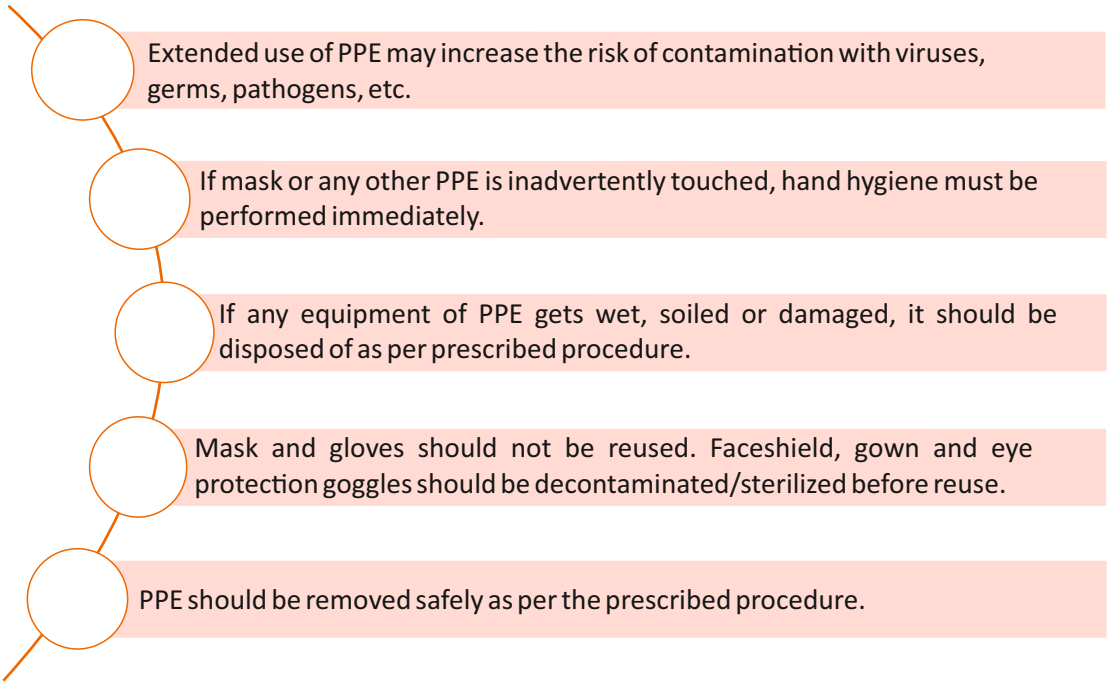


Fig. 11.10 Guidelines for Use of PPE

The steps to take off PPE after use are given in the following figure:

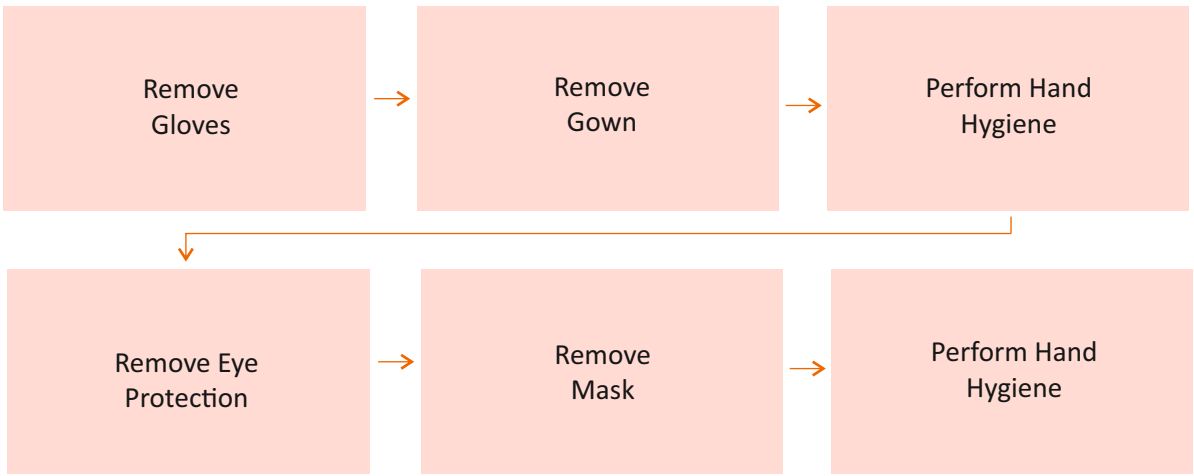


Fig. 11.11 Steps to Take off PPE

The different PPE required by different professionals is shown in the following image:



Fig. 11.12 PPE for other Professionals, Typically Working in Offices

Let us now learn about the correct methods of taking off PPE as shown in the following image



Fig. 11.13 Procedure to Remove PPE Set, Boots, Leg Cover and Gloves



Fig. 11.14 Procedure to Remove Goggles and Masks

Summary

- Workplace safety is one of the most significant concerns for any organisation or facility. Getting it right can improve the overall performance of the operation and lead to growth. On the other hand, jeopardizing safety may result in lost time, money, occupational injuries, and even reputational harm.
- It is the responsibility of everyone, whether employer or employee to adopt and follow safety standards, keep the workplace clean, healthy, and safe. It is also important to follow all guidelines to reduce risks. It is necessary to be prepared for any kind of emergencies, be aware of the first steps to be taken and ensure quick and correct actions.
- A medical emergency is an accidental injury or a medical crisis that is severe. These could be situation where:
    - The person is not breathing
    - Stroke or heart attack
    - Severe bleeding
    - Shock
    - Poisoning
    - Burns
- A medical emergency requires your immediate attention, sometimes even before you call emergency services for help. One should be aware of the first aid to be provided in case of bleeding, fainting, shock, injuries due to fall, fractures, etc.
- A hazard or risk is something or someone that has the possibility of causing, serious harm, damage, or negative health effects. It has the potential to cause human injury or illness, property damage, environmental damage, or a combination of these effects.
- An organizational safety procedure is a step-by-step instruction manual for carrying out a work procedure. It is used when a deviation from the procedure could result in injury or an accident.
- Color coding in health sector refers to the systematic process of displaying information using different colors for providing assistance in classification and identification.
- PPE refers to the clothing or equipment designed to protect the workers/employees from shop floor hazards. It consists of items for example; hard hats, safety boots, coveralls, gloves, safety glasses, earplugs, high visibility clothing and lifejackets, fall protection, and respirators.
- PPE also includes protective facemasks, gloves, clothing, helmets, face shields, eye protective wear or other equipment designed to protect the wearer from the spread of infection or illness.

Exercise

Answer the following questions.

1. Why health and safety is important at workplace?

2. State five health and safety guidelines.

3. Mention three ways of reducing risks.

4. How can you ensure safety while working with electrical devices?

5. Mention five important steps that you would take in case of a fire.

6. What can be considered as medical emergency?

7. How should you be prepared to deal with a medical emergency?

8. What action would you take if a person is bleeding?

9. What can be the cause of chemical hazards?

10. What can lead to agronomical hazards?

11. State three safety rules to be followed with respect to hazardous materials.

_____
_____
_____

12. How can falls be prevented?

_____
_____
_____

13. What is color coding in health sector?

_____
_____
_____

14. What do the colors blue, black, red and yellow indicate?

_____
_____
_____

15. Mention three PPE and their use.

_____
_____
_____

Scan the QR Code to watch the related video

PPE – Donning, doffing and discarding methods

www.youtube.com/watch?v=L3wh5FnTRyA&t=27s



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12. Infection Control Policies and Procedures

Healthcare
Sector
Skill Council

Unit 12.1 Infection Control Policies and Procedures
Unit 12.2 Hand Hygiene and Prevention Methods
Unit 12.3 Spill Management
Unit 12.4 Incident Reporting
Unit 12.5 Immunisation



Bridge Module

Key Learning Outcomes

At the end of this module, the trainee will be able to:

1. Describe the importance of infection control and prevention and guiding others about it in accordance with healthcare team
2. Identify the factors which influence the outcome of an exposure to infection
3. List strategies for preventing transmission of pathogenic organisms
4. Demonstrate the steps of spill management
5. Ensure hand hygiene and infection control and exposure control
6. Describe nosocomial infections
7. Explain the importance of incident reporting
8. Develop techniques of self-grooming and maintenance
9. Explain the concept of immunisation to reduce the health risks for self and patients

Unit 12.1 Infection Control Policies and Procedures

Unit Objectives

At the end of this unit, the trainee will be able to:

1. Describe the importance of infection control
2. Ensure hand hygiene and infection control and exposure control
3. Describe nosocomial infections
4. Develop techniques of self-grooming and maintenance

12.1.1 Importance of Infection Control

Controlling infections in hospitals, nursing homes, assisted living homes and other places where healthcare is provided is very important. This is the first step to stop the spread of infection, or germs, to patients, residents, staff and visitors.

One can help control infections by doing special things in these areas:

- Equipment and supplies: We most use sterile dressings on open skin surfaces to prevent infection. We most also keep patient equipment and supplies clean in order to prevent the spread of germs.
- The environment: We can all help to keep the patients' rooms clean and sanitary. Clean rooms and a clean hospital or nursing home spread fewer germs.
- Our work practices: The employees in healthcare must make infection control a part of everything they do. We must wash our hands while we work in order to stop the spread of germs from one person to another. Our own state of health: Healthcare workers who come to work with a cold or flu can spread it to their patients. We must get enough rest, have a good diet and take the hepatitis B shot so that we can stay well and work without harming the ones we care for. We should also stay home when we have a bad cold, flu or another illness that our patients can catch from us.
- Our patients' and residents' state of health: Many older people and those with a history of breathing problems should get pneumonia and flu vaccines to protect them against these common illnesses.

12.1.2 Need for Infection Control

Infections are a big problem in hospitals and nursing homes for many reasons. The reasons are:

- Germs are very tiny and cannot be seen. We do not know when we are spreading germs as cannot see them.
- People in hospitals and nursing homes are at great risk of getting an infection as these, infections can spread very quickly in hospitals and nursing homes.
- Infections cause deaths, longer lengths of stay and they cost a lot of money.

Harmful germs that can make people ill are called pathogens, which are the cause for infections and diseases. They can typically cause wound infections, colds, pneumonia, AIDS/HIV and other diseases.

Infections spread very quickly in hospitals and other healthcare places for a couple of reasons because people in hospitals are ill and very often weak. People in hospitals and nursing homes are also at risk for getting infections because they all live together in one area, rather than their own homes. Germs and disease can spread very quickly from one sick patient or resident to another when people live in a large group. Our patients are also at risk for infection because they may have a weak and poor immune system. A disease, like AIDS/HIV, common cold or flu, some medications old age and being an infant can cause this weakness.

It is necessary to maintain special infection control in areas where there are infants, old people and very ill people. Some of these areas are:

- Labour and delivery room
- Infant nursery
- New mother's area
- ICU
- Kidney areas
- Surgical areas
- Operating rooms

12.1.3 The Cycle of Infection: How Infection Spreads

Nobody can prevent germs from spreading as they spread when you cough, sneeze or when you have a draining wound. However, using measures such as tissues can lessen the extent of their spread.

We can also perform various sanitation and hygienic tasks to ensure that the spread of germs is controlled, such as:

- Wash hands thoroughly before and after assisting any patient.
- Wash hands thoroughly before and after assisting a doctor or nurse in a procedure.
- Use gloves to handle items that may be infected with germs.
- Avoid touching dirty linen and keep clothes clean.

12.1.4 Infection Control Measures

- Follow infection control and standard precautions procedures.
- Handle hazardous waste properly.
- Handle sharps properly.
- Keep yourself healthy.
- Keep your patients healthy.
- Wash your hands properly.

12.1.5 Standard Precautions and Infection Control Prevention

The employees in healthcare should follow certain safety precautions to ensure that the infection is not caught and further spread when assisting a patient, especially while handling body fluids such as:

- Blood and Faeces
- Wound drainage
- Secretions from the nose
- Saliva and Sputum
- Tears
- Urine and Vomit
- Breast milk
- Fluids from lungs, abdomen, etc.

Notes



Unit 12.2 Hand Hygiene and Prevention Methods

Unit Objectives

At the end of this unit, the trainee will be able to:

1. Prevent and guide others about it in accordance with healthcare team
2. Identify the factors which influence the outcome of an exposure to infection
3. List strategies for preventing transmission of pathogenic organisms

12.2.1 Hand Hygiene

Hand hygiene is an essential part of maintaining personal hygiene. Our hands are the potential carriers of viruses as they are exposed to all types of surfaces and used for carrying out all the tasks during the day. In fact, it is no exaggeration to mention that personal hygiene routine begins with hand hygiene. Keeping them clean and healthy is of prime importance as this would safeguard oneself and others from infections and illnesses.

Washing hands is the quickest and simplest way to get rid of viruses, protect oneself and others, and prevent diseases from spreading. Hand hygiene routine has already been explained in detail in the previous unit. Here we shall learn about when and how to wash hands to stay healthy.

The following images show hand washing techniques:



Fig. 12.1 Hand Washing Technique



Fig. 12.2 Washing Hands with Soap and Water

The following figure shows the steps to wash hands properly:

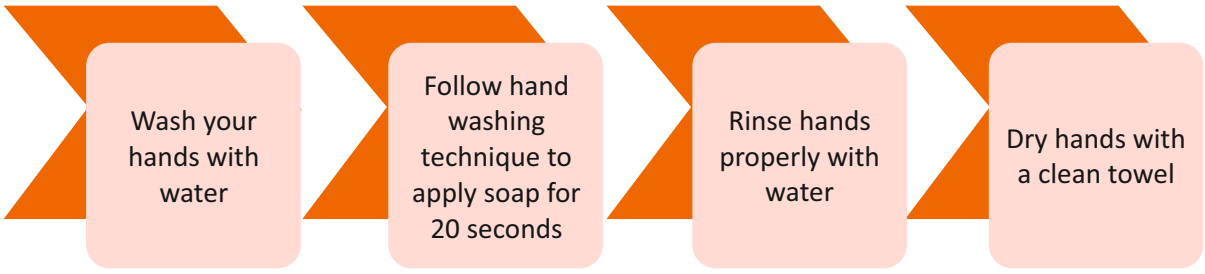


Fig. 12.3 Steps to Wash Hands Properly

The Centres for Disease Control and Prevention (CDC) recommend washing hands at certain times, as shown in the following figure:

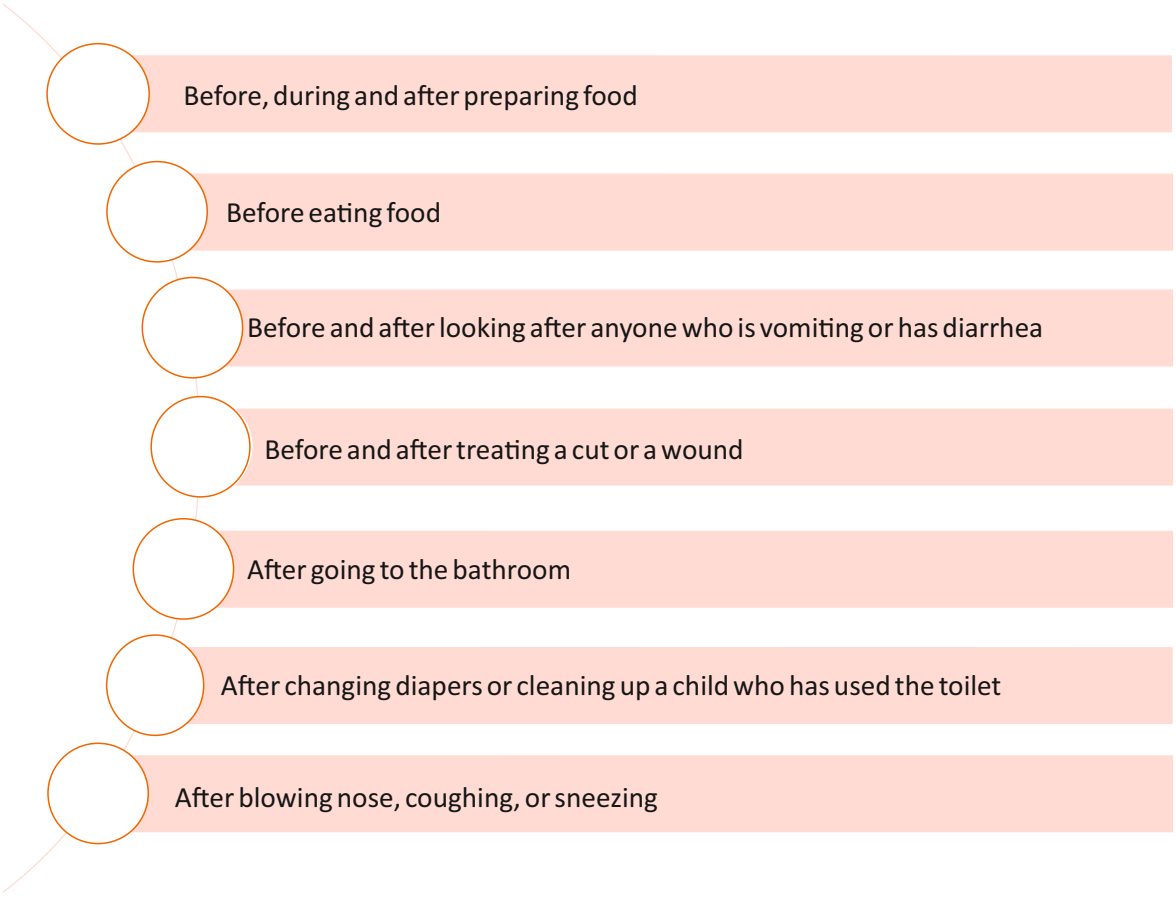


Fig. 12.4 Key Times to Wash Hands as Recommended by CDC

If soap and water are not available, one must use alcohol-based sanitiser (containing at least 60% alcohol). Although cleaning hands with sanitisers is not a substitute for cleaning them with soap and water, but in case they are not available or one needs to clean hands when not dirty, sanitisers are a good alternative. They help in reducing germs and viruses but don't eliminate them completely, and thus they are less effective in case of dirty or greasy hands.

The following image shows how to use a hand sanitiser:



Fig. 12.5 Use of Hand Sanitiser

The following figure shows the steps to use sanitiser for cleaning hands:



Fig. 12.6 Steps to Sanitise Hands Properly

Here are some standard precaution practices for hand washing.



Fig. 12.7 Standard Precaution Practices for Hand Washing

12.2.2 Standard Precautions Practices for using Masks, Eye Protection and Face Shields

- Use PPE when handling body fluids or when near a patient with acute infection
- Use special mask or Ambu-bag when doing CPR or rescue breathing
- Dispose off all disposable PPE immediately after use
- Wear a plastic gown if a task involves splashes of body fluids
- Wash hands immediately after taking off PPE

Fig. 12.8 Standard Precautions for Using Masks, Eye Protection and Face Shields

12.2.3 Standard Precautions Practices While Handling Patient Care Equipment and Supplies

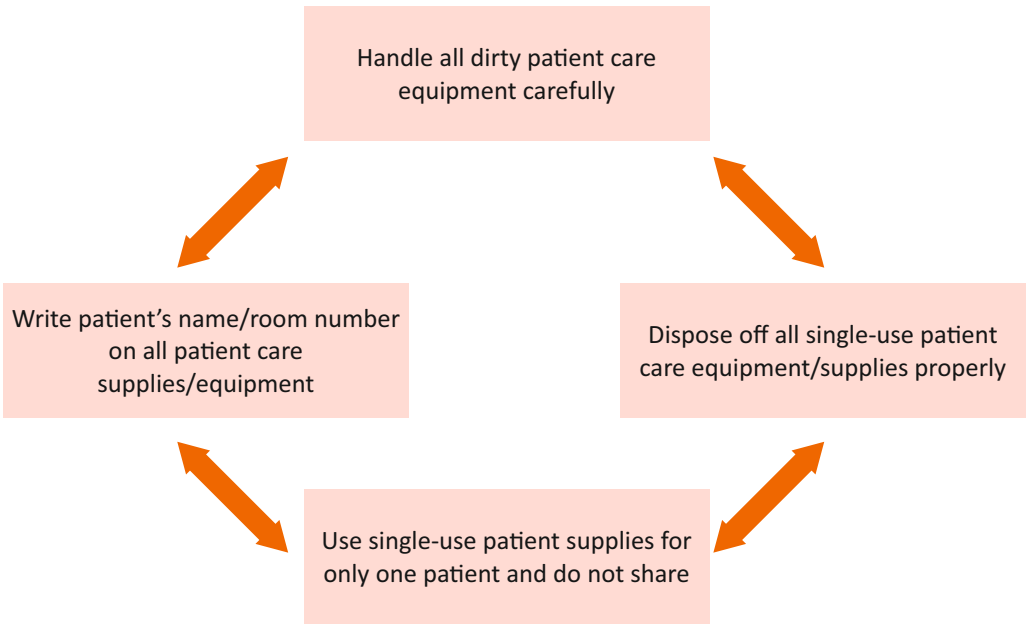


Fig. 12.9Standard Precautions While Handling Patient Care Equipment and Supplies

12.2.4 Standard Precautions Practices - Environmental Control

- Clean all dirty items such as bedside tables and night stands regualrly and properly
- Do not keep or eat food and drinks in patient care areas
- Ensure that all wheelchairs, beds, side rails and walkers are regularly cleaned by the housekeeper

Fig. 12.10 Standard Precautions Practices – Environmental Control

12.2.5 Standard Precautions Practices for Linen, Patients' Beds and Chairs

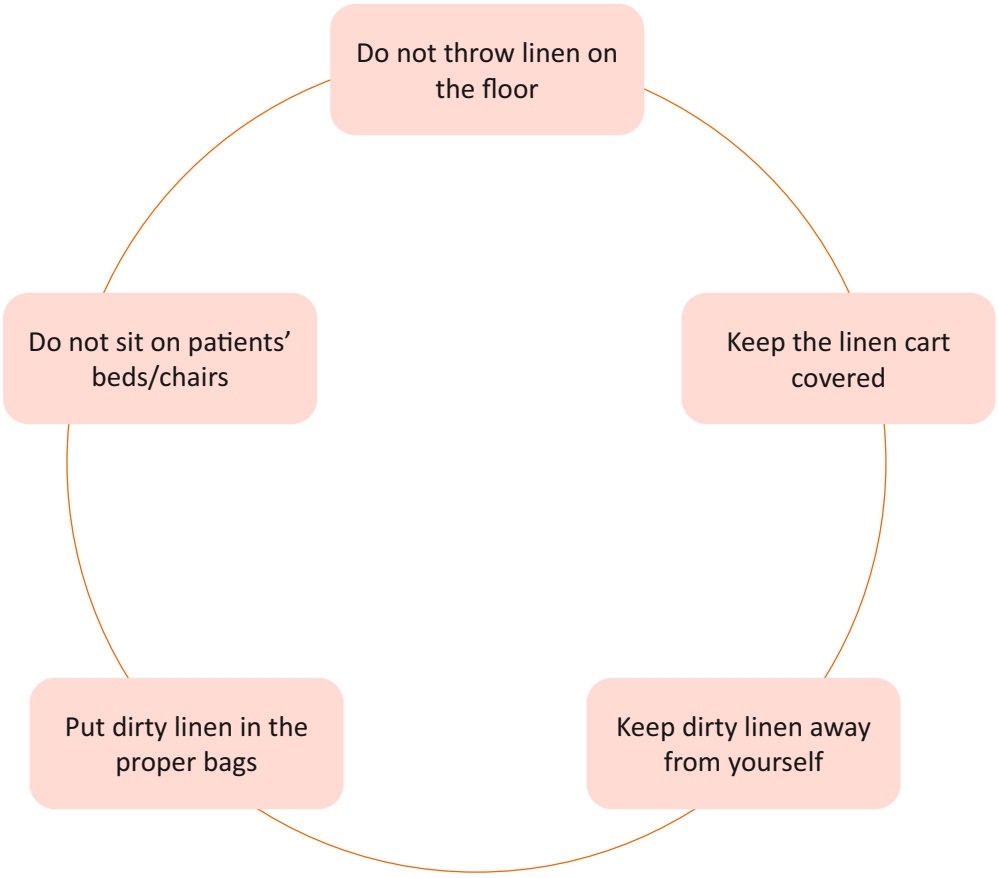


Fig. 12.11 Standard Precautions Practices for Linen, Patient's Beds and Chairs

12.2.6 Transmission Precautions

When a person has an infection which is difficult to control, then in such cases special transmission precautions are used in addition to standard precautions. For instance, a person with tuberculosis needs special transmission precautions. Such patients are typically kept in a private room.

There are three types of precautions:

1. Airborne - For example, a person with TB would need this kind of precaution, in a private room with proper signage outside the room. Special precautions include wearing a mask, NEPA mask, when entering the room. Another set of patients who need such precautions are people with mumps or flu.
2. Droplet
3. Contact - For example, a person with a severe wound or infection would need this kind of precaution. Special precautions include wearing a gown, gloves and a mask when entering the room. You must also wash your hands using a special type of soap after being in the room of such patients.

Special Waste Handling

In order to prevent infections from spreading, throw away all body fluids and trash or waste. You must also throw away gowns, gloves, masks, bandages and other items, except sharps, in a special red bag, which means this bag has hazardous waste.

Safe Handling of Sharps

You should dispose off sharps, such as needles using hard puncture proof red containers, as these sharps are hazardous waste.

Keeping Yourself Healthy

When you are healthy, you can fight infections and your patients are not prone to catching infection from you.

To keep healthy:

- Rest sufficiently
- Eat a healthy diet
- Exercise regularly
- Ensure you are not stressed
- Get a hepatitis B, flu, pneumonia shot if you have not already had one

Keeping Your Patients and Residents Healthy

Nursing assistants and other healthcare providers can work together to keep their patients and residents as healthy as possible. You can help them to:

- Get a good diet
- Get plenty of fluids
- Get enough sleep and rest
- Manage their stress
- Get their flu, pneumonia or hepatitis B shots
- Stay away from infections and other sick people, as much as possible

12.2.7 Nosocomial Infections

Nosocomial infections are the infections acquired by the patient when admitted in the hospital. They were not present before admission. They take 48 hours to develop and are also called healthcare associated or hospital acquired infections. They occur due to invasive procedures, improper antibiotic use, not following infection protocol or by multi drug resistant pathogens. Common pathogens are staphylococcus aureus, escherichia coli, enterococci and candida. Some of the common causes of nosocomial infection are:

- Urinary catheters
- Surgeries
- Central venous catheter
- Ventilation devices

Nosocomial infection can be prevented by implementation of infection control programs, frequent hand hygiene, compliance with isolation protocols, strict antibiotic use policy and proper care on indwelling devices.

12.2.8 Self Grooming and Maintenance

Self-grooming not only make you attractive but also prevents you from infection and keeps you healthy. It is essential for all to take care of his/her own grooming factors that includes:

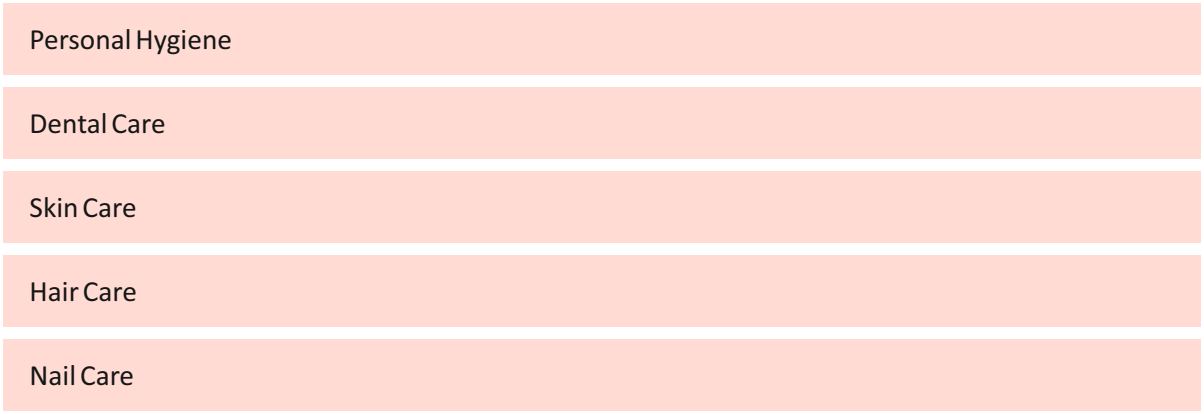


Fig. 12.12 Self-Grooming Factors

Personal Hygiene

It includes:

- Wash your hands frequently with clean water and soap/handwash.
- Sanatitize your hands after and before dealing with patients.
- Taking bath daily (before and after duty) to wash away dirt, infectants, dead skin etc.
- Ensure brushing your teeth twice a day.
- Floss your teeth once a day for optimal oral hygiene.

- Cleaning your tongue once/twice.
- Always wear clean and washed clothes.
- Cover your mouth with a face mask.
- Take a good sleep. Itis essential for good health.
- Visit the doctor for regular health check-ups.

Dental Care

Oral hygiene is also contributing to overall health of a person. Dental care routine It includes:

- Consumption of nutritious foods
- Avoid sugary snacks
- Avoid tobacco products
- Never smoke cigarette
- Rinse your mouth after meal.
- Brush your teeth at least twice a day.

Skin Care

Skincare routine includes the following:

- Drink water as recommended per your age. This will keep you hydrated and naturally moisturize the skin
- Intake balanced diet.
- Wash face twice a day morning and night, follow up with a full-face gentle cleanse.
- Keep your skin moist by applying moisturize.
- Regular use of disinfectants may cause skin rashes, after using disinfectants, wash your hands properly apply moisturization/hand cream.

Hair Care

Haircare routine includes:

- Applying hair oil at least twice a week.
- Wash your hair every alternate day.
- Tie up your hair as per dress code.
- Use head cap while dealing with paitents/chemcials.

Haircare routine can benefit you in following ways:

- Prevents hair loss
- Prevents dandruff
- Boost strength and volume of hair

Nail Care

Cleaning and trimming your nails reduce the chances of contracting an infection. Nail care includes manicure or pedicure which should be done weekly/fortnightly. Manicure and pedicure are therapeutic treatment for hands and feets respectively. These treatment not only help in cleaning of nails, hands or feet but also stimulates blood circulation.

Notes

Unit 12.3 Spill Management

Unit Objectives

At the end of this unit, the trainee will be able to:

1. Demonstrate the steps of spill management

12.3.1 Cleaning Spills

Workplaces in health services may have spills of blood and other body substances. It is necessary to following standard operating procedures to clean specific substances so as to ensure there is no spread of any kind of infection, because spills may be contaminated.

Spill areas have to be wiped before cleaning. Cleaning substances as per the norms should be used in the right formula prescribed in the cleaning procedure manuals.

Person cleaning the spills should equip themselves with proper PPE and post cleaning they should wash their hands to maintain hygiene.

The basic principles of managing spills such as blood and body fluid/substance are:

- Use of PPE as applicable
- Clearing of the spills before cleaning the area (because if cleaning liquids are added to spills, it will increase the size of the spill)
- Avoiding generation of aerosols from spilled material

Spill management should be flexible enough to deal different types of spills, different types of surface where the spill occurs and so it is important to take into consideration the following factors:

- The nature (type) of the spill (for example, sputum, vomit, faeces, urine, blood or laboratory culture)
- The pathogens likely to be involved in these different types of spills – viruses, bacteria, etc
- Size of the spill – large, small
- The type of surface – carpet, floor, bed

A mop, a cleaning bucket, and cleaning materials should be readily available for managing spills.

Unit 12.4 Incident Reporting

Unit Objectives

At the end of this unit, the trainee will be able to:

1. Explain the importance of incident reporting

12.4.1 Importance and Methods of Reporting Incidents

Identifying and reporting the symptoms of a disease can help a great deal in seeking timely care and taking immediate actions to prevent further spread of the disease. This is one of the best early control measures in case of a disease outbreak, an epidemic or a pandemic. For example, in case of Covid 19, researches across the world have identified the sequence of symptoms, such as fever, cough, sore throat, shortness of breath, fatigue, aches and pains, headaches, runny nose and so on, which help differentiate Covid 19 from common cold and flu.

It is mandatory for the workplace to have a formal documentation procedure pertaining to identification and reporting of symptoms as per the organisational policy. The employee must immediately inform the concerned officer in-charge and complete the required documentation accordingly in this context.

In addition to this, one needs to inform the local authorities appointed for the purpose and follow the prescribed procedure as given in the following figure:

Be aware of symptoms	Stay informed about the symptoms of the infection
Report to officer in-charge/local authorities	As soon you identify symptoms, inform the person concerned at workplace and local authorities as per your location
Follow reporting procedure	Fulfill documentation with complete details required as per workplace reporting procedure and local reporting procedure
Seek immediate consultation and undergo testing	Consult the appointed medical specialist and undergo the required test to determine the result at the earliest
Decide on self-isolation or hospitalization	Follow the advice of medical specialist, as per the intensity of symptoms, to either go for isolation at home or admission to the recommended hospital
Inform your contacts	Let those who have come in contact with you recently know about your test status and advise them to take necessary measures as per the recommendations of medical specialist

Fig.12.13 Steps to be followed for identification and reporting of symptoms

Unit 12.5 Immunisation

Unit Objectives

At the end of this unit, the trainee will be able to:

1. Explain the concept of immunisation to reduce the health risks for self and patients

12.5.1 Vaccinations

Vaccinations protect us from various diseases. In today's world, we have seen that infectious diseases can easily spread across borders, and infect anyone who is not protected. Covid-19 is a good example of this. Vaccines do not protect only the ones who are taking it but also others like who cannot get vaccinated for reasons – for example, small babies, elderly, people with allergies, etc.

Vaccines protect against many diseases. Few of them are listed below:

Cervical cancer	Cholera	Diphtheria	Ebola virus disease	Hepatitis B
Influenza	Japanese encephalitis	Measles	Meningitis	Mumps
Pertussis	Pneumonia	Polio	Rabies	Rotavirus
Rubella	Tetanus	Typhoid	Varicella	Yellow fever

Fig 12.14 Diseases Against which Vaccinations are Available

12.5.2 COVID-19 Vaccine

In the past year, we have seen the vaccines for COVID-19 and how the use of vaccines controlled the spread of COVID and also minimised the impact for those who got vaccinated.

12.5.3 The Need for Immunisation

The prime objective of Public Health services in any country is to prevent disease. immunizations play a great role in this. Immunizations protect us from several diseases and also prevent the spread of those diseases to others. Over the years, immunizations have helped in fighting infectious diseases such as measles, mumps, and whooping cough, which were dangerous initially. Due to immunisation, some diseases like polio and smallpox have also been eradicated.

Notes 

Summary

- Controlling infections in hospitals, nursing homes, assisted living homes and other places where healthcare is provided is very important. This is the first step to stop the spread of infection, or germs, to patients, residents, staff and visitors.
- Harmful germs that can make people ill are called pathogens, which are the cause for infections and diseases. They can typically cause wound infections, colds, pneumonia, AIDS/HIV and other diseases.
- Infections spread very quickly in hospitals and other healthcare places for a couple of reasons because people in hospitals are ill and very often weak. It is necessary to maintain special infection control in areas where there are infants, old people and very ill people.
- Hand hygiene is an essential part of maintaining personal hygiene. Our hands are the potential carriers of viruses as they are exposed to all types of surfaces and used for carrying out all the tasks.
- Standard precautions have to be followed with respect to use of various PPE, handling equipment and supplies, cleanliness of environment, disposing of waste items, etc. When a person has an infection which is difficult to control, then in such cases special transmission precautions are used in addition to standard precautions.
- Nosocomial infections are the infections acquired by the patient when admitted in the hospital. They were not present before admission. They take 48 hours to develop and are also called healthcare associated or hospital acquired infections. They occur due to invasive procedures, improper antibiotic use, not following infection protocol or by multi drug resistant pathogens. Common pathogens are staphylococcus aureus, escherichia coli, enterococci and candida.
- Nosocomial infection can be prevented by implementation of infection control programs, frequent hand hygiene, compliance with isolation protocols, strict antibiotic use policy and proper care on indwelling devices.
- Self-grooming not only make you attractive but also prevents you from infection and keeps you healthy. Grooming includes taking care of personal hygiene, dental, skin, hair and nails.
- Workplaces in health services may have spills of blood and other body substances. It is necessary to following standard operating procedures to clean specific substances so as to ensure there is no spread of any kind of infection, because spills may be contaminated.
- Spill management should be flexible enough to deal different types of spills, different types of surface where the spill occurs.
- Identifying and reporting the symptoms of a disease can help a great deal in seeking timely care and taking immediate actions to prevent further spread of the disease. This is one of the best early control measures in case of a disease outbreak, an epidemic or a pandemic.
- It is mandatory for the workplace to have a formal documentation procedure pertaining to identification and reporting of symptoms as per the organisational policy.

Exercise

Answer the following questions.

1. What is infection control?

2. Mention five measures that can help to control infection?

3. What are pathogens?

4. Why are people in hospitals at higher risks to get infected?

5. What is immunisation?

6. State the importance of immunisation.

7. What is nosocomial infection? Give examples.

8. How are nosocomial infections spread?

9. Name a few pathogens that cause nosocomial infection.

10. What are the steps to be followed for reporting of symptoms?

11. List a few good practices to be followed for managing spill.

_____
_____
_____

12. What are the factors to be taken into consideration as part of spill management?

_____
_____
_____

Scan the QR Code to watch the related video

Incident Reporting

www.youtube.com/watch?v=CK6A8N0CMis



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13. Bio-Medical Waste Management

Unit 13.1 Bio-Medical Waste



HSS/N9617

Key Learning Outcomes

At the end of this module, the trainee will be able to:

1. Explain the importance of proper and safe disposal of bio-medical waste and treatment
2. Explain the categories of bio-medical waste
3. Discuss about disposal of bio-medical waste – colour coding, types of containers, transportation of waste, etc.
4. Explain standards for bio-medical waste disposal
5. Discuss means of bio-medical waste treatment

Unit 13.1 Bio-Medical Waste

Unit Objectives

At the end of this unit, the trainee will be able to:

1. Explain the categories of bio-medical waste
2. Discuss about disposal of bio-medical waste – colour coding, types of containers, transportation of waste, etc.
3. Explain standards for bio-medical waste disposal
4. Discuss means of bio-medical waste treatment
5. Explain the importance of proper and safe disposal of bio-medical waste and treatment

13.1.1 Categories of Bio-Medical Waste

The wastes that are disposed from the hospital can be a source of many infections such as HIV, hepatitis B and other bacterial infections. You must take extreme care while disposing the wastes such as needles, syringes and gloves in order to prevent infections to yourself and others. In this module, the basic rules that need to be followed to dispose wastes safely are listed.

The excretory wastes eliminated by the patients should also be handled properly, as incorrect Waste management includes collecting, moving, treating or organising, handling and observing of waste materials.

In order to follow a standard method of waste management you must know about the different types of the waste that are generated in the hospital.

Waste Category	Type of Waste	Treatment and Disposal Option
Category – 1	Human waste – human tissues, organs, body parts	Incineration (Type 1)/deep burial (Type 2)
Category – 2	Animal waste – animal tissues, organs, body parts, carcasses, bleeding parts, fluid, blood	Incineration Type 1 / deep burial (Type 2)
Category -3	Microbiology and biotechnology waste – wastes from laboratory cultures, stocks or specimen of live microorganisms or attenuated vaccines	Local autoclaving/ microwaving / incineration (Type 1)
Category -4	Waste Sharps – needles, syringes, scalpels, blades, glass	Disinfecting (chemical treatment (Type 3)/ autoclaving / microwaving and mutilation / shredding (Type 4)

Continued...

Waste Category	Type of Waste	Treatment and Disposal Option
Category- 5	Discarded Medicine and Cytotoxic drugs	Incineration@/destruction and drugs disposal in secured landfills
Category -6	Soiled Waste – cotton, dressings, soiled plaster casts, lines, bedding and other materials contaminated with blood	Incineration@/autoclaving/ microwaving
Category -7	Solid Waste – tubing, catheters, intravenous sets and so on	Disinfecting by chemical treatment (Type3)/autoclaving/microwaving and mutilation/shredding (Type 4)
Category -8	Liquid Waste – waste coming out from the laboratory and washing, cleaning, housekeeping and disinfecting activities	Disinfecting by chemical treatment (Type 3) and discharge into drains
Category -9	Incineration Ash – ash from incineration of any biomedical waste	Disposal in municipal landfill
Category -10	Chemical Waste – production of biologicals, chemicals used in disinfecting, as insecticides ad so on	Chemical treatment (Type 3) and discharge into drains for liquids and secured landfill for solids.

Table 13.1 Waste Category

13.1.2 Segregation of Bio-Medical Waste

Bio-Medical Waste should be carefully managed to prevent people especially heath care professionals who are frequently exposed to different kinds of waste as a part of their work.

7 Steps of bio-medical waste segregation

Step 1: Collection and Proper labelling of bins

- Biomedical wastes are collected in various kinds of containers from different. Dust bins or waste containers should be located in such a way that total collection is achieved. Needles and other shaper objects must always be placed in puncture- proof containers.
- Waste bins and disposable bags should have the biohazard signs depicting the type of waste.

- The following figure gives an idea about labelling of wastes:

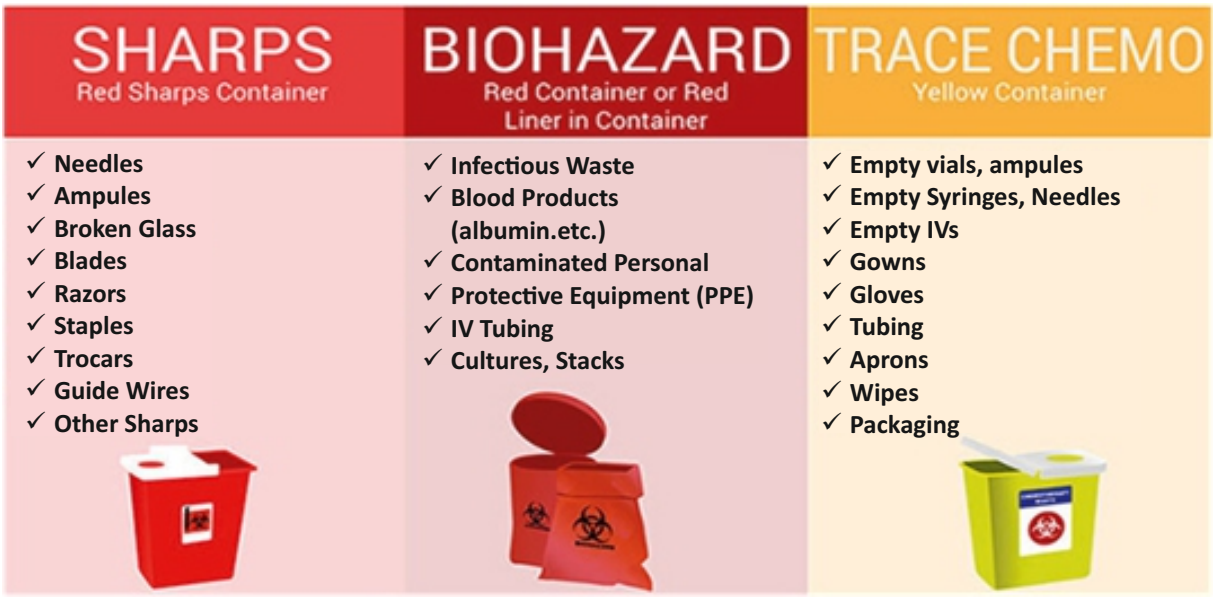


Fig. 13.1 Biohazard Symbol

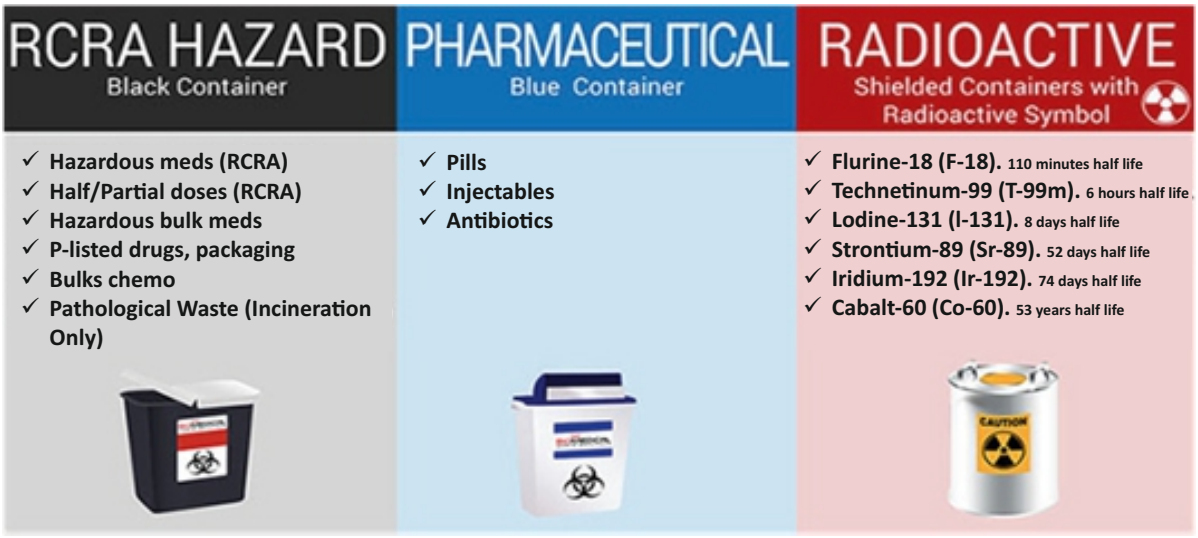


Fig. 13.2 Cytotoxic hazard Symbol

Step 2: Storage

After collecting the bio-waste, it is imperative to store it properly and in a designated proper place. Typically, one should not store such waste for more than 8-10 hrs in large hospitals. In addition, every waste container should be properly labelled.

Step 3: Transportation

The stored containers need to be transported to proper waste management facilities using trolleys or covered wheelbarrows.



Fig. 13.3 Special Vehicle

Step 4: Using PPE

PPE should be always used while managing waste, which includes:

- **Gloves:** Should worn at all times when collecting, segregating, and transporting waste.



Fig. 13.4: Gloves

- **Aprons, gowns, or other apparels:** Proper clothing should be worn to protect the body and clothes.



Fig. 13.5 Safety Suit

- **Masks:** Masks, goggles and face shields should be used to prevent inhalation of toxic fumes and other smells or bacterial agents.



Fig. 13.6 Masks

- **Boots:** Boots/shoe-covers should be worn to prevent splashes or infected waste touching the feet/legs.



Fig. 13.7 Boots

Step 5: Cleaning Equipment

- **Brooms:** Proper brooms or sweeping rods should be used for handling and sweeping dry waste.



Fig. 13.8 Brooms

- **Dustpans:** Dustpans should be used to pick up waste instead of hands.



Fig. 13.9 Dustpans

- **Mops:** Mops with long handles should be used to wipe spillage or any other liquid waste.



Fig. 13.10 Mops

- **Vacuum cleaners:** Domestic vacuum cleaners or industrial vacuum cleaners should be used to clean carpeted areas.



Fig. 13.11 Vacuum Cleaner

Step 6: Storage and Handling

Dustbins: Clean dustbins and containers should be used for storage.

Handling devices

- Trolleys
- Wheel barrows



Fig. 13.12 Trolleys



Fig. 13.13 Wheelbarrows

Step 7: Treatment of waste

The treatment of Bio-Medical Waste can be done using any of the following processes:

1. Chemical processes
2. Thermal processes
3. Mechanical processes
4. Irradiation processes
5. Biological processes

Chemical processes: Chemicals or disinfectants can be used to treat smaller quantities of waste, such as Sodium hypochlorite, dissolved chlorine dioxide, hydrogen peroxide and so on.

Thermal processes: Heat can be used to disinfect specific waste. Thermal processes involve Autoclave & Microwave:

- Autoclaving, a low heat thermal process, uses steam for disinfecting. Autoclaves can be of gravity flow autoclave and vacuum autoclave.
- Microwaving involves disinfecting waste by moisture, heat and steam using microwave energy.
- Incinerator & Hydroclaving are examples of high heat systems. Hydroclaving uses steam treatment with fragmentation and drying. Incineration involves burning.

Mechanical processes: The two primary mechanical processes are:

- Compaction: Used to cut down waste volume
- Shredding: Used to treat plastic and paper waste and making them reusable. The waste has to be disinfected before putting in a shredder.

Irradiation processes: Uses ultraviolet or ionizing radiation on the waste within a closed environment. Typically need post shredding to make the waste unidentifiable.

Biological processes: Using biological enzymes to treat waste. Waste can be of the following categories:

Infectious: Waste containing pathogens which can cause diseases. E.g. waste from surgery/autopsies of people with infectious diseases, sharps or nails.

Pathological: Waste such as tissues, body parts, foetus, blood and body fluids which are collected from wards, OTs, and drugs that have expired or contaminated.

Radioactive: Waste such as solids, liquids and gaseous contaminated with radioactive material. E.g. used in diagnosis/treatment of diseases such as toxic goitre.

Others: Waste from offices, kitchens and rooms, such as bed linen, utensils, and paper.

13.1.3 Occupational Health Hazards

- The health hazards because of improper waste management can lead to Occupational hazards.
- This will impact the occupants in the institutions and also spread in the vicinity of the institutions.
- People happened to be in contact with the institution include laundry workers, nurses, emergency medical personnel, and refuse workers.
- Risks of infections outside the hospital are for waste handlers, scavengers and the general public.
- Risks are associated with the hazardous chemicals like drugs, being handled by persons handling wastes at all levels.
- Injuries from sharps and exposure to harmful chemical waste and radioactive waste also cause health hazards to employees.

The public's health can also be unfavorably affected by bio-medical waste.

Improper practices such as discarding of bio-medical waste in municipal dustbins, open spaces, water bodies etc., leads to the spread of diseases.

Emissions from incinerators and open burning also lead to exposure to harmful gases which can cause cancer and respiratory diseases.

Fig. 13.14 Health Hazards

Bio-medical waste is hazardous to animals and birds too!

What you can do?

- Use only disposable syringes.
- Bandages, cotton and other blood stained waste should not be thrown with general waste.
- Use black plastic bags to dispose biomedical wastes.
- Keep trash out of reach of small children.
- Diapers, Sanitary napkins etc. should be disposed separately.
- Drugs that are past date of expiry should be thrown away.

Fig. 13.15 Practices to Control Health Hazards from Bio-Medical Waste

Dos and Don'ts

Ensure that:



Fig. 13.16 Do's for Bio-Medical Waste

Do not:

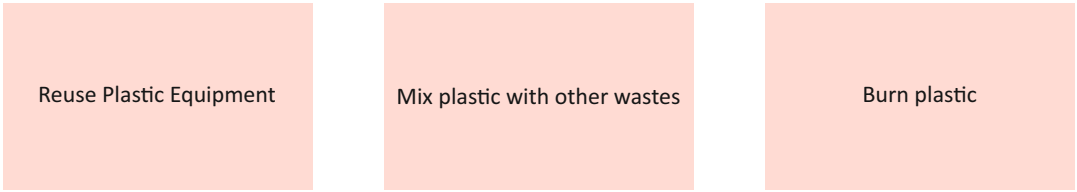


Fig. 13:17 Don'ts for Bio-Medical Waste

Tips

- Types of Wastes
  - Infectious waste
  - Pathological waste
  - Sharps
  - Chemicals
  - Pharmaceuticals
  - Radioactive waste
  - Non-hazardous waste
- Colour Coding and Container Types
  - Yellow: Plastic bag
  - Red: Disinfected container/plastic bag
  - Blue/White Translucent: Plastic Bag/puncture proof container
  - Black: Plastic bag
- Steps of Biomedical Segregation
  - Collection and Proper labelling of bins
  - Storage
  - Transportation
  - Personnel safety and its devices
  - Cleaning and its devices
  - Storage and Handling
  - Treatment

Notes

Summary

- The wastes that are disposed from the hospital can be a source of many infections such as HIV, hepatitis B and other bacterial infections. You must take extreme care while disposing the wastes such as needles, syringes and gloves in order to prevent infections to yourself and others.
- Waste management includes collecting, moving, treating or organising, handling and observing of waste materials.
- Bio-Medical Waste should be carefully managed to prevent people, especially health care professionals who are frequently exposed to different kinds of waste as a part of their work.
- The seven steps of bio-medical waste segregation include:
    - Step 1: Collection and proper labelling of bins
    - Step 2: Storage
    - Step 3: Transportation
    - Step 4: Using PPE
    - Step 5: Cleaning and its devices
    - Step 6: Storage and Handling
    - Step 7: Treatment of Waste
- The health hazards because of improper waste management can lead to Occupational hazards. People working in the institutions as well as outsiders will be affected. The public's health can also be unfavorably affected by bio-medical waste.
- It is important to follow the control measures to curb the impact of the various hazards.

Notes

Exercise

Answer the following questions.

1. What is bio medical waste?

2. What are the categories of bio-medical waste?

3. What are the steps followed in categorisation of bio-medical waste?

4. List the colors used to identify different categories of bio-medical waste.

5. Give examples of radioactive wastes.

6. Name the items that fall under pathological wastes.

7. What is the color of the container used for pharmaceutical wastes?

8. What are the different processes of waste treatment?

9. Which category of waste is disposed off in municipal landfill?

10. What are the best practices to control health hazards that can be caused by bio-medical waste?

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14. Basic Computer Knowledge

Unit 14.1 Application of computers

Unit 14.2 Microsoft office 2000 – MS Word, MS Excel, PowerPoint Presentation



Bridge Module

Key Learning Outcomes

At the end of this module, the trainee will be able to:

1. Discuss the application of computers
2. Explain the concepts of computers including block diagram, input and output devices and storage devices.
3. Discuss the latest version of software such as Window 10, its utilities and basic operations
4. Microsoft office 2000 – MS Word, MS Excel, PowerPoint Presentation

Unit 14.1 Application of Computers

Unit Objectives

At the end of this unit, the trainee will be able to:

1. Discuss the application of computers
2. Explain the concepts of computers including block diagram, input and output devices and storage devices

14.1.1 Overview of Computers

Computer is the greatest technology of all times. An innovative electronic device that takes raw data as input from the user and processes these data under the control of set of instructions which is called program, to give the result the output. The computer of today's time is thousands of times faster and in any size you want. They can fit on your desk, on your lap, or even in your pocket. Computers work through an interface of hardware and software. Computers work through an interaction of hardware and software.

- Hardware = Internal Devices + Peripheral Devices: All concrete parts of the computer (or everything that we can touch) are known as hardware. The most significant piece of hardware is a tiny quadrangular chip inside the computer called the central processing unit (CPU), or microprocessor. It's the "brain" of the computer—the part that interprets instructions and performs calculations. Hardware items such as your monitor, keyboard, printer, mouse and other components are often called hardware devices.
- Software = Programs: Software provides "intelligence" to the computer. Software refers to the instructions, or programs, that tell the hardware what to do. A word-processing program that you can use to write letters on your computer is a type of software. The operating system (OS) is software that manages your computer and the devices linked to it. Windows is a well-known operating system.

14.1.2 Application of Computers

Computers are used for different purposes in various areas such as:

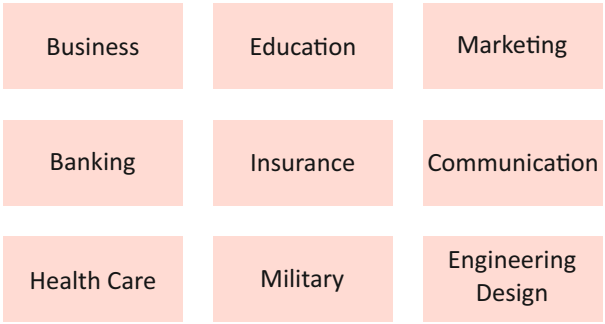


Fig 14.1 Application Areas of Computers

Computers are used at homes and offices. They are used for airline reservations, train ticket booking, making online payments, banking purposes, watching movies or shows at home, teaching, social media access, playing games, internet access, etc. They provide communication through electronic mail. Corporate employees use computers while they work from home.

14.1.3 Block Diagram

A block diagram is a diagram of a system in which the principal parts or functions are represented by blocks connected by lines that show the relationships of the blocks. These diagrams are used in engineering in hardware design, electronic design, software design, and process flow diagrams.

Being a graphical representation, a block diagram provides a functional view of a system. Block diagrams give us a better understanding of a system's functions and help create interconnections within it. The elements in the diagram are represented in the form of rectangular blocks.

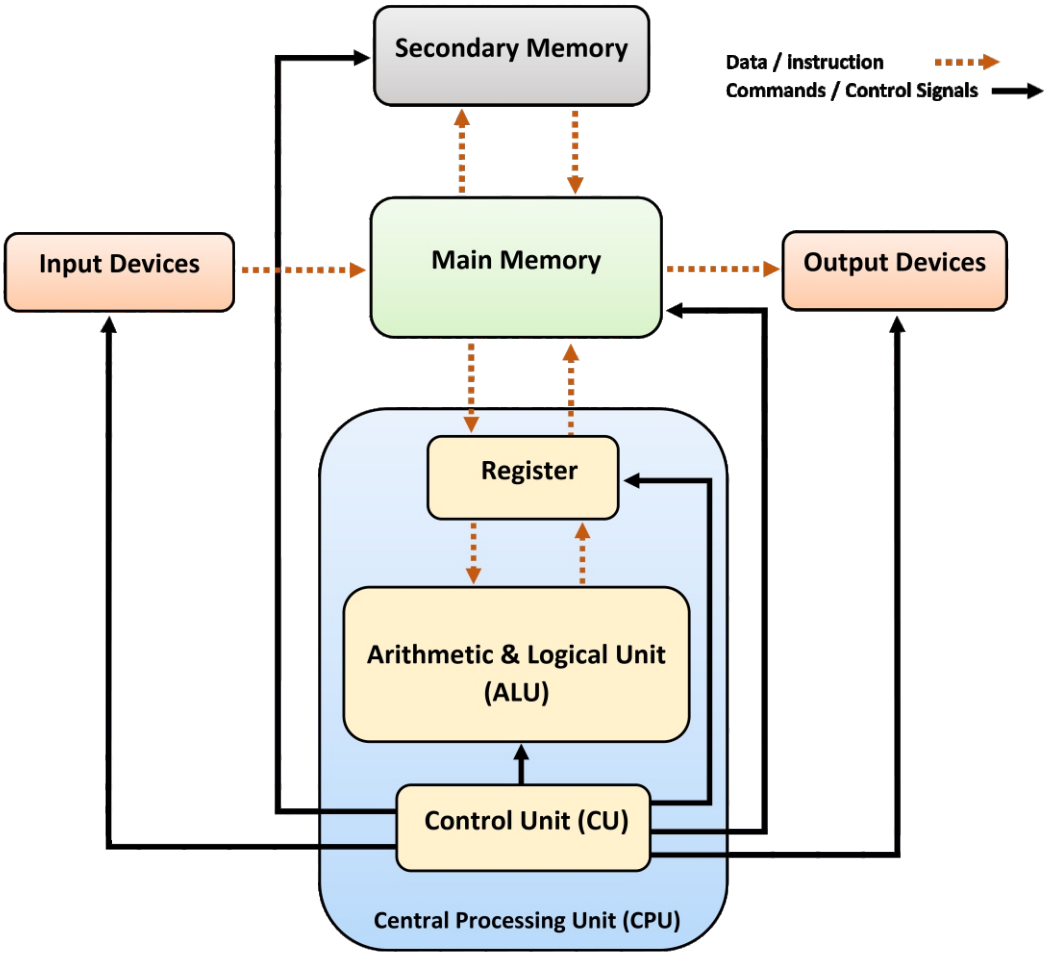


Fig 14.2 Sample Block Diagram Showing the Parts of a Computer

14.1.4 Input, Output and Storage Devices

Input devices help in entering data into the computer and output devices display output to the user.

Input devices send data to the processor for processing while output devices send processed data to the user.

Examples of input devices include keyboard, mouse, joystick, scanners etc. Examples of output devices include monitor, printer, headphones, etc.

Storage devices are used to store data permanently for future use. For example, Hard disk.

Unit 14.2 Microsoft Office 2000 – MS Word, MS Excel, PowerPoint Presentation

Unit Objectives

At the end of this unit, the trainee will be able to:

1. Discuss the latest version of software such as Window 10, its utilities and basic operations
2. Describe Microsoft office 2000 – MS Word, MS Excel, PowerPoint Presentation

14.2.1 Utilities

Utility programs are called "utilities". These are software programs that add functionality to your computer or help your computer perform better. These utilities include antivirus, backup, disk repair, file management, security, and networking programs.

14.2.2 Microsoft Office

There have been many versions of Microsoft Office over the last two decades. The latest one is Microsoft Office 2022.

Office for the web is a free version of Office that you can use in a web browser. You can sign up for a Microsoft account with a new or existing email address.

Microsoft Office is a package of some Microsoft apps, such as Word, Excel, PowerPoint, etc. Microsoft 365 package offers all those apps along with some other applications.

MS Word is a word processor software developed by Microsoft in 1983. It is the most commonly used word processor software. It is used to create professional quality documents, letters, reports, resumes, etc and also allows you to edit or modify your new or existing document. The files created in MS Word can be exported to pdf formats.

MS Excel is a spreadsheet application developed and published by Microsoft. It is part of the Microsoft Office suite of productivity software. Excel organizes data in columns and rows. Rows and columns intersect at a space called a cell. MS Excel has a lot of inbuilt functions which can be used for data manipulation. Various formulas can be used in this software to make a wide range of calculations and analysis.

MS PowerPoint is a standard component of the company's Microsoft Office suite software, and is bundled together with Word and Excel, and other office productivity tools. It uses slides to present content. It can incorporate information in the form of graphics and sound.

Summary

- A block diagram is a diagram of a system in which the principal parts or functions are represented by blocks connected by lines that show the relationships of the blocks. These diagrams are used in engineering in hardware design, electronic design, software design, and process flow diagrams.
- Being a graphical representation, a block diagram provides a functional view of a system. Block diagrams give us a better understanding of a system's functions and help create interconnections within it. The elements in the diagram are represented in the form of rectangular blocks.
- Input devices help in entering data into the computer and output devices display output to the user. Input devices send data to the processor for processing while output devices send processed data to the user.
- Examples of input devices include keyboard, mouse, joystick, scanners etc. Examples of output devices include monitor, printer, headphones, etc.
- Utility programs are called "utilities". These are software programs that add functionality to your computer or help your computer perform better.
- There have been many versions of Microsoft Office over the last two decades. The latest one is Microsoft Office 2022. Office for the web is a free version of Office that you can use in a web browser.
- Microsoft Office is a package of some Microsoft apps, such as Word, Excel, PowerPoint, etc. Microsoft 365 package offers all those apps along with some other applications.

Notes

Exercise

Answer the following questions:

1. What is a block diagram?

   _____
   _____
   _____

2. What are input devices? Give examples.

   _____
   _____
   _____

3. What are output devices? Give examples.

   _____
   _____
   _____

4. What are utilities?

   _____
   _____
   _____

5. Name a few utilities programs.

   _____
   _____
   _____

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15. Reporting and Documentation

Unit 15.1 Information to be Reported

Unit 15.2 Essential Components of Various Records



HSS/N9618

Key Learning Outcomes

At the end of this module, the trainee will be able to:

1. Define the scope of practice for panchakarma Technician in reporting and documentation
2. Define and discuss the method of reporting matrix
3. Explain the importance of maintaining various records
4. Explain the various types of records to be maintained by the panchakarma Technician
5. Demonstrate essential components of various records and the method of their documentation and retrieval

Unit 15.1 Information to be Reported

Unit Objectives

At the end of this unit, the trainee will be able to:

1. Define the scope of practice for panchakarma Technician in reporting and documentation
2. Define and discuss the method of reporting matrix

15.1.1 Documentation at First Appointment

As a minimum the following information should be documented at an initial appointment:

- Date and time of occurrence of service.
- Relevant history of the illness.
- Relevant physical examination, assessment findings and diagnosis.
- Treatment options and treatment given e.g. clinical observations results of treatment, and
- Medication prescribed
- Diagnostic and therapeutic orders/plan.
- Signature, surname and initials, and designation of the clinician.

Some aspects of the initial assessment can be documented using case notes (see the examples below).

Note: If an assessment form is used it is still a requirement to make an entry in the case notes. The education delivered and the plan should be documented in the case notes.

Initial consult – case note entry

Diabetes education assessment note

- Referral source and reason
- Preferred name and age
- Type of diabetes
- Date of diagnosis
- Current signs and symptoms/issues

Concerns

Person's understanding of purpose of the appointment

How are they feeling about their diagnosis? Do they have concerns, questions?

Diabetes Management

- Management – prior and current (including diabetes medication)
- Previous education

Psychosocial

- Mental health
- Social: Marital status, employment
- Living arrangements
- Independence level with ADLs
- Cultural considerations
- Social supports/significant others
- Barriers to learning e.g. language, memory deficits, religion

Relevant medical and surgical history

- Include relevant history including mental health, family history of cardiovascular and / or early death (<60 years)
- Allergies/alerts
- Hearing or visual deficits

Diabetes complications/cycle of care

- Micro – retinopathy, nephropathy, neuropathy
- Macro – CHD, CVA, PAD
- Oral health and sexual health

Medications

- Include over the counter and complementary medications

Anthropometry

- Weight, height, BMI
- Pathology tests e.g. HbA1c/ lipids/eGFR/AER/Liver function
- BP

Foot assessment

- Circulation and sensation
- Self-care and footwear

Lifestyle

- Smoking
- Alcohol
- Nutrition
- Physical activity/exercise
- Stress
- Driving

Self-care assessment and education planning (based on risk factors and current need)

- Pathophysiology of type 1/type 2/steroid induced
- Management requirements
- Oral hypoglycaemic agents profile
- Insulin profile
- Healthy eating principles/carbohydrate intake
- Importance of regular activity
- Commencement /update of blood glucose monitoring
- Commencement/update of insulin/check technique
- Complications of diabetes (micro and macro)
- Health checks (cycle of care)
- Coping skills
- Rights and responsibilities
- Decision making/behaviour change

Referrals

- What referrals did you provide (to allied health) or recommend at this appointment?

Resources provided

- What written or other resources did you provide at this appointment?

SMART Goals

- Goals should be Specific, Measurable, Achievable, Realistic, and Time framed.
- Education plan should be used to record what is planned for subsequent appointments.

Subsequent visit

The method used to document education will vary depending on the preferences of the practitioner. However, it is useful to use headings and try to avoid writing in narrative sentences.

Narrative charting can result in a lot of writing, can be time consuming and repetitive. This method of writing case notes is still commonly used but more nurses are now turning to problem oriented approaches, clinical pathways or focus charting.

Guiding principles

- Document any amendments to education plan
- Document education given
- Document plan for next appointment including Patient goals
- Complete any outstanding assessment areas

It is important to communicate with the referring doctor after your initial appointment to share the education plan and potential education completion date. Consider additional communication if circumstances change or there are concerns. Always communicate when the person discharged from your care.

The Documentation and record keeping cycle of a patient by a healthcare provider is demonstrated in the Fig below (illustrative).

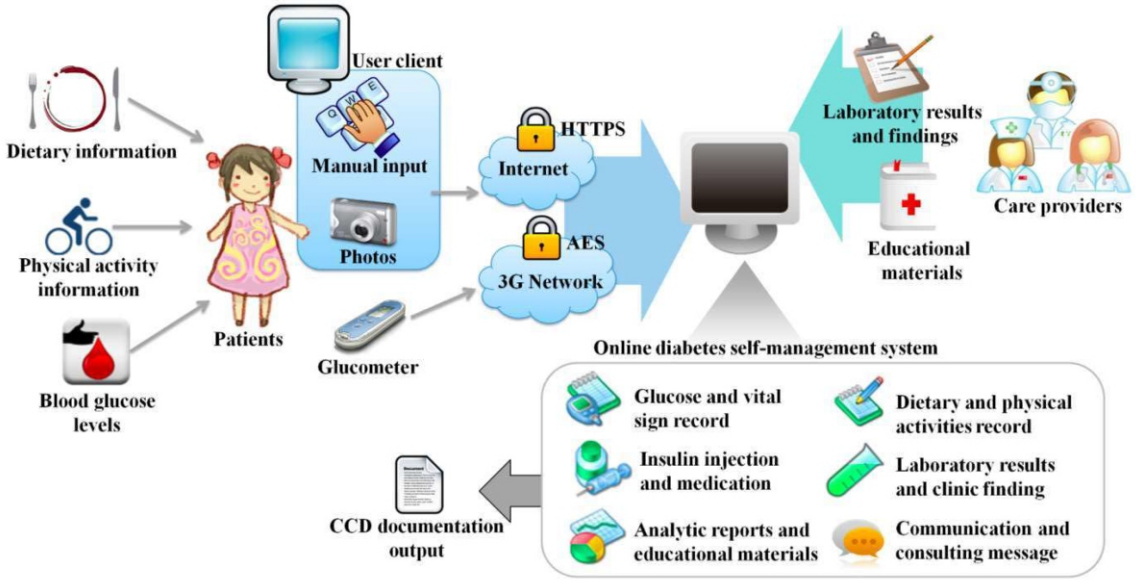


Fig 15.1 Documentation and Record Keeping Cycle of a Patient

Notes

Unit 15.2 Essential Components of Various Records

Unit Objectives

At the end of this unit, the trainee will be able to:

1. Explain the importance of maintaining various records
2. Explain the various types of records to be maintained by the panchakarma Technician

15.2.1 Documentation

Clear and accurate documentation is important as it provides a summary of the assessment, on-going care and education of the person with diabetes. It provides a method of communicating details about the care with other professionals as well as being a potential form of evidence if there is a legal case.

Documentation refers to all forms of documentation that has been recorded in a professional capacity. Precise documentation and record keeping are a basic part of clinical practice as they show a clinician's accountability as well as provide a record of their professional practice.

Effective documentation should be:

- Clear, concise and accurate.
- Contemporaneous with the events recorded in chronological order.
- Complete
- Comprehensive
- Collaborative and person-centred.
- Confidential

Documentation can be made up of:

- Written and electronic health records including email and faxes.
- Audio and video tapes.
- Images such as photographs and diagrams.
- Observation charts and checklists.
- Incident reports.
- Clinical anecdotal notes or personal reflections.

Documentation should be able to demonstrate:

- A full report of the clinical assessment, the care provided, and future care planning information related to the person's condition and any interventions/actions taken to achieve health outcomes.
- Proof that the clinicians have done their duty of giving care and have taken appropriate actions to render the topmost standard of care.
- A record of all communications with relevant health professionals.

INDIAN JOURNAL OF MEDICAL RESEARCH PATIENT CONSENT

FORM

(For Clinical Images)

Manuscript Ref. No.:

Patient's Registration number: Title of manuscript:

Name of authors (Only two):

Corresponding author: (With E mail)

.....

To be signed by the patient

I hereby give my consent for image(s) and clinical information related to me to be reported in the *Indian Journal of Medical Research* (both in print and electric edition). I understand that my name and identity will be concealed.

Once signed, I cannot revoke my consent.

Name of patient:

Date of Birth (DD/MM/YY):

Signature of patient (or signature of the person giving consent on behalf of the patient):

Relationship to the patient in case of other person signing the consent: Address:

Date:

Fig. 15.2 Sample Patient Consent Form

15.2.2 Medical Record Documentation

Medical records are to be accurate, well documented and kept safely as these are also used as legal documentation for the patient.

Medical records:

- Tells the Healthcare team about a patient; the care and treatment rendered to him.
- Gives details about the patient.
- Helps staff in making good decisions related to the patient.
- Helps in analysing whether the care being provided is benefitting the patient or not.

Method of doing the documentation

Documentation of records must be, complete, accurate, regular and timed, and legal. All the details of everything done and observed by you should be recorded. This includes the care and treatment given to the patient and all observations related to the patient, especially if they are abnormal. If the care is not documented, it was not given. So, if you have performed all the allocated duties, take out the time to document them. If you are proving a bath to your patient and the patient complained of a headache during the bath, you must record both the bath given and the patient's complaint. The nurse should be told about the headache as early as possible. All abnormal observations should be immediately reported to the supervisor/nurse. In addition, it should be put down in the patient's medical record by the nurse.

The employees in health care who are responsible for infection control generally document the following:

- Baths provided
- Oral care given
- Foot care given
- Hair/nail care given
- Urinary catheter care
- Turning and positioning done
- Food intake
- Fluid intake
- Level of awareness

15.2.3 Sharing Information and Organization's Documentation

In the workplace, information drives communication, and communication, in turn, allows all members of the organization, from entry-level employees to the CEO, to work together to achieve the company's goals and maximize productivity. Transparently sharing data and information ensures that everyone is in the loop and aware of any potential issues with the business, product, or service that can be addressed collaboratively. Employees might have lots of knowledge that is crucial for the organization and other employees. Sharing information helps them connect, perform better, and become more vital as professionals. The following chart explains the importance of sharing information with team members in an organization:

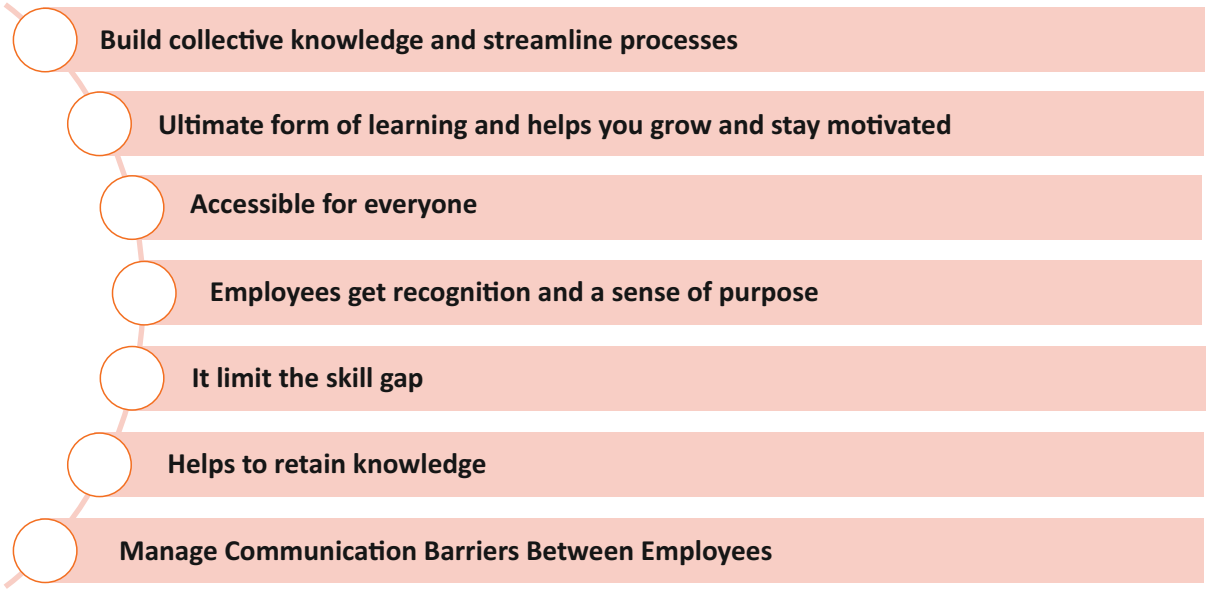


Fig. 15.3 Importance of Sharing information with team members

1. **Document Policy –** Documentation Policies define a company's approach to implementing document controls and practices throughout the organization. Below are the generic requirement for the document policy and procedure:
    a. Documents must have a title, a unique identification or control number, a current revision number, and an effective date.
    b. Documents that are out of date must be removed from operational use. Personnel should never have to choose which document to use.
    c. It is to ensure that personnel can perform the task exactly as described in the procedure.
    d. Procedures are designed so that if they are followed, products will meet their quality specifications and adhere to best practices.
    e. Documents will serve as key records for the quality management system.
2. **Organizational policies and procedures** are an essential part of any organization. It provides a roadmap for day-to-day operations, ensures compliance with laws and regulations, gives guidance for decision-making and streamlines internal processes.

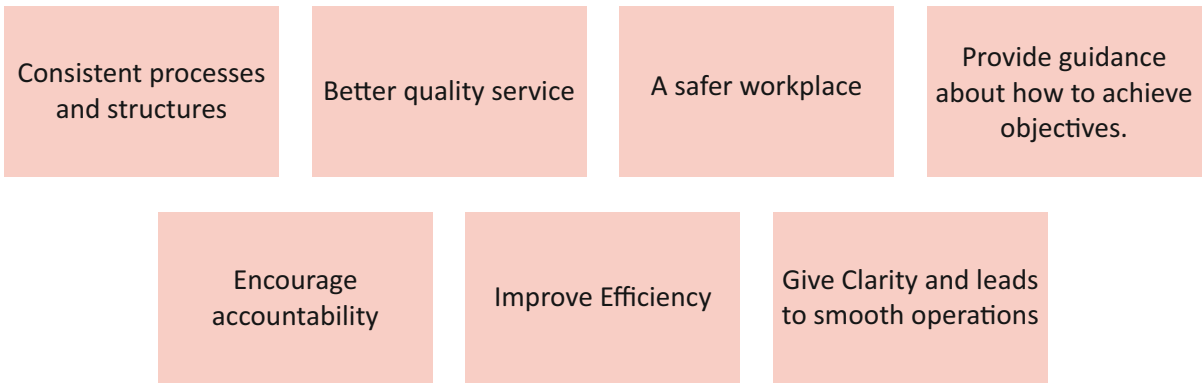


Fig. 15.4 Importance of Following Organisation's Policies and Procedures

15.2.4 Reporting Structure

The interdependence of various authorities in a company is referred to as a reporting structure. It is a hierarchical chain of command that specifies who reports to whom. In small businesses with a few employees, some reporting structures are self-evident. There are numerous types of organizational reporting structures, each with its own set of benefits and drawbacks. The reporting structure is chosen based on the organizational requirements. The following are the top organizational reporting structures.

Traditional vertical reporting structure	• It is a pyramid-like top-down management structure.
Functional reporting structure	• It is a business structure that divides a company into departments based on areas of expertise.
Divisional or product reporting structure	• In a product-based structure (also known as a divisional structure), employees are assigned to self-contained divisions based on the -
Line-and-staff reporting structure	• In this structure, authorities (e.g., managers) establish goals and directives that are then carried out by employees and other workers.

Continued...

Flat reporting structure	• A flat organizational structure means that there are few (if any) levels of management between the workforce and the highest-level managers.
Matrix reporting structure	• A matrix organization is a work structure in which team members report to multiple leaders.
Network organization structure	• It is a type of internal structure that prioritizes communication and relationship goals over hierarchy.

Fig. 15.5 Types of Reporting Structure

Tips

- Consent to treatment is the principle that a person must give their permission before they receive any type of medical treatment or examination. It can be given:
  - Verbally
  - In writing
- For consent to be valid, it must be voluntary and informed, and the person consenting must have the capacity to make the decision.
- All the observations which are not considered normal are to be documented and reported to the nurse right away
- Effective documentation should be:
  - Clear, concise and accurate
  - Contemporaneous with the events recorded in chronological order
  - Complete
  - Comprehensive
  - Collaborative and person-centred
  - Confidential

Summary

- Documentation refers to all forms of documentation that has been recorded in a professional capacity. Precise documentation and record keeping are a basic part of clinical practice as they show a clinician's accountability as well as provide a record of their professional practice.
    - As part of the initial documentation, the following information should be recorded:
    - Date and time of occurrence of service.
    - Relevant history of the illness.
    - Relevant physical examination, assessment findings and diagnosis.
    - Treatment options and treatment given e.g. clinical observations results of treatment, and
    - Medication prescribed
    - Diagnostic and therapeutic orders/plan.
    - Signature, surname and initials, and designation of the clinician.
- The following self-care assessment and education planning (based on risk factors and current need) are documented:
    - Pathophysiology of type 1/type 2/steroid induced
    - Management requirements
    - Oral hypoglycaemic agents profile
    - Insulin profile
    - Healthy eating principles/carbohydrate intake
    - Importance of regular activity
    - Commencement /update of blood glucose monitoring
    - Commencement/update of insulin/check technique
    - Complications of diabetes (micro and macro)
    - Health checks (cycle of care)
    - Coping skills
    - Rights and responsibilities
    - Decision making/behaviour change
- It is important to communicate with the referring doctor after your initial appointment to share the education plan and potential education completion date.
- Clear and accurate documentation is important as it provides a summary of the assessment, on-going care and education of the person with diabetes.
- Documentation of records must be, complete, accurate, regular and timed, and legal. All the details of everything done and observed by you should be recorded. This includes the care and treatment given to the patient and all observations related to the patient.

- In the workplace, information drives communication, and communication, in turn, allows all members of the organization, from entry-level employees to the CEO, to work together to achieve the company's goals and maximize productivity. Transparently sharing data and information ensures that everyone is in the loop and aware of any potential issues with the business, product, or service that can be addressed collaboratively.
- The interdependence of various authorities in a company is referred to as a reporting structure. It is a hierarchical chain of command that specifies who reports to whom.

Notes



Exercise

Answer the following questions:

1. What kind of information has to be collected and documented as part of first appointment?

   _____
   _____
   _____

2. What are the features of effective documentation?

   _____
   _____
   _____

3. What does documentation consist of?

   _____
   _____
   _____

4. Mention the important information that are part of a patient's medical record.

   _____
   _____
   _____

5. What is the importance of a Document Policy?

   _____
   _____
   _____



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16. Personal Hygiene

Unit 16.1 Concept of Healthy living

Unit 16.2 Hand Hygiene

Unit 16.3 PPE, its Usage and Importance

Unit 16.4 Vaccinations against Common Infectious Diseases



Bridge Module

Key Learning Outcomes

At the end of this module, the trainee will be able to:

1. Explain the concept of healthy living
2. Demonstrate the procedures of hand hygiene to prevent cross infection including effective hand washing to include; social and clinical techniques
3. Demonstrate the techniques of proper usage of PPE
4. Explain the importance of PPE
5. Explain various vaccinations against common infectious diseases

Unit 16.1 Concept of Healthy living

Unit Objectives

At the end of this unit, the trainee will be able to:

1. Explain the concept of healthy living

16.1.1 Healthy Living

Good health is not just the absence of disease or illness. It is a state of complete physical, mental and social well-being. This means eating a balanced diet, getting regular exercise, avoiding tobacco and drugs and getting plenty of rest.

Healthy living is having the opportunity, capability and motivation to act in a way that positively affects a person's physical and mental well-being. Paying attention to the food we eat, being physically active, and learning more about the right food and oneself can help to meet our health goals.

16.1.2 Tips for Healthy Living

The following tips can help to maintain a healthy lifestyle:

Learn to manage stress
Practice relaxation techniques like meditation, yoga or tai chi when you start feeling stressed.
Remember that you cannot control everything, but you can control how you respond.
Discuss your feelings, opinions and beliefs rather than reacting angrily, defensively or passively.
Devote a part of your day towards exercise.
Eat healthy foods like fruits and vegetables. Avoid unhealthy foods especially those containing large amounts of sugar.
Plan your day so that you can manage your time better.
Say no to people and things when required.

Continued...

Schedule time to pursue your hobbies and interests.

Ensure you get at least 7-8 hours of sleep.

Reduce your caffeine intake.

Increase the time spent with family and friends.

Fig 16.1 Tips for Healthy Living

16.1.2 Hygiene

Hygiene is a series of practices performed to preserve health. According to the World Health Organization (WHO), "Hygiene refers to conditions and practices that help to maintain health and prevent the spread of diseases. Good hygiene is critical for preventing the spread of infectious diseases and helping people lead long, healthy lives".

Personal Hygiene

Good personal hygiene involves keeping all parts of the external body clean and healthy. It is important for maintaining both physical and mental health. In people with poor personal hygiene, the body provides an ideal environment for germs to grow, leaving it vulnerable to infection. On a social level, people may avoid a person with poor personal hygiene, which may result in isolation and loneliness.

Personal Hygiene includes:

- Washing your hands frequently with clean water and soap/handwash.
- Sanitizing your hands after and before dealing with patients.
- Taking bath daily (before and after duty) to wash away dirt, infectants, dead skin etc..
- Brushing your teeth twice a day.
- Flossing your teeth once a day for optimal oral hygiene.
- Cleaning your tongue once/twice.
- Always wearing clean and washed clothes.
- Covering your mouth with a face mask.
- Taking a good sleep. Itis essential for good health.
- Visiting the doctor for regular health check-ups.

Dental Care

Oral hygiene is also contributing to overall health of a person. Dental care routine It includes:

- Consumption of nutritious foods
- Avoid sugary snacks
- Avoid tobacco products
- Never smoke cigarette
- Rinse your mouth after meal.
- Brush your teeth at least twice a day.

Skin Care

Skincare routine includes the following:

- Drink water as recommended per your age. This will keep you hydrated and naturally moisturize the skin
- Intake balanced diet.
- Wash face twice a day morning and night, follow up with a full-face gentle cleanse.
- Keep your skin moist by applying moisturize.
- Regular use of disinfectants may cause skin rashes, after using disinfectants, wash your hands properly apply moisturization/hand cream.

Hair Care

Haircare routine includes:

- Applying hair oil at least twice a week.
- Wash your hair every alternate day.
- Tie up your hair as per dress code.
- Use head cap while dealing with paitents/chemcials.

Haircare routine can benefit you in following ways:

- Prevents hair loss
- Prevents dandruff
- Boost strength and volume of hair

Nail Care

Cleaning and trimming your nails reduce the chances of contracting an infection. Nail care includes manicure or pedicure which should be done weekly/fortnightly. Manicure and pedicure are therapeutic treatment for hands and feets respectively. These treatment not only help in cleaning of nails, hands or feet but also stimulates blood circulation.

Workplace Hygiene

Hygiene is also important in the workplace because it contributes to a healthy workforce. A healthy workforce is happier and more productive. Workplace hygiene refers to the standards of cleanliness that employers are expected to meet in ensuring that they provide a healthy working environment in which their staff can work, as well as clean and safe premises for members of the public to visit.

Personal hygiene should extend to workplace, which is all about keeping the work area clean, tidy and disinfected. This would be required more frequently and regularly during an epidemic or a pandemic. It so happens that often personal hygiene gets priority over workplace place hygiene, whereas both should get equal importance. If required one must modify the setting of the work area to facilitate social distancing and wear necessary PPE as per the profile of the job. In case the work entails meeting the public, then in addition to facemask one must use face shield and sanitiser after any kind of exchange with a person.

In addition to wearing necessary PPE such as masks, gloves and shields, cleaning and disinfecting the work area is also important. It should be carried out with a solution containing 1% sodium hypochlorite disinfectant and a disposable cleaning cloth. Ensure to disinfect the frequently used devices such as laptop, mobile, mouse and so on.

The following figure shows the steps to perform cleaning and disinfection of work area:

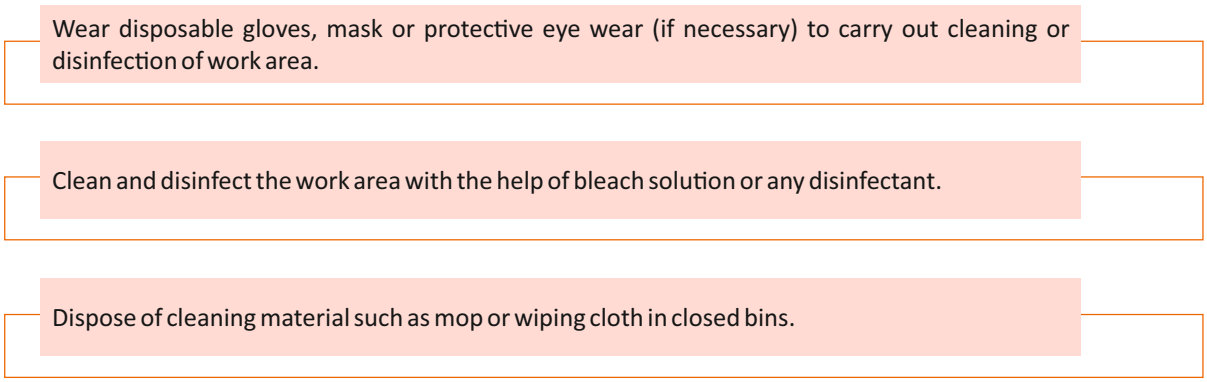


Fig 16.2 Steps to clean and disinfect work area

Practices:

1. A regular cleaning routine is a simple but effective way to improve workplace hygiene and prevent the spread of germs and diseases.
2. Regular hand-washing and sanitizing is important. Staff should be given clear guidance on how to hand wash and what technique should be used, with reminders as to how this is done, e.g., posters placed outside restrooms, or other areas where standard hand-washing facilities are in place.
3. To stay safe in the workplace and to help control the spread of any disease, you must have in place specific controls such as a risk assessment, safe systems of work, training and personal protective measures as part of an overall pandemic risk management strategy.

Unit 16.2 Hand Hygiene

Unit Objectives

At the end of this unit, the trainee will be able to:

1. Demonstrate the procedures of hand hygiene to prevent cross infection including effective hand washing to include; social and clinical techniques

16.2.1 Hand Washing

For details on hand hygiene practices, please refer to Module 12.

Notes

Unit 16.3 PPE, its Usage and Importance

Unit Objectives

At the end of this unit, the trainee will be able to:

1. Demonstrate the techniques of proper usage of PPE
2. Explain the importance of PPE

16.3.1 PPE Usage

The different types of PPE and their usage have been discussed in details in Module 11.

Notes

Unit 16.4 Vaccinations against Common Infectious Diseases

Unit Objectives

At the end of this unit, the trainee will be able to:

1. Explain various vaccinations against common infectious diseases

16.4.1 Vaccinations against Common Infectious Diseases

Please refer to module 12 for details on vaccination.

Notes

Summary

- Good health is not just the absence of disease or illness. It is a state of complete physical, mental and social well-being. This means eating a balanced diet, getting regular exercise, avoiding tobacco and drugs and getting plenty of rest.
- Healthy living is having the opportunity, capability and motivation to act in a way that positively affects a person's physical and mental well-being. Paying attention to the food we eat, being physically active, and learning more about the right food and oneself can help to meet our health goals.
- Hygiene is a series of practices performed to preserve health. According to the World Health Organization (WHO), "Hygiene refers to conditions and practices that help to maintain health and prevent the spread of diseases. Good hygiene is critical for preventing the spread of infectious diseases and helping people lead long, healthy lives".
- Good personal hygiene involves keeping all parts of the external body clean and healthy.
- Hygiene is also important in the workplace because it contributes to a healthy workforce. A healthy workforce is happier and more productive. Workplace hygiene refers to the standards of cleanliness that employers are expected to meet in ensuring that they provide a healthy working environment in which their staff can work, as well as clean and safe premises for members of the public to visit.

Notes

Exercise

Answer the following questions:

1. What is meant by good health?

_____
_____
_____

2. What can contribute to good health?

_____
_____
_____

3. How can one achieve his/her health goals?

_____
_____
_____

4. What is hygiene?

_____
_____
_____

5. What are the ways you can keep your work area clean?

_____
_____
_____



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18. Annexure

Annexure - QR Code



Annexure - QR Code

Serial No.	Module No.	Unit Number	Topic Name	Page No.	URL	QR Code
1.	Module 1 - Introduction to Panchakarma Technicians and their Key Functions	Unit 1.1 - Roles and responsibilities of Panchakarma Technician	Janu Basti	16	youtu.be/A2fxGnQ18-o	Janu Basti
2	Module 4 - Panchakarma and its Associated Therapy	Unit 4.2 - Types of Procedures	Pada Abhyanga	102	youtu.be/8W3W-1toxsg	Pada Abhyanga
3	Module 4 - Panchakarma and its Associated Therapy	Unit 4.2 - Types of Procedures	Kati Basti	102	youtu.be/ZE0J2y1nwHI	Kati Basti
4	Module 4 - Panchakarma and its Associated Therapy	Unit 4.2 - Types of Procedures	Shiro-Abhyanga	102	youtu.be/qhNgXXLQDxQ	Shiro-Abhyanga
5.	Module 4 - Panchakarma and its Associated Therapy	Unit 4.2 - Types of Procedures	Shirodhara	102	youtu.be/ebq8bkqeRAU	Shirodhara

Annexure - QR Code

Serial No.	Module No.	Unit Number	Topic Name	Page No.	URL	QR Code
6.	Module 4 - Panchakarma and its Associated Therapy	Unit 4.3 - Standard Operating Procedures	Patra Pinda Swedana	102	youtu.be/uRRWodZXbtc	Patra Pinda Swedana
7.	Module 4 - Panchakarma and its Associated Therapy	Unit 4.3 - Standard Operating Procedures	Shashtik Shali Pinda Swedana	102	youtu.be/_W3NjS5Yt3c	Shashtik Shali Pinda Swedana
8.	Module 5 - Major Procedures of Panchakarma	Unit 5.2 - Indications and Contraindications of various Panchakarma Procedures	Udvartana	136	youtu.be/ikI2-Am2FGg	Udvartana
9.	Module 11 - Infection Control Practices and Waste Management	Unit 11.4 - PPE– Donning, doffing and discarding methods	PPE– Donning, doffing and discarding methods	225	youtube.com/watch?v=L3wh5FnTRyA&t=27s	PPE–Donning, doffing and discarding methods
10.	Module 12 - Sanitization and Infection Control at the Workplace	Unit 12.4 - Incident Reporting	Incident Reporting	247	youtube.com/watch?v=CK6A8N0CM	Incident Reporting

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11.	Module 11 - Employability and Entreprenuership Skills			299	www.skillindiadigital.gov.in/content/list	

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