Skill India
कौशल भारत-कुशल भारत

सत्यमेव जयते
GOVERNMENT OF INDIA
MINISTRY OF SKILL DEVELOPMENT
& ENTREPRENEURSHIP

N·S·D·C
National
Skill Development
Corporation
Transforming the skill landscape

Healthcare
Sector
Skill Council

# Participant Handbook

Customised crash course programme for COVID warriors

Sector
**Healthcare**

Sub-Sector
**Allied Health & Paramedics**

Occuaption
**COVID Frontline Worker**
**(Advanced Care Support)**

Reference Id: **HSS/Q5605, Version 1.0**
**NSQF Level 4**

## COVID Frontline Worker (Advanced Care Support)

**Published by**


First Edition, July 2021

Printed in India at
New Delhi - 110016


**Healthcare Sector Skill Council**
520- 521, 5th floor, DLF Tower A, Jasola District Centre,
New Delhi - 110025, India Tel: 011-41017346, 40505850
Email: info@healthcare-ssc.in Website: www.healthcare-ssc.in



This Participant Handbook is designed to skill individuals for COVID Frontline Worker (Advanced Care Support), HSS/Q5605, version1.0.

"Skilling is building a better India. If we have to move India towards development then Skill Development should be our mission."

**Shri Narendra Modi**
Prime Minister of India

Skill India

Healthcare Sector Skill Council

N·S·D·C National Skill Development Corporation
Transforming the skill landscape

# Certificate

**COMPLIANCE TO**

**QUALIFICATION PACK - NATIONAL OCCUPATIONAL STANDARDS**

is hereby issued by the

**HEALTHCARE SECTOR SKILL COUNCIL**

for

**SKILLING CONTENT : PARTICIPANT HANDBOOK**

Complying to National Occupational Standards of

Job Role/Qualification Pack: **"COVID Frontline Worker (Advanced Care Support)"**
QP No. **"HSS/Q5605, NSQF Level 4"**

Date of Issuance : 31th May 2021
Valid up to* : 31th May 2022
***Valid up to the next review date of the Qualification Pack or the 'Valid up to' date mentioned above (whichever is earlier)**

Authorised Signatory
(Healthcare Sector Skill Council)

## Acknowledgements

Healthcare Sector Skill Council (HSSC) acknowledges the contribution of all the individuals and organizations who have contributed to the preparation of this book.

We would like to thank Dr. Naresh Trehan, Chairman, HSSC for his constant guidance and support.

We would also like to acknowledge the efforts of the HSSC Academic Committee chaired by Dr. Devi Shetty and its eminent members who guided development of the COVID crash courses.

Sincere appreciation is extended to our industry partners and all the experts for providing technical inputs and reviewing the individual modules. The development of this book would not have been possible without their strong support and valuable feedback.

The efforts of Team HSSC is especially appreciated for supporting the development of this book.

HSSC dedicates this book to youth of the country who desire to come forward to fight COVID 19 and learn specialized skills, an invaluable asset for providing the care while making a career in the Healthcare Sector and wish to be part of the most Noble profession of saving lives.

## About this Book

This Participant Handbook is designed to enable training for the specific Qualification Pack (QP). Each National Occupational (NOS) is covered across Unit/s.

Key Learning Objectives for the specific NOS mark the beginning of the Unit/s for that NOS.

- Discuss the role of a CFW (ACS)
- Demonstrate techniques to maintain the personal hygiene needs of a patient
- Practice infection control measures
- Demonstrate the ability to perform clinical skills essential in providing basic healthcare services
- Promote safety, understand usage of protective devices and demonstrate precautions to be taken while usage of Oxygen
- Demonstrate professional behaviour, personal qualities and characteristics of a CFW (ACS)
- Demonstrate right methods of bio medical waste management
- Demonstrate Basic Life Support, Cardio Pulmonary Resuscitation and other actions in the event of medical and facility emergencies
- Demonstrate good communication, communicate accurately and appropriately in the role of CFW (ACS) and demonstrate professional appearance and demeanour
- Assist nurse in critical care unit
- Learn about COVID specific care facilities, portals and resources for latest updates about COVID protocols

## Symbols Used

Key Learning Outcomes

Steps

Exercise

Tips

Notes

Unit Objectives

Practical

# Table of Contents

Skill India
कौशल भारत-कुशल भारत

सत्यमेव जयते
GOVERNMENT OF INDIA
MINISTRY OF SKILL DEVELOPMENT
& ENTREPRENEURSHIP

N·S·D·C
National
Skill Development
Corporation
Transforming the skill landscape

Healthcare
Sector
Skill Council

# 1. Introduction to the Program



Bridge module

## Key Learning Outcomes

**After completion of this module, the participants will be able to:**

1. State the overview of the program
2. Enumerate the ground rules for the participants.
3. Identify the code of ethics and therapeutic communication techniques
4. Identify the different departments in a hospital
5. List the medical terminology and abbreviations related to the job role
6. Identify different types of medical instruments and equipment related to the job role

# UNIT 1.1: Objectives of the Program

## Unit Objectives

**After completion of this unit, the participants will be able to:**

1. State the overview of the program
2. Enumerate the ground rules for the participants.
3. Explain the basic role of a CFW (ACS)
4. Identify the rights and responsibilities of patients

## 1.1.1 Overview of the Program

This program will facilitate an overview of:

- Healthcare industry
- Behavioural, professional and technical skills required for performing the job effectively
- Methods to manage the work to meet requirements
- Ways to maintain a safe, secure and healthy working environment
- Roles and responsibilities of a CFW (ACS)

## 1.1.2 Role of CFW (ACS)

A CFW (ACS) is responsible for taking care of COVID patients. He or she provides an advanced level of care to the patients.

He/she should have the following qualities as a part of the job role:

- Compassion
- Communication
- Observation
- Interpersonal skills
- Time management
- Organisation
- Cleanliness
- Patience
- Physical strength and stamina

The responsibilities of a CFW (ACS) include:

- Assisting patients with personal care such a bathing, dressing, grooming and so on
- Monitoring patient medication
- Maintaining health records and documents
- Providing special care to geriatric, immobile, paralytic and unconscious patients

## 1.1.3 Ground Rules

All the participants are expected to follow certain ground rules which will facilitate an efficient learning environment. These rules are:

- Arrive and start on time.
- Participate in all phases of the workshop.
- All mobile phones should be either switched off or in silent mode.
- Adhere to the timelines. If the break given is of 15 minutes, then be in the training room within those 15 minutes.
- Clear your doubts with the facilitator. Do not talk among yourselves.
- Listen to others when they talk. Do not interrupt. Be sure to ask questions if you don't understand something.

## 1.1.4 Patient's Rights and Responsibilities

All COVID frontline workers have a role in maintaining a patient's rights to:


*Fig. 1.1.1: Patient's rights and responsibilities*

# UNIT 1.2: Introduction to the Healthcare Industry

## Unit Objectives

**After completion of this unit, the participants will be able to:**

1. Explain about the Healthcare Industry including diagnostic centre
2. List the medical terminology and abbreviations related to the job role

## 1.2.1 Hospital Environment

Whenever people think of healthcare, the first image that comes to their mind is that of a hospital. A hospital is a healthcare institution that is built to provide medical treatment to patients suffering from different types of diseases and other healthcare related issues. The treatment involves the help of trained staff and specialised medical equipment.

In recent times, a change is being witnessed in the nature of healthcare services. In addition to hospitals, there are other healthcare facilities such as primary healthcare centres, nursing homes, clinics, surgical centres and others.

## 1.2.2 Types of Care

There are three major types of care that are provided by healthcare organisations as shown in the following figure:

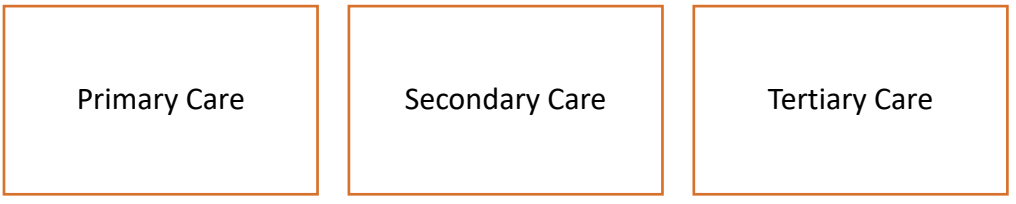



*Fig. 1.2.1: Types of care*

### Primary Care

It is a patient's first point of contact for any type of medical consultation and is provided by a primary care physician, also referred to as general practitioner or a family physician. The physician also coordinates and refers a patient to specialists whenever the patient requires secondary care.

### Secondary Care

When patients require more complicated services which are beyond the scope of primary care physicians, they are referred to secondary care which consists of specialists who have more specific expertise in a particular area. Examples of secondary care specialists include cardiologists, endocrinologists and so on.

### Tertiary Care

When a patient needs to be hospitalised—as he/she requires a still higher level of care that can be provided only within a hospital—it is referred to as tertiary care. Examples of tertiary care services include in-patient treatment of cancer, burns and various types of surgeries such as cardiac surgery, neurosurgery and other complicated treatments or procedures.

## 1.2.3 Functions of a Hospital

The functions of a hospital can be spilt into three broad sections as shown in the following image:

| | |
|---|---|
| Medical | Treatment and management of patients |
| Patient support | Diagnostic, nursing, therapy and laboratory services, pharmacy, dietary |
| Administrative | Finance, personnel, materials and property, housekeeping, laundry, security services |

*Fig. 1.2.2: Functions of a hospital*

In addition to these major functions, most hospitals also perform the following functions:

- Providing training and education to doctors, nurses, dieticians and so on
- Conducting health and medical research
- Providing employment to various healthcare professionals

### Common Medical Terminology

The following table lists some common medical terminology that is used in healthcare sector:

| Medical Terminology | Full form/Meaning |
|---|---|
| Sample Accessioning | Assigning a unique identification number to identify a patient |
| Antecubital fossa | The area commonly used for venipunctures; the bend of the arm adjacent to the elbow |
| TAT | Turnaround time |
| RBC | Red blood cell |
| WBC | White blood cell |
| ESR | Erythrocyte sedimentation rate |
| CBC | Complete blood count |

| Medical Terminology | Full form/Meaning |
|---|---|
| DLC | Differential leucocyte count |
| TLC | Total leucocyte count |
| RFT | Renal function test |
| LFT | Liver function test |
| HIV | Human immunodeficiency virus |
| HLA | Human leucocyte antigen |
| Hb | Haemoglobin |
| C&S | Culture and Sensitivity |

*Table 1.2.1: Common medical terminology*

# UNIT 1.3: Departments in a Hospital

## Unit Objectives

**After completion of this unit, the participants will be able to:**

1. Identify the different departments in a hospital
2. List the various services offered within the hospital and diagnostic centre

## 1.3.1 Hospital Management

The structure of senior management in a hospital is as follows:

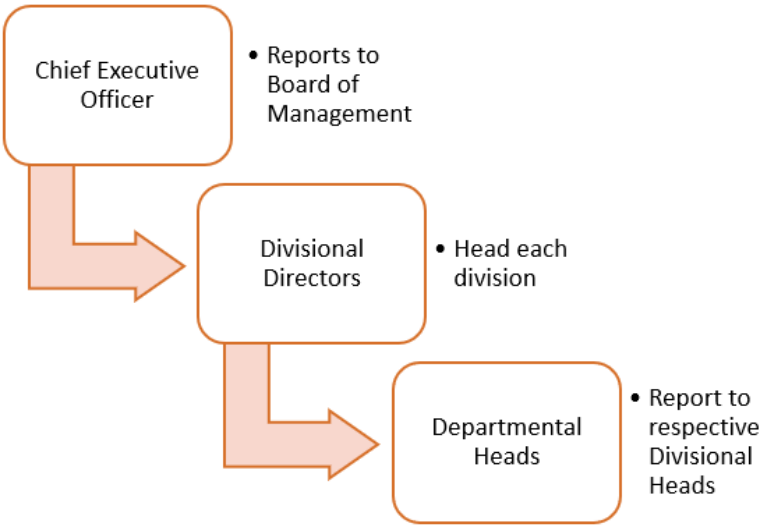



*Fig. 1.3.1: Structure of senior management in a hospital*

**Services Provided by a Hospital**

There may be difference in the way different healthcare organisations are structured, but every hospital provides the following important services:

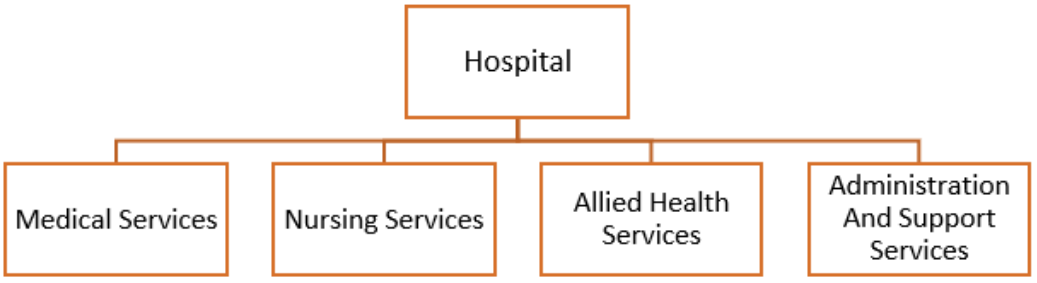



*Fig. 1.3.2: Services provided by a hospital*

## 1.3.2 Medical Services

Hospitals provide a range of services under different departments. The departments are categorised on the basis of medical/surgical specialties, organ systems or procedures offered to the patient. Each department is headed by a Chief Physician.

The following figure shows the medical specialties and departments:

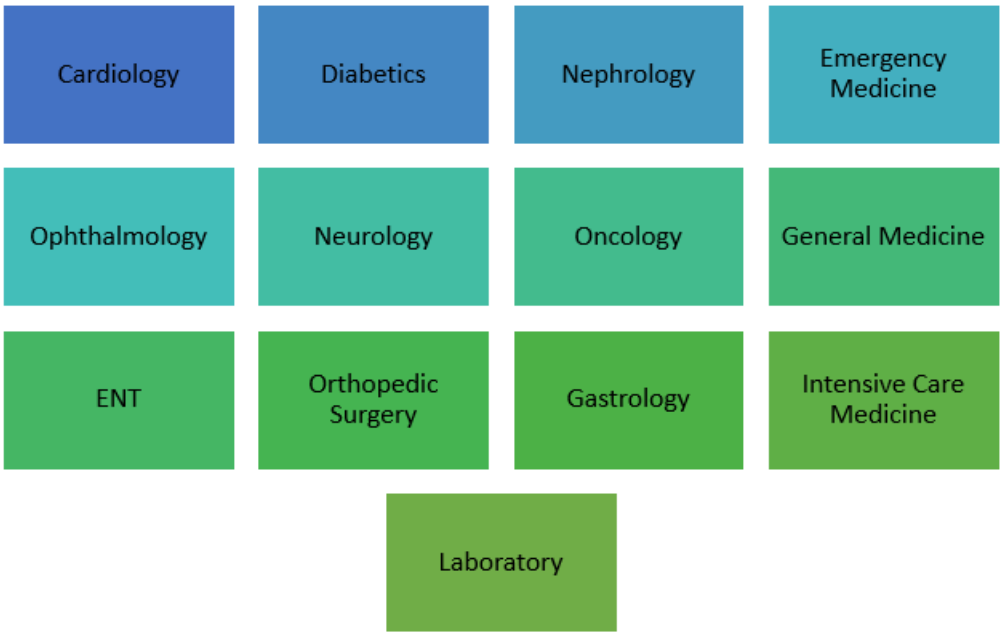



*Fig. 1.3.3: Hospital departments*

### Medical Services Staff

The medical services staff are organised on the basis of seniority as shown in the following figure:

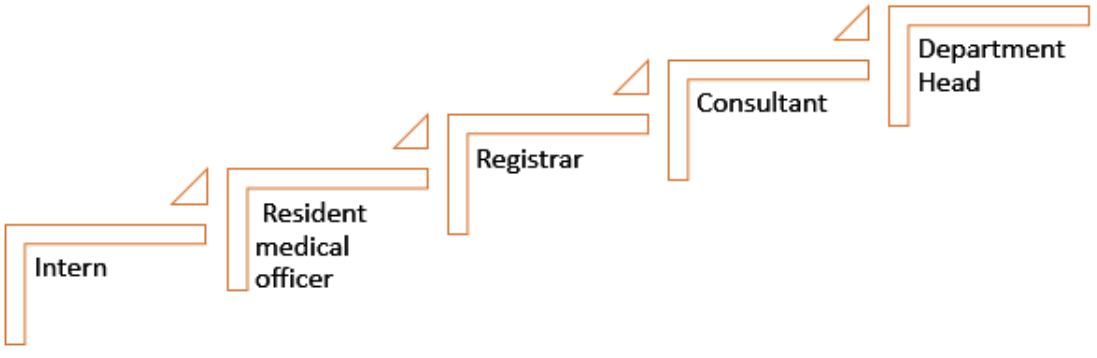



*Fig. 1.3.4: Structure of medical services staff*

## Nursing Services

The nursing staff consists of degree qualified nurses. The career structure of nurses is based on the following positions:

Charge Nurse → Nurse Unit Manager → Nursing Director

## Allied Health Services

The various allied health services provided by hospitals are as shown in the following figures:

| | |
|---|---|
| Nutrition and Dietetics | Assesses nutritional requirements of patients and design special diets for patients |
| Diagnostic Imaging / Radiology Services | Uses ionizing radiation, fluoroscopic and radiographic X-Ray instrumentation and imaging methods for diagnosing and treating disease |
| Occupational Therapy | Assists the patient in becoming functionally independent within the limitations of the patient's disability or condition. |
| Pathology | Uses specialised instrumentation to analyse blood, body fluids and tissues for pathological conditions. Laboratory results are used in the diagnosis, treatment and monitoring of a patient's health status. |
| Pharmacy | Dispenses medications ordered by physicians |
| Physiotherapy | Assists in restoring physical abilities impaired by illness or injury |
| Speech Therapy | Treats communication or speech disorder |
| Social Work | Ensures essential needs of individuals and groups are met within the framework of a society |

*Fig. 1.3.5: Allied health services*

*Fig. 1.3.6: Diagnostic services*

*Fig. 1.3.7: Pharmacy in a hospital*

## Administration and Support Services

The patient service departments of a hospital are supported by a large network of administrative services as shown in the following table:

| | |
|---|---|
| General Administration | Human Resources |
| Accounting Services | Engineering Services |
| Housekeeping Services | Supply and Purchasing |
| Information Technology | Transportation Services |

*Table 1.3.1: Administration and support services*

## Medical Laboratory Facilities

*Fig. 1.3.8: Phlebotomist in a laboratory*

A clinical laboratory or medical laboratory is a place where tests are carried out on clinical specimens of patients in order to help the doctors in diagnosis, treatment, and/or prevention of a disease in a patient.

Clinical laboratories lay emphasis on applied science in contrast to research laboratories that concentrate on basic science.

Medical laboratories are not standard; they vary in size and offer a range of testing services.

- In acute-care medical centres and hospitals, 70% of clinical assessments are based on laboratory testing.
- Laboratories in clinics, skilled long-term care and nursing facilities offer basic testing services.
- Commercial medical laboratories offer testing services which are not provided in other settings because of low test volume or complexity.

## Pathology Services

Pathology is the branch of medicine that helps in understanding the cause and processes of disease by looking at the changes in the tissues of the body, blood and other body fluids. These changes throw light on the cause or the severity of the disease and are used to follow an effective treatment.

# UNIT 1.4: Tools and Equipment

## Unit Objectives

**After completion of this unit, the participants will be able to:**

1. Recognize and utilise the different types of medical instruments and equipment

## 1.4.1 Tools and Equipment

**Weighing machines:** Weighing machines have an important role to play in patient care. If there are inconsistencies in recording the body weight of patients or if wrong weighing equipment are used, they could cause errors in the diagnosis, medication and treatment of patients. Hence appropriate weighing machines should be used.

*Fig. 1.4.1: Weighing machines*

*Fig. 1.4.2: Blood Pressure Gadget*

**Blood Pressure Gadget:** It is an equipment which is used to measure blood pressure. It is made up of an inflatable bag which is wrapped around the arm. It is collapsed slowly to release the artery under the bag.

**Gauge:** It is a bandage utilised to give support to a dressing, a splint or a similar device. It can also be used to give support or curb the movement of a body part.

*Fig. 1.4.3: Gauge*

*Fig. 1.4.4: Tourniquet*

**Tourniquet:** A tourniquet is a restricting or a compressing equipment. It is usually utilised as a bandage to limit blood flow in the arteries and veins for some time.

- **Mannequin:** Mannequins are used to provide patient care and to impart management skills. Interactive scenarios are created by using these mannequins for training purposes.

*Fig. 1.4.5: Mannequin*

- **Wheelchair:** Wheelchairs are equipment utilised for people who are unable to walk because of some disability, sickness or injury.

*Fig. 1.4.6: Wheelchair*

- **Trolleys:** Surgical instrument trolley are used for carrying equipment and tools.

*Fig. 1.4.7: Trolley*

- **PPE:** Personal protective equipment (PPE) is a specially designed equipment to protect workers from germs by creating a barrier.

*Fig. 1.4.8: PPE*

- **First aid kit:** It consists of various medicines, equipment and other supplies that are needed in case of minor injuries or treatments. It can be easily purchased by an individual or an organisation.


*Fig. 1.4.9: First aid kit*

- **Betadine:** These microbicides have been used worldwide as a crucial initial line of defence against germs in both homes and hospitals.

*Fig. 1.4.10: Betadine*

- **Cotton Bandage:** These medical bandages are like rolled gauze bandages and are utilised for various kinds of wounds, cuts and injuries.

*F*
*ig. 1.4.11: Cotton bandage*

- **Sanitizers:** These are cleaners used to remove germs and achieve a standard in cleanliness.

*F*
*ig. 1.4.12: Sanitizer*

- **Disinfectants:** These are antimicrobial agents which are used on objects to eradicate microorganisms which might be present on them.

*Fig. 1.4.13: Disinfectants*

- **Insulin pen:** Insulin pen is used by diabetic patients. It gives them confidence and the advantage of precision and convenience.

*Fig. 1.4.14: Insulin pen*

- **Little Anne:** This a CPR training mannequin designed to give CPR training of high quality to students.

*Fig. 1.4.15: Little Anne*

- **Ambu Mask (Adult):** These are face masks which are designed to be used with manual and automatic resuscitators and ventilators.

*Fig. 1.4.16: Ambu mask*

- **AED Trainer:** AED training system has all the requisite features needed for learning about adult CPR, defibrillation and defibrillator pad placement.

*Fig. 1.4.17: AED trainer*

- **Pocket Mask:** A pocket mask is an equipment utilised to safely provide rescue breaths in case of cardiac arrest or respiratory arrest.

*Fig. 1.4.18: Pocket mask*

- **Oxygen Cylinder:** This is a container filled with oxygen in the form of gas or as a cryogenic storage tank with liquid oxygen.

*Fig. 1.4.19 Oxygen cylinder*

- **Oxygen Key:** This is the key used for opening the valve on oxygen/ medical air cylinders.

*Fig. 1.4.20: Oxygen key*

- **Oxygen Cylinder Trolley:** It is used in a hospital for carrying oxygen cylinders.

*Fig. 1.4.21: Oxygen cylinder trolley*

- **Hospital Bed:** This is a special bed designed to be used by patients requiring hospitalisation or any other kind of health treatment. There are special features incorporated in these beds for the comfort of the patients and convenience of the healthcare workers.

*Fig. 1.4.22: Hospital bed*

- **Bedside Locker:** This is a small sized cabinet or table which is kept beside a hospital bed.

*Fig. 1.4.23: Bedside locker*

- **Cardiac Table:** This special table is used for making it easy for the patients to eat meals while staying in their beds.

*Fig. 1.4.24: Cardiac table*

- **Walker:** It gives support to patients while walking, especially if a patient has difficulty in walking after a surgery or afracture.

*Fig. 1.4.25: Walker*

- **Crutch:** It is a long stick with a padded piece at the top that fits snugly under a person's arm. It can be used for help or support while walking.

*Fig. 1.4.26: Crutch*

- **Stretcher:** It **is** utilised for shifting patients who require medical care.

*Fig. 1.4.27: Stretcher*

- **Cane:** It is used for help or support while walking.

*Fig. 1.4.28: Cane*

- **Bed pan:** It is used to provide toilet facilities to a bedridden patient in a healthcare facility. It generally comprises a metal, glass or plastic receptacle.

*Fig. 1.4.29: Bed pan*

- **Urinal (Male & Female):** A urinal is a bottle for urination. It is most frequently used in healthcare for patients who find it impossible or difficult to get out of bed.

*Fig. 1.4.30: Urinal (male & female)*

- **Artery Forceps:** It is a surgical tool used in many surgical procedures to control bleeding.

*Fig. 1.4.31: Artery forceps*

- **Dissecting Forceps:** Dissecting forceps are used to handle tissues and other materials as well as to manipulate needles and other instruments whilst operating.

*Fig. 1.4.32: Dissecting forceps*

- **Splint:** A splint is a medical device which is used to restrict the movement of an injured part of the body and to prevent any more damage to it. It is generally utilised to give temporary stability to a broken bone while the injured person is being transported to a hospital for proper treatment.

*Fig. 1.4.33: Splint*

- **Cervical Collar:** A cervical collar is formed from thick foam rubber which is covered in cotton for softness. It is utilised to support the neck and to control pain and discomfort after an injury such as a whiplash.

*Fig. 1.4.34: Cervical collar*

- **Spine Board:** It is an equipment usually used to handle patients as a part of trauma care prior to hospitalisation to provide rigid support during shifting. Patients with probable spinal or limb injuries are moved on these boards

*Fig. 1.4.35: Spine board*

- **Kidney Tray:** It is a bean shaped shallow basin utilised as a receptacle to collect soiled dressings and medical waste in the hospital wards.

*Fig. 1.4.36: Kidney tray*

- **Stand:** It is used for administering intravenous drugs such as drips.

*Fig. 1.4.37 IV stand*

- **Measuring Glass:** It is used for measuring liquid ingredients.

*Fig. 1.4.38: Measuring glass*

- **Uro bag**: It is a urine collection device.


*Fig. 1.4.39 Uro bag*

- **Sample Collection Bottle:** This is used for collecting blood, urine or sputum sample.

*Fig. 1.4.40: Sample Collection Bottle*

- **Normal Saline Bottle:** It contains saline which is a sterile solution of sodium chloride (NaCl), generally called table salt, in water.

*Fig. 1.4.41: Normal saline bottle*

- **Micropore:** This is a surgical tape utilised for general taping purposes. It is a hypoallergenic adhesive which is gentle on sensitive and delicate skin.


*Fig. 1.4.42: Micropore*

- **Hydrogen Peroxide:** Hydrogen peroxide is one of the rare germicidal agents that is a combination of hydrogen and oxygen; hence, it is the safest natural sanitizer.


*Fig. 1.4.43: Hydrogen peroxide*

- **Syringe destroyer:** It is a compact equipment with a steel alloy cutter used for secure and fast removal of needles and syringes.

*Fig. 1.4.44: Syringe destroyer*

- **Syringe Sterilizer:** It is used for sterilising syringes.

*Fig. 1.4.45: Syringe sterilizer*

- **Thermometer:** It is a device that measures temperature.

*Fig. 1.4.46: Thermometer*

- **B.P. Monitoring Machine:** It is used for measuring blood pressure.

*Fig. 1.4.47: B.P. monitoring machine*

- **Hot Water Bottle:** This is a container with a stopper to provide heat to a patient's body or to provide warmness to a particular body part of a patient, usually in bed. It is filled with hot water and closed with the stopper.

*Fig. 1.4.48: Hot water bottle*

- **Transfer Forceps:** This is an instrument similar to a pair of pincers or tongs. It is made for grasping, handling or extracting tissues.

*Fig. 1.4.49: Transfer forceps*

- **Suction Apparatus:** A suction machine is an equipment which removes liquids, gases or substances such as mucus or serum from a body cavity by creating a partial vacuum.

*Fig. 1.4.50: Suction apparatus*

- **Foley catheter:** This is a slim tube which is sterilised and inserted inside the bladder to drain urine. It is also known an indwelling catheter and can be left behind in the bladder for long time.

*Fig. 1.4.51: Foley catheter*

- **Suction Catheter:** These are flexible, elongated tubes that eliminate respiratory secretions from the airway by suction and ensure a clear passage.

*Fig. 1.4.52: Suction catheter*

- **Ryle's Tube:** This is a tube that goes from the nose and down the nasopharynx and oesophagus into the stomach.

*Fig. 1.4.53: Ryle's tube*

- **Vacutainer:** This is a sterile tube that collects blood and is made of plastic or glass. It has a closure that evacuates and forms vacuum within the tube. This facilitates a predefined volume of liquid.

*Fig. 1.4.54: Vacutainer*

- **Examination table:** The exam table is where the practice of medicine takes place. It is the place of interaction between the physician and the patient.

*Fig. 1.4.55: Examination table*

- **Draw Sheet:** This is a sheet that is placed in such a way that it can be taken from under a patient or an invalid without disturbing the bedclothes.

*Fig. 1.4.56: Draw sheet*

## 1.4.2 Common Medical Equipment

The medical equipment used commonly in the hospital includes:

- Diagnostic equipment such as stethoscope, blood pressure apparatus and thermometer
- Imaging equipment such as x-ray, ultrasound, CT scan and MRI
- Specialised equipment such as ECG, ventilator, oxygen, pulsometer and dialysis machine
- Other patient management equipment in hospitals such as beds, wheelchairs, stretchers etc.

You need to identify and understand the form and function of some hospital equipment in order to assist the doctor or the nurse efficiently. Let us now look at the common medical equipment used in the hospitals.

### Patient Monitor

The patient monitor is a big equipment used for recording and interpreting a patient's vital signs during medical care or treatment. The heart rate, breathing rate and the ECG of the patient are displayed on the LCD monitor. The patient monitor is attached by the nurses. The recordings of the patient monitor are noted and reported to the doctor at regular intervals.

*Fig. 1.4.57 Patient monitor*

### X-ray Machine

Doctors get X-rays of patients by using X-ray machines which help them in the diagnosis of the ailment and detection of fractured bones and foreign substances inside the patient's body as well as harmful cavities.

*Fig. 1.4.58: X-ray machine*

### Electro Cardio Gram (ECG) Machine

- An ECG machine detects any abnormalities in the functions of the heart.
- It is found in the heart disease section of a hospital.

*Fig. 1.4.59: ECG machine*

### Ultrasound Machine

Ultrasound machine maps the body's interior and produces its visual picture. One of the uses of the ultrasound is to check a pregnant woman and report the growth of the foetus.

*Fig. 1.4.60: Ultrasound machine*

### Medical Ventilator

A medical ventilator is a machine which pumps air in and out of lungs.

*Fig. 1.4.61: Medical ventilator*

**Dialysis Machine**

The medical ventilator role of a dialysis machine is to remove harmful/toxic substances and purify the blood stream in case the kidney is not functioning properly. It is used for taking out waste material and undesired water. There are specialised equipment such as saline bottles, catheters and apparatus used for feeding and medication of the patient

## 1.4.3 Some Other Equipment for Personal Care

**Feeding Tools**

- Steel Plate
- Steel Glass
- Steel Bowl
- Spoon

**Bathing Equipment**

- Steel Jug
- Bath Tub
- Screen
- Towel
- Gown
- Gloves
- Liquid Soap Bottle
- Mask–packet, Shoe
- Cover–packet
- Hair Cap
- Mackintosh
- Sponge Cloth
- Comb
- Toothbrush
- Toothpaste
- Hair Oil
- Shampoo Bottle
- Bath Soap
- Talcum Powder

**Nail care equipment**

- Nail cutter
- Hand towel
- Disposable bath mat
- Disposable gloves

## Practical: General Medical Tools 

1. Divide the class into 5 groups. Name each group as team A, B, C, D and E.
2. Once the teams are formed, open your participant handbooks.
3. Each team has to make questions on any of the medical tools that have been discussed in the chapter.
4. Each team will get 15 minutes to read and prepare questions.

## Tips 

- Common medical instruments used in the hospital
- Helping the healthcare professional in the use of common medical equipment

## Exercise

1. List few common medical equipment and their usage.

_____

_____

_____

_____

2. List few common surgical instruments and their usage.

_____

_____

_____

_____

3. Identify the following equipment.

| | |
|---|---|
|  | |
|  | |
|  | |
|  | |

## Notes

Skill India

GOVERNMENT OF INDIA
MINISTRY OF SKILL DEVELOPMENT & ENTREPRENEURSHIP

N·S·D·C National Skill Development Corporation
Transforming the skill landscape

Healthcare Sector Skill Council

# 2. Introduction to Human Body-Structure & Function

Unit 2.1 - Structure and Function of Human Body

Unit 2.2 - Physiological Systems of the Human Body

Bridge Module

## Key Learning Outcomes

**After completion of this module, the participants will be able to:**

1. Explain the basic structure and functioning of the human body
2. Identify various human physiological systems
3. Identify the route of sample collection from human body
4. Explain the basic structure and functioning of cardiovascular system and integumentary system
5. Prepare a chart on Cardiovascular system and integumentary system

# UNIT 2.1: Structure of Human Body

## Unit Objectives

**After completion of this unit, the participants will be able to:**

1. Explain the basic structure of the human body
2. Identify various human physiological systems

## 2.1.1 Structure of Human Body

The human body structure is organised into various different systems. Each system has a specific function and consists of organs, tissues and cells. The smallest living unit in the body of an organism is a cell. A group of cells is called tissue. Tissues combine together to form an organ. The cells have following characteristics:

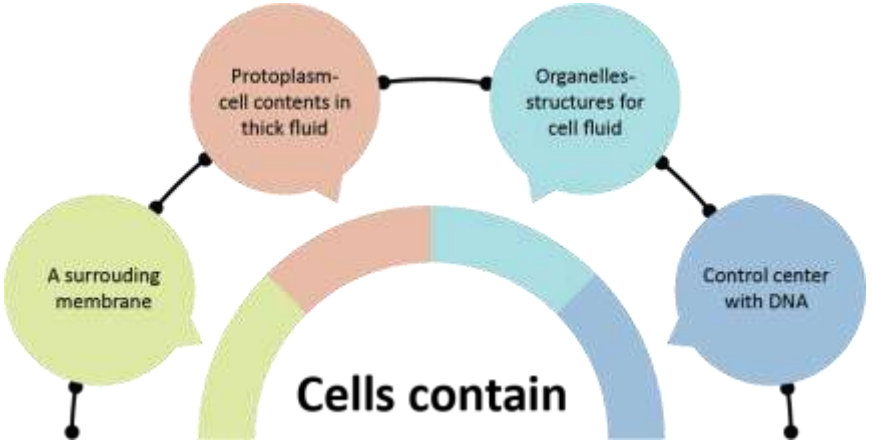



*Fig. 2.1.1: Characteristics of a cell*

### Central Dogma

The central dogma of molecular biology describes the two-step process, transcription and translation, by which the information in genes flows into proteins.

DNA → RNA → protein

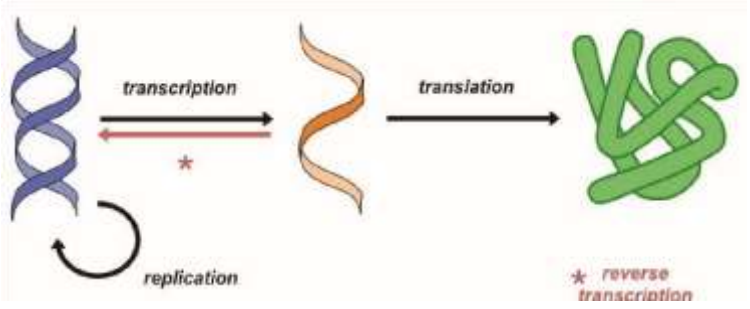



*Fig. 2.1.2: Central dogma of molecular biology*

## 2.1.2 Different Types of Tissue

The human body has four different types of tissues:

- Muscular tissue
- Connective tissue
- Epithelial tissue
- Nervous tissue

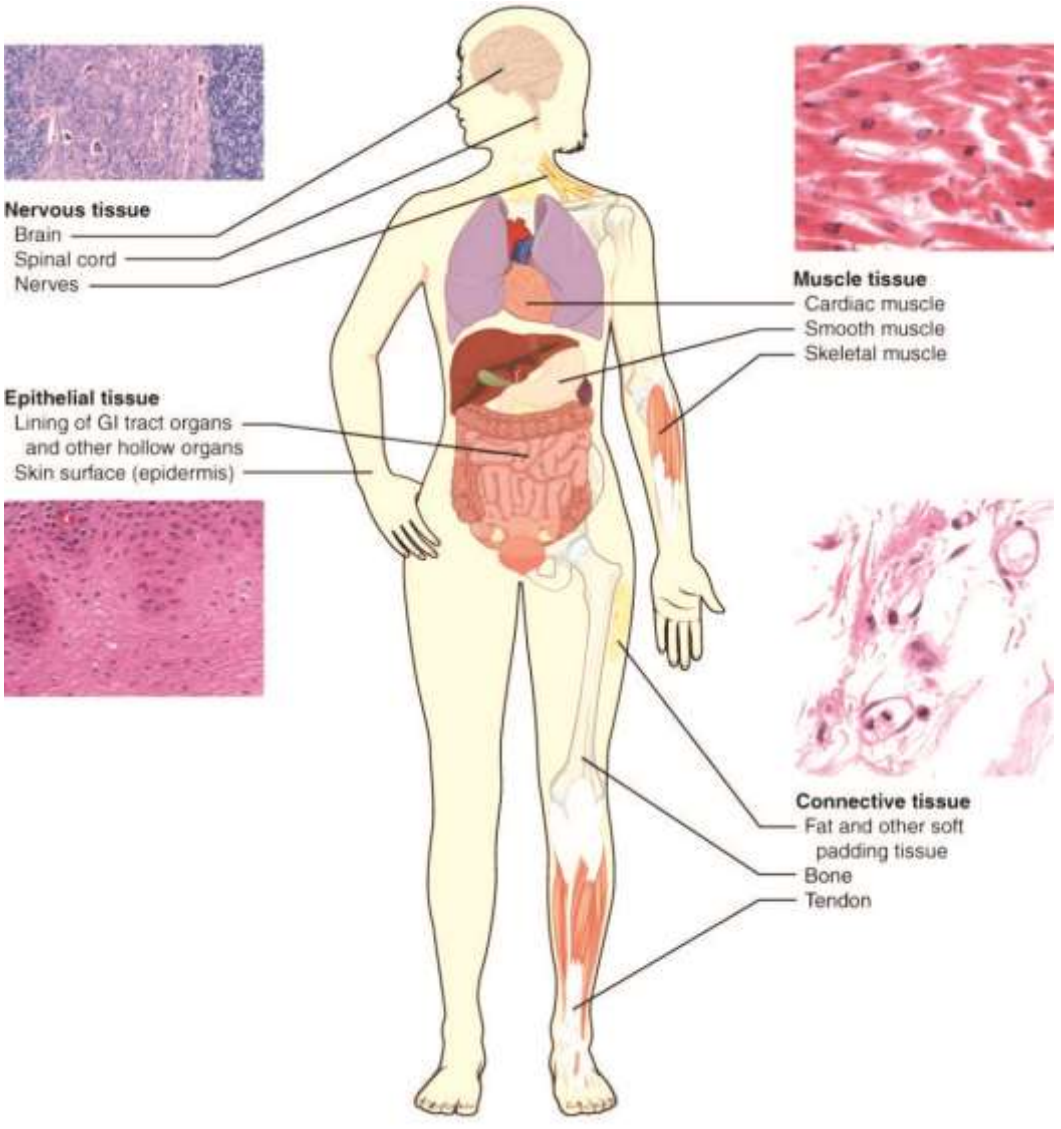



*Fig. 2.1.3: Types of tissues*

### Muscular tissue

Muscular tissue makes up the muscles of the body. There are three types of muscular tissues:

- Skeletal muscle tissue
- Cardiac tissue
- Smooth muscle tissue

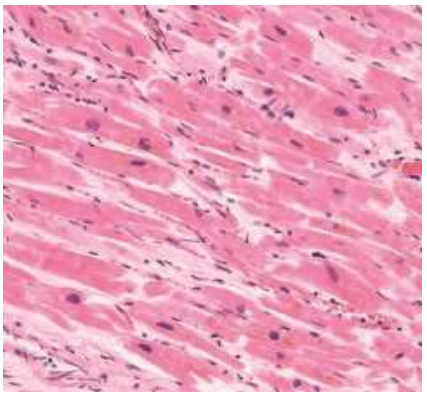


*Fig. 2.1.4: Muscular tissue*

### Connective tissue

Connective tissue is the connecting point between tissues. It can be categorized into:

- Cartilage tissue
- Loose connective tissue
- Liquid connective tissue
- Bone tissue
- Dense connective tissue

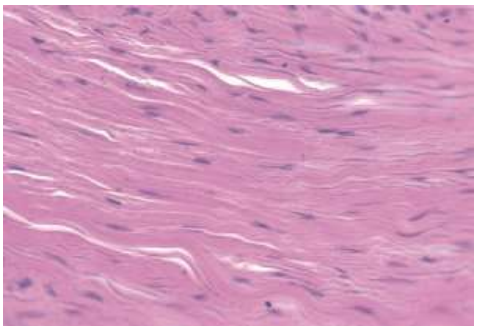


*Fig. 2.1.5: Connective tissue*

### Epithelial tissue

Epithelial tissue refers to the upper most tissue covering the body or organs. It can be classified into:

- Simple epithelium
- Stratified epithelium

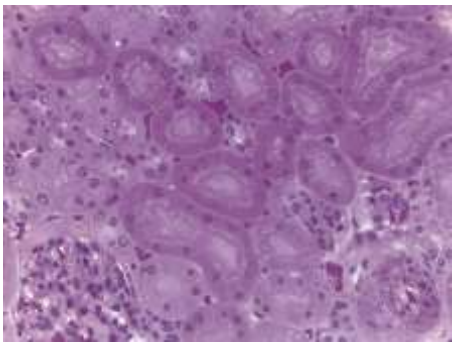


*Fig. 2.1.6: Epithelial tissue*

### Nervous tissue

Nervous tissue is present in the entire nervous system including brain and spinal cord. It can be classified into:

- Nervous cell
- Neuroglia

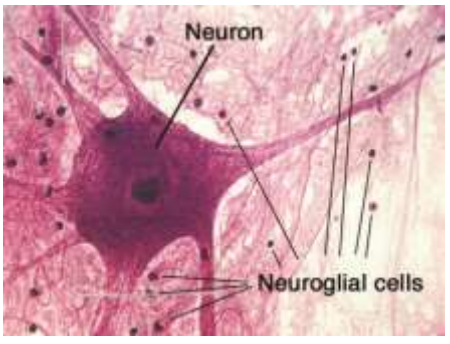



*Fig. 2.1.7: Nervous tissue*

## 2.1.3 Different Parts of the Body

The human body consists of the following different parts:

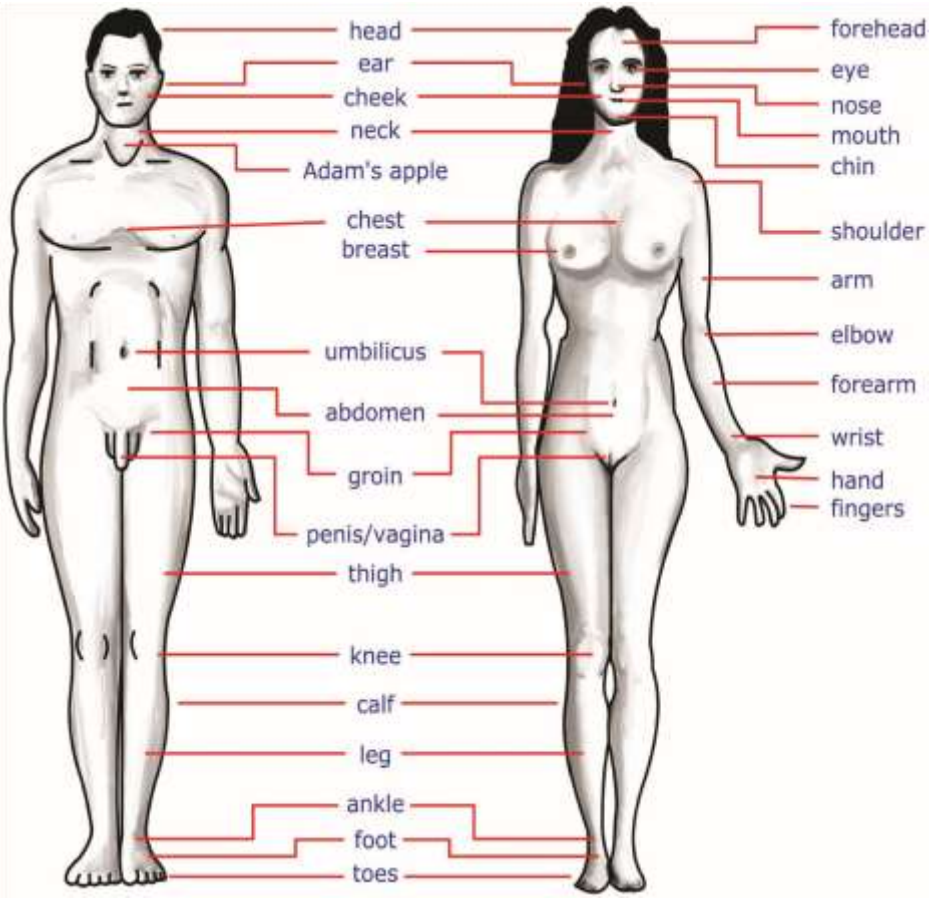



*Fig. 2.1.8: Parts of the body*

# UNIT 2.2: Physiological Systems of the Human Body

## Unit Objectives

**After completion of this unit, the participants will be able to:**

1. Explain the different physiological systems in the human body
2. Identify the disorders and syndromes that affect the body's systems

## 2.2.1 Human Physiological Systems

The human body is built-up of the following physiological systems:

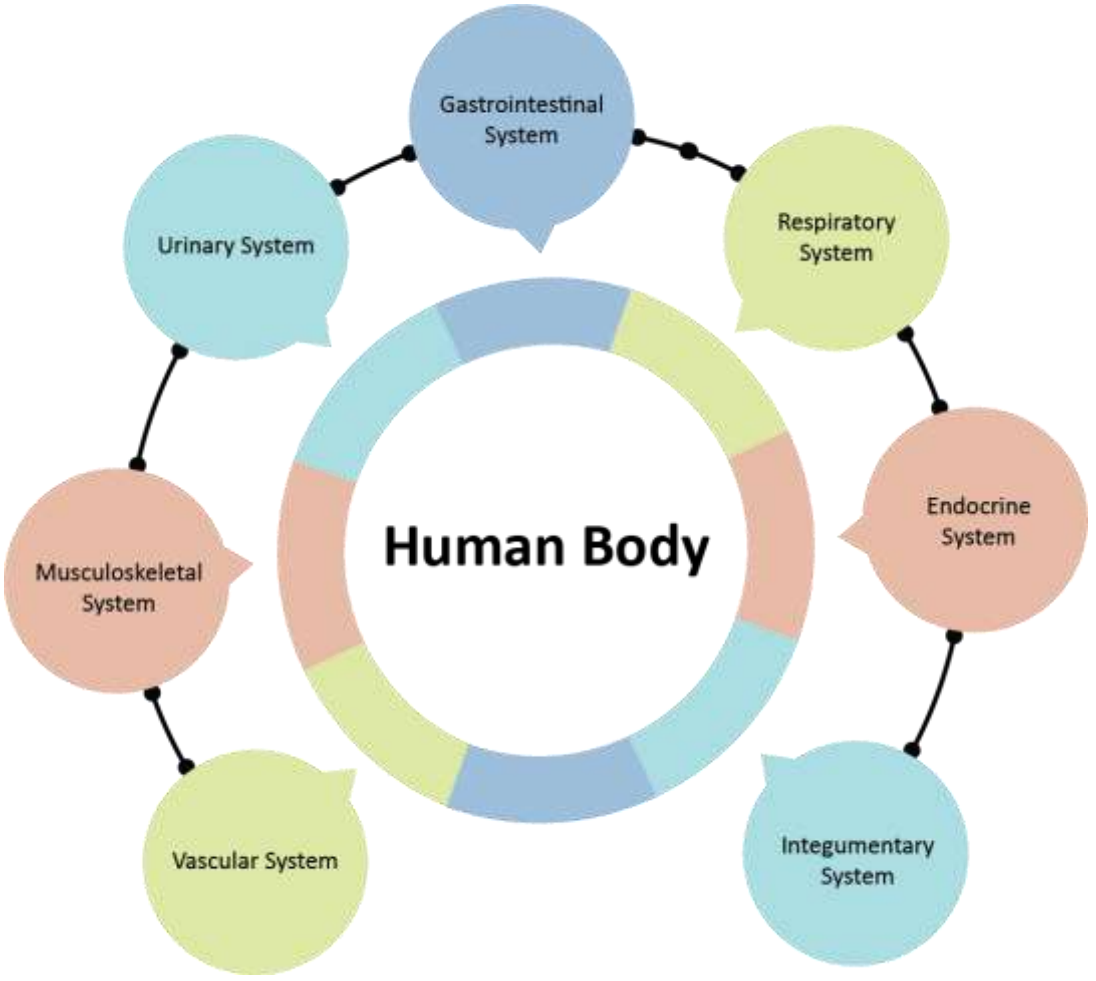



*Fig. 2.2.1: Human Physiological Systems*

## Vascular System

The cardiovascular system consists of the blood, heart, and blood vessels. The heart pumps blood throughout the body. Blood carries nutrients and oxygen to the cells in the body and removes carbon dioxide and other wastes from the cells and transfers to the excretory organs: kidneys, lungs and skin. The blood vessels comprise arteries, veins and capillaries. Arteries carry blood from the heart to the organs and tissues. Veins carry blood back from the organs to the heart.

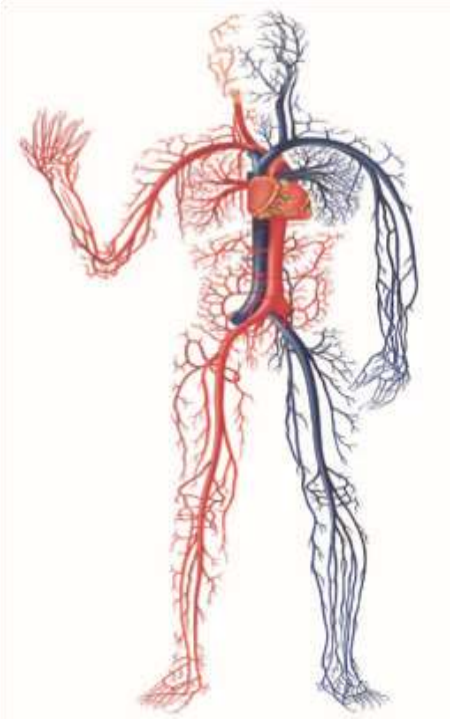


*Fig. 2.2.2: Vascular system*

## Sources of Blood

Depending on its source, blood can be categorized as:

| Arterial | Venous | Capillary |
|---|---|---|
| • Blood leaves heart and passes into arteries.<br>• Arteries branch out into smaller vessels called arterioles.<br>• Arterioles regulate the flow of blood into different tissues. | • Blood returns back to the heart through veins.<br>• This is aided by one-way valves that ensure unidirectional flow of blood. | • Capillaries are the smallest and most numerous of blood vessels.<br>• They function as the site of exchange of nutrients and wastes between blood and tissues. |

*Fig. 2.2.3: Sources of blood*

### Vascular Flow

Vascular flow is divided into:

- Pulmonary circulation
  - within the lungs and associated vessels.
- Systemic circulation
  - general, throughout the body.

Pulmonary circulation carries deoxygenated blood (blue) from the right chambers of the heart to the lungs where the red blood cells absorb oxygen ($O_2$) and flush out carbon-dioxide ($CO_2$) from the blood. This oxygenated blood (red) returns to the left chambers of the heart.

Systemic circulation carries the oxygenated blood from the heart to all parts of the body, through the arteries. In capillaries, $O_2$ and nutrients are exchanged for $CO_2$ and other wastes and then carried by the veins to the heart.

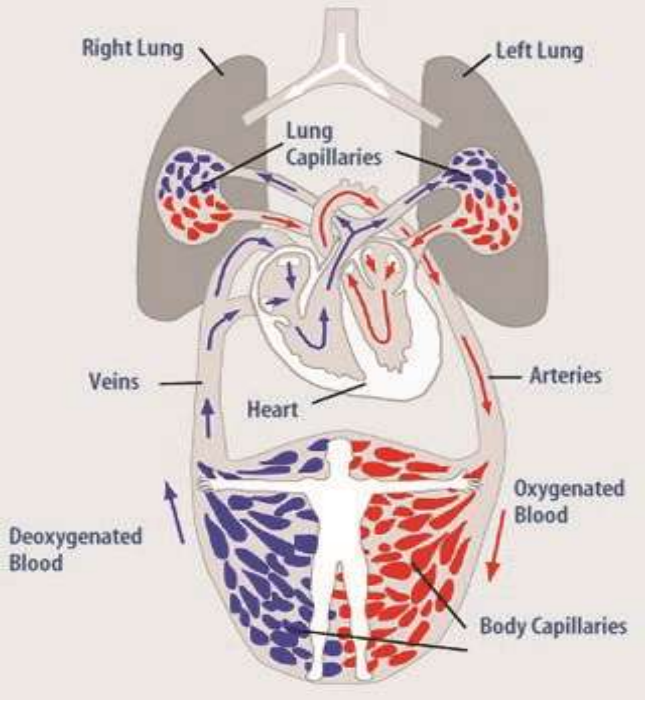



*Fig. 2.2.4: Vascular flow*

### Arteries and Veins

Arteries and veins are composed of three layers:

- The outer layer (tunica adventitia), is made up of connective tissue and is thicker in arteries than in veins.
- The middle layer (tunica media) is made up of smooth muscle tissue and elastic fiber and is thicker in arteries than in veins.

- The inner layer (tunica intima), is made up of a single layer of endothelial cells, a connective tissue layer, basement membrane, and an elastic internal membrane.

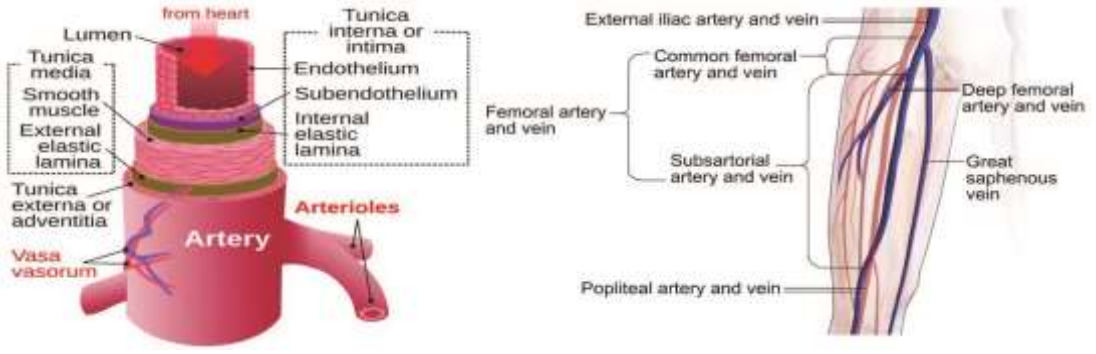



*Fig. 2.2.5: Arteries and Veins*

### Valve

Valves stop the backflow of blood in the veins. The valve controls the direction of blood flow. When skeletal muscles are active and contracting, venous return of blood to the heart is facilitated by combination of muscle contraction and valve function. When muscles are resting, blood flow in the venous system is slower.

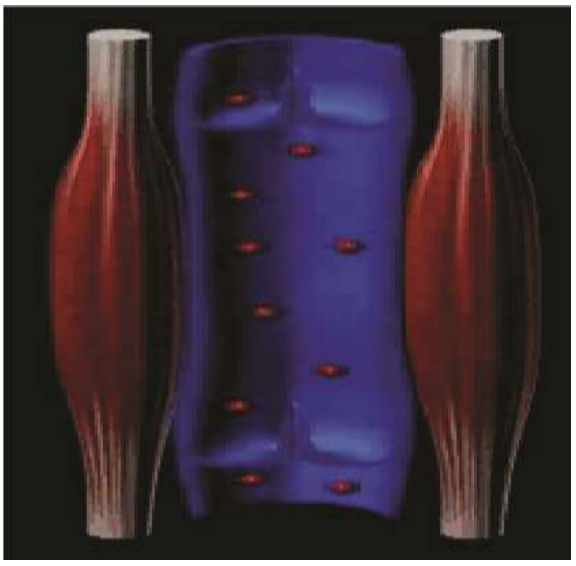


*Fig. 2.2.6: Valve*

## 2.2.2 Musculoskeletal System

Musculoskeletal system provides the body with support, protection, and movement and at the same time it protects the vital organs in the body. It involves the complex interactions of muscles, bones, and connective tissues.

- The skeleton is the main store of phosphorus and calcium in a human body.
- Muscles contract and expand to help to shift the bones associated with the joint.

- Cartilage prevents the bone ends from rubbing on to each other directly.

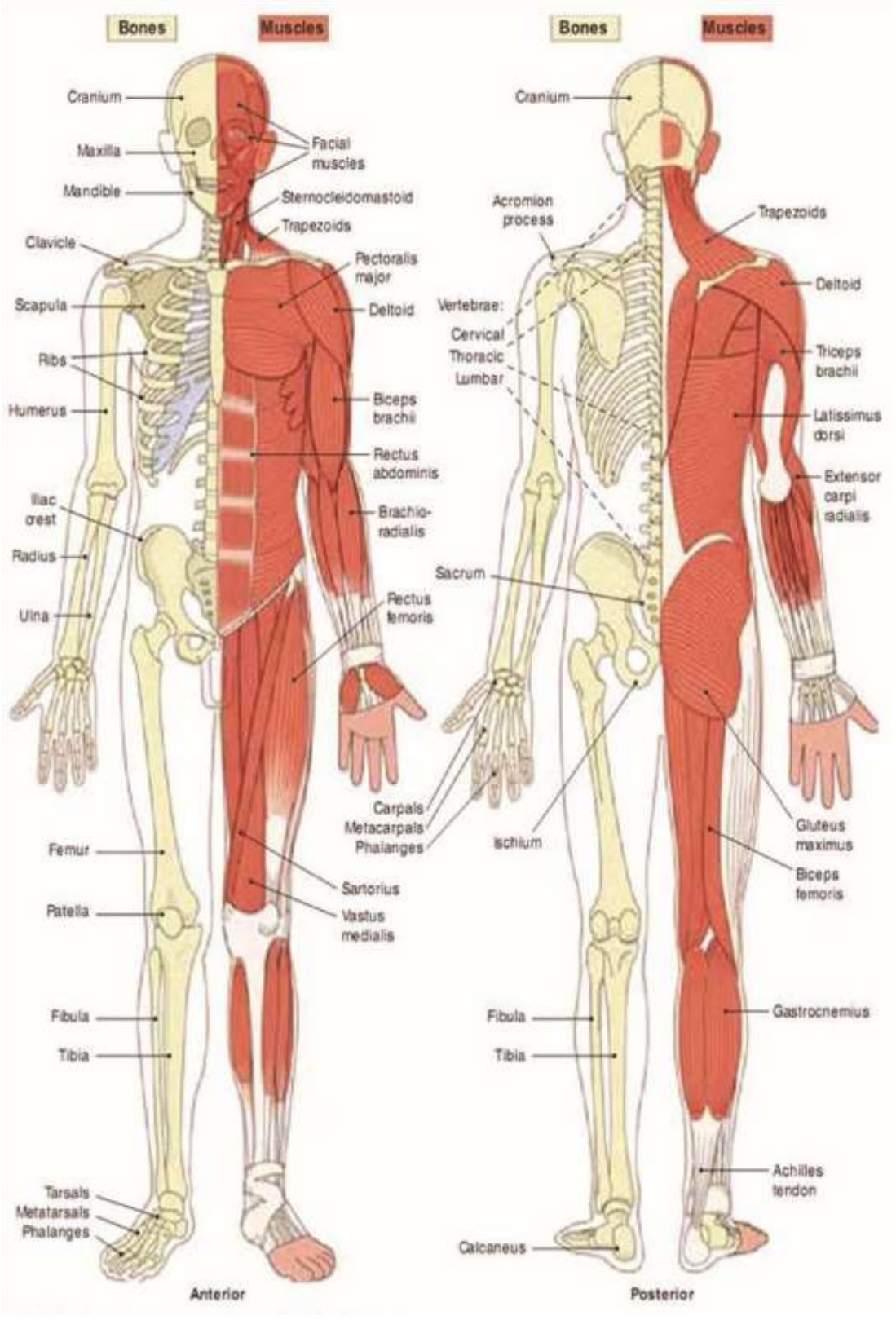



*Fig. 2.2.7: Musculoskeletal System*

## 2.2.3 Urinary System

The urinary system is also known as the renal system. It is the excretory system of human body. It stores as well as eliminates urine, the fluid waste that is excreted by the kidneys. The kidneys filter extra water and wastes from the blood and produce urine.

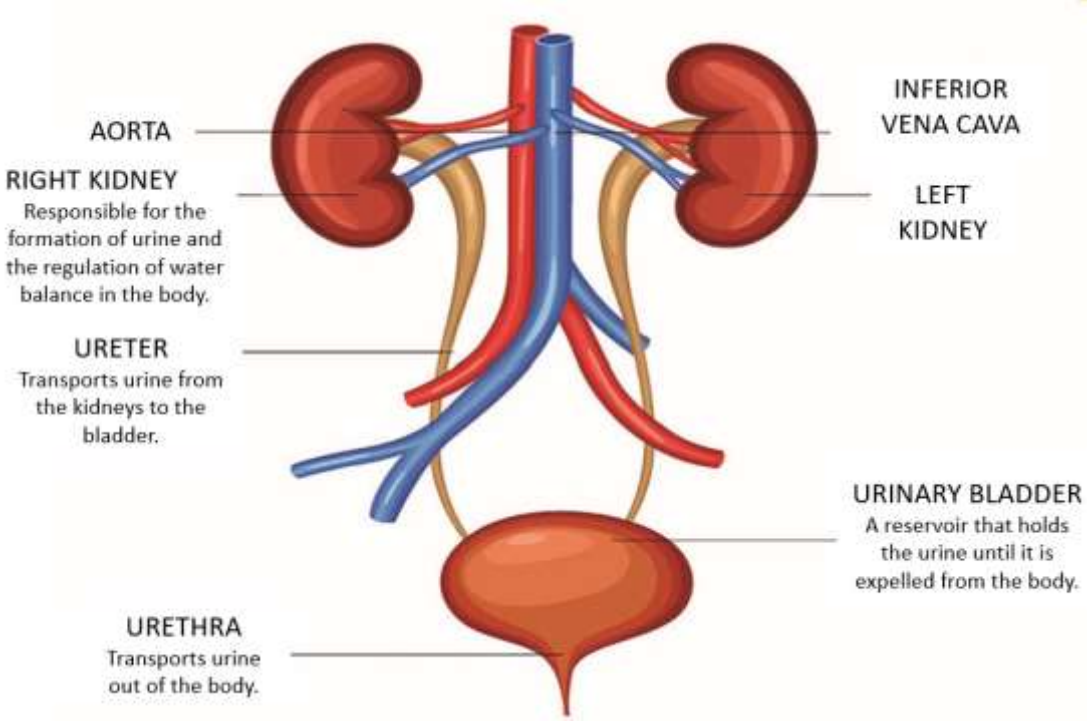



*Fig. 2.2.8: Urinary System*

## 2.2.4 Gastrointestinal System

The gastrointestinal system consists of organs that break down food into components that our body uses for energy and for building and repairing cells and tissues.

It includes the following:

- Mouth
- Pharynx (throat)
- Oesophagus
- Stomach
- Small intestine and large intestine
- Rectum
- Anus

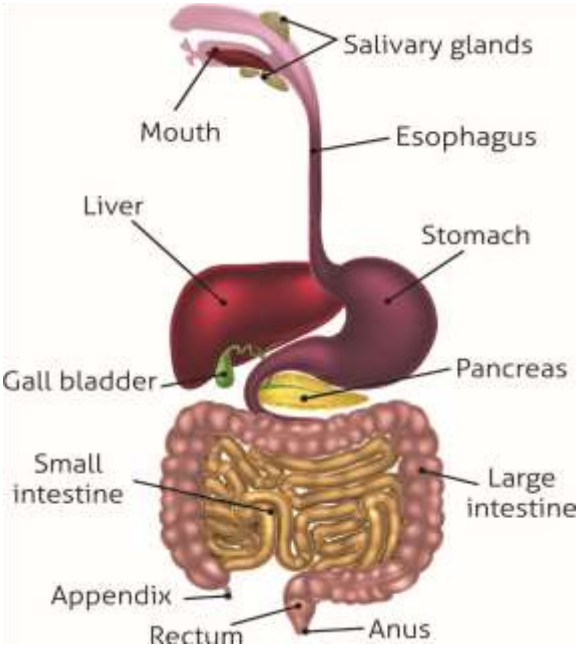



*Fig. 2.2.9: Gastrointestinal System*

## 2.2.5 Respiratory System

The respiratory system consists of a series of organs required for breathing in oxygen and expelling carbon dioxide. The oxygen that one breathes goes into the lungs and from there passes into the blood. Via the blood it is conveyed to all the cells in the body through the bloodstream.

It includes:

- Lungs
- Airways
- Blood Vessels

The location of the lungs is in the chest region, shielded by the ribs in the rib cage.

The windpipe, also termed as the trachea, filters the air that is inhaled.

The trachea branches into the bronchi (two tubes that transport air into each lung).

The left lung has two lobes and the right lung has three lobes.

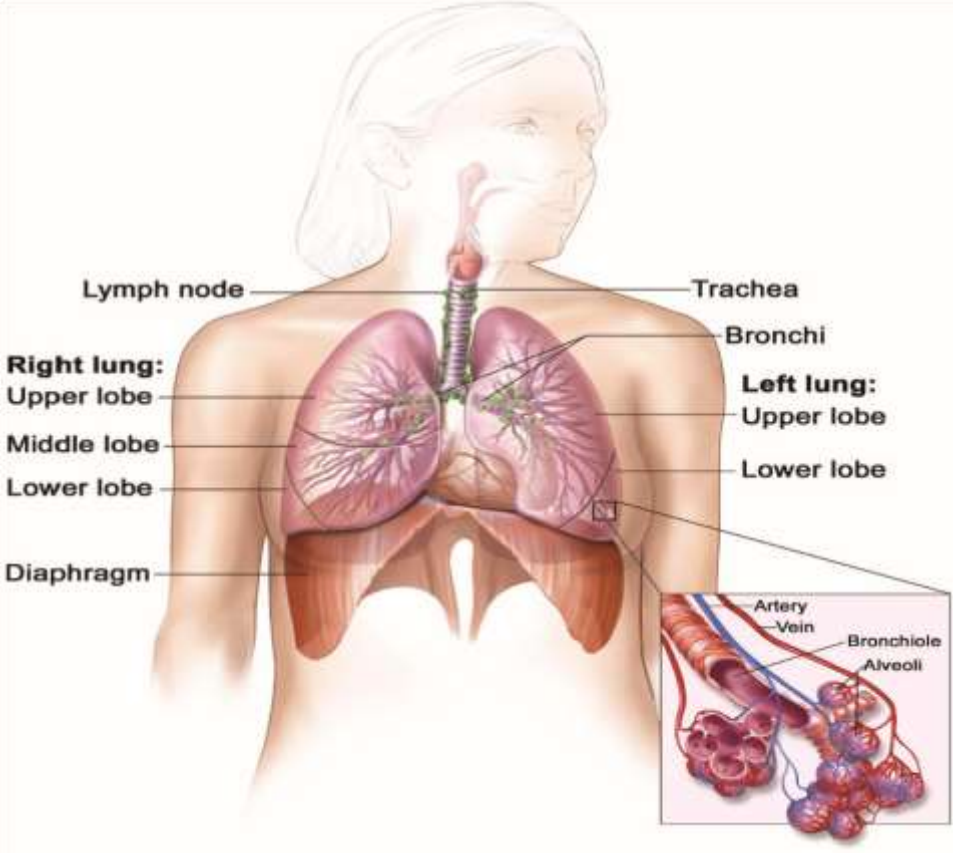



*Fig. 2.2.10: Respiratory System*

## 2.2.6 Endocrine System

The endocrine system consists of glands that secrete hormones. These hormones govern growth and energy production in a body. The endocrine system is made up of the following glands:

- Hypothalamus, pituitary gland, pineal gland - Brain
- Thyroid, parathyroid glands – Neck
- Thymus – Between the lungs
- Adrenals – Top of the kidneys
- Pancreas – Behind the stomach
- Ovaries (female) or testes (male) – Pelvic region

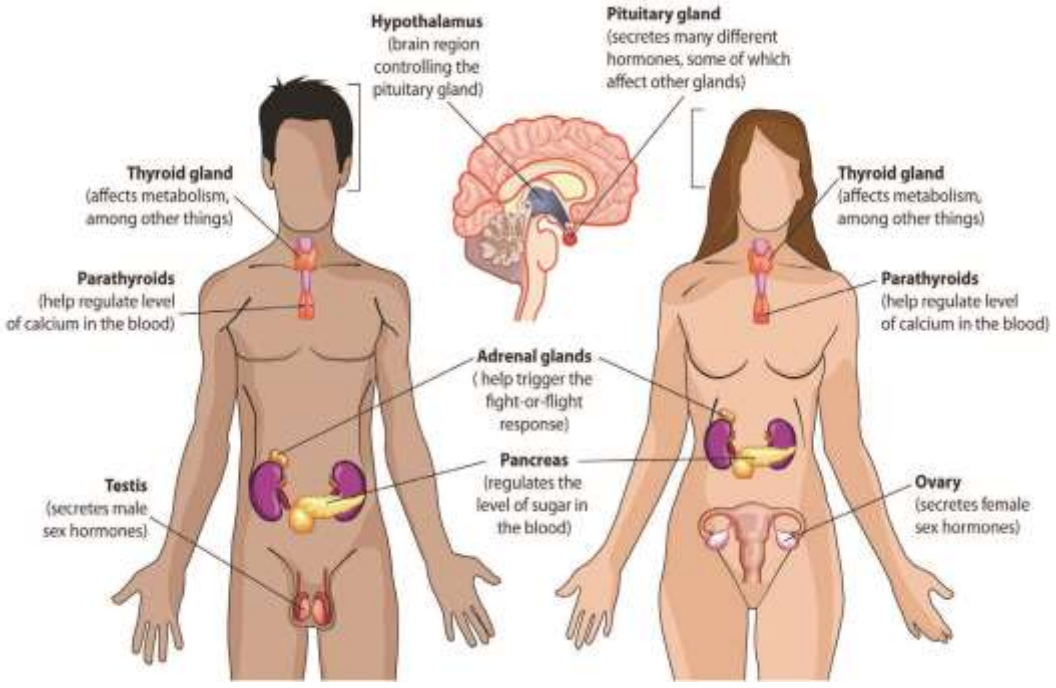



*Fig. 2.2.11: Endocrine System*

## 2.2.7 Integumentary System

The integumentary system is the largest organ in the human body. It includes:

- Epidermis
- Dermis
- Hypodermis
- Associated glands
- Hair
- Nails

The integumentary system performs the following functions:

- **Barrier Function:** It protects the body from invasion by microorganisms, chemicals, and other environmental factors.
- **Thermoregulation:** It helps regulate the body temperature.
- **Excretion:** Sweat and sebum also have an excretory role for water- and fat-soluble metabolites.
- **Sensation:** Nerve endings on the skin help in sensing touch, pressure, heat, cold etc.

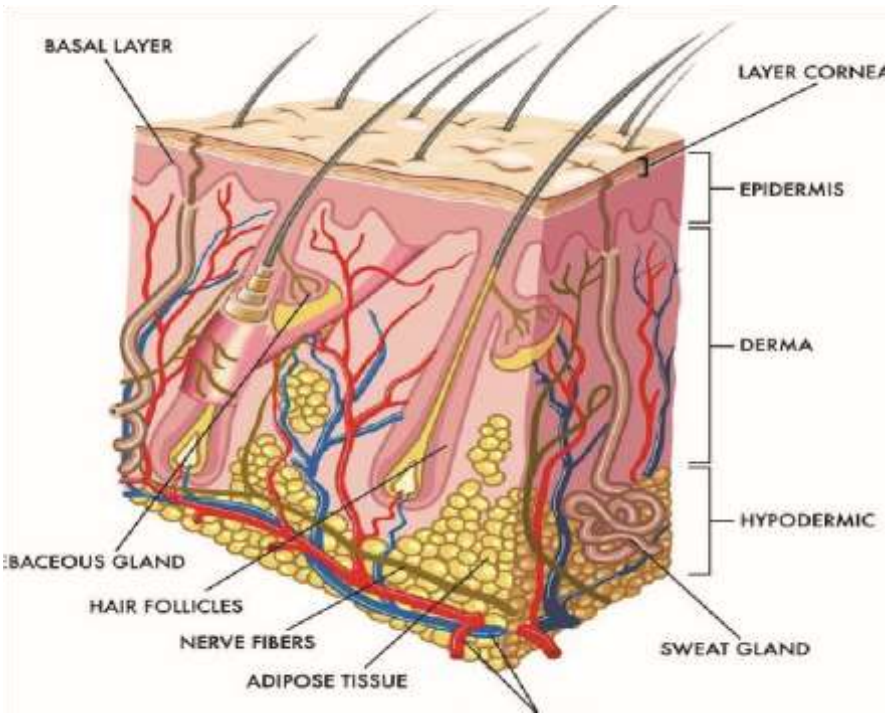



*Fig. 2.2.12: Integumentary System*

## 2.2.8 Chain of Infection

Whenever the body contracts an infection, there is a chain of causes and suitable conditions that lead to infection, such as:

- **Causative Agent:** Microorganism such as virus or bacteria that can spread directly or indirectly from person to person.
- **Reservoir:** A place where the microorganism has all the things it needs to grow and multiply. Human beings make ideal reservoirs.
- **Portal of exit:** For infection to spread, the microorganism has to leave the reservoir through the portal of exit. E.g., skin cells, blood, body fluids.
- **Mode of transmission:** Includes direct or indirect contact (Hands etc.)
- **Portal of entry:** This is how the organism can get into another person.
- **Susceptible Host:** All patients and healthcare workers are potentially at risk of infections.

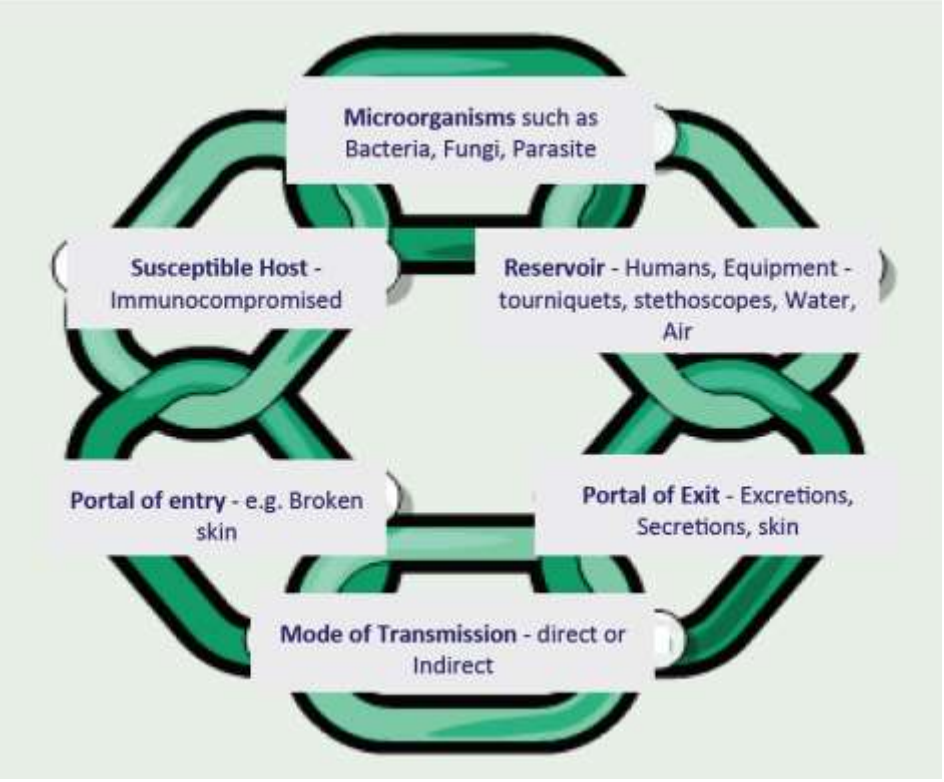



*Fig. 2.2.13: Chain of infection*

## Exercise

1. List the different types of tissues present in human body.

   _____

   _____

   _____

   _____

2. Identify which of the following statements are true or false.
   a. Capillaries function as the site of exchange of nutrients and wastes between blood and tissues.
   b. The cartilages are the main stores of phosphorus and calcium in a human body.
   c. The left lung has three lobes and the right lung has two lobes.
   d. The thymus is located between the lungs.

3. Which of the following is a part of the integumentary system?
   a. Trachea
   b. Hair
   c. Pancreas
   d. Rectum

4. Arteries and veins are composed of three layers. Name them.
   a. _____
   b. _____
   c. _____

## Notes

Skill India

GOVERNMENT OF INDIA
MINISTRY OF SKILL DEVELOPMENT
& ENTREPRENEURSHIP

N·S·D·C
National
Skill Development
Corporation
Transforming the skill landscape

Healthcare
Sector
Skill Council

# 3. Supporting Patient in Daily Living Activities



HSS/N5125

## Key Learning Outcomes

**After completion of this module, the participants will be able to:**

1. Explain the process of bathing patients
2. Explain the process of assisting a patient to eat and drink
3. Describe the correct way of measuring patient's parameters accurately
4. Explain the care to be provided in case of urine and bowel Incontinence or patient with urinary catheter
5. Explain the care to be taken to avoid fall in high-risk patients
6. Describe the techniques and procedures of dressing-up
7. Explain how to assist a patient in grooming
8. Explain the role of CFW (ACS) while assisting nurse/physician during special procedures
9. Explain importance of observing and reporting the conditions of patient as well as taking consent while assisting the patient
10. Enumerate patient's rights
11. Explain the correct way to handle hazardous situations safely
12. Describe the rules and importance of body mechanics
13. Explain the correct way to move patient safely
14. Explain the different types of positions of a patient
15. Identify the different modes of patient transferring
16. Explain the correct way of shifting patient
17. Explain how to move patient effectively
18. Enumerate patient's rights
19. Learn the role of CFW (ACS) in maintaining patient's rights
20. Handle hazardous situations safely

# UNIT 3.1: Aid in Personal Hygiene

## Unit Objectives

**After completion of this unit, the participants will be able to:**

1. Explain the process of bathing patients
2. List the steps of performing a body bath
3. Explain how to give sitz bath to patient

## 3.1.1 Help in Bathing Patients

### Introduction

Bathing is a common daily task that is necessary for our personal hygiene. Bathing is done to make a patient clean, remove any dust/dirt or any other external agent from the skin, increase blood circulation, promote confidence, reduce body odour and encourage movement.

*Fig. 3.1.1: Bathing Patients*

### Importance of Bathing

Bathing is washing and cleaning the body using water and soap. Bathing regularly helps prevent infection. Bathing also, as an activity, relaxes the patient and keeps the patient fresh. It promotes circulation of blood within the body.

In many cases, however, patients are unable to perform this activity by themselves. It is your duty as an CFW (ACS) to facilitate a bath or bathe the patient and help maintain appropriate personal hygiene. You must follow the bathing methods that the nurse or the doctor suggests depending on the condition of the patient.

### Common Bathing Techniques

Patients are given a bath according to their needs and medical conditions. Patients who are able to get up and walk, get a shower or a tub bath; whereas patients who are ill or weak will have a bed bath.

There are three different kinds of bath that are given in a hospital, namely:

- Shower or tub bath
- Full bed bath
- Limited bed bath

A bed bath is given to a patient when a patient cannot move out of bed. A bed bath is given completely on bed. A partial bed bath is a technique wherein you help the patient in taking a bath close to the bed. It is given to patients who cannot move to use the shower.

A shower or tub bath is a bathing technique that is followed by patients who can maintain personal hygiene by themselves. The patient might use the tub or the shower for taking a bath.

### Role of a CFW (ACS) in bathing a patient

As a CFW (ACS), you have to prepare the patient for the bathing procedure as per instructions given by the doctor. The following arrangements have to be made before starting the procedure:

**Procedure for a complete bed bath:**

- Set the room temperature to keep the patient warm during bathing.
- Draw the curtains or blinds for privacy.
- Get two big bowls of warm water, one for washing and other for rinsing.
- Put a wash cloth in each basin.
- Move the patient gently while washing and rinsing the body.

**Procedure for a partial bath:**

- Keep two trays of warm water ready to be used by the patients for washing and rinsing.
- Assist the patient with washing the areas that the patient cannot reach, such as the back.
- Give the patient towels and sheets for drying immediately after the bath.
- Move the patient gently while washing and rinsing the body.

**Procedure for a self-bath:**

- Make sure that the tub or shower appliance is clean.
- Place a non-skid mat on the tub or the shower floor.
- Check the water temperature.
- Assist the patient to the tub or the shower.
- Make sure the patient wears the robe and slippers.
- Help the patient sit on the edge of the tub. Ask the patient to hold a bar for support with one hand.
- Give the patient towels and sheets for cleaning immediately after the bath.

**Precautions to be followed while bathing:**

- Consult the nurse or the doctor and discuss the method of bathing that must be followed with each patient.
- Consider patient's preference and conditions when deciding the type, frequency and time of bath.
- Give importance to patient's privacy needs (e.g., draw the curtains properly) and encourage the patient to do as much as possible to promote independence.
- Arrange for the bath of the patient by keeping the necessary items in place such as the soap, water and towels for cleaning.
- Make sure that the water that is used is warm. Have the patient test the water. Adjust the temperature, if needed.
- Instruct the patient on the use of taps and bathroom accessories.
- Assist your patient in undressing and put dirty clothing in the plastic bag of the laundry hamper.
- Make sure you don't hurt or injure the patient in anyway while bathing the patient.
- Make sure that water does not enter the wounds of the patient while bathing.
- Stand beside the patient and encourage the patient to perform the activity by themselves. Help the patient to dress up after drying.
- Remove all the wet bed sheets and towels after the bathing procedure is complete.
- Ensure that the area is dry, as wet areas can lead to infection.

## 3.1.2 Types of Bed Bath

Cleansing bath is part of routine patient care for personal hygiene. The different kinds of baths are:

1. **Shower**: Ambulatory patients are usually able to take a shower. Patients who are physically hampered can use an easy drying chair inside the shower. The care giver can help the patient with the shower.
2. **Self Help**: If a patient is restricted to the bed, then this bath provides them the required hygiene. The CFW (ACS) arranges the bathing equipment and helps in cleaning difficult to reach areas, like back, legs, feet, and external genitalia.
3. **Complete Bed Bath**: The CFW (ACS) helps the patients, who are bedridden, with a complete body wash.
4. **Partial Bath**: The CFW (ACS) helps in cleaning only those body parts that could cause inconvenience or odour, such as face, hands, and genital areas.

### Purpose of the bed bath

The purpose of the bed bath is to:

- Keep the skin clean.
- Make the patient comfortable and fresh.
- Stimulate circulation and thereby increase elimination through the skin.

- Observe the skin for redness, sores, swelling, rashes or other infections and bony prominences for bed sores.
- Improve the patient's self-image and emotional and mental well-being.
- Prevent pressure sores.

**Articles needed for giving a bed bath**

- Jug of hot and cold water - 2
- Bath towels -2
- Large basin -1
- Linens for bed making
- Screen
- Patient's clothes
- Bowl with clean cotton balls for eye care
- A clean tray containing:
  - Articles for mouth care
  - Sponge clothes – 2
  - Soap and soap dish
  - Spirit
  - Talcum powder
  - Oil
  - Comb
  - Cotton dressing pads – 2
  - Nail cutter
  - Mackintosh with cover
  - Kidney tray and paper bag
  - Gloves (optional)

## 3.1.3 Perineal Care

Cleansing the external genitalia and the surrounding region is called perineal hygiene. Being warm and moist and lacking ventilation, the perineal region is favourable to the proliferation of pathogenic organisms. The pathogenic organisms are able to enter into the body through the various orifices in this region such as the vaginal orifice, the anus and the urinary meatus. Meticulous cleanliness is mandatory to avoid bad odour and to enhance comfort.

**What is Perineal Care?**

Perineal care involves bathing the genitalia and the surrounding region. Proper inspection and care of the perineal region requires professional clinical assessment. The proper procedure for perineal care is to wash the perineum from the cleanest region to the less clean region. The urethral orifice is supposed to be the cleanest region and the anal orifice is the unclean part.

### Importance of perineal care

Perineal care is carried out to:

- Keep cleanliness and prevent infections in the perineal area
- Relieve inflammation and congestion
- Relieve pain
- Stimulate circulation
- Prevent infection and promote healing
- Prevent the spread of infection
- Make the patient comfortable

### Indications for Perineal care

Perineal care should be carried out for the following types of patients:

- Patients who are incapable of carrying out self-care
- Patients who are suffering with genitor-urinary tract infections
- Patients who have incontinence of urine and stool
- Patients who are experiencing excessive vaginal discharge
- Patients having indwelling catheters
- Post-partum patients
- Patients who after surgery are on the genitor-urinary system
- Patients having wound, ulcers or surgery in the perineal area

### Preliminary Assessment before performing perineal care

Before performing perineal care, a preliminary assessment must be made. You must:

- Analyse the condition of the skin in the perineal region— inspect the area for any itching, drainage, irritation, ulcers and so on.
- Analyse the need and the frequency required for the perineal care.
- Analyse whether the perineal care requires an 'aseptic' procedure or a 'clean' procedure.
- If there is a wound, the perineal care should be done according to the aseptic procedure or the 'clean' procedure.
- Check the orders of the physician and any particular instructions.
- Analyse if the patient is capable of self-care.
- Analyse if the patient is mentally fit to follow instructions.
- Check the items available in the unit.

### Equipment needed for perineal care

The equipment needed for perineal care are:

- Gloves (non-sterile)
- Sponge cloth
- Basin containing warm water
- Waterproof pad or gauze
- Towel
- Mackintosh
- Soap dish with soap
- Toilet paper
- Bed pan

### Procedure for perineal care

Take a look at the steps for carrying out perineal care: 

**Step 1:** Arrange all the equipment.

**Step 2:** Explain the procedure to the patient.

**Step 3:** Perform hand hygiene and wear gloves.

**Step 4:** Provide privacy to the patient by closing the door or by putting the screen.

**Step 5:** Position the patient. Uncover the patient's perineal area.

**Step 6:** Keep the mackintosh and the towel or the waterproof pad) under the patient's hips.

**Step 7:** Clean the thigh and the groin region by:

- Making a crimp with the sponge cloth.
- Cleaning the patient's upper thigh region and groin using soap and water.
- Rinsing the area and drying it.
- Washing the genital area.

## 3.1.4 Proper Disposal of Urinary Wastes

The urinary system of the human body functions as the body's filtering system, wherein it removes all the toxic waste materials along with excess water in the body. The accumulation of wastes, if not removed, may lead to medical complications. You must help the patient in the process of urination.

**Elimination of wastes by urination**

The kidneys are the central units of the excretory system. The blood carrying the waste materials enters the kidneys where they are filtered out and removed from the body with excess water in the form of urine. Urine is filled up in the urinary bladder which opens into the genital area through the urethra. When the bladder is full, the patient develops an urge to empty the bladder. If the bladder is not emptied then it can lead to extreme discomfort for the patient. When the patients express the need to empty the bladder, you must immediately facilitate for the same. You must help the patient to the toilet if the patient can walk. If the patient cannot walk, then you must arrange for the equipment for the passage of urine by the bed. The urine output of a patient in a day is critical to understand the functioning of the kidneys. If the kidneys are infected or are not functioning properly then the urine output is low. If the waste materials are not removed by production of urine, then they can accumulate within the body leading to severe complications.

**Precautions to be taken while assisting in urination**

- Once the urine is passed from the body, it should be drained out immediately.
- Urine should not accumulate anywhere in the surroundings of the bed or the room. It can lead to infections with severe complications. You must take proper hygiene measures to prevent infections arising out of urine that is accumulated.
- In case of patients who are able to move, help the patients by keeping the toilet ready to use when they express the need to use. Instruct the patient not to latch the door from inside of the toilet, as you cannot enter the toilet if the patient needs help.
- Maintain the privacy and dignity of the patient.
- In case the patient has passed urine on the bed, gently clean the bed and change the clothes of the patient. Ensure that the patient is not embarrassed.
- Always wear gloves while assisting the patient in urination or while collecting the urine to measure the output.
- Dispose of any urine that is collected into the toilet and ensure that all the equipment is thoroughly cleaned and sanitized.

## 3.1.5 Perform a Body Bath

- **Step 1:** Wash hands. Assemble all the articles and take them to the bedside after testing the temperature of the water.
- **Step 2:** Explain the procedure to the patient.
- **Step 3:** Place a stool at the foot of the bed. Place the articles near the patient, within reach.
- **Step 4:** Arrange clean linen on the stool in order of use.
- **Step 5:** Screen the patient.
- **Step 6:** Check if there is any drought.
- **Step 7:** Ask the patient if he or she wants a bedpan.

- **Step 8:** Remove all the top linen and patient's clothes except the sheet or blanket and place one pillow under the head if the patient is uncomfortable.

*Fig. 3.1.2: Removing gown and line*

- **Step 9:** Position the bath towel below the patient's chin.
- **Step 10:** Give oral hygiene.
- **Step 11:** Give eye care to the patient using wet cotton balls from inner to outer canthus.
- **Step 12:** After checking the temperature of the water, fold a sponge towel around your hand. Wash the patient's face properly with water and then proceed to dry the face with a bath towel.
- **Step 13:** Take the sponge towel and fold it around your hand. Apply soap. Clean the patient's neck and ears.
- **Step 14:** Keep the sponge towel in a soap dish. Take a second sponge towel and rinse it in water and wipe off the soap from the neck and ears. Then dry it with the second bath towel.

*Fig. 3.1.3: Applying soap*

- **Step 15:** Spread the mackintosh with cover under the opposite arm. Clean the arm from the distal to the proximal end including the axilla. Use a circular movement, while applying soap.
- **Step 16:** Wash and dry the arm with the bath towel. Place the basin of water under the patient's hand and allow the patient to rinse their hand in the water and then dry it.
- **Step 17:** Spread the mackintosh with cover under the other arm and repeat steps no. 14 & 15.
- **Step 18:** Change the water.
- **Step 19:** Spread a bath towel over the patient's chest. Fold the top linen at the level of the umbilical area and repeat step no. 14. Use circular movements while applying soap.

*Fig. 3.1.4: Cover the patient's chest*

- **Step 20:** Spread the mackintosh with cover under the opposite leg and precede in the same way as in step no 14 & 15.
- **Step 21:** Spread the mackintosh with cover under the other leg, and proceed in the same as in step no. 14 & 15.
- **Step 22:** Place the mackintosh and the towel over the bed, then place the basin of water over it, and bend the patient's knees, place one foot in the basin of water, and wash it. Dry the foot with a towel and repeat the procedure for the other foot.
- **Step 23:** Change the water.

*Fig. 3.1.5: Applying soap on back*

- **Step 24:** Turn the patient onto the opposite side. Spread the mackintosh with cover on the patient and tuck it under the patient. Wet the back with water, and apply soap. Then wash and dry the back and buttocks, with special care to the bony prominences. Apply spirit, powder, and remove the bath towel. Then change the water.

*Fig. 3.1.6: Wearing gloves*

- **Step 25:** Give a wet cotton pad to the patient, and ask them to clean the genitalia. If the patient is unconscious, clean and dry the genitalia with two different cotton pads.
- **Step 26:** Apply powder to the body.
- **Step 27:** Put a clean dress on the patient, then comb and set the hair.
- **Step 28:** Remove and replace the articles.
- **Step 29:** Be sure to leave the patient feeling comfortable and tidy.
- **Step 30:** Wash your hands.
- **Step 31:** Record and report to the ward sister if there is any redness, cracks on the skin, or any abnormality is observed.


*Fig. 3.1.7: Applying powder to the body*

## 3.1.6 Skin Abnormalities

While giving a patient a bath, observe and report the following:

- **Temperature -** hot skin implies fever; cold skin implies poor circulation. Sensitivity- includes pain, soreness, itching, or burning sensation. Odour- may be a result of sweat which the sweat glands secrete; maladies, such as an infection or a kidney disease; or body eliminations such as urine or faeces that require to be cleaned.

- **Texture –** could either be smooth and supple or dry and chapped; skin texture is affected by nutritional deficiencies
- **Colour –** red flushed areas that could imply presence of pressure, cyanosis if there is a bluish tinge or jaundice if there is a yellowish tinge
- **Swelling (oedema) –** Areas with stretched or tight appearance; usually starts at the ankles, legs or some other pendent body part; may be linked to an injury.
- **Skin lesions –** Skin with rashes, outgrowths, or breaks

*Fig. 3.1.8: Skin Abnormalities*

**How to take care of the abnormalities?**

- Inspect the patient's skin carefully for pressure areas at the time of providing a bath or a back massage.
- Wash any areas that are red with soap water, rub with lotion.
- Keep the sheets which are under the patient clean, unrumpled and tight to assist in eliminating skin irritation.
- Ensure proper nutrition and fluid intake for the patient as advised by the physician.
- Ensure that when the patient is incapacitated, urine and faeces are kept off the patient's skin, the skin is washed with soap and water and the buttocks and the genital region are kept dry. A body lotion or powder may be used in the region, depending upon the skin type of the patient.
- Assist obese patients who need help while washing and drying areas under skin folds (groin, buttocks, under breasts, and so forth).
- For patients with very dry skin, various bath oils may be added to the bath water.
    - Omit the use of soaps because of its drying effect.
    - Use lotions and oils after the bath.

Skin abnormalities vary greatly in symptoms and severity. They can be momentary or permanent, trouble-free or sore, can be due to situation or genetic, minor or life-threatening.

## 3.1.7 Sitz Bath

A sitz bath is used to wash the perineum region that is the area between the vulva or the scrotum and the rectum. It is a warm, shallow bath which can be used as a part of daily personal hygiene. It can even alleviate pain or itching in the genital region.

Sitz Bath is advised by a doctor if a patient:

- Has got surgery done on the vulva or vagina.
- Has lately given birth.
- Has got haemorrhoids removed by a surgical procedure.
- Has pain or irritation due to haemorrhoids.
- Has issues with bowel movements.

### Giving patient sitz bath

- Clean the bathtub.
- Set water temperature. Make sure water should be warm not hot.
- Fill the bathtub with 3-4 inches of water
- Mix soothing additives to the water if you wish.
- Soak in the sitz bath. Make sure that the affected area is covered in the warm bath.
- Pat patient dry when finished.

*Fig. 3.1.9: Giving patient sitz bath*

## Tips

- Use mild soap and gentle strokes with a soft cloth when giving a bath to the patient.
- Rinse the skin well and then dry it with a soft towel.
- Use bland lotion to moisturise the skin do not use alcohol base lotion on skin. Alcohol dries the skin.
- Keep a time track sheet to monitor the position of the patient.
- Change the patient's clothes every day.
- Every patient's clothes must be washed separately.
- While brushing patient's teeth various abnormalities can be observed in the oral cavity. Report these to nurse or doctor immediately.

## Exercise

1. Name the different types of baths.

_____

_____

_____

_____

2. Why is perineal care important?

_____

_____

_____

_____

3. Name the type of skin abnormalities that you will observe while bathing a patient.

_____

_____

_____

_____

# UNIT 3.2: Aid in Daily Activities

## Unit Objectives

**After completion of this unit, the participants will be able to:**

1. Explain the process of assisting a patient to eat and drink

## 3.2.1 Feeding the Patient

One of the most important roles for you as an CFW (ACS) is feeding a patient. Different patients with different medical conditions must be fed in different ways. In this chapter we will study in detail about the different feeding techniques and the role of a CFW (ACS) in feeding.

*Fig. 3.2.1: Feeding the Patient*

### Supplies for routine patient feeding

- Stainless Steel Plate
- Stainless steel Glass
- Stainless Steel spoon
- Steel bowl
- Steel Jug
- Disposable Gloves

### Types of Feeding

Feeding is the process of ingesting food. It is a critical activity as food ingested into our body is converted into energy by the process of digestion. Doctors decide the method of feeding that needs to be followed depending on the physical condition and the type of nutrition needed by the patient. The different types or methods of feeding are classified as:

- Oral feeding
- Tube feeding
- Fluids or intravenous route

**Oral Feeding**

Oral feeding is providing food or fluids through the mouth. Oral feeding is done using spoons and other normal cutlery. This is suggested for a patient who can perform the daily activities normally and is able to respond to the instructions given by you.

**Tube Feeding**

A feeding tube is a medical equipment used to give nutrition to patients who are unable to feed themselves by mouth, are incapable of swallowing safely, or require to be given nutritional supplements. In tube feeding, a type of external nutrition is delivered into the digestive system in a liquid form. A tube is inserted into a part of the digestive system, often through the throat or nose. The tube carries the food directly into the digestive system. Sometimes, it is used in addition to the oral feeding method. The most common type of tube used for feeding is called the Ryle's tube. Ryle's tube is also called a nasal tube or NG tube.

*Fig. 3.2.2: Tube Feeding*

**Intravenous fluids (IV fluids)**

An intravenous or an IV line is used in case of patients who are unable to feed even with your assistance. It is a short-term device used to give fluids containing essential nutrients directly into the bloodstream through a vein.

*Fig. 3.2.3: Intravenous fluids (IV fluids*

The process of inserting an IV line is specialized and is carried out by the nurse. The IV line is usually inserted by the nurse on the instruction of the doctor. You must monitor the level of the IV fluid from time to time and report the same to the nurse.

## 3.2.2 Role of a CFW (ACS) while Feeding a Patient

- Encourage the patients to eat independently.
- Check the patient records for any instructions on the diet to be followed or any food to be avoided.
- If the person has not eaten well, you must report this immediately to the nurse in charge.
- Sit on a chair close to the person so he or she can see or hear you. Talk to him or her about the food you are feeding.
- Put the spoon on the side of the mouth where there is feeling. Be sure food is being swallowed and not collected on the numb side of the patient's mouth.
- Stop feeding a patient if they tell or show that they have had enough. Stop feeding a person if they fall asleep during the meal.
- If the patient can walk, encourage him or her to walk before a meal. Walking may help in gaining appetite and helps the body digest the food.
- Wear gloves while carrying, serving or feeding the patient. If the patient express discomfort while feeding you can remove the gloves, wash your hands thoroughly and continue feeding the patient.

## 3.2.3 Precautions While Feeding a Patient with a Medical Condition

A CFW (ACS) is needed while giving oral feeding. In intravenous and tube feeding, the role of a CFW (ACS) is restricted to just assisting the nurse in monitoring the condition of the patient and changing the packet of fluid in case it is over. No matter which feeding technique he/she is using, he/ she must follow these precautions:

**Steps while feeding a patient** 

- **Step 1:** Check the diet of the patient with the dietician or the nurse before feeding the patient.
- **Step 2:** Feed the patient slowly, at a speed he or she is comfortable with.
- **Step 3:** Ensure that the patient is fully awake and alert prior to feeding.
- **Step 4:** Ensure proper consistency of the patient's food or liquids prior to feeding them to him or her.
- **Step 5:** Ensure suitable temperature of the food or liquids to be given to the patients.
- **Step 6:** If the patient starts to cough continuously or begins to choke, stop the feeding at once. Provide suitable care and inform the healthcare provider.
- **Step 7:** Never ask the patient to hurry up while eating.
- **Step 8:** Never feed a patient whose eating posture is not correct.
- **Step 9:** Provide the patient with towels and sheets for cleaning immediately after eating.

### Guidelines for serving food 

The importance of serving food is to facilitate the feeding process for the patient. In order to make sure that you serve the patient effectively, you must follow the following guidelines

- **Step 1:** Ask the nurse about the diet plan of the patient.
- **Step 2:** Help the patient to the washroom in washing their hands before dining.
- **Step 3:** Check the temperature of the food that is being served. It should be comfortable for the patient.
- **Step 4:** Keep noise levels low.
- **Step 5:** Do not shout or raise your voice.
- **Step 6:** Do not bang plates or cups.
- **Step 7:** Arrange the food to be consumed by the patient in a manner where all the items are kept open for the patient to choose from.
- **Step 8:** Always tell the patient what is being served and encourage the patient to eat the items that are being served.
- **Step 9:** Tell the patient about the benefits of the food items being served.
- **Step 10:** Encourage the use of dentures, if the patient uses a denture. This will help the patient in chewing better and therefore in better digestion of the food consumed.

## 3.2.4 Food Nutrition and Dietetics

Let us study about the food which is given to the patients and its importance. The type of food that the patients eat has a considerable effect on their health. Alterations in their diet can assist in preventing or controlling a number of health problems such as obesity, diabetes and some of the risk factors related to cancer and heart diseases. Dietetics is the health area that deals with the interaction between nutrition and health. You as a CFW (ACS) should have sufficient knowledge about the nutrition need of the patient according to his/ her condition or disease type. Let us see some of the common diet of patient in health and disease, which a CFW (ACS) should know.

**Diet in Gastroenteritis:** Gastroenteritis or common stomach flu is a condition where the stomach and the intestines are inflamed, generally due to a viral infection. Common symptoms of this ailment include:

- Upset stomach
- Nausea
- Diarrhoea
- Cramping
- Vomiting

The aim of a diet that has been planned to deal with gastroenteritis is to prevent dehydration from occurring. An appropriate balance of electrolytes also needs to be maintained. Minerals like sodium and potassium are the electrolytes that a body requires to work properly.

Vomiting and diarrhoea, which are the common symptoms of gastroenteritis, can flush out the electrolytes from the body. In this case, such food should be provided which can rehydrate the body and reinstate the balance of the electrolytes. Oral dehydration salts (ORS) help a lot in this case. ORS is a specially prepared drink that has a combination of dry salts. When mixed in the right proportion with safe water, the ORS drink can help in rehydrating the body after plenty of fluid has been lost as a result of diarrhoea. There are two ways to make oral dehydration salts.

Take the ORS powder present in the market and mix it with water as prescribed. Second way is to simply add one teaspoonful of sugar and one teaspoonful of salt in one glass of water and the solution is ready.

- **Diet in Diabetics:** A simple, nutritious and healthy diet that is full of nutrients, has less fat, and moderate calories is required for patients suffering from diabetes. The content of carbohydrates in what the patient eats should be monitored as increased carbohydrates affect the blood sugar levels.
- **Diet in heart disease:** Patients suffering from heart diseases must be given healthy fats, nutrients, fibre, omega 3 and protein rich food items. Eating more fruits and vegetables will help a lot.

## Tips

- One of the most important roles for you as a CFW (ACS) is in feeding and/or assisting a patient in feeding.
- The different types or methods of feeding are classified as:
  - Oral feeding
  - Tube feeding
  - Fluids or intravenous route
- Encourage the patients to eat independently.
- Check the diet of the patient with the dietician or the nurse before feeding the patient.
- Encourage the use of dentures, if the patient uses a denture. It will help patient in chewing better and therefore better in digestion of the food consumed.

## Exercise

1. What is the importance of feeding?

_____

_____

_____

_____

2. List the precautions while feeding a patient.

_____

_____

_____

_____

# UNIT 3.3: Measuring Parameters

## Unit Objectives

**After completion of this unit, the participants will be able to:**

1. Describe the correct way of measuring patient's parameters accurately

## 3.3.1 Measuring Vital Signs/Parameters

The heart rate, blood flow, body temperature and the oxygen supply are described as the "Vital Signs".

The general health condition of a patient is measured using these parameters These vital signs are measured from time to time to understand the status of the patient's health. Increase or decrease in these measurements can lead to medical emergencies. Vital signs are the first thing to be checked by a doctor to understand the status of the health condition. As a CFW (ACS) , you are expected to know about these parameters and ways to measure it as these are the health indicator of patient's condition. Although your job as a CFW (ACS) will be to assist the nurse in taking these measurements.

## 3.3.2 Body Temperature

Body temperature is a measure of the body's ability to regulate heat. The human body functions normally in a specific range of temperature. If the body temperature is steady, the body functions normally. If it is either high or low, it means you are not normal and that you need medical attention. Body temperature is measured in degrees Fahrenheit (F) and degrees Celsius (C). The normal body temperature for a healthy person is 98.6 degrees Fahrenheit or 37 degrees Celsius. It may also be 1 °F (0.6 °C) above or below 98.6°F (37 °C). The body temperature is normally measured using a thermometer.

*Fig. 3.3.1: Measuring Body Temperature*

The most common places for measuring body temperature are:

- Mouth
- Ear
- Forehead
- Armpit (also called axillary method)
- Rectum

### Equipment used for measuring body temperature

In the hospital, body temperature is measured using a clinical thermometer.

Clinical thermometers are of two types:

- Liquid Filled
- Electronic

The traditional measuring instrument may be a glass tube. it's a bulb at one finish. The bulb contains a liquid that is commonly mercury. The liquid expands with an increase within the temperature. The glass wall of the measuring instrument is labelled to point the temperature levels.

Let us currently learn the procedure to live and report the body temperature victimization the oral technique. The temperature may be measured by putting the bulb of the thermometer in the mouth. This technique is called the oral technique. The oral technique is the most typical technique of measuring body temperature. As a CFW (ACS) you need to understand the steps to measure the body temperature of a patient via the oral technique.

*Fig. 3.3.2: Thermometer*

## 3.3.3 Measuring Body Temperature Using the Oral Method

- **Step 1:** Wash the thermometer in water under normal room temperature.
- **Step 2:** Ensure that the reading of the mercury level is below the 95 ° F mark.
- **Step 3:** Reset the mercury level below the 95° F level by shaking it vigorously.
- **Step 4:** Place the bulb thermometer under the tongue. Ask the patient to close the lips tightly around it. The person must be able to breathe through their nose. Keep the thermometer in the mouth just for a minute. Use a watch to check the time. Remember, in order to get an accurate reading, you must ensure that the patient breathes through the nose while you take the temperature.
- **Step 5:** Remove the thermometer from the mouth and note the reading.
- **Step 6:** Clean the thermometer in water under normal room temperature.

## 3.3.4 Blood Pressure

During the heartbeat, the heart pumps blood to the different parts of our body. Blood flows to different parts of our body within blood vessels and exerts certain pressure on the wall of the vessels. This pressure is known as blood pressure. An increase in the blood pressure can damage the body organs and a decrease in the blood pressure results in insufficient supply of blood to the body organs. The vessels may break leading to haemorrhage (blood clots), further leading to death of a person. Also, low blood pressure indicates that blood flow to the organs is not adequate. Therefore, blood pressure is a good indicator of the person's health as it indicates the flow of blood to the various organs.

**Equipment used for measuring blood pressure**

The BP apparatus or sphygmomanometer is used to measure the blood pressure is measured using or. The BP apparatus comprises a pressure cuff which is wrapped around the arm of the patient. The pressure cuff is attached to the hand bulb. The hand bulb pumps air into the pressure cuff. A release value on the hand bulb controls the air pumped into the cuff. The pressure cuff is attached to the mercury gauge through rubber tubing.

The mercury level keeps rising as the hand bulb pumps air into the pressure cuff. The BP apparatus is used along with a stethoscope which is used to hear sounds generated in blood vessels.

*Fig. 3.3.3: BP Apparatus*

## 3.3.5 Measurement of Blood Pressure

As an CFW (ACS) you must know the steps to measure the blood pressure of the patient. although it is the duty of the nurse, you only need to assist him/her in doing that.

- **Step 1:** First, see that the patient is relaxed and is comfortably positioned on the bed.
- **Step 2:** The patient extends the arm. The cuff of the BP apparatus is wrapped around the patient's upper arm.
- **Step 3:** The drum of the stethoscope is placed under the pressure cuff. The sound of the blood flow is heard when the drum is placed.
- **Step 4:** The hand bulb is used to inflate the cuff to create maximum pressure. This is indicated in the mercury gauge by the rise in the level of mercury.
- **Step 5:** The doctor inflates the pressure cuff until the sound of blood flow stops. Now the pressure cuff is deflated by using the release valve of the hand bulb and the pressure drop is indicated by the mercury level.
- **Step 6:** The reading of the mercury level is noted when the first sound is heard on the stethoscope.
- **Step 7:** The pressure cuff is deflated until the normal blood flow sounds are heard again. The reading of the mercury level is noted when the blood flow sounds are heard normally.
- **Step 8:** The pressure cuff is removed from the arm of the patient and the patient is asked to relax.

## 3.3.6 Breathing Rate

Breathing is a process of taking in breath which we call inspiration and letting out breath which we call expiration. When we breathe in air, the lungs get filled with air. The lungs absorb the oxygen in the air inhaled. The blood then carries this oxygen and supplies it to all parts of the body. Breathing rate is the number of breaths a person takes in a minute. Measuring breathing rate is a good way to check on the supply of oxygen within the body. Normal breathing rate for adults is 12 to 20 breaths per minute.

## 3.3.7 Measurement of Breathing Rate

The most common method of measuring breathing rate is by physical examination of the patient for a minute. The steps involved are:

- **Step 1:** Seat the patient comfortably on the examination stool.
- **Step 2:** Ask the patient to breath normally. Observe the number of chest expansions.
- **Step 3:** Measure the breathing rate by counting the number of chest expansions in one minute.

The normal breathing rate of a healthy person is 12 to 20 breaths per minute. If the breathing rate is higher than 20 breaths per minute it indicates that the oxygen supplied to the body parts is inadequate. Lower breathing rate indicates the abnormality of the functions of the lungs. Both high and low breathing rates need medical attention. You must report them to the doctor immediately.

## 3.3.8 Height and Weight of a Patient

Body measurements have been used as nutritional indices for many years. Height is the measurement taken from crown to heel after ensuring that the neck, hip joint and knees of the Patient are extended and weight is the heaviness of the person.

*Fig. 3.3.4: Measuring height*

To measure height and weight of a patient, the following equipment is needed:

- Scales with a height rod / height measuring apparatus
- Tape measures or measuring rod
- Weighing machine / Weight balance / Weighing scale
- Pen / Pencils / Chalk to mark
- Height and weight record sheet

*Fig. 3.3.5: Weighing a patient*

### Procedure for measuring height and weight

**To weigh a patient:**

- Explain the procedure to the patient being weighed.
- When weighing children, explain the procedure to the mother.

**To weigh an infant:**

- A clean paper is kept when weighing of an infant takes place by keeping the baby on the platform and noting the weight.
- Place the child on the platform.
- Read the weight after balancing and record it on the infant's chart.
- Tell the mother the recorded weight and show / tell how much weight the child has gained or lost.

**To weigh children and adults:**

- Balance the scale / weighing machine.
- Instruct the person to stand on the middle of the platform of the weighing machine.
- In case of a scale, move the bar to the right or left until the scale balances.
- Read the scale or the reading on the weighing machine.
- Record the weight on the chart immediately. Tell the person his weight.

**To measure the height of a new-born / infant:**

- Place the tape measure or measuring rod on a table or firm surface and place the infant alongside the measure. Hold the head and heel firmly and note the reading or,
- Place the infant on a white cloth or paper, hold the head and feet in a straight line; have someone mark the position of the head and heel; place the tape measure on the marked area and read the length.

*Fig. 3.3.6: Weighing Machine*

**To measure the height of school children and adults:**

- Instruct the person to stand against the height rod, with his feet together, with his back towards the height rod, arms and hands straight and head erect.
- Place a flat board or ruler on top of his head and read the figure appearing at the point where the ruler touches the head.
- Read out the height to the person and record it.

## Practical: Role Play

1. In groups of four prepare a role play on measuring vital body parameters as:
   - Body temperature
   - Blood pressure
   - Height and weight
2. You have 10 minutes to prepare your role plays.

## Tips

- The heart rate, blood flow, body temperature and the oxygen supply are described as the “Vital Signs”.
- The body temperature is normally measured using a thermometer.
- The BP apparatus or sphygmomanometers is used to measure the blood pressure.

## Exercise

1. How will you measure body temperature? What is the importance of monitoring body temperature?

   _____

   _____

   _____

   _____

2. How will you measure blood pressure?

   _____

   _____

   _____

   _____

# UNIT 3.4: Elimination

## Unit Objectives

**After completion of this unit, the participants will be able to:**

1. Explain the meaning for excreta disposal in human body
2. Explain the care to be provided in case of urine and bowel incontinence or patient with urinary catheter
3. Describe the process of observation of urine and stools for routine as well as special reporting

## 3.4.1 Managing Elimination Needs

Removal of body waste is called elimination. Some patients may not be in a state to move in order to eliminate their body wastes. Some may not even be aware of the need for elimination of their body wastes. How must you help such patients? Is there any special equipment that you must use to help such patients?

## 3.4.2 Equipment Used for Managing Elimination Needs

Most patients who are in a good medical condition can express the need to use the toilet and manage their needs themselves. However, many of them need some help to move to the toilet. For patients who are bedridden, their elimination needs can be managed by using various equipment.

Some of the equipment used are:

**Bed Pan**

A bed pan is used for patients who are bed ridden but are able to communicate their need to pass urine or defecate.

**Urinal**

A urinal is much like a bed pan but is meant only for a male. The urinal is shaped in a way that only a male patient may use it while still in bed and remain comfortable.

**Diapers**

Diapers are used for bedridden patients.

**Foley Catheters**

These are tube like equipment that are inserted directly into the urinary bladder and are used to empty the urine directly from the bladder.

On the basis of the patient's condition, the doctor would advise the use of the appropriate equipment. You must know the how to use the required equipment.


*Fig. 3.4.1: Equipment used for managing elimination needs*

## 3.4.3 Placing the Bed Pan for Use

In order to help a person with the bedpan, you must put the following items within easy reach of the patient.

- A basin with warm water
- Disposable gloves
- Toilet paper
- Towels
- Wash clothes

Steps are as follows:

**Step 1:** Tell the patient that you are helping him/her in using the bed pan which will further help him/her to overcome any fear or uncertainty.

**Step 2:** Try to lower the head part of the bed to a lowest position that a patient can bear. Also try to level the bed so that the patient can easily roll on his/her side.

**Step 3:** Enquire from the patient, on which side he/she is more comfortable.

**Step 4:** Put on the disposable gloves.

**Step 5:** Ask the patient to hold the rails of the bed so that they can stay to the rolled side.

**Step 6:** Bring the patient a warm bed pan which is rinsed in hot water and then dried. Bring it inserted in paper cover.

**Step 7:** Place the bed pan across the buttocks, to ensure the buttocks are under the curved edge of the bed pan.

**Step 8:** Ask the patient to sit back to ensure that the bed pan does not move from its place. Hold the bed pan till the time patient sit back to its place.

**Step 9:** Lift the head of the patient somewhat from the bed, so that patient can come in a sitting position, which will relax him/her.

**Step 10:** Provide some privacy to the patient. In addition, ensure that he/she has a call button nearby for contacting you.

**Step 11:** When the patient is done, answer his call accordingly. Carry the warm water basin.

**Step 12:** Take out the bed pan after its use.

## 3.4.4 Removal of Bed Pan after Use

**Step 1:** Lower the head of the bed to a flat position, if possible.

**Step 2:** Ask the person to turn over so that you can take away the bed pan.

**Step 3:** Grab the bed pan with one hand and carefully take off from the person's buttocks.

**Step 4:** If the person has had a bowel movement, use a washcloth and towel to clean the area using the appropriate cleansing methods as per your hospital's protocol.

**Step 5:** Place the bed pan on a chair and place a towel over the contents of the bed pan. Never place the bed pan on a side table or a bed table.

**Step 6:** Cleanse the person's buttocks or genital area first with toilet paper or wet wipes. If necessary, wash the anal area with soap and warm water. Dry thoroughly.

**Step 7:** Adjust the position and dressing of the patient. Keep the bedding in order.

**Step 8:** Open the windows to keep the air fresh and clean.

Elimination of wastes such as faeces and urine can lead to different types of infections. You must maintain hygiene while helping the patient in managing their elimination needs.

## 3.4.5 Precautions to be taken While Using Bed Pan

- Respond to the call of the patient quickly.
- Explain the process politely before placing the bed pan.
- Always wear gloves while helping the patient use the bed pan.
- If the patient complains of pain while urinating or if you observe any abnormality such as bleeding while passing urine or blood in the faecal matter, report it to the nurse or the doctor immediately.
- If you find any areas of redness or soreness on the skin of the patient near the buttocks or the genitals, report to the doctor immediately.
- Once the bed pan is removed and cleaned, fill it with warm soap water. Use a toilet brush to clean the pan thoroughly. You can also use a bleach to clean the bed pan. After cleaning the bed pan, sanitize it immediately.
- Maintain proper hygiene while managing the elimination needs of the patient. It is very critical in the prevention of many infections.

## 3.4.6 Using Urinals

Patients who are recovering from surgery or illness and cannot reach to a bathroom quickly are forced to ask for help when they feel the need to urinate.

*Fig. 3.4.2: Urinals*

**Step to use Urinals**

**STEP 1:** Collect equipment required for the procedure.

**STEP 2:** Put on safe hand gloves.

**STEP 3:** Share the procedure with the patient.

**STEP 4:** Choose a position that is comfortable for patient. If patient is not comfortable to stand on his/her feet, ask him/her to sit when using the urinal.

**STEP 5:** Tilt the patient ward slightly so that he can aim into the urinal.

**STEP 6:** Empty and clean the urinal after use.

## 3.4.7 Using Diaper

A person whose body is bigger than that of small babies wears an adult diaper. There are various situations when an adult need to wear diapers such as severe diarrhoea or dementia, mobility impairment, incontinence and so on. Some people have medical conditions due to which they have urinary or faecal incontinence, require diapers or comparative items since they are unable to control their bladders or bowel movement. Bedridden patients, including those with good bowel and bladder control, may wear diapers since they are unable to go to the toilet frequently or independently.

*Fig. 3.4.3: Diaper*

## Changing Diapers

**Step 1:** If the patient is soiled, you also want to have either wipes or washcloths to perform perineal care. Make sure at least one of the washcloths is dampened with warm water and another is completely dry. You need multiple washcloths if they had a bowel movement.

*Fig. 3.4.4: Changing Diapers*

**Step 2:** Wipe the patient's genitals thoroughly with the dampened washcloth and then pat them dry with the dry one. You don't want to leave moisture on the patient's skin or else it defeats the purpose. If they have a foley catheter, make sure you wipe around it as well as four inches up the tubing coming out of the urethra.

**Step 3:** With patients on bedrest, the best way to put an adult diaper on is to have them roll onto their side. An incontinence pad helps immensely if the patient can't roll on their own.

*Fig. 3.4.5: Changing Diapers*

**Step 4:** If they are able, ask the patient to grab the rail on the side of the bed that you are turning them, which will be the face you are on. If the bed doesn't have a rail, be very cautious. You don't want the patient rolling off the bed.

**Step 5:** Then grab the pad on the opposite side of you and slowly pull it upwards and towards you, assisting the patient to their side. Once they are in place, support the patient's back and bottom and put the pad back on the bed.

*Fig. 3.4.6: Cleaning Body*

**Step 6:** If they are soiled, wipe their bottom and, in the creases, around their bottom thoroughly with the wipes or dampened washcloth and pat dry with the dry one. Then place barrier cream on their bottom if necessary.

**Step 7:** Make sure the plastic side of the adult diaper goes on the outside of the patient. Most briefs have four sticky flaps, two on each end. Place that half underneath the patient's bottom in such a way that it will be directly in the centre once they roll back. Tuck the end closest to them underneath their hip as much as you can. The rest of the brief should be down by their legs.

*Fig. 3.4.7: Cleaning Body*

**Step 8:** Once it is in place, ask or assist them back flat onto their back. Then roll them the other way exactly how you did it the first time and pull out the rest of the brief.

**Step 9:** The other end of the brief down at their legs should then be pulled up between their legs towards the stomach. Lay it flat and wrap the sticky flaps over the end on the stomach securing the brief. Make sure it is wrapped very snug so it doesn't slip off.

## Tips

- Respond to the patient call quickly.
- Always wear gloves while helping the patient use the bed pan.
- If the patient complains of pain while urinating report it to nurse or doctor immediately.
- If you find any redness or soreness in the patient's skin inform it to nurse or doctor immediately.
- Maintain proper hygiene while managing the elimination needs of the patient.

# UNIT 3.5: Fall Prevention

## Unit Objectives

**After completion of this unit, the participants will be able to:**

1. Explain the care to be taken to avoid fall in high-risk patients
2. State measures to be taken to prevent falls
3. Explain how to act in event of a fall incident

## 3.5.1 Fall Prevention

Due to various reasons, patient's falling is a serious problem in the hospital. Some common challenges due to which the patients are vulnerable to falls in the hospitals are:

- New environment
- Illness
- Surgery
- Bed ridden
- Medications
- Treatments
- Various tubes and catheters

Falls are destructive to the patients and their family members. Further, a fall can result in fear of falling in future, downward spiral of reduced mobility, and function loss.

*Fig. 3.5.1: Patient falls*

A research study suggests that most of the patient fall in the hospitals can be avoided if the patient waits for help. Fall prevention measures require certain measures such as checking the patient on regular interval of time, ensuring that patient's personal possessions are easily accessible.

During the rounds, the flowing 5P check is required:

- **Pain:** Determine the pain level of the patient. Give a pain killer, if required.
- **Personal Basic Needs:** Offer help in using the toilet, food and other basic needs.
- **Position:** Ask and assist the patient in attaining a relaxed position or immobile patient in maintaining skin honour.
- **Placement:** Ensure that things such as phone, bell and reading material are easily assessable to the patient.
- **Prevent fall:** Ask the patient or their family member to turn on the call light whenever the patient needs to move out of bed.

### Importance of Fall Prevention

It supports in clinical decision making. Utilization of a regulated assessment guarantees that key risk factors are determined and executed.

- Fall prevention can be resource intensive therefore a targeted approach should be followed.
- It assists in planning care.
- It requires effective communication between healthcare workers and patients.

### Assessment of risk factors


*Fig. 3.5.2: Fall Risks*

Assessing key risk factors include:

- **History of falls:** Patients who have a history of falls are prone to more falls in future.
- **Mobility problems and use of assistive devices:** Patients who have a problem in walking or require a supplementary equipment for mobility are more likely to fall.
- **Medications:** Patients who are on an expansive number of physician-endorsed medicines, or patients who have been prescribed medicines which may cause sedation, misperception or orthostatic pulse changes are at a greater risk for falls.
- **Mental status:** Patients who are suffering, or have a history of suffering from delirium, dementia, or psychosis may be moody or temperamental, which puts them at a risk for falls.
- **Continence:** Patients who have urinary recurrence are always at a greater risk for falls. Other risks for falls include restricted mobility due to being fastened to gear, such as an IV pole, vision impairment and orthostatic hypotension.

## 3.5.2 Role of CFW (ACS) in Fall Prevention

In order to mitigate the risk of patient fall, a CFW (ACS) should:

- Identify the patient at risk for falls.
- Keep such patients closer to nurse's duty room.
- Hourly and close supervision is must.
- During bedside care, ensure patient's bed is lowered and only top two rails are in upright position.
- Offer visit to the bathroom every two hours.
- Keep reinforcing activity limits/safety precautions with patients and their family/friends.
- Assess if physical therapy is needed.
- Ensure use of proper assistive device to ambulate.
- Collaborate with other team members for a fall prevention plan.

**Safety measures to prevent fall**

- Tape down all area rugs.
- Remove unnecessary items from main thoroughfares.
- Hallways and stairways should be properly lighted especially during night as older patients need to use the washrooms more often.
- Non-slip mats should be placed in kitchen and bathroom. Non-slip mats greatly reduce the risk of falls.
- Suggest safety supports, like railing on the stairs or grab bars in the bathroom

## Tips

- In healthcare units, following fall prevention guideline need to be adopted:
  - Get the patient to be aware of the surroundings.
  - Do a mock test with patient on how to use call light.
  - Maintain call light within reach.
  - Put strong handrails in patient area of use.
  - Lock the wheelchair when in stationary motion.
  - Keep nonslip, comfortable, well-fitting footwear for the patient.
  - Floor surfaces should always be clean and dry.
  - Keep patient care areas in order.

## Exercise

1. Which patients are at risk of falls?

_____

_____

_____

_____

2. Mention any three risk assessment factors.

_____

_____

_____

_____

# UNIT 3.6: Dressing

## Unit Objectives

**After completion of this unit, the participants will be able to:**

1. Describe the techniques and procedures of dressing-up
2. Explain the correct way of maintaining clothing hygiene

## 3.6.1 Dressing the Patient

Patients might be unable to manage their own clothing needs during the stay in the hospital. In some cases, the patient is too weak to dress up. Also, a patient undergoing different medical procedures needs to wear clothes designed specifically for that procedure. Therefore, correct clothing of a patient is very essential. As a CFW (ACS), it is your duty to assist the patient in dressing. In case, the patient is very weak you must dress him/her yourself. But for this, you must first know the different types of hospital garments, the procedure to dress a patient, precautions to be taken and the steps to maintain clothing hygiene.

### Types of Hospital Clothing

The type of clothing a patient must wear depends on the needs of the patient. In many cases the clothes worn by a patient are designed based on the body area that needs to be examined. The most common type of hospital clothing that is used is a hospital gown. Based on the need of the patient, hospital gowns are classified as:

- Basic hospital gown
- Isolation gown
- Toddler gown
- Nursing gown

#### Basic Hospital Gown

This is the most common type of hospital gown and is used for patients whose upper body has to be examined. These gowns can be worn on the patient's regular clothes and are very roomy and comfortable.

#### Isolation Gown

Isolation gowns are used by patients who need extra protection. In patients where there is secretion of body fluids or if the patient's body is insensitive to infections, isolation gowns are the best choice.

#### Toddler Gown

Toddler gowns are designed for children and typically printed with cartoons and images. They are meant to make the child comfortable and cheerful.

**Nursing Gown**

Nursing gown is a special type of gown that is designed to facilitate the feeding of the child by a nursing mother.

## 3.6.2 Role of a CFW (ACS) While Clothing the Patient

- Check the type of clothing that needs to be worn by a patient.
- One of the most important principles of clothing is to prevent any injury or discomfort to the patient while clothing him or her.
- Always instruct the patient before you actually dress him or her up. Before you start to change the clothes of a patient, describe the process that would be followed and explain what needs to be done while changing their clothes.
- For patients who have suffered a stroke, one side of the body may be weak. Instruct such patients to undress the weak part first. While putting on a dress, it should be put on from the strong side first.
- You will need to put a sweater on the patient too to keep warm as poor blood circulation could make the patient cold.
- Put the patient's shoes or slippers on. Make sure the sole of the footwear is non-slippery.
- Try and make the patients wear their clothes themselves. This will help them manage their activities on their own.

## 3.6.3 Maintaining the Privacy and Dignity of the Patient

While dressing the patient the most important point to be kept in mind is maintaining their privacy. Some patients may not be able to dress by themselves.

You must take care of the following points while dressing the patient

- Collect and arrange the patient's clothes. Make sure you get all the under garments such as underwear, vests, briefs and socks.
- Let the patient choose what they would like to wear. If they cannot choose for themselves then, you need to pick clothes that are free of holes, and those with proper buttons and zippers. You may dress the patient in the restroom.
- When you do so, make sure you close the door for privacy.
- Even if the patient has a private room, close the bathroom door when the patient is inside the bathroom. This is to maintain the patient's dignity.
- Make sure you draw the curtains to maintain privacy while you dress the patient in bed.
- If the patient wears an adult brief, make sure you put this first. This is another aspect of dignity.
- Put on the socks or stockings on the patient, then the vests and then put on the top layer of clothes.
- Make sure you dress the patient the same way you would dress yourself. Remember, to maintain the patient's dignity at all times.

## 3.6.4 Maintaining Clothing Hygiene

Clothes plays an important role in personal hygiene. As the clothes worn by the patient come in direct contact with the body, they may be contaminated with germs. To prevent any infection, it is very important to change the clothing of the patient and dress him/ her with a clean piece of clothing. To do so, you must follow the given points:

- Change the patient's clothes every day. Innerwear is most likely to be contaminated as they come into direct contact with the body. So, change them every day.
- Change the clothing if it is stained due to the treatment procedure.
- Every patient's clothes must be washed separately.
- Ensure clothes are not shared between patients. During laundering, micro-organisms may spread from one set of clothing or linen to the other. So, laundry hygiene must be maintained.
- Patients must always be provided with clothing and gowns that are washed and that smell fresh and good.

## Exercise 

1. CFW (ACS) should check the type of clothing worn by patient.
   a. True
   b. False
2. While dressing the patient the most important point to be kept in mind is maintaining their privacy.
   a. True
   b. False
3. How will you maintain the clothing hygiene?

_____

_____

_____

_____

# UNIT 3.7: Grooming

## Unit Objectives

**After completion of this unit, the participants will be able to:**

1. Explain how to assist a patient in grooming

## 3.7.1 Help Patient in Grooming

This is probably one of the most important aspect in care activities, which effects patients feeling of emotional wellbeing.

### Importance of Patient Grooming

Personal hygiene includes the following:

- Bathing and Showering
- Hair, nail and foot care
- Dental and Genital care

## 3.7.2 Oral Care

Good oral hygiene should be practiced everyday

This is one of the most vital organs, we take our food from here and bad oral hygiene will cause several infections to stomach. So, you must consider this at utmost priority.

*Fig. 3.7.1: Oral Care*

### Maintenance of oral hygiene

A daily part of our routine is brushing the teeth and rinsing the mouth. These are the most common activities carried out to maintain oral hygiene as a daily habit. Maintaining oral hygiene depends on type of food the patient eats.

Ensure that the required material such as toothbrush, toothpaste and other such material are kept ready for the patient to use. Also, remember to replace these materials in case they get over.

### Role of a CFW (ACS) in maintaining oral hygiene

To maintain oral hygiene we use a toothbrush, toothpaste, mouthwash and dental floss. In addition to it, the CFW (ACS) should take care of following points:

- Speak in a gentle, soft and soothing voice when helping patients brush and floss.
- Avoid brushing the tongue as this can cause irritation in elderly patients. Instead, use a tongue scraper to clean the tongue.
- Wrap the toothbrush handle with a tape as it makes the toothbrush handle easy to hold.
- Teach patients to brush the eating surfaces using soft, circular motions.
- Instruct patients and care givers to replace toothbrushes every three months.
- If the patient is using a denture, remove the dentures. Clean them gently under running water or by brushing with a soft brush.
- Store dentures in cool water with patients name to avoid confusion.
- The various abnormalities that can be observed in the oral cavity include redness of the skin, bleeding of the gums or bad breath. Report these abnormalities to the nurse or a doctor immediately.

### Oral care of an unconscious patient

Oral hygiene helps to maintain the healthy state of the mouth, teeth, gums, and lips. Some clients require special oral hygiene methods because of their level of dependence.

### Effects of a neglected mouth

The mouth presents all requirements for bacterial growth such as warmth, moisture, and food supply from residual foods. It causes some local infections like:

- Gingivitis: Gums Inflammation
- Glossitis: Tongue Inflammation
- Root Abscess: Pus formation of the root of the teeth
- Stomatitis: Inflammation of the mucus membrane of the mouth
- Dental Carries
- Bleeding Gums

### Importance of Oral Care

Oral care is important to:

- Keep the mouth clean and moist.
- Keep the teeth and gums in good condition.
- Keep the oral cavity free from bad odours.
- Stimulate appetite.
- Prevent infection and tooth decay.

### Articles required for giving oral care

To perform oral care, a tray containing the following articles is required:

- Gauze pieces in a small bowl
- Container with artery forceps, swab sticks, tongue depressor and mouth gag
- Container with 1:8 hydrogen peroxide, Condy's lotion 1/6000(KMn04) Listerine/Betadine, Chlorhexidine, Gluconate, Boroglycerine, Vaseline, and Olive Oil
- Feeding cup with water
- Kidney tray and paper bag
- Small mackintosh with towel

*Fig. 3.7.2: Articles required for giving oral care*

### Procedure for performing oral care

Take a look at the steps to perform oral care:

- Explain properly the method to the patient or the relative.
- Give privacy.
- Position the patient so he or she is comfortable. Fowler's position should be followed.
- Spread the mackintosh and the face towel over the patient's chest.
- Place the kidney tray near patient's cheek.
- Arrange the articles.
- Always remember to wear gloves.
- Prepare the mouthwash or use the commercially available mouth wash solution.

- Take a piece of gauze and enwrap the artery forceps with it, especially the tips.
- Open the unconscious patient's mouth gently by pressing the lower jaw forward.
- Wet the gauze. Soak it with the cleansing agent and clean the inside of the cheeks and the tongue.
- Let the fluid flow through the corner of the mouth or clean with wet gauze sponges. Clean the patient's lips with the towel.
- Observe for tooth decay, coated tongue, cracked lips or any other abnormalities and report the same to the senior.
- Apply glycerine or any other emollients to the tongue, gums and lips.
- Remove the tray, mackintosh and towel.
- Ensure patient is at ease.
- Clean the articles and replace them.
- Wash your hands thoroughly.
- Record the procedure mentioning the observations made during the procedure.

## 3.7.3 Hair Care

Good hair care is an important aspect of personal hygiene.

Excessive hair needs to be trimmed and maintained properly and hair that has fallen off the patient should be cleaned. There are various methods that need to be followed for hair care of a patient. In this chapter, you will learn the steps to maintain cleanliness and hygiene of the patient's hair.

### Importance of Hair Care

The head and the face are the predominantly hairy regions of the body. In addition to these areas, hair is present under the armpits, chest, and genital areas of patients. The outer layer of skin on head is called the scalp.

Hair cells are embedded in the scalp and each strand of hair keeps growing during the life time of an individual. Different types of bacteria are present on the scalp and the hair. If the hair is not kept clean, it tends to become greasy and can smell bad. These conditions aid the growth of germs in the hair and lead to infections.

You must ensure that the hair is kept clean and excess hair is periodically removed to avoid any discomfort to the patient. Let us look at the different methods of maintaining the hygiene of the hair of a patient.

### Role of a CFW (ACS) in hair care

- Patients who can take a shower by themselves should to be told to wash their hair regularly.
- Shampoo is a special agent that can be used to clean the hair. You must motivate patients to shampoo their hair regularly.
- In case of patient's confined to the bed, you must shampoo the hair of the patient and keep the hair of the patient clean.

- Hair should be properly combed from time to time. You should assist the patient in combing the hair and keeping it clean.
- In the case of male patients, facial hair in the form of a beard or a moustache has to be shaved and trimmed according to the patient's choice.
- Excess hair in other regions of the body such as the armpits or the chest has to be removed according to the directions of the doctor.
- Hair is cut and shaved by barbers. Barbers can provide hair cutting services as and when requested.

Arrange for all the required equipment by the side of the bed, before you start cleaning the hair of the patient. The things needed include:

- A large pitcher of warm water
- Shampoo
- Bed Shampoo pan
- Towels and wash cloth
- Clean comb and brush

## 3.7.4 Steps for assisting a Patient with Hair care

The steps for hair care of a patient are as follows:

1. Cover the pillow with a towel or any protective cover, to keep it dry.
2. Untie the gown or loosen the bed clothing.
3. Put a towel under the person's neck and arms.
4. Put the bed shampoo pan under the person's head.
5. Place a washcloth over the person's eyes so the shampoo does not burn them.
6. Wet the hair of the patient first and then apply the shampoo.
7. Wash the hair of the patient until it is clean and shiny. It takes more rinsing for a female patient. Hair should be shampooed two to three times a week as it becomes dirty or greasy soon. However, before washing the hair of the patient, check with the doctor if it is fine to use a shampoo.
8. Gently dry the hair of the patient using a clean dry towel.
9. Now, help the patient comb the hair with a comb or a brush. Provide the patient with towels.

## 3.7.5 Shaving

Steps for shaving a patient are as follows:

1. In the beginning, the patient may just need to be reminded to shave. If an electric razor is being used, he may continue to shave for a longer period as it requires less skill and is safer.
2. If the patient begins to cut himself while shaving with the razor, it is time to take over the shaving.
3. Moisten the man's beard region with a cloth and apply the shaving cream.
4. Shave with small strokes in the direction of the hair growth. Be gentle across sensitive surface.
5. Rinse the area using a fresh wet cloth and after that, dry the skin. Use of after-shave lotion is a matter of choice.
6. Special pre-shave lotion meant for electric razors may be used if the patient is using an electric razor. Shave with firm circular motions.

**Shaving Tools and Accessories**

- Razor
- Shaving Cream
- Brush
- Trimmer
- Wax
- Lather Bowl
- Disinfecting Liquid or Spray
- Disposable gloves Disinfecting Liquid or Spray
- Disposable gloves

## 3.7.6 Steps to Maintain Nail Care

**Nail Care**

Nails should be kept short and clean as they tend to collect dirt and germs. Dirty fingernails spread infection.

Also, broken nails can lead to injuries, therefore shaping the rough edges of the nail is also important. A patient may be too weak to take proper nail care. You must ensure that nail hygiene of the patient is maintained.

**Common Methods of Nail Care**

Cutting and shaping of nails is very important for proper nail care. The finger nails are cut using a nail cutter or sharp scissors, straight across and then a nail file is used, if available, to round off the nail. During the morning bath, the nail care of hands and feet is administered as nails are softer and easier to trim after a bath. Provide the patient with towels and sheets for cleaning immediately after the procedure.

The things needed include:

- Washbasin
- Washcloth
- Hand towel
- Nail cutters
- Disposable bath mat and gloves

The steps to provide care for the nails are:

**Step 1:** Clean hands and keep the supplies within reach.

**Step 2:** Make the patient sit in chair and place a mat under patient's feet, and provide patient privacy.

**Step 3:** Fill the basin with warm water. Place the basin on a disposable mat and help patient place his feet into the basin.

**Step 4:** Soak the feet for 5 to 10 minutes. Re-warm the water if necessary.

**Step 5:** Trim nails straight across using a nail cutter and even with clippers.

**Step 6:** Round the finger nails to be smooth, without any jagged edges using a filer.

**Step 7:** Trim and clean toenails in the same way as for finger nails.

**Step 8:** Remove gloves and dispose them properly.

*Fig. 3.7.3: Nail Care*

### Finger, Toe nails and Other Foot Care

- People suffering from dementia may lose the ability to groom their own nails, especially their toe nails.
- Painful foot problems such as bunions or calluses are common in the elderly. However, someone with dementia might not be able to clearly communicate what is wrong.

## Tips

- Use mild soap and gentle strokes with a soft cloth when giving both to the patient.
- Rinse the skin well and then dry it with a soft towel.
- Use bland lotion to moisturise the skin do not use alcohol base lotion on skin. Alcohol dries the skin.
- Keep a time track sheet to monitor the position of the patient.
- Change the patient's clothes every day.
- Every patient's clothes must be washed separately.
- While brushing patient's teeth various abnormalities can be observed in the oral cavity. Report these to nurse or doctor immediately.

## Exercise

1. What are the different clothing principles?

_____

_____

_____

2. Why is it important to maintain oral hygiene?

_____

_____

_____

3. List the tips for hair care.

_____

_____

_____

# UNIT 3.8: Special Procedures

## Unit Objectives

**After completion of this unit, the participants will be able to:**

1. Explain the role of CFW (ACS) during special procedures while assisting nurse/physician:
    - Application of heat and cold
    - Administering Oxygen
    - Suctioning
    - Catheterization
    - Intravenous Observations
    - Enema
    - Specimen collection
    - Medicine dispensing
    - Feeding through Ryle tube

## 3.8.1 Heat Application

Both heat and cold can help reduce pain. However, it can be confusing to decide which is more appropriate at any given time. These basic rules may help:

- Use cold for acute pain or a new swollen/inflamed injury.
- Use heat for chronic pain or an injury that is a day or more old.

### Purposes of heat applications

- Promote healing and comfort
- Reduce tissue swelling

### Results of heat applications

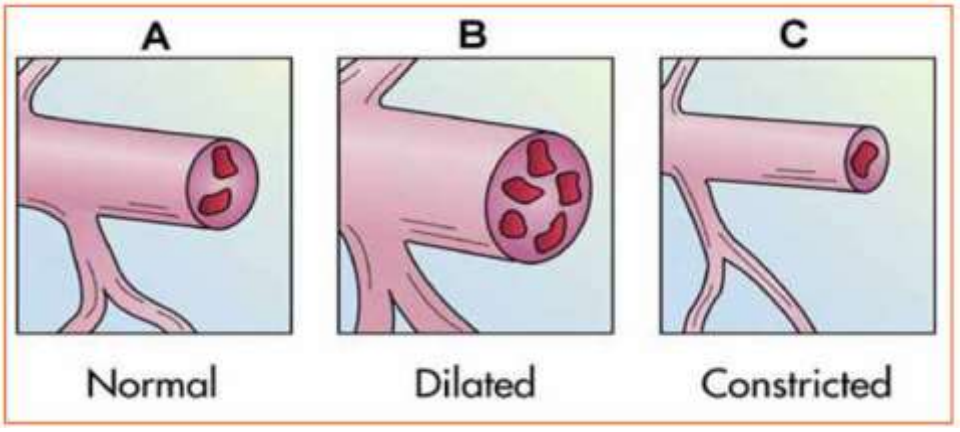



*Fig. 3.8.1: Results of heat applications*

### Local Effects of Heat

- Vasodilatation and increases blood flow to the affected area
- Bringing oxygen, nutrients, antibodies, and leukocytes
- Promote soft tissue healing
- Used for client with joint stiffness, low back pain
- Sedative effect
- Relieves pain, relaxes muscles, promotes healing, reduces tissue swelling, decreases joint stiffness
- When applied, blood vessels dilate, causing increased blood flow, increasing oxygen and nutrition to area and removing excess fluid from tissues

### Complications

- Burns (pain, excess redness, blisters, pale skin)
- Excessive peripheral vasodilatation
- Drop in blood pressure
- Fainting attack

### Systematic effects of Heat

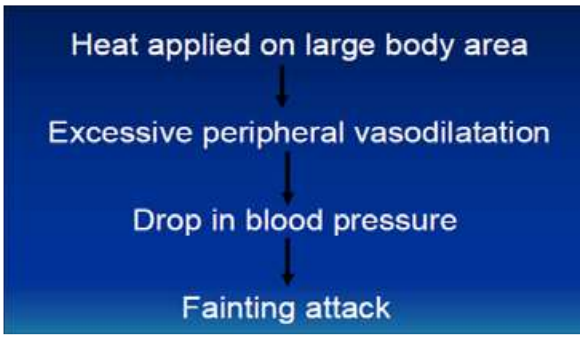



*Fig. 3.8.2: Systematic effects of heat*

### Application of Heat and Cold

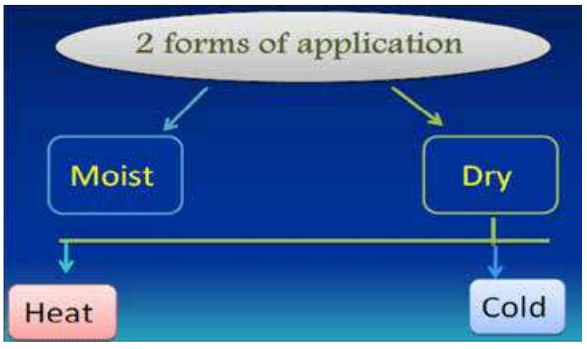



*Fig. 3.8.3: Application of Heat and Cold*

**Moist Heat Applications**

- Water in contact with skin
- Water conducts heat
- Has greater, faster effects than dry heat
- Penetrates better
- Hot compresses
- Hot soaks
- Sitz baths

**Local Effect of Cold**

- Lowers the temperature of the skin and underlying tissue
- Vasoconstriction
- Decrease capillary permeability
- Slow bacterial growth
- Decrease inflammation
- Local anaesthetic effect

**Systematic Effects of Cold**

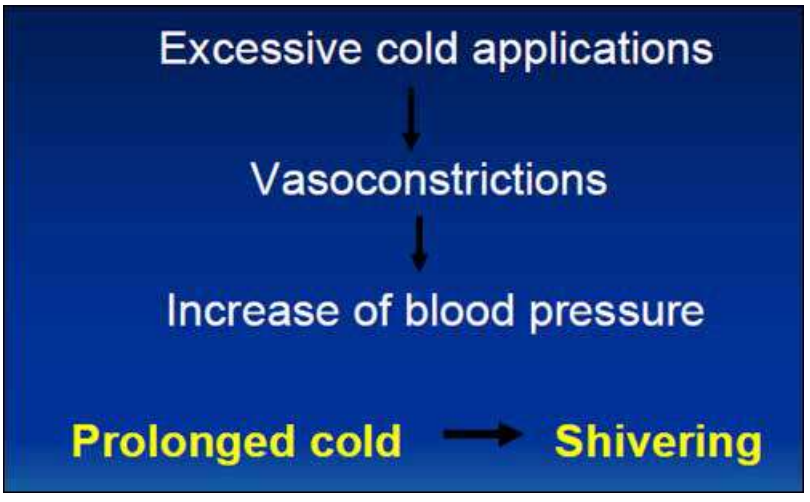



*Fig. 3.8.4: Systematic Effects of Cold*

**Cold Applications**

- Complications of Pain, burns, blisters, Cyanosis
- Persons at risk
- Fair skinned
- Those with mental or sensory impairments
- High risk for elderly or very young

### Contraindications to the use of cold

- Open wound (cold can increase tissue damage by decreasing blood flow to an open wound)
- Impaired circulation (cold can further impair nourishment of the tissue)
- Allergy and hypersensitive to cold application
- Some people react by decrease BP
- Inflammatory response (swelling, joint pain)

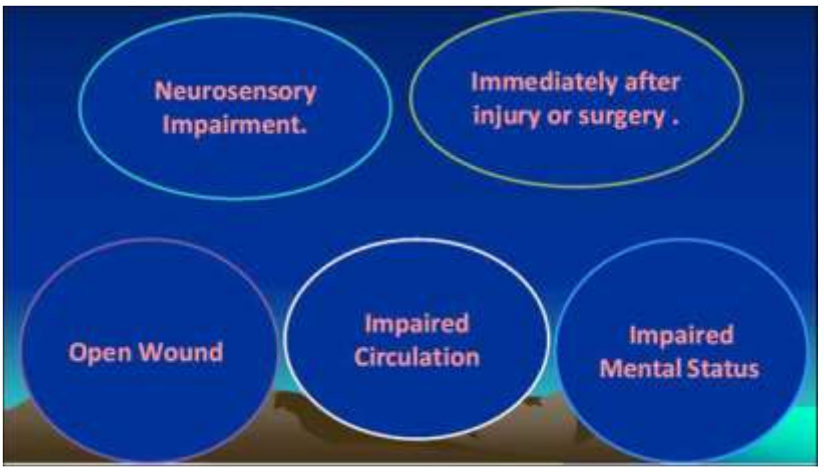



*Fig. 3.8.5: Contraindications to the use of cold*

### Contraindications to Use Heat and Cold

- The first 24 hour after traumatic injury
- Active haemorrhage
- Non-inflammatory edema
- Localized malignant tumour
- Skin disorder
- Open wound
- Allergy or hypertensive to cold

| Description | Temperature | Application |
|---|---|---|
| Very cold | Below 15C | Ice bag |
| Cold | 15-18 C | Cold packs |
| Cool | 18 – 27 C | Cold compresses |
| Tepid | 27 – 37 C | Alcohol sponge bath |
| Warm | 37 – 40 C | Warm bath |
| Hot | 40 – 46 C | Hot soak, hot compresses |
| Very Hot | Above 46 C | Hot water bag for adult |

*Fig. 3.8.6: Contraindications to Use Heat and Cold*

**Methods of Applying heat and cold**

- Hot water bag (bottle)
- Hot and cold packs
- Electrical Pads
- Ice Bags
- Compresses
- Soak
- Sitz Bath or hip bath
- Cooling Sponge Bath

**Procedure of heat and cold applications**

- Understand the patient's condition.
- Select the temperature on the basis of patient status and agency policy.
- Thoroughly explain the procedure and benefits to the patient.
- Assess patient's status before during and after treatment is performed to prevent injury.
- Document the effects of therapy.

## 3.8.2 Emergency Oxygen Management

**Assessing patients**

- High concentration oxygen needs to be given to patient who are crucially ill and this should be regularly monitored and recorded in patients chart. A close watch needs to be kept on all vital signs including the oxygen concentration, blood pressure, pulse, temperature and heart rate.
- In all the locations where emergency oxygen is given, pulse oximetry should be accessible and crucially ill patients should always be monitored.

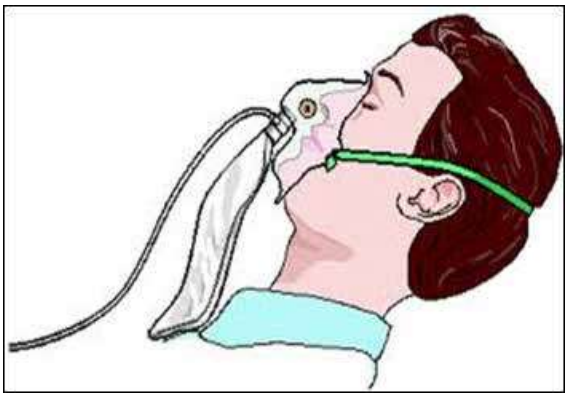


*Fig. 3.8.7: Oxygen administration*

**Oxygen administration**

- A trained and experienced member of staff should only perform this action.
- Always use right devices and keep a track on the rates to reach to desired saturation.
- Reduce the levels as the oxygen saturations reaches the desired range.
- Remove it from the drug chart once the levels are normal.

## 3.8.3 Suctioning

Suctioning removes excess discharge from mouth and throat (oropharynx), nose and throat (nasopharynx), and windpipe (trachea) by using a mechanical device (Suction machine).

Indications for Suctioning: Used when a patient is unable to clear the airways by coughing:

- Frequent cough
- Visible secretions
- Gurgling noise which is quite audible while breathing
- Blockage of upper airway or gastric secretions

**Operating the Suction Machine**

- Start by plugging the machine.
- Ensure tubing is on.
- Lid to the collection jar should be tightly closed and attach the extension.
- Turn on the machine and bend the extension tube to block the air flow. In case there is no movement in the pressure gauge recheck connections, check the leaks.
- Observe the pressure gauge, and then set the gauge pressure at the desired level using the control dial.
- Once you set the pressure, connect the device (Suction Tip) to the suction extension tubing.

**Precautions: Each CFW (ACS) should be trained to understand**

- Importance of suction
- To differentiate the type of suction required (oral vs. nasal tracheal)

They should have deep knowledge of what needs to be done when, when to pre-oxygenate, perform normal saline instillations, hyper inflate the lungs by resuscitator bag and suction.

## 3.8.4 Catheterisation

Catheters are hollow, slightly flexible tubes, which are used to collect urine from the bladder and come in various sizes and types.

Catheters can be made of:

- Rubber
- Plastic (PVC)
- Silicone and Latex

Catheters are usually essential for patients who can't empty their bladder. In the event that the bladder isn't emptied, urine can collect and develop pressure in the kidneys. The pressure can lead to kidney failure, which can be risky and may result in permanent damage to the kidneys.

Most of the catheters are essential until the patient recaptures the competency to urinate on their own, which is generally a brief timeframe. Elderly individuals and those with perpetual injury or serious sickness may need to utilize urinary catheters for a longer amount of time and occasionally on a permanent basis.

**Applying Catheter**

- Collect the equipment.
- Describe the process to the patient.
- Help the patient to attain a supine position, in which the legs should be spread but the feet should be together.
- Ensure you have worn sterile gloves.
- Open the catheterization kit along with the catheter.
- Check whether the patency of the balloon is as expected.
- Cover the catheter's distal portion (2-5 cm) with the lubricant.


*Fig. 3.8.8: Lubricate the catheter*

- Apply sterile drape.
- Utilizing dominant hand to deal with forceps, wash down periurethral mucosa using a cleansing solution. Wash down front to back, inside to out, one swipe per swab, and dispose of swab far from sterile field.

- Using the gloved hand, pick up the catheter. Determine the urinary meatus and then insert the catheter gently 1-2 inches in where the urine is detected. Inflate the balloon with the right quantity of the sterile liquid.

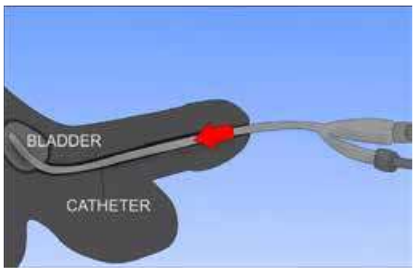



*Fig. 3.8.9: Put the catheter*

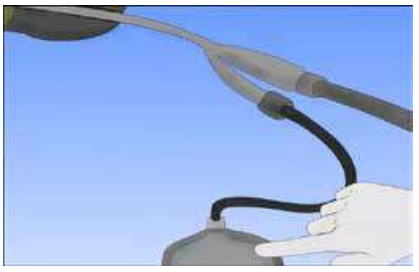


*Fig. 3.8.10: Inflate the balloon*

- Pull the catheter gently till the inflated balloon is snugged against the bladder neck. Associate the catheter with the drainage system. Place the catheter to abdomen or thigh, without putting any pressure on the tube.
- Put the drainage bag below the bladder level. Check the function of the catheter, amount, colour, odour and urine quality. Take out the gloves, dispose the equipment properly and wash the hands with an antiseptic. Report the size of the inserted catheter, quantity of water in the balloon, and the patient's response to the process to the nurse or the supervisor.

## 3.8.5 Ryle's Tube

A nasogastric tube (NG tube) is a unique tube that carries food and drug into the stomach via nose. It helps in feeding and for proving additional calories to the patient. Great caution is needed for feeding bag and tubing to work properly. It is also important to ensure on the skin around the nostrils with the goal that it doesn't get irritated.

**Flushing the Tube**

This helps in removing any agents stuck inside the tube after feeding, do this as often or as recommended.

STEP 1: Wash your hands well with soap and water and put on a pair of disposable gloves.

STEP 2: Explain the procedure to the patient.

**STEP 3:** Position the patient: After the feeding is finished, add warm water to the feeding syringe and let it flow by gravity.

**STEP 4:** Examine the nostrils.

**STEP 5:** Measure the tube. Measure the necessary tube length by drawing the NG tubing across the outside of the patient's body.

**STEP 6:** Lubricate the tube

**STEP 7:** Insert the tube into the chosen nostril.

*Fig. 3.8.11: Flushing the Tube*

- Ask patient to swallow.
- Change the position or reattach the plunger to the syringe in case of obstruction.
- Do not press all the way down or press fast.
- Remove the syringe.
- Close the NG tube cap.

### Taking Care of the Skin

Follow these universal guidelines:

- Clean the tube and skin around it after every feeding
- In case you need to remove a bandage or dressing, you can use any kind of mild or lubricant, but make sure you are always gently while removing either if these
- Use the other nostril in case the first one shows signs of redness or irritation

## 3.8.6 Enema

This is done before any medical examination, procedure or in case of constipation by injecting fluid into the lower bowel through rectum. Most commonly used is a cleansing enema (also called a soapsuds enema).

### Enema Administration

1. Gather your supplies and prepare for enema

*Fig. 3.8.12: The enema kit*

2. Fill the enema bag if using.

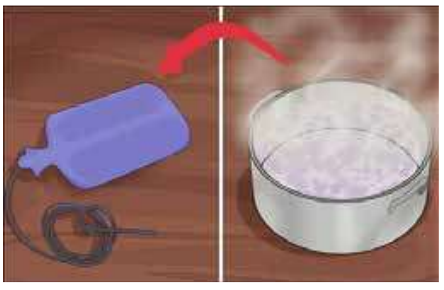


*Fig. 3.8.13: Filling Enema*

3. Prepare the enema tube.

*Fig. 3.8.14: Preparing Enema*

4. Ask the patient to lie down and insert the enema tube into rectum.

*Fig. 3.8.15: Inserting Enema*

5. Allow the fluid to enter rectum.
   Wait for all the fluid to enter the rectum and ask assist patient to evacuate.

*Fig. 3.8.16: Inserting Enema*

**Different solutions used in enemas:**

- Tap water enemas should be given in small volumes as this can be hypotonic.
- Harsher soaps should never be used for enema, inside soap-suds or pure castile soaps should be preferred.
- Oil retention enemas help soften the stool, making easier to pass it. Adults' dosage is 150 ml and children approx. 75 ml.
- Powdered milk and molasses are widely used for constipation.
- Coffee enemas help detoxify and clean the bowel.

*Fig. 3.8.17: Tap water enema*

*Fig. 3.8.18: Coffee enemas*

## 3.8.6.1 Types of Enemas

The different types of enemas are:

1. **Large Enemas**
   - Purgative enema is given to purge / catharsis (cleanse) and perform evacuation of the rectum, e.g., soap and water enema (500 -1500 ml) (Temperature 37.2ºC, one ounce of soap in 500 ml of water).
   - Cleansing enema is given for mild cleaning of the bowel, e.g., with normal saline (2 teaspoons of salt in one litre of water).
   - Carminative enema is given to relieve distension and expulsion of gases, e.g., Turpentine enema (2 teaspoon/litres of soap and water enema).
   - Asafoetida enema (2 teaspoon/litres of soap and water enema).
   - Anthelmintic enema is given for the expulsion of worms, e.g., hypertonic saline for threadworms (2 teaspoon / 500 ml of water).
2. **Small Enemas**
   - Glycerine enema is prepared by mixing 100 ml of water with 100 ml of glycerine (in the ratio of 1:1)
   - Olive Oil / Sweet Oil enema is prepared by mixing 100 ml of water and 100 ml of olive oil / sweet oil.
3. **Retention Enema**
   - As a nutrient enema with glucose (1 oz of glucose / 500 ml of normal saline temperature -400C).
   - Normal saline enema (1 teaspoon of common salt into 500 ml of water) for replacement of fluids in burns, haemorrhage, dehydration etc. (temperature 40o C).

### Purposes of an Enema

Enemas are used to:

1. Expel gas and farces
2. Stimulate peristalsis
3. Administer medication
4. Aid in diagnosis
5. Provide nutrition

### Procedure to induce Enema

- Wash your hands and explain the procedure to the patient.
- Bring the equipment to the bedside and screen the unit.
- Put on clean gloves and place the patient in the left lateral position with buttocks resting on the edge of the bed. Remove the pillows. Roll the draw sheet close to the patient.
- Hang the irrigating can on the irrigation stand. It should not be more than 18" from the level of the bed.
- Remove the top bedding except the top sheet. Roll back the patient's clothing towards the waist.
- Connect the rectal tube to the glass connection. Pour fluid into the can. Loosen the screw clip and expel the air by allowing the same solution to run through the tube.
- Lubricate the tip of the rectal tube 4". Separate the buttocks with the thumb and four fingers of the left hand, using two cotton swabs.
- Insert the tube gently, about 4" and let the fluid flow in. Press both buttocks together so that the tube is secured in position.
- Encourage the patient to relax and ask the patient to take deep breaths.
- If the patient complains of mild discomfort during the procedure, clamp the tube for a few minutes and then continue slowly. Discontinue the procedure if the patient complains of severe discomfort.
- Clamp the tube before can gets emptied, Grasp the catheter near the anus and withdraw the catheter gently after informing the patient. Disconnect the rectal tube and place it in the kidney tray. Encourage the patient to hold the fluid for another 5 - 10 minutes. Turn the patient on his back and give him a pillow.
- Offer a bedpan and let the patient empty his bowel. Patient could be left alone unless he is too sick. Give a second bed pan and finish the procedure of perinea care.
- Clean and leave the patient dry and comfortable.
- Make sure that the mackintosh is dried of any fluid and pull and tuck the draw sheet.
- Note the patient's reaction, amount, colour and consistency of the outcome and record the same on the chart, with date, time and result.
- Wash all the articles with soap and water and rinse well. Run water through the eye of the tube and make sure that it is cleaned well. Boil the rectal tube for 5 minutes by putting it into boiling water or send it for autoclaving. Reset the tray and keep it ready for the next use.

## Tips

Before starting any special procedure make sure:

- To wash your hands
- Explain the procedure to the patient
- Collect all the necessary equipment and supplies for the required treatment
- Clean and leave patient in a comfortable position after the treatment
- Clean and disinfect all the equipment.
- Wash your hands and dispose all the waste properly.

## Exercise

1. Which of the followings are the moist heat application?
   a. Water conducts heat
   b. Hot soaks
   c. Penetrates better
   d. All the above

2. Suctioning is a procedure that removes excess secretions from the mouth and throat (oropharynx), from the nose and throat (zA), and from the windpipe (trachea) using a mechanical aspiration device (Suction machine).
   a. True
   b. False

3. What are the steps of flushing the tube?

   _____

   _____

   _____

   _____

4. What are the methods of applying heat and cold application?

   _____

   _____

   _____

   _____

# UNIT 3.9: Observing and Reporting

## Unit Objectives

**After completion of this unit, the participants will be able to:**

1. Explain the importance of observing and reporting to authority for said or unsaid findings, if any
2. Explain the importance of verbally informing the person in authority

## 3.9.1 Observing and Reporting

A CFW(ACS) needs to be aware of changes related to the patients. These changes may include change in patient's condition, change in medication, change in doctor, change in care plan availed. All these changes and any other important changes have to be carefully observed, documented and reported to the appropriate authorities (like doctor, relatives, Home Health Service Provider, etc.).

The following information should be documented at an initial appointment:

- Date and time of occurrence of service
- Details of illness
- Appropriate physical examination, evaluation and diagnosis
- Options and treatment used e.g., clinical observations results and prescribed medication
- Investigative/therapeutic orders/plan
- Signature, surname and initials, and designation of the clinician.

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.

**Health assessment note**

- Referral source and reason
- Preferred name and age
- Type of disease
- Date of diagnosis
- Current signs and symptoms/issues

## Tips

- An approval taken by the patient after explaining the treatment plan to him. It can be:
  - Verbally
  - In writing
- A valid consent should be voluntary and informed, and the one taking consent should be some authorized personnel

- Effective documentation should be:
  - Clear, concise and accurate
  - Contemporaneous with the events recorded in chronological order
  - Complete
  - Comprehensive
  - Collaborative and person-centric
  - Confidential

## Exercise

1. Which of the following information should be documented at an initial appointment:
   a. Medication prescribed
   b. Relevant history of the illness
   c. Diagnostic and therapeutic orders/plan
   d. All the above
2. Consent to treatment is the principle that a person must give their permission before they receive any type of medical treatment or examination.
   a. True
   b. False
3. The most important aspect that a CFW-HCS has to observe and record is the visit to the doctor or hospital.
   a. True
   b. False

# UNIT 3.10: Consent, Documentation & Records

## Unit Objectives

**After completion of this unit, the participants will be able to:**

1. Explain importance of taking consent while assisting the patient
2. Describe the importance of verbal information to the doctor in charge
3. Explain the importance and guidelines for documentation of different observations and informed consent of the patient
4. Explain uses and importance of various records in healthcare set up & how to obtain information from them at the time of follow up or during research activities

## 3.10.1 Consent

It is a principle that an individual must give permission before receiving any kind of medical care or check-up.

This should be done as per an initial explanation by a clinician. Consent is needed from a patient's side irrespective of the type of treatment required.

Medical ethics and the international human rights law include the principle of consent as its vital component.

The consent can be provided in two ways. They are:

- **In a verbal manner:** for example, by saying that they are fine with having an X-ray done.
- **In a written form:** for example, by filling and signing a consent form for a surgical procedure.

A consent can be considered to be credible if it is voluntary and informed, and the person who is consenting should have decision making capacity.

These can be further explained as follows:

- **Voluntary:** The person who requires treatment should give the consent on his own free will without any pressure or influence by the medical personnel, friends or family.
- **Informed:** The medical staff should provide all important information to the person which includes the advantages and risks involved, alternative treatments and the outcome of avoiding the prescribed treatment.
- **Capacity:** The person should have the capacity to assimilate all the provided information and analyse it to take a well-informed decision.

The healthcare personnel who are treating the patient directly should get the required consent.

In case a person is going to get a major medical procedure, such as an operation/surgery, then their consent should ideally be taken in advance. This is done to ensure that the patient had enough time to accept the decision and agrees to it, and they have time to come up with queries and get them resolved in time. Also, this helps them give time to change their decision if needed.

**When consent is not necessary**

Some exceptions when treatment does not require consent are:

- Emergency treatment, that is, the person is unable, not in a condition, to give consent.
- During an operation or surgical procedure, as the need of the hour, an additional/extra procedure/treatment is required to treat a life-threatening issue that was not mentioned in their initial consent.
- In case the patient has a serious mental condition such as bipolar disorder or dementia and hence is not in the capacity to give consent.


*Fig. 3.10.1: Consent*

## 3.10.2 Reporting and Documentation

It is important to maintain proper and accurate documents for all patient records. The documentation helps patients in case the care giver changes or if they want to refer to previous treatments and diagnosis. The documentation also serves the purpose of evidence in case of legal matters/issues.

As a CFW (ACS), you should document every formal/informal interaction with a patient.

Some points to remember while maintaining and ensuring that the documentation to be effective are:

- Clear, concise and accurate
- Record the events in chronological order based on the time period
- Complete
- Comprehensive
- Collaborative and patient-centric
- Confidential

Documentation can be:

- Hand-written or electronic records, such as email and faxes
- Audio/video tapes
- Images, photographs and diagrams
- Charts marking observations or checklists
- Clinical anecdotal notes or personal reflections
- Incident reports

The main purpose of documentation is to:

- Give a full report of the care given and care planning for the future and give details about the health condition and treatment.
- Serve as evidence indicating that the medicines were administered timely, with consent and completed as prescribed.
- Prove that the care provider performed his/her duties to the fullest and as per standards.
- Provide a record of the communications or interactions with health professionals.

**PARTICIPANT INFORMED CONSENT FORM (PICF)**

Protocol / Study number :_____
Participant identification number for this trial: _____
Title of project:_____
_____
Name of Principal Investigator: _____Tel.No(s).____
The contents of the information sheet dated that was provided have been read carefully by me / explained in detail to me, in a language that I comprehend, and I have fully understood the contents. I confirm that I have had the opportunity to ask questions.

The nature and purpose of the study and its potential risks / benefits and expected duration of the study, and other relevant details of the study have been explained to me in detail. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason, without my medical care or legal right being affected.

I understand that the information collected about me from my participation in this research and sections of any of my medical notes may be looked at by responsible individuals from AIIMS. I give permission for these individuals to have access to my records.

I agree to take part in the above study.

---------- Date:
(Signatures / Left Thumb Impression) Place:

Name of the Participant: _____
Son / Daughter / Spouse of:_____
Complete postal address: _____

This is to certify that the above consent has been obtained in my presence.

---
Signatures of the Principal Investigator Date:
Place:

1) Witness – 1 2) Witness – 2

---------- ----------
Signatures Signatures

Name: Name:

Address: Address:

**NB Three copies should be made, for (1) patient, (2) researcher, (2) Institution**
**(Investigators are advised to prepare the translation in simple understandable Hindi on their own.)**

*Fig. 3.10.2: Sample patient Consent Form*

## Tips

- All the observations which are not considered normal are to be documented and reported immediately to the relatives and/or hospital, if required.
- Observations must be recorded in a timely manner.
- Do not use pencil or ink that can be erased.
- Keep all medical records in a safe and secure place.
- Medical records are confidential. Do not tell anyone unless they are taking care of the patient.
- Do not use any abbreviation unless they are accepted for use by hospitals or doctors tending to the patient.

# UNIT 3.11: Patient's Rights & Environment

## Unit Objectives

**After completion of this unit, the participants will be able to:**

1. Enumerate patient's rights
2. Explain the role of CFW (ACS) in maintaining patient's rights

## 3.11.1 Rights of a Patient

As a CFW (ACS), you have to impart certain information about patients' rights to patients and caregivers. Tell your patients that you want their experience to be excellent.

As a patient, you have the right to:

- Get kind, compassionate and respectful care in a safe, secure environment, free from all forms of abuse, harassment, neglect and mistreatment.
- Be treated with respect and regard for privacy, personal values, and beliefs, spiritual and cultural traditions.
- Be informed of rights and the policies both verbal and written in which you or your representative understands.
- Consultation, examination, treatment and case discussion are confidential.
- Receive timely and qualified care in a setting appropriate to Healthcare needs.
- Receive referrals to staff and services on time, consistent with quality professional practice.
- Access protective and advocacy services in cases of abuse or neglect.
- Get knowledge about professional status of the care giver.
- Participate in decisions of your care/treatment as per your desires and understanding.
- Get information about your health, diagnosis, prognosis, treatment, benefits and risks of treatment.
- Refuse care, treatment and services, to the extent permitted by law.


*Fig. 3.11.1: Rights of a patient*

## 3.11.2 Ethical Aspect of Legal Rights

- Right to know the facts about your condition; get proper explanation for your medical records; and can ask adverse effects of the particular prescribed drug to doctor.
- Doctors must get your consent to make physical touch for examination purpose.
- You can investigate on doctor's qualifications.
- Patient have a right to confidentiality regarding an illness.
- A doctor must inform the details of medical treatments that they will do on you and their side effects. If you're being unconscious or for some other reasons, your nearest relatives must be informed before they consent to the operation.
- In case of any emergency situation on discharge or moving to another hospital, you must be informed on the reasons and you have rights to choose hospitals of your choice by consulting physician.

## 3.11.3 Patient Safety and Comfort

In order to ensure patient safety and comfort, some basic safety precautions and general guidelines are to be followed by a hospital staff inside the premises:

- Smoking is strictly restricted at the health care premises. It can be both a health and fire hazard.
- Notify the nurse before you are leaving.
- Inform the nurse know if patient has dentures, hearing aid and other prosthetic devices. Store them properly when not in use, otherwise they could be disposed of accidentally.

- Always inform any accidents immediately to the concerned staff so that it can be taken care of promptly. Examples: spills, broken glass
- Any form of drug such as alcohol is strictly prohibited at all the health care premises. Security Staff should be informed about all potential substance abuse problems so that they can help management to rectify any potential behaviour problems.
- Special care should be given to the patients receiving oxygen. Electrically-operated equipment and aerosol items are not allowed in these areas. Smoking while on oxygen or near an oxygen tank is dangerous and prohibited.
- Rest is a very important part of the healing process. To ensure patient, get the downtime that they need, visiting hours need to be followed as per the hospital guidelines to provide a peaceful environment during patient's stay.

## Exercise

1. As a CFW (ACS) you have to, at times, explain the ethical aspects of the rights that a patient has.
   a. True
   b. False
2. Which of the followings are the rights of patients?
   a. In case of abuse or negligence take help of protective and advocacy services
   b. Receive timely and qualified care in a setting appropriate to healthcare needs
   c. Receive referrals to staff and services in case of abuse or neglect
   d. All the above
3. What are the ethical aspects of legal rights?

_____

_____

_____

_____

# UNIT 3.12: Patient Safety

## Unit Objectives

**After completion of this unit, the participants will be able to:**

1. Explain the correct way to handle hazardous situations safely
2. List the various electrical safety measures
3. List the various fire safety measures

## 3.12.1 Overview

Ensuring patient safety is the most essential feature of patient care. We cannot stop accidents permanently. But we can prevent them by standard instructions and precautions. Accidents can cause injury to any person in the healthcare and can damage hospital properties.

## 3.12.2 Promoting a Safe Working Environment

Always follow the guideline and procedures provided by your organisation. Before you begin work always:

- Eliminate the things that can risk our life.
- Work in accordance to your own profile.
- Seek help from supervisors when necessary.
- Check and use any risk assessments. Analyse surroundings and equipment for safety and check for its quality and errors to avoid accidents. Request for repair or service if necessary.
- Keep your patients' needs and choices in mind while ensuring safety to him/her, yourself and other staff or family members.
- Report any miss in health and safety polices as provided by your organisation or followed by law.

## 3.12.3 How to Reduce Risk

To reduce risk, you must:

- Be healthy and hygienic.
- Always update your family/ or friends about your whereabout.
- Team work is very important to reduce risks.
- Make sure only authorised people are present at your workplace.
- Follow necessary protocols while doing dangerous activities including:
    - Moving and handling techniques
    - Storing equipment, materials and while dealing with spillages or removing waste

- Serious and immediate actions are required if there is any problem in the following factors:
  - Security issues
  - 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.
  - Check for patients and others including family carers who may need help.
  - Document all the emergencies and accidents accurately based on the organization's policies.

## 3.12.4 Electrical Safety Measures

Follow electrical safety measures by doing the following:

- Monitor the working condition of all equipment and perform constant service checks on the same.
- Electrical equipment needs to be placed away from the water prone areas like bath tub, washing area.
- Never remove a plug from a wall by pulling it through cord, instead pull the socket.
- Try not to over-burden an electrical outlet.
- Do not crimp electric strings; this may cause the fine wires inside the rope to break.
- Duplicate or low-quality equipment should not be used. Follow protocols to get the appliance evaluated by medical maintenance.

## 3.12.5 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. With all fire safety equipment and instructions, fire may occur. Hence, healthcare facilities should have regular fire drills to teach people safety from fire.
   - Needed health care staff skills are:
     - Fire prevention
     - Know the usage and location of fire alarm
     - Fire extinguisher's location
     - Aware of emergency exits
     - Evacuation procedures
2. Oxygen supports fire. Use signs to provide use of oxygen. Any fire related activities are strictly restricted where oxygen is administered to the patient.

3. If a fire occurs, you need to:
   - Switch on fire alarm.
   - Make sure oxygen, lights and other electronic equipment's are switched off.
   - Help patients who need emergency help.
   - Notify management about the fire location.
   - Close the door and windows to reduce ventilation.
   - Use fire extinguisher before the experts arrives.
   - Post a guard to coordinate with the fire department.

## 3.12.6 Home Safety Measures

Safety measures to be followed for patient care are:

| Identify the patients who are at a risk for injury. A few of them are: | Secure the ones at a risk for injury. Falls can be prevented by: | Prevent burns and scalds by: |
|---|---|---|
| • Vision or hearing impaired patients.<br>• Old age patients.<br>• Impaired mobility patients (wheelchairs, walkers, and partial paralysis).<br>• Patients having a history of substance abuse.<br>• Patients taking sedative medications | • Putting the bed in a lower position.<br>• Raising the side rails up when the patient is not getting any bedside care.<br>• Suggesting the patient to wear low-heeled well fitted shoes while walking.<br>• Ensuring that anti slippery strips or mats are tacked at the bottom of bathtubs and the shower floors.<br>• Ensuring that bathtubs have stiff handrails and shower stool is in place when needed.<br>• Warning the patients and their visitors when the floors are wet and slippery. Additionally check that signs are posted. | • Putting tea, coffee, soup and other hot liquids where the patient can reach them effortlessly and securely<br>• Assisting the patient if there is any doubt about whether he can safely regulate the temperature of water in tubs or showers.<br>• Be very attentive while using hot-water bags or heating pads as it may cause burns |

*Fig. 3.12.1: Home Safety Measures*

## Practical: Safety Measures

1. Make groups of four reach. Write on what safety measures you should take in the situations:
   - Electrical Safety
   - Fire Safety
   - Environment safety
2. You have ten minutes to prepare your thoughts.

## Tips

- Understand the importance of safety measures.
- Understand how to promote a safe working environment.

## Exercise

1. Explain electrical safety measures.

_____

_____

_____

_____

2. Explain what needs to be done to maintain fire safety measures.

_____

_____

_____

_____

# UNIT 3.13: Body Mechanics

## Unit Objectives

**After completion of this unit, the participants will be able to:**

1. Describe the rules and importance of body mechanics
2. Explain the correct way to move patient safely

## 3.13.1 Body Mechanics

Patient care requires the CFW (ACS)s to bend their backs, flex their arms and legs and strain their body while handling the patients. CFW (ACS)s are, hence, at a risk of straining themselves physically and developing spinal injuries. They can prevent these problems from occurring by practicing body movements known as body mechanics. This is used for the efforts made by our body in coordination with bones, nervous system and muscles.

### Rules

The rules that should be followed when transferring/moving patients:

- The base of your back should always be kept in its normal position.
- Move as near to the patient's bed as possible.
- Do not twist your body.
- Set the feet to provide a comfortable and firm wide support when lifting.
- The abdominal muscles should be contracted.
- Keep your head upright and shoulders straight.
- Push up from the knees.

### Importance

Body mechanics are important as they protect the CFW (ACS)s from the following:

- Musculoskeletal strain
- Injuries to self
- Injury to patients
- Tiredness

The various principles for body mechanics are:

**Stable Centre of Gravity**

- Maintain a stable centre of gravity to ensure even distribution of weight.
- The centre of gravity should be low.
- Greater balance is met with a low centre of gravity.
- Bend your knees and keep the body straight.

**Wide Base of Support**

- Wide base support should be maintained.
- It stabilizes the body more effectively.
- Feet should be spread apart in a rational distance.
- Bend your knees to shift centre of gravity nearer to the base support.

**Proper Body Alignment**

- Body alignment is the way the joints, tendons, ligaments and muscles are organized in a certain position.
- Balance is done using the line of gravity going through the base of our support.
- Back injury is reduced by maintaining equal balance in upper and lower parts of the body
- More work is done by involving the stronger muscle/muscles.
- During interventions keep the back straight.

## 3.13.2 Moving Patient

To properly move patients using proper body mechanics, perform the following:

**Pushing**

- Be close to the patient.
- Position one foot in front of the other foot.
- Position the hands on the patient, bend your elbows and lean to the patient.
- Position the weight from your flexor to the extensor portions of your legs.
- Apply pressure with your leg muscles.
- To avoid fatigue, keep using alternate rest.

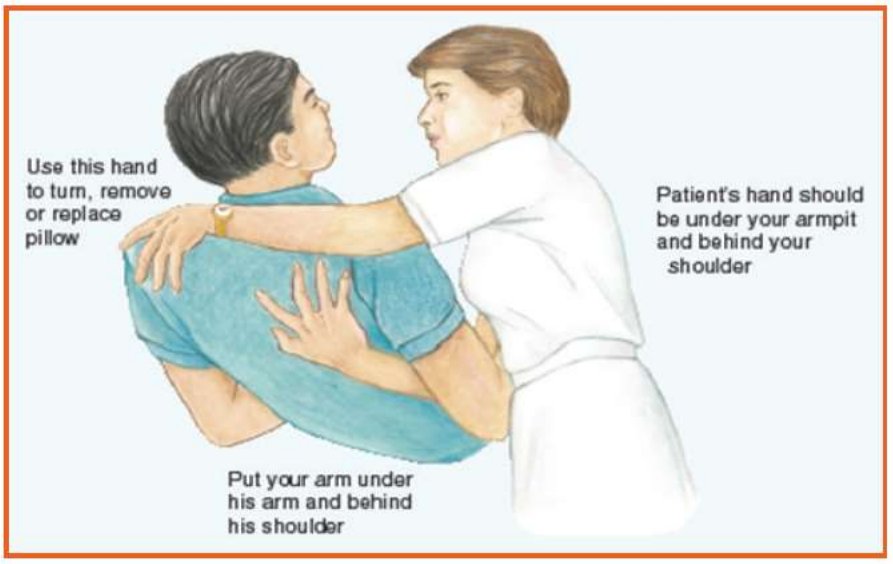



*Fig. 3.13.1: Moving Patient*

**Pulling**

- Keep the patient close to you while pulling.
- Put one foot in front of the other.
- Hold the patient, bend your elbows and lean your body away from the patient.
- Try to stay still.
- Take rest to prevent fatigue.

**Lifting and Carrying**

- Face the subject and be on squat position.
- Maintain your centre of gravity while holding the subject.
- Use your dominant leg when lifting.
- Hold the object from waist height.
- Keep your back straight.

*Fig. 3.13.2: Lifting Objects*

## Tips

- Never lift heavier objects you cannot handle alone.
- Create a base of support by positioning your legs shoulder width apart with one foot a half-step in front of the other foot.
- Ensure that your back does not do the heavy work, instead use the legs.
- If the bed is low, put one foot on a footstool to relieve the pressure from your lower back.
- If you are lifting a heavy object, use a back-support belt.

## Exercise

1. Body mechanics is the coordinated effort by the muscles, bones and nervous system.
   a. True
   b. False

2. Which of the following rules are applies when you transfer or move your patients to protect your back?
   a. Stand straight
   b. Don’t twit your body. Always do a side step or a pivot
   c. Hold the lower part of your body in normal posture
   d. All the above

3. If the bed is low, put one foot on a footstool. This relieves pressure on your lower back.
   a. True
   b. False

4. Why body mechanisms are important?

_____

_____

_____

_____

# UNIT 3.14: Positioning

## Unit Objectives

**After completion of this unit, the participants will be able to:**

1. Explain the different types of positions of a patient

## 3.14.1 Positioning Patient

Bed rest, ordered by the medical officer, is also a very essential part of the patient's treatment.

In case the patient is incapable of moving, he must be shifted and repositioned after every two hours at the minimum. This should be done both day and night. If the patient is capable of moving himself, he or she must be encouraged to do so with precautions. A CFW (ACS) then requires to check if the patient's posture is good.

Several postures should be taken by the patient for relief, support, and proper posture. If a patient hesitates to change a body position due to a sore condition, he or she should be warned that not changing the position might cause deformation of a body part.

**Prone position:** The constant resting position of the head and knees help in limited movement of hip and knee joint. In the prone position, place the patient flat on abdomen, legs stretched out. The toes should be pointing.

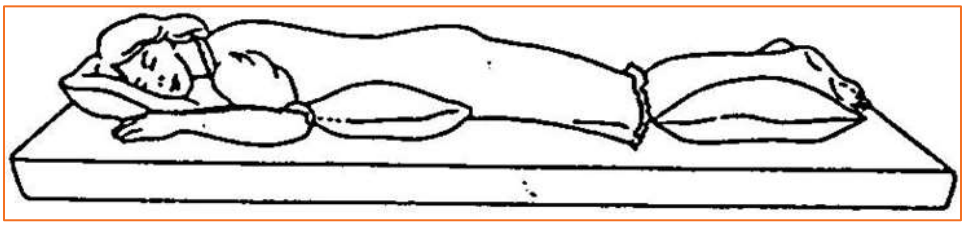


*Fig. 3.14.1: Prone position*

**Supine Position:** In the supine position, place the patient face up, with the hands at the back of the head/neck.

*Fig. 3.14.2: Supine Position*

**Lateral recumbent:** In the lateral recumbent position, place the patient on their left side and keep the right thigh and knee pulled up.

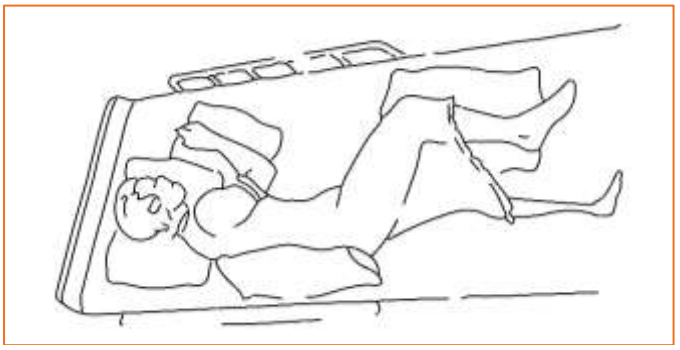


*Fig. 3.14.3: Lateral recumbent*

**Fowler's position:** In half-Fowler's position the patient in supine position, the head of the bed is drawn up to about 30 to 45 degrees. In full-Fowler's position, the patient is in the same position but the head side of the bed is drawn up to 90 degrees.

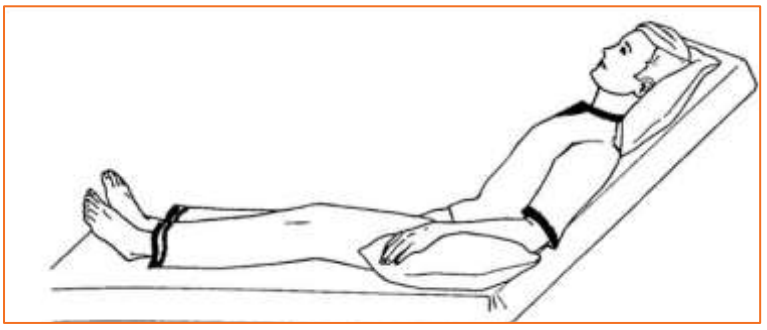


*Fig. 3.14.4: Fowler's position*

**Dorsal Recumbent:** Patient is on back, knees bent and flat feet on the examination table.

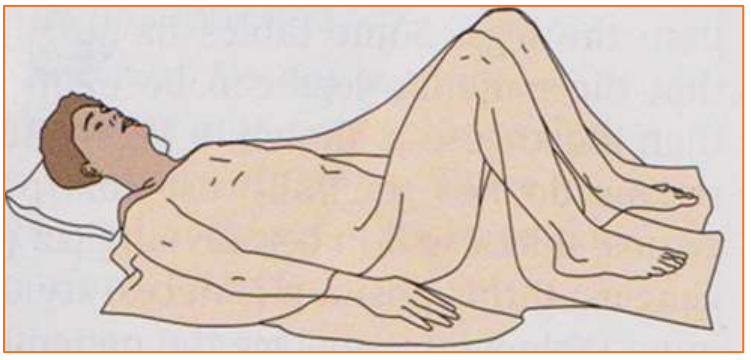


*Fig. 3.14.5: Dorsal Recumbent*

**Lithotomy:** Patient on back, knees bent, thighs apart, and feet in stirrups.

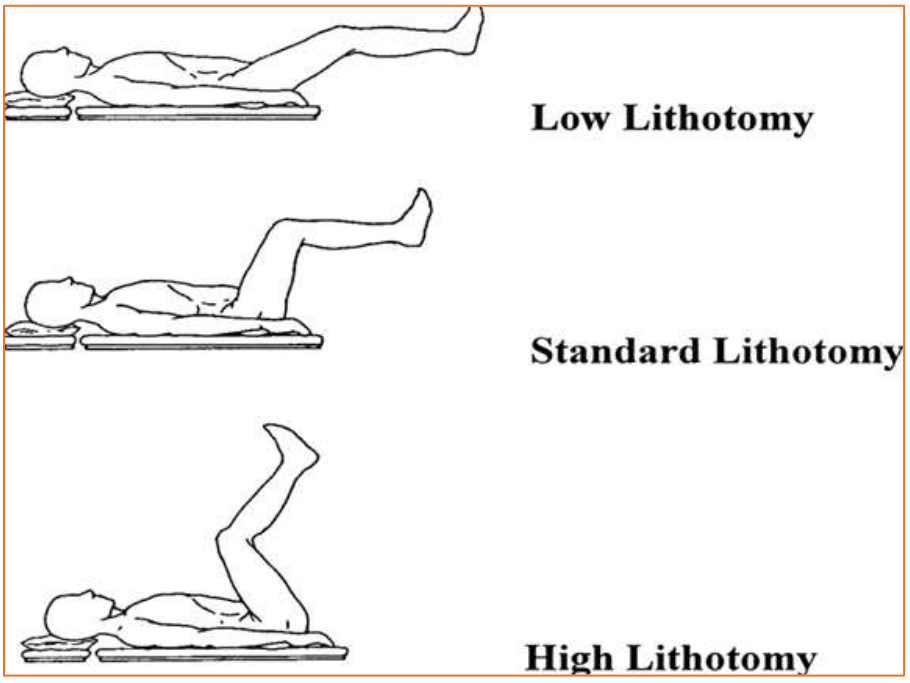



*Fig. 3.14.6: Lithotomy*

**Sims' (Left Lateral Position):** Patient on left side, left arm behind back, flex right hip and knee.

*Fig. 3.14.7: Sims'*

**Trendelenburg:** Patient in supine at an angle, head lower than trunk, knees bent

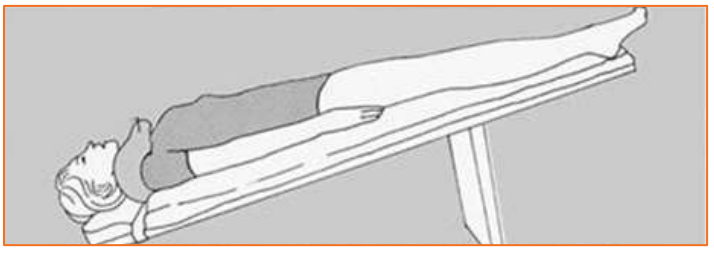


*Fig. 3.14.8: Trendelenburg*

## Exercise

1. In _____ position, the patient is flat on abdomen, legs extended, feet over the edge of the mattress, and toes pointing to floor.
   a. Lateral recumbent
   b. Prone
   c. Dorsal recumbent
   d. Lithotomy

2. The Semi-Fowler's position is in which the patient is in bed in supine position, and top of the bed at approximately 30 to 45 degrees.
   a. True
   b. False

3. What is Supine Position?

_____

_____

_____

_____

# UNIT 3.15: Transferring

## Unit Objectives

**After completion of this unit, the participants will be able to:**

1. Identify the different modes of patient transferring
2. Explain the correct way of shifting patient

## 3.15.1 Transferring Patient Using a Stretcher

A patient is often carried into the ward on a stretcher. The patient needs to be carefully and safely transferred from the stretcher onto the bed. This process is very important because while transferring, the patient should not suffer any injury or pain. Also, the medical condition of the patient must also be kept in mind while doing it.

The steps to follow to safely shift the patient from the stretcher to the bed:

1. Before shifting from stretcher to the bed, report to the nurse about the transfer of the patient into the ward.
2. Ensure that there are at least two other CWF (ACS)s to help you when the patient is transferred to the bed.
3. Place the stretcher close to the side of the bed. Ensure that both the bed and the stretcher are stabilized or locked before moving the patient. You can use the lock of the stretcher and the hospital bed in order to prevent the stretcher or bed from moving.
4. Lower any side rails present.
5. Roll the patient gently to a side and place a sheet on the stretcher. Roll back the patient onto the sheet.
6. Ask the other assistants to hold the sheet from the remaining sides.
7. Gently lift the patient with the sheet and shift the patient onto the bed.
8. Place the patient comfortably on the bed. Raise the rails to prevent the patient from falling off the bed.

*Fig. 3.15.1: Transferring Patient Using a Stretcher*

### Stretcher and its parts

The stretcher is a critical component of the hospital system. It is a medical equipment used to carry patients who have difficulty in movement from one place to another. It also serves as a hospital bed that can be moved from one ward to another. A stretcher is generally handled by two persons, one at the head end and the other at the feet end. The patient is transferred to the stretcher and then is lifted or wheeled away. Stretchers have to be utilized if a person is incapable of walking or if wheelchairs or similar devices cannot be used. Most modern stretchers have straps for the safety of the patients.

The different parts of the stretcher are:

- **Stretcher bed:** The stretcher bed is a flat area with a thin mattress on which the patient is placed.
- **Handle bars:** The handle bar is located on one side of the stretcher and is used by the assistant to hold and push the stretcher.
- **Side rails:** The side rails of the stretcher prevent the patient from falling off the side and ensure the safety of the patient.
- **Wheels:** The stretchers are provided with wheels with rubber covering for smooth movement.
- **Wheel locks:** Wheel locks prevent the movement of the stretcher while the patient is transferred.
- **Attachments:** The stretcher also has provisions for attachment of medication drips and carrying the support systems needed by the patient.

*Fig. 3.15.2: Stretcher and its parts*

The components of the stretcher vary from place to place. As a CFW (ACS) you should be aware of the form and function of the stretcher.

## 3.15.2 Transferring Patient Using a Wheelchair

In case of a moveable patient, you can use a wheelchair for transferring the patient.

Before the ambulance arrives, keep the wheelchair ready for use. Below are the steps involved:

1. With the help of the ambulance team, align the wheelchair with the ambulance bed.
2. Assist the patient in stepping out of the ambulance.
3. Carefully transfer the patient to the wheelchair. Ensure that the patient is comfortably seated in the wheelchair.
4. Collect the belongings of the patient and place them on the patient.
5. In case the patient has been attached with a medication drip, ensure that the drip is also moved with the patient during the transfer.
6. While transferring the patient on the wheelchair, lock the wheels of the chair.
7. Transfer the patient smoothly without any jerks while moving the wheelchair. Do not rush the patient.

Transferring a patient from the ambulance to the ward is a team effort. You should be ready with a plan of transfer for each patient. You should be prepared to plan and coordinate for the smooth transfer of the patient from the ambulance to the ward.

### Parts of a Wheelchair

Patients who are too weak to walk on their own, use a wheelchair. The different components of the wheelchair are designed to facilitate easy and comfortable movement of the patients. The components of the wheelchair are:

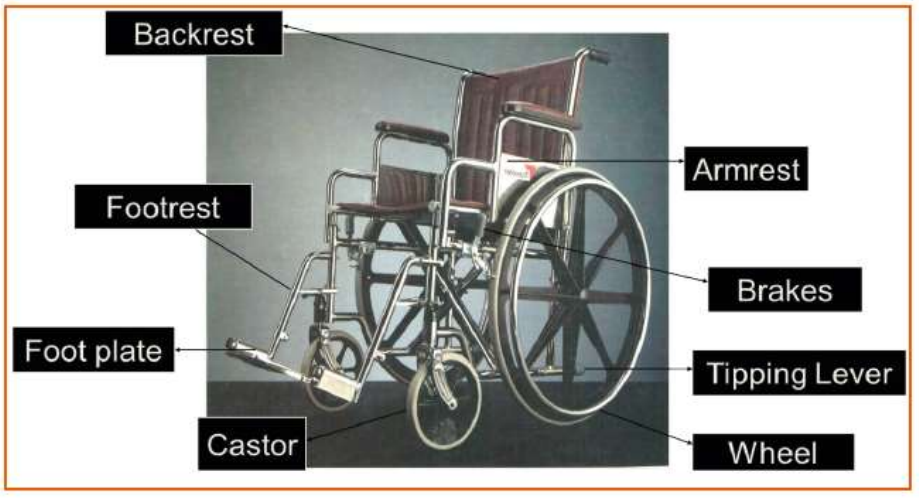



*Fig. 3.15.3: Wheelchair and its parts*

**Seat:** It is made of metal or vinyl plastic. It is the basic component on which the patient rests during movement from one point to another.

**Foot rest:** The patient can rest his legs on the foot rest. It is a small platform-like component which is attached to the seat of the wheelchair.

**Arm rests:** The seat is attached with two arm rests which the patient can hold for support. Sometimes the arm rest is covered with padding so that the patient can rest his/her arms on it.

**Wheels:** The wheels enable the wheelchair to move. There are two pairs of wheels. The front wheels are small in size and are located under the foot rest. The rear wheels are large wheels that are attached to the seat at the back.

**Metal skirts:** The metal skirts are present on the rear wheels and are used by the patient for changing the direction of movement. In addition to these core components, there are other components such as:

- Wheel locks to prevent movement of the wheelchair, especially while transferring the patient into the wheelchair.
- Brakes to control and bring the motion to a stop.
- Push bars are present on the back rest of the seat, used to move the wheel chair. An assistant must hold the push bars and push the wheelchair forward to make it move. An assistant can also pull the push bars backward in order to make the wheelchair go backwards.

### Use lift in case patient is not able to walk

1. Keep the bed at the minimum level.
2. Place the wheelchair adjacent to the bed so that the patient's healthy side is facing towards the bed.
3. Lock the brakes of the wheelchair and take out the feet from the foot rests.
4. Swivel the foot rests or take them away from the wheelchair.
5. Explain the procedure which was used to lift and swivel the patient into the wheelchair. For example, at the count of 3, I am going to assist you to get up, turn to your strong side and get in the wheelchair. In the above image the patient can be seen using the right side to get into a wheelchair.

*Fig. 3.15.4: Transferring patient from bed to stretcher*

6. Move the patient's such that the feet come in firm contact with the floor.
7. If required, help can be provided to block the person's knees for added support to bear the weight
8. Balance the patient's feet with your feet to avoid slipping.
9. With the help of your leg muscles, get up and lift the patient upwards in a gradual steady motion.
10. Place the patient on the bed
11. Help in lifting the person's legs onto the bed.
12. Ensure that the patient is comfortable.

## 3.15.3 Transferring Patient from Stretcher to the Bed

A patient is often carried back home on a stretcher. The patient is needs to be carefully and safely transferred from the stretcher into the bed.

This process is very important because while transferring, the patient should not suffer any injury or pain. Also, the medical condition of the patient must also be kept in mind while doing it. There are certain steps you must follow while transferring:

1. Before transferring a patient from the stretcher to the bed, report to the nurse about the transfer of the patient into the ward.
2. Ensure that there are at least two other CFW(ACS)s to help you when the patient is transferred to the bed.
3. Place the stretcher close to the side of the bed. Ensure that both the bed and the stretcher are stabilized or locked before moving the patient. You can use the lock of the stretcher and the hospital bed in order to prevent the stretcher or bed from moving.
4. Lower any side rails present.
5. Roll the patient gently to a side and place a sheet on the stretcher. Roll back the patient onto the sheet.
6. Ask the other assistants to hold the sheet from the remaining sides.
7. Gently lift the patient with the sheet and shift the patient onto the bed.
8. Place the patient comfortably on the bed. Raise the side rails to prevent the patient from falling off the bed.

## 3.15.4 Transferring the Patient from a Bed to the Stretcher

There are certain steps you must follow to shift the patient from bed to stretcher. The steps involved in the shift/transfer of a patient from the bed to the stretcher are as follows:

1. Ensure that there are at least two other CFW(ACS)s to help you when the patient is transferred from the bed to the stretcher.

*Fig. 3.15.5: Transferring Patient Bed to Stretcher*

2. Place the stretcher close to the side of the bed. As the assistant in charge, ensure that both the bed and the stretchers are stabilized or locked before moving the patient.
3. Lower side rails, if present.
4. Roll the patient gently to a side and place a sheet on the bed. Roll back the patient on the sheet.
5. Get on to the patient's bed and hold the sheet from one side. Ask the other assistants to hold the sheet from the sides.
6. Gently lift the patient with the sheet and shift the patient onto the stretcher. Get down from the bed.
7. Place the patient comfortably on the stretcher.
8. Move the equipment attached to the patient along with the patient.
9. Remove the wheel locks of the stretcher and move the stretcher gently.
10. Place the medical records along with the patient while moving the stretcher.

## 3.15.5 Transferring Patient from Bed to Wheelchair

There are many ways of transferring the patient to the wheelchair from the bed. But you have to use the safe and most comfortable way for the patient. Before you start the procedure, collect information about the patient's condition from the nurse.

1. Ensure that patient is comfortably seated on the bed. Roll the patient to one side and place a belt around the patient.
2. Now get into a standing position with the patient and gently move the patient close to you.

3. Place the patient on the edge of the seat on the wheelchair and rock the patient into the chair. Ensure that wheels are locked to prevent movement of the wheelchair.
4. Instruct the patient to use the arm rests for support.
5. Place the feet of the patient on the footrest of the wheelchair.
6. Remove the wheel locks of the wheelchair and move the wheelchair gently to the ward that the patient has to be moved into.
7. Place the medical records on the patient while moving the wheelchair.

**General Precautions to be Taken While Transferring a Patient**

Some patients walk into the hospital by themselves, while others are brought in an ambulance. This depends on the medical condition of the patients. As a CFW(ACS), you must be prepared for facilitating these movements of the patient by consistently coordinating with the workforce in the hospital. There are few steps you must keep in mind while transporting the patient:

- While shifting a patient from the ambulance to the ward, you must understand the condition of the patient and coordinate the process of transfer with other CFW(ACS)s.
- You should collect all details of the patient from the nurse before planning the transfer.
- The transport procedures involve the use of varied equipment such as wheelchairs and stretchers.
- You should be aware of the usage of these equipment and take necessary precautions while handling them.
- You should take certain precautions with respect to the physical condition of the patient and also take some protective measures to prevent any undue physical strain on yourself.

## 3.15.6 Role While Transporting Patient

- When you use a stretcher, you must understand the condition of the patient before planning the process of transfer.
- Ask the nurse of the patient about the need for transfer of the patient. Learn about the condition of the patient to plan a safe technique of transfer.
- In many cases, some parts of the patient's body are damaged or very weak. You should know about those areas and ensure that those areas are not affected when the transfer is carried out.
- The patient might be provided with medication and support for breathing. In such cases the support equipment must also be carefully moved along with the patient.
- Necessary documentation and equipment should be available and an experienced staff can come handy in this situation
- The receiving ward should also be prepared for the patient. Ensure that you organize the facilities that are required for the transfer.

## 3.15.7 Safety Measures in Handling Equipment

The basic equipment used in the transport of the patient are the stretcher and the wheelchair. While using these, you must keep a few points in mind:

- While using a stretcher or a wheelchair ensure that the wheels of the equipment are locked. This will prevent any undue movement while the patient is being transferred.
- If the stretcher is provided with side rails, ensure that side rails are lowered before the transfer and raised back into the place once the transfer is done.
- Ensure that the stretcher bed is rigid enough to support the patients, especially in case of patients with a weak back.
- While moving the stretcher or the wheelchair take care while you move the patient on uneven ground. Do not rush the movement.
- Do not stop or start moving the wheelchair or the stretcher with a jerk. Initiate or stop the movement smoothly.
- The medication equipment such as the drip or the breathing support system attached to the patient should be stabilized with the stretcher or the wheelchair.

**Safety Measures While Handling the Patient**

- The most important precaution that you need to take while handling the patient is getting all the information about the condition of the patient.
- You must understand the painful areas of the patient and be sensitive to the movements of those areas while transferring the patient.
- When you use a blanket for lifting the patient, lift the patient gently with the help of other assistants, holding the blanket gently.
- Do not hold and lift the patients by their armpits while lifting them from a wheelchair. Always use a belt that can be used to hold the patient in position.
- You should also avoid undue strain on yourself when you lift the patient. Do not take the burden of the patient's weight on the back.
- Always use the powerful muscle of your legs, thighs and the arms in lifting and moving the patients.
- In order to avoid undue strain on your back while using the transfer equipment, adjust the height of equipment to level of waist.
- Hold the patient as closely as possible to your body. Do not let the patient slip or roll away. Always slide the patient gently into the wheelchair or the stretcher.

## Exercise

1. Which of the followings are the different parts of the stretcher?
   a. Attachments
   b. Handlebar
   c. Side rails
   d. All the above

2. If the patient is able to move on his or her own, then you can use a wheelchair for transferring the patient.
   a. True
   b. False

3. Which of the followings are the parts of a wheelchair?
   a. Armrests
   b. Metal skirts
   c. Seat
   d. All the above

4. What are the steps of transferring the patient from stretcher to the bed?

   _____

   _____

   _____

   _____

# UNIT 3.16: Mobility

## Unit Objectives

**After completion of this unit, the participants will be able to:**

1. Explain how to move patient effectively
2. Identify the equipment used in moving patients

## 3.16.1 Ambulation/Movement

- The level of assistance varies from patient to patient, according to patient's health and the time since patient has been inactive.
- Walk alongside a patient who is ill or recovering from surgery. At times, using a gait belt for additional stability can help. In case of more serious conditions offer an assistive device like a walker, crutches or cane etc.
- It is advised to break the ambulatory process into stages for the patients who have been immobile or on bed rest from a while to avoid vertigo and orthostatic hypotension
- Start with making the patient sit upright in the bed followed by dangling the legs, then make them stand up near to the bed and then start ambulation
- In case when patient feels weak or dizzy during the process, help him/her to sit on the floor gently instead of trying to hold him/her straight which can cause injury to both you or patient

*Fig. 3.16.1: Moving a patients*

## 3.16.2 Equipment Used for Ambulation

**Gait Belt:** When using a gait belt for transferring a patient, grasp the belt with both hands. Ensure you walk slowly and make the patient to set the pace of the walk. Ideally, one of your hands should hold the back of the belt and the other hand should be placed below the front side of the belt. It is best to be on the patient's weaker side and keep asking the patient to use the strong arm and take support from a handrail, if possible.


*Fig. 3.16.2: Using Gail Belt*

**Walkers:** Used for patients who have difficulty in walking and need support. A patient should be able to stand in upright posture and that is considered the ideal height of walker. If using a walker without wheels, then ensure that the patient's feet are not moving.

*Fig. 3.16.3: Walker*

**Canes:** These are used by patients who have weakness and need slight support for walking. Always use the cane on the patient's stronger side to ensure correct balance of the weight between the cane and the patient's weaker side. The ideal height of the cane should be such that the patient's elbow is slightly flexed when walking. Three pointer or four pointer canes are preferred than a single pointer because of better support.

*Fig. 3.16.4: Canes*

**Brace:** This is used specifically to support for weakened muscles/joints or to provide immobilization of an injured part. Report any loose part and the breakdown of the skin where the brace is applied to the supervisor/nurse. When not in use prop the brace and never lay it flat as it could warp.

*Fig. 3.16.5: Brace*

## Exercise

1. A brace for specific support of weakened muscles/joints or to provide immobilization of an injured part.
   a. True
   b. False

2. _____ are used for the client who requires some support when walking due to imbalance or weakness.
   a. Brace
   b. Walker
   c. Gait Belt
   d. None of the above

3. Always verify required assistance before moving the patient out of bed or while helping them walk
   a. True
   b. False

## Notes

Skill India

GOVERNMENT OF INDIA
MINISTRY OF SKILL DEVELOPMENT
& ENTREPRENEURSHIP

N·S·D·C
National
Skill Development
Corporation
Transforming the skill landscape

Healthcare
Sector
Skill Council

# 4. Carry Out Last Office (Death Care)

Unit 4.1 - Mortuary Management

HSS/N5115

## Key Learning Outcomes

**After completion of this module, the participants will be able to:**

1. Explain the process of carrying out last office work in the hospital
2. Identify the signs of approaching death
3. Explain how to provide psychological support to a patient approaching death
4. List the procedure for care of body after death

# UNIT 4.1: Mortuary Management

## Unit Objectives

**After completion of this unit, the participants will be able to:**

1. Explain the process of carrying out last office work in the hospital
2. Identify the signs of approaching death
3. Explain how to provide psychological support to a patient approaching death
4. List the procedure for care of body after death

## 4.1.1 Definition of Death

Death affects a person physically, psychologically, emotionally, spiritually, and financially. Whether the death is abrupt and unexpected, or ongoing and hoped for, there is information and help accessible to address the impact of dying and death.

*Fig. 4.1.1: A Dead Body*

Death is defined as:

1. "Cessation of heart-lung function, or of whole brain function, or of higher brain functions."
2. "Either permanent cessation of circulatory and respiratory functions or permanent cessation of all functions of the whole brain, including the brain stem."

## 4.1.2 Purpose of the Procedure

The purpose of the procedure is to:

- Assist the sufferer in having a comfortable and peaceful death.
- Prevent injury to the body tissues after death.
- Prevent contamination from drainages while the body is being transferred.
- Prevent physical deformities of the body.
- Relieve mental tension of relatives.
- Console distressed relatives.
- Prevent the other patients in the ward from having traumatic experiences.

## 4.1.3 Signs of Approaching Death

Dying patients exhibit signs of approaching death. These signs can be seen in the form of changes in:

1. **Facial appearance:** Facial muscle relaxes, cheeks become flaccid, facial structure may change, loss of muscle tone and anaemia.
2. **Sight, speech and hearing:** Sight gradually fails; the pupils fail to react to light. Eyes are sunken, and half closed and a film appears over the eyes. Speech becomes difficult, confused, unintelligent and finally impossible. Hearing is thought to be retained longer.
3. **The respiratory system:** Respiration becomes irregular, shallow or very slow, and Sertorius due to the presence of secretions.
4. **The circulatory system:** Circulatory changes cause alterations in the temperature, pulse and respiration. Radial pulse gradually fails.
5. **The gastro-intestinal system:** Hiccups, nausea, vomiting, abdominal distension are seen. The gag reflex disappears; the patient feels the inability to swallow.
6. **The genitor-urinary system:** Retention of urine, dissention of the bladder, incontinence of urine and stool due to loss of sphincter control.
7. **The skin and muscular-skeletal system:** The skin may become pale, cool and sweat profusely.
8. **The central nervous system:** Reflexes and pain are gradually lost. Patient may be restless due to lack of oxygen and due to raised body temperature, although the body surface is cool.

## 4.1.4 Psychological Support to a Patient Approaching Death

There are 5 psychological stages that dying persons pass through. These are:

- Denial
- Anger
- Bargaining
- Depression
- Acceptance

A person approaching death has the following psychological needs:

- Provide relief from loneliness, fear and depression.
- Maintain security, self confidence and dignity.
- Maintain hope.
- Meet the spiritual needs according to his religious customs.
- Provide a quiet environment.
- Screen the patient's unit to provide privacy.
- If workable, shift the patient to an individual room.

- Position the patient on his side or turn his head to the side to obstruct ambition.
- Remove the blanket to reduce the weight on their body.
- Never leave the patient alone.
- Never say anything near the patient which might hurt them because no one knows how long the power of hearing remains.
- Keep the airways clean by clearing the mucous secretions ratting in the oropharynx with the help of suction.
- Lips and tongue should be moistened with a wet cotton swab. Water should not be poured into the mouth. Perspiration should be wiped away.
- Be sympathetic to the patient's relatives and support them at the time of their emotional outbursts and reassure them.

## 4.1.5 Signs of Clinical Death

The signs of clinical death are as follows:

- Absence of pulse, heart beat and respirations
- Pupils of the eye become fixed and non-reactive to light
- Absence of all reflexes
- Rigor mortis, a stiffening of the body after death, is due to fixation of the muscles. Rigor mortis generally appears in a few hours. Once a person has been announced dead, his body should be taken care properly

## 4.1.6 Procedure for Care of Body after Death

The steps for caring for a body after death are as follows:

- **Step 1:** Ascertain that the death is declared and certified by the doctor on duty. Ensure that the necessary forms are filled and signed by the person concerned.
- **Step 2:** Close the eyes immediately, straighten the arms and lay them at the sides. Straighten the legs. Any dentures that have been removed are to be replaced and the mouth is to be closed. Support the chin with a jaw bandage. The head should be elevated on a pillow.
- **Step 3:** Keep the body in a normal position. The body should be cared for immediately after death and before rigor mortis develops.
- **Step 4:** The body should be cared for with reverence.
- **Step 5:** Remove all the appliances used for the patient i.e., Ryle's tubes, urinary catheter, oxygen catheters, all comfort devices, blankets, drainage tubes and soiled dressings. Adhesive marks are to be removed.
- **Step 6:** Remove ornaments of any type from the dead body: List and entrust it to a close relative and obtain a receipt for delivery of the same. Any other belongings of the patient that was entrusted at the time of admission should also be checked and entrusted to the relatives.

- **Step 7:** The body is bathed, hair combed and dressed in clean clothes. Pack vagina, rectum and nose with gauze or cotton.
- **Step 8:** Place three identification labels - first on the left wrist, on the chest and over the packed body with details of the name, age, sex, ward, bed no., diagnosis, cause of death, complete address, date and time of death.
- **Step 9:** Place hands over the chest and tie the thumbs and wrists together.
- **Step 10:** Tie the toe and ankles together.
- **Step 11:** Place a clean bed sheet under the body. Fold the top of the sheet over the face and shoulders.
- **Step 12:** Hold the bottom end of the sheet over the feet and then cover the body by folding the sheet from the sides and fixing it with tapes and bandages.
- **Step 13:** Place the 3rd identification tag over the sheet. Cover with another clean sheet.
- **Step 14:** In medico-legal cases, the concerned authorities (CM0) should be notified and one extra death certificate is prepared by the doctor and sent to the mortuary / police inspector on duty.
- **Step 15:** If the patient was suffering from an infectious disease, the body should be handled with special care to prevent the spread of infection.
- **Step 16:** Ensure that the due payment is updated and paid. Send one copy of the death certificate to the mortuary, one to the admission office and one with a case sheet.
- **Step 17:** The dead body must be dispatched to the mortuary within half an hour after death through the bed-lift. Enter it in the dispatch book, report book and treatment book.
- **Step 18:** After the body is removed from the ward, the unit should be treated as in case of discharge of the patient i.e., fumigation, carbonisation, disinfection, etc.
- **Step 19:** Make a detailed written record of all the activities undertaken in the nurse's record of the patient and also in the nurse's report book. Record time of respiration stopped and death declared with red ink. Complete the case sheets and make an entry in the dispatch book.
- **Step 20:** If the relatives want to care for the body, allow them to do so. Be kind, courteous and helpful.
- **Step 21:** The body must be transferred from the ward to the mortuary with great care, within an hour after death.
- **Step 22:** No dead body should be handed over to the relatives from the wards.
- **Step 23:** Inform the relatives that:
  - The body can stay in the mortuary for 48 hours, after which it will be disposed of.
  - Arrangements for bathing the body are provided in the mortuary.
  - Arrangements for a funeral van can be made through the enquiry office on payment.
  - Death certificate can be obtained from the medical record section on written request.

## 4.1.7 Removal of Body from Isolation Room/Area

The frontline worker should follow the hand hygiene procedure and wear proper PPE while attending to the dead body.

The following steps should be taken while attending to the dead body:

| | |
|---|---|
| All tubes, drains and catheters should be removed from the body. | |
| Any puncture holes or wounds should be cleaned and disinfected using 1% hypochlorite solution and proper dressing with an impermeable material should be done. | ***NOTE*:** Follow standards protocols and precautions while allowing family member(s) of the patient to view the body during removal from the isolation room/area. |
| Remove sharps, such as intravenous catheters and other sharp devices, carefully and dispose them in the sharps container. | |
| Ensure there is no leakage of body fluids by plugging all oral and nasal orifices of the body. | |
| Put the dead body in a leak-proof plastic body bag and ensure that the exterior of the bag is decontaminated using 1% hypochlorite solution. | |
| Handle all used/soiled linen and other materials with standard precautions. | |
| Place used/soiled linen in a biohazard bag and disinfect the exteriors of the bag using hypochlorite solution. | ***NOTE***: The bag can be further wrapped using a mortuary sheet/sheet provided by the family and can then be either handed over to the relatives or taken to mortuary, as per the instructions. |
| Decontaminate or autoclave the used equipment as per the prescribed infection prevention control practices/guidelines. | |
| Handle all medical waste as per the biomedical waste management rules/procedures and ensure they are disposed off properly. | |
| Perform hand hygiene after handling the body and removal of PPE. | **room/area.** |
| Provide counseling to the family, if required, while respecting their sentiments. | |

*Fig. 4.1.2: Steps to be taken while attending to the dead body*

## Tips

- Ascertain that the death is declared and certified by the doctor on duty.
- Ensure that the necessary forms are filled and signed by the person concerned.
- Prevent the contamination from drainages while the body is transferred.
- Relieve the mental tension of the relatives and console them.
- Prevent other patients in the ward from having traumatic experiences.

## Exercise

1. Define death. What is the main purpose of care of dying?

_____

_____

_____

_____

2. List articles needed for packing the dead body.

_____

_____

_____

_____

3. List 5 psychological stages a dying person passes through.

_____

_____

_____

_____

## Notes

Skill India
कौशल भारत-कुशल भारत

सत्यमेव जयते
GOVERNMENT OF INDIA
MINISTRY OF SKILL DEVELOPMENT
& ENTREPRENEURSHIP

N·S·D·C
National
Skill Development
Corporation
Transforming the skill landscape

Healthcare
Sector
Skill Council

# 5. Provide Support to Nurse for Implementing Nursing Care Plan

Unit 5.1 – Implementation and Monitoring of Patient Care Plan under Nurse Supervision

Unit 5.2 – Preparation of patient's unit

HSS/N5126

## Key Learning Outcomes

**After completion of this module, the participants will be able to:**

1. Explain the steps of a patient care plan
2. Explain the importance of patient care planning
3. Identify the various types of hospital beds
4. Explain the process of making up the bed for patient

# UNIT 5.1: Implementation and Monitoring of Patient Care Plan under Nurse Supervision

## Unit Objectives

**After completion of this unit, the participants will be able to:**

1. Explain the steps of a patient care plan
2. Explain the importance of patient care planning

## 5.1.1 Patient Care Planning

The CFW (ACS) has to perform certain simple procedures like enema or preparing the patient for an operation. These different procedures are a part of patient care management and assisting nurses in performing procedures as instructed in the care plan.

Patient care plan means planning your services according to the needs of the patient.

You must make a patient care plan by:

- Knowing the patients' needs to facilitate their fast recovery.
- Consulting with the attending doctor and nurse about the patient's condition.
- Maintaining the patient activity schedule during his/her stay in the hospital.
- Motivating the patient to maintain a steady emotional state.
- Understanding and respecting the patient's rights and maintaining privacy.

## 5.1.2 Importance of Patient Care Planning

Patient care plan basically concentrates on the patient's care and concern. Patient care planning involves standard procedures and policies to be followed to prevent spread of infection, avoid discomfort to the patient and ensure continued treatment. As a CFW (ACS), it is your responsibility that to ensure and perform the correct procedure as instructed by the nurse. You have to ensure that the patient is comfortable and not inconvenienced due to the procedure or during the procedure. The procedure is performed in a timely manner as part of the treatment plan.

# UNIT 5.2: Preparation of Patient's Unit

## Unit Objectives

**After completion of this unit, the participants will be able to :**

1. Identify the various types of hospital beds
2. Explain the process of making up the bed for patient

## 5.2.1 Hospital Bed

A hospital bed is specially designed for hospitalized patients or others in need of some form of healthcare. Common features are adaptable height for the entire bed, the head, and the feet, modifiable side rails, and electronic buttons to operate both the bed and other nearby electronic devices.


*Fig. 5.2.1: Hospital Bed*

- **Wheels:** Enable easy movement of the bed, either within parts of the facility or within the room. Wheels are lockable. For safety, wheels can be locked during shifting the patient in or out of the bed.
- **Elevation:** Beds can be raised and lowered. While cranks are used in old beds, on modern beds this is an electronic feature.
- **Side rails:** These can be raised or lowered, as they provide protection for the patient and make the patient feel more secure.

## 5.2.2 Bed Making

Another important role for you as a CFW (ACS) is to make the bed of a patient.

The reason for bed making is to enable patients to feel good and to diminish pathogens in the patient's condition.

Spotless, dry, and sans wrinkle cloths additionally help to diminish the potential for skin breakdown and they are essential to help control smell.

*Fig. 5.2.2: Bed Making*

## 5.2.3 Types of Hospital Beds

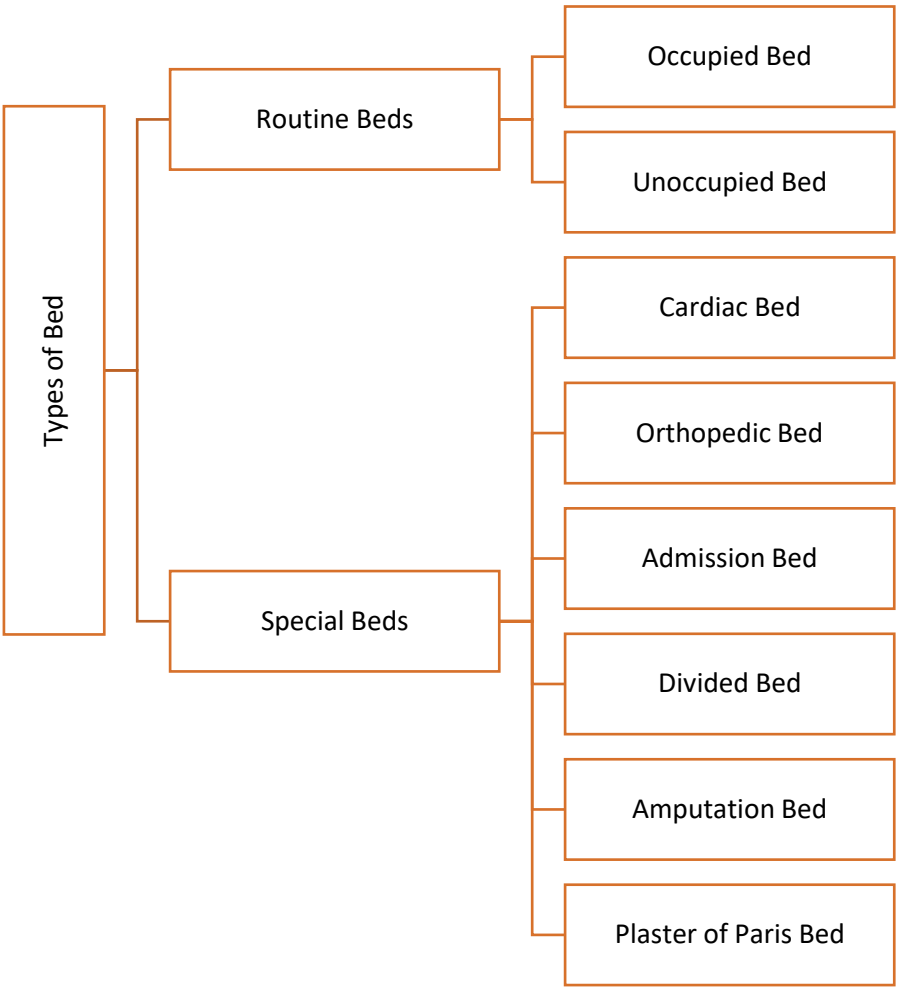



*Fig. 5.2.3: Types of Hospital Beds*

## Routine beds

*Fig. 5.2.4: Simple unoccupied bed.*

*Fig. 5.2.5: An occupied bed*

## Special beds

*Fig. 5.2.6: Cardiac bed*

*Fig. 5.2.7: Orthopaedic bed*

*Fig. 5.2.8: Operation bed*

*Fig. 5.2.9: Admission bed*

*Fig. 5.2.10: Plaster of Paris bed*

*Fig. 5.2.11: Amputation bed*

## 5.2.4 Bed Making

Important supplies for bed making incorporate clean materials, a tight base sheet to avoid wrinkles that may cause skin irritation, and clothing of the upper bed that does not weigh on the patient's body or confine their movement, yet at the same time covers his or her shoulders.

### Purpose of Bed Making

- To minimize source of skin irritation.
- To provide a clean environment for the patient.
- Patient has clean, safe surroundings throughout hospitalisation.
- Patient verbalizes a sense of comfort while in bed.
- To reduce source of illness.
- To provide a clean environment.
- Prepare the bed for the patient’s return.

### Supplies

- Bed side
- Linen Hamper or bag
- Bed sheet
- Blanket
- Top sheet
- Pillow Cover
- Plastic draw sheet
- Cotton draw sheet
- Bottom sheet
- Mattress Pad
- Gloves

### Kinds of Linens

There are five types of linens:

1. **Blanket:** A large piece of fabric which is delicate, woollen and used to keep warm or as a bed cover.

*Fig. 5.2.12: Blanket*

2. **Top sheet:** Used to cover the patient in order to provide warmth, made of thick cotton, thermal material.

*Fig. 5.2.13: Top sheet*

3. **Cotton draw sheet:** A piece of fabric that covers the rubber sheet and is used to absorb and moisture.

*Fig. 5.2.14: Cotton draw sheet*

4. **Bottom sheet:** It is a mattress cover.

*Fig. 5.2.15: Bottom sheet*

5. **Rubber sheet:** Used to prevent the bottom sheet from soiling due to patient secretions. It's usually placed over the centre of the bottom sheet.

## 5.2.5 Steps of Bed Making

**Step 1:** Wash your hands, wear gloves and carry a clean sheet to the patient's room.

**Step 2:** Greet the patient and inform them that you will be making their bed now. Start by explaining how they can help in the process, or modify the process as per their comforts and needs. Give them privacy, if needed.

**Step 3:** Shift any chairs/stools away from the bed.

**Step 4:** Pull up the support bed rail to ensure that the patient does not fall out of the bed. Adjust the height of the bed to a comfortable level so that you don not strain your back.

**Step 5:** If the patient is feeling fine then lower the head/top portion of the bed to ensure a wrinkle-free spread.

**Step 6:** Cover the patient with a cover to prevent from exposing them to cold air. Fanfold the top layer of the bed sheet and then spread it underneath the cover. Loosen the bed sheet kept at the foot of the bed and remove it

**Step 7:** If the mattress slides down when raising the head of the bed, then pull it up back. If the patient is capable, ask them to hold the head of the bed.

*Fig. 5.2.16: Cover the patient with a bath blanket*

**Step 8:** Ask the patient to hold the bed rails and gently roll the patient to the other side of the bed. To make the patient comfortable, place the pillow under their head.

**Step 9:** Similarly, remove the lower layer of the bedsheet, one side at a time.

**Step 10:** Put the clean bed sheet on the bed, keeping the centre fold in the centre of the bed.

**Step 11:** Fanfold the clean bed sheet towards the patient, and place the sheet, around 38 cm from the top portion of the bed, with its centre fold in the middle of the bed. Then, tuck in the

whole edge of the sheet on your nearest side. Fanfold the rest of the sheet towards the patient.

*Fig. 5.2.17: Fanfold the bottom sheet*

**Step 12:** Roll the patient gently over the dirty and fan folded sheet to the side with the clean bed sheet.

**Step 13:** Similarity, do the other side of the bed.

**Step 14:** If the patient is comfortable, help them into a supine position.

*Fig. 5.2.18: Place the sheet behind the patient*

**Step 15:** Remove the old pillow cover and put the removed bedsheet and the pillow cover in the laundry bag. Put a clean cover over the pillow. Place the patient's head on the pillow.

**Step 16:** Place the clean top sheet over the patient.

**Step 17:** Now, tuck the top sheet and spread it under the mattress, at the foot of the bed.

*Fig. 5.2.19: Place the sheet to other side of bed*

**Step 18:** Raise the head of the bed to a comfortable position. Ensure the bed rails are raised and the wheels are locked. Observe and assess the patient's body alignment, mental and emotional status.

**Step 19:** Return the chairs and stools earlier kept away to their original positions. Remove the laundry bag from the room and discard the gloves.

## Tips

- Make sure the bed is firm, smooth and unwrinkled. Wrinkled bed-sheet can lead to undue pressure points on the patients resulting in bed sores.

- Inspect the mattress and pillows daily of vermin. Destroy them if found in bed.
- Make adaptations according to climatic differences, individual needs, customs and habits related to the patient.
- Turn the mattress, air it and make it free from lumps and creases.

## Exercise

1. Which of the followings are the types of linen?
   a. Cotton draw sheet
   b. Rubber sheet
   c. Blanket
   d. All the above
2. Clean, dry, and wrinkle-free linens also help to reduce the potential for skin breakdown and they are important to help control odour.
   a. True
   b. False
3. What is the purpose of making bed?

_____

_____

_____

_____

## Notes

Skill India
कौशल भारत-कुशल भारत

GOVERNMENT OF INDIA
MINISTRY OF SKILL DEVELOPMENT
& ENTREPRENEURSHIP

N·S·D·C
National
Skill Development
Corporation
Transforming the skill landscape

Healthcare
Sector
Skill Council

# 6. Support During Ancillary Services

Unit 6.1 – Support during ancillary services

Unit 6.2 – Care of Geriatric/Paralytic/Immobile/Other Special Patients

## Key Learning Outcomes

**After completion of this module, the participants will be able to:**

1. Explain the procedure for handling laundry linen
2. List the steps of transporting samples, drugs and documentations
3. State the importance of maintaining information security
4. Explain how to take care of a geriatric patient
5. Explain how to take care of a paralytic patient
6. Explain how to take care of an immobile patient
7. List the conditions that require special and compassionate care
8. Explain how to care of mentally challenged patients
9. Explain how to take care of infectious patient

# UNIT 6.1: Support during Ancillary Services

## Unit Objectives

**After completion of this unit, the participants will be able to:**

1. Explain the procedure for handling laundry linen
2. List the steps of transporting samples, drugs and documentations
3. State the importance of maintaining information security

## 6.1.1 Provide Ancillary Service for Supporting Patient Care

### Manage Changing and Transferring Laundry Linen

- Always wear personal protective equipment as per requirements before handling soiled linen (e.g., bed sheets, towels, curtains). Always consider used linen as contaminated.
- Ensure that soiled linen is never carried against the body. It should always be placed it in the linen trolley as per organizational standard protocols.
- Instead of shaking the linen, ensure that the soiled linen is rolled up to prevent contamination of the air, surfaces, and hospital personnel etc.
- If the linen is soiled with excrement such as faeces or vomit, use a flat, firm object to carefully scrape it off. Dispose the excrement in the commode or toilet and then place the linen in the designated washing basket.
- Place soiled linen into a clearly labelled, leak-proof container (e.g., bag, bucket) in the utility area.
- Do not transport soiled linen without PPE especially gloves and masks outside the specific area from where it was removed.
- Clean and disinfect the soiled linen after each use as per organizational process.
- Do not overfill the linen bags, ensure to tie them tightly before transferring them.
- Practice hand hygiene before application and after removal of PPE.
- Wear reusable rubber gloves while handling and laundering linens.

**Best Practices for Management of Clean Linen**

| |
|---|
| Sort, package, transport, and store clean linens in a manner that prevents risk of contamination by dust, debris, soiled linens, or other soiled items. |
| Each floor/ward should have a clean utility room for sorting and storing clean linens. |
| Transport clean linens on specified and labeled trolleys. |
| Keep the linen cart covered. |
| Keep all linen off the floor. |
| Keep dirty linen and all other objects away from your body and clothing. |
| Place dirty linen in the designated bag. |

*Fig. 6.1.1: Best practices for management of clean linen*

## 6.1.2 Role of CFW (ACS) in Transportation of Samples and Drugs, Documents

A sample may, generally, comprise blood, urine, faeces, or tissue sample that is tested to make a diagnosis. A number of samples are collected in one place and transported to another for diagnosis. The sample needs to be transported to a lab as soon as possible. In case of a delay, the cells in the sample may get contaminated, leading to incorrect diagnosis. Therefore, continuous effort must be made in order to ensure timely transportation of clinical samples. The cooperation of nursing staff and others concerned with sample collection, storage and transportation is required.

As a CFW (ACS) the role is to assist the nurse or doctor while the sample is being collected, labelled, and ensure that it is delivered to the lab in time.

### Procedure to Transport Samples, Drugs and Documentations

Some of the procedures that must be followed for the transportation of samples are mentioned below.

- Once a sample is collected, label and store it as per the standard procedures.
- The primary container must be closed tightly, labelled, and placed in a plastic bag. A 'biohazard' label must be affixed on the sample. 'Biohazard' label indicates a potential danger if the content gets leaked or is opened without protection.

- Seal the plastic bag using a tape or heat sealer. Pins, staples, and metal clips must not be used. A separate bag must be used to store each sample.
- Each sample must be placed in a leak-proof secondary container with sufficient absorbent material so as to absorb the content in case of a leakage. The secondary container must be disinfected externally.
- Efficient transportation of infectious material requires coordination between the nurse, CFW (ACS) and lab technician (receiving laboratory).

The CFW (ACS) plays an important role while transporting drugs and documents from one department to other departments (Interdepartmental and Interdepartmental). For these functions, they follow the instructions of a nurse or a doctor. It is very crucial in their role that they take the signature of the concerned official while receiving and providing the drugs and documents to the concerned authority. While handling the drugs, they must ensure that drugs are not given to someone without concerned authority or acknowledgement.

In a hospital, the documents and records generated is its primary asset and its security is essential.

The patient's information like contact number, financial information, personal information, medical information is confidential and it should be protected etc.

Information confidentiality is the normal procedure of protecting important data from unofficial access, application, leak, interruption, alteration, investigation, recording or elimination. This confidential data could be electronic data, physical data, etc. It is important that as a CFW (ACS) you take all measures for information security.

## 6.1.3 Maintain Information Security

- Do not reveal patient's personal, medical and financial information to anybody other than the authorized personnel.
- Do not divulge unauthorized information, written or verbal to any patient/competitor/any other people e.g., photocopy of patient information sheet etc.
- Do not share information about a patient with other patients.
- CFW (ACS) must ensure that the sample, drug, documents are transported safely.
- Clear and effective communication is important for coordination between the healthcare team.

## Exercise

1. List the best practices for management of clean linen.

_____

_____

_____

_____

2. What is the procedure to transport samples, drugs and documentations?

_____

_____

_____

_____

3. How can you maintain information?

_____

_____

_____

_____

# UNIT 6.2: Care of Geriatric/ Paralytic/Immobile and Other Special Patients

## Unit Objectives

**After completion of this unit, the participants will be able to:**

1. Explain the meaning of the term geriatrics
2. Explain how to take care of a geriatric patient
3. Explain the meaning of paralysis
4. Explain how to take care of a paralytic patient
5. Explain the concept of physical immobility
6. Explain how to take care of an immobile patient
7. List the conditions that require special and compassionate care
8. Explain how to care of mentally challenged patients
9. Explain how to take care of infectious patient

## 6.2.1 What is Geriatrics?

Some common medical problems, such as heart disease, diabetes, arthritis and Alzheimer's disease is common in the older patient ranging from the age 65 and above.

Taking care of an old patient is always more difficult and complex as compared to younger patients as older patients may have multiple health problems. This is a challenge for professionals who are specialized in Geriatrics, the medical care of older adults.

With multiple health problems, it's always difficult to prescribe drugs as one medication might affect the other disease or at time taking multiple drugs can cause problematic drug interactions and side effects.

*Fig. 6.2.1: Elderly patient's care*

## 6.2.2 Geriatrics: The Team Approach

Geriatrics in simple words means giving health care to older people and the team may include the below professionals or more:

- Geriatrician
- Frontline Worker Advanced Care Support
- Nurse
- Physician assistant
- Social worker
- Consultant pharmacist
- Nutritionist
- Physical therapist
- Occupational therapist
- Speech and hearing specialist

This team focuses on conditions like incontinence, frequent falling, memory problems and so on and also assesses their emotional, medical, social, needs.

The geriatrics team:

- Evaluates the patient's living situation and social supports
- Assesses one's ability to do daily task like bathing, eating and dressing
- Focuses on patient preferences and values

## 6.2.3 When a Geriatric Patient Need Care

- Patients with old age and medical conditions become more prone to injury and weakness due to diseases such as inability to walk and cognitive memory problems.
- Immediate family members and close friends get stressed while dealing with multiple health issues.

## 6.2.4 Support in Performing a Comprehensive Assessment

A CFW (ACS) is responsible for providing support in performing the following comprehensive assessment:

- Functional impact of the present illness and its symptoms
- Use of present medications and their usages and effects
- History of older illnesses
- Current and future life changes
- Measures in personal and social functionality
- Present and prospect living surroundings and its suitability to function and diagnosis
- Limitations and potential of the current caregiver

- Assessment of mobility and balance
- Analysis of the current status in case of being critically ill or disabled
- Existing emotional health and substance abuse
- Nutritional status and needs
- Details of the received and future required

## 6.2.5 Paralysis

### Symptoms of paralysis

A lay man is also able to realize the symptoms of paralysis. Effected part will get numb or the patient feels tingling sensation before paralysis completes sets in. This will further make it difficult or impossible for the patient to control the affected area.

### Types of Paralysis

Paralysis can be categorized in the way following ways:

1. **Location:** When only one area of the body gets affected like face or hand, it's called Localized Paralysis. When multiple parts get affected, it called Generalized Paralysis and is of the following types:
    - Monoplegia, one arm or a leg gets affected
    - Hemiplegia, one arm or a leg of the same side of the body gets affected
    - Paraplegia, influences both of legs
    - Quadriplegia, or tetraplegia, both arms and legs are involved
2. **Severity:** In case of partial paralysis, the patient is able to control the part partially. In case of complete paralysis; the patient loses complete control of the muscles.
3. **Duration:** Sometimes paralysis can be temporary like in Bell's palsy condition which causes a temporary paralysis of face; same is the case with strokes which can momentarily paralyze one side of the body. In such cases, chances of regaining complete or maximum consciousness of the muscle are possible with treatment.

### Flaccid or spastic

This shrinks and makes the muscles loose which further causes weakening of the muscle, majorly affecting tight and rigid muscles. It also causes uncontrolled twitching or ripples.

### What causes paralysis?

Major reasons for paralysis include, paralysis by birth, by an accident, severe medical illness, stroke, followed by spinal cord injury and multiple sclerosis affecting patients.

Other causes of paralysis include:

- Cerebral palsy
- Post-polio syndrome
- Traumatic injury to the brain
- Neurofibromatosis
- Birth defects

### How is paralysis diagnosed?

Diagnosis of paralysis is easy, in the case of muscle function loss. X-rays, CT scans, MRI scans, and other imaging studies are used to identify paralysis in internal body parts. Myelography is used to assess condition of the spinal cord injury. In this process, a special dye is inserted into the spinal cord of a patient to have clear visuals of the affected nerves. Electromyography is another method doctors use to measure electrical activity in muscles through sensors.

### How is paralysis treated?

Treatment plan depends on causes and symptoms of the patient and a specialist/doctor may prescribe:

- Surgery, maybe amputation
- Physio/occupational therapy
- Mobility aids like wheelchairs, braces, mobile scooters, etc.
- Botox or muscle relaxers in case of spastic paralysis

In case of incurable paralysis, a variety of treatments, tools and strategies are advised by the healthcare team to improve the quality of life.

### What is the outlook for people with paralysis?

In many cases, paralytic patients never resume mobility or sensation in the affected areas. Things listed below can be modified by occupational therapists as per the patient's abilities and needs:

- Clothes
- Home
- Car
- Workplace

## 6.2.6 Patient Care

### Partially paralysed patients

In case of partial immobility, the patient should be encouraged to do whatever he/she can to the best of his/her ability. Consult an occupational therapist for recommendation of suitable equipment like toothbrush with long and thick handle, special beakers and spoons for easy grasping and swallowing, folding wheelchairs, etc. to make the patient more independent. If the patient shows resistance to usage of the new equipment, be patient until the patient gets used to it.

This will help the patient gain confidence and give respite to the care-giver. Physiotherapy or exercises should be practised many times a day to facilitate muscle movement, followed by an outing and breathing exercises.

### Completely paralysed patients

More intensive care is required for bed-ridden patients. A hospital bed is important to be able to raise or lower the patient. Such patients have to be turned every half or one hour, so that they don't get bedsores.

Consult a specialist in case of redness, tenderness and pain. Ensure hygiene of bed sheets, toileting aids, utensils and moisturising agents. Empty urinary catheter or a drain bags frequently to avoid spillage and maintain hygiene.

To maintain social health of the patient and care-giver, invite friends, neighbours, relatives for an occasional tea or take the patient out for a stroll on the wheelchair.

### Medicine schedules

Adhere to medicine schedule. This is recommended for both semi and completely paralysed patients. This can be done with the help of a professional or by a friend or family member. Be in touch with the nearest primary health centre or nursing home for specific medical needs.

Apart from regular medical needs, regular care should be kept in mind. For example, consulting a dietician about daily nutritional intake.

Caregiver shall also focus on his/her personal health along with the patient’s needs, because this can be a tedious job that can take a toll on your own health. Once a while going out for shopping or personal work is inevitable.

The trips to the market should be planned optimally. Try to take advantage of home delivery or online services. Have some music running in the background as per the choice of the patient; have newspaper session and be cheerful on the job.

### Smile and do the duty

It's difficult to be cheerful for both, the patient and the caregiver, realising the seriousness of the disease and its affects, but one should not hesitate in keeping a positive and cheerful attitude towards life. Celebrate by being part of festivals, birthday parties and other recreational activities to break monotony.

## 6.2.7 Impaired Physical Mobility

Impaired physical mobility is the state in which an individual has a limited movement possible independently. For example, trauma, multiple sclerosis, morbid obesity, stroke, fracture etc.

### Causes of Impaired Physical Mobility

Aging is the main reason for impaired physical mobility that causes loss of muscle mass, movement and strength, posing difficulties in day-to-day activities amongst elderly patients.

Characteristics of impaired physical mobility are:

- Inability to move around
- Loss in strength, stamina and mass
- Restricted muscle movement

The other factors related to this are:

- Damage to the musculoskeletal or neuromuscular system and cognitive function
- Depression, pain, anxiety

## 6.2.8 Care Plan for Immobile Patient

Special care includes changing position, taking care of nutrition and rendering a safe environment.

### Symptoms

Different categories of the symptoms are given below:

- **Musculoskeletal system:** Loss of muscle strength, joint pain, stiff joints, restricted movement, extended bed rest
- **Cardiovascular system:** Weakness, oxygen imbalance, Edema
- **Respiratory system:** Chest muscle atrophy, decreased lung expansion, trouble in breathing pattern due to medications like analgesics and tranquillizers. Impaired gas exchange occurs due to increased fluids in lungs.
- **Metabolic system:** Imbalance in nutritional requirement, which can cause catabolism of the muscle mass.
- **Urinary & excretory system:** Constipation happens due to reduced physical activity. Urinary tract infection happens due to irregular flow of urine.
- **Skin:** Limited mobilization causes dry patches and pressure on the skin.
- **Other changes:** Reduced reaction time, changes in walk pattern, jerky movements, cognitive impairment, weak bone structure causing osteoporosis, and depression.

### Interventions

- Test mobility on bed, ability get up from sleeping position, ability to sit with/without support, or stand from sitting position.
- Identify immobility causes.

- Keep a close check at all vitals including pulse, blood pressure, breathing and skin colour before and after the activity.
- Monitor pain as it can hinder activity and mobility.
- Use assistive devices like canes, crutches, wheelchair or walker.
- Keep the (immobile) patient in upright position for as long as possible daily to avoid cardiovascular problems.
- Monitor urine output and bowel movements.

## 6.2.9 Nursing Actions and Selected Purposes/Rationales

- Methods to keep optimal joint and muscle mobility while patient can't move:
  - Exercise at least 3 times a day unless told otherwise
  - Follow the exercise plan as given by physician
  - Use electrical stimulation for muscle strength, if told
  - Encourage independent movements by putting rails and trapeze over the head
  - Exercise to reduce the risk of contractures
  - Exercise to ensure nutritional status is maintained for muscle mass, tone, and strength.
- Use other support and encourage them to help in putting the patient in the desired position.
- In case you see that the movements have become more restricted consult a physician or a physical therapist.

## 6.2.10 Conditions That Require Special and Compassionate Care

Some conditions that require specialized patient care are:

- Alzheimer's disease
- Breathing Disorders
- Cancer or Leukaemia
- Cerebral palsy
- Developmental disabilities
- Diabetes
- Down's Syndrome
- Geriatric Dentistry
- Emotional disabilities
- Extreme Fear of Dental Care
- Heart Disease
- Infectious Diseases

- Mental disabilities
- Multiple or complex medical problems
- Muscular dystrophy
- Paralysis
- Physical disabilities
- Seizure disorders or Epilepsy
- Stroke

## 6.2.11 Care for Mentally Challenged

- Keep focus on oral hygiene.
- Ensure proper skin care.
- Persons with tracheotomy and percutaneous endoscopic gastrostomy (PEG) sites may have chronic colonization with bacteria such as methicillin-resistant Staphylococcus aureus.
- Obstructive sleep apnoea is observed with Down syndrome patients.
- Keep a close nutritional watch on patients who have swallowing difficulties and use food pipes, if advised.
- Monitor pulse oximetry during oral feedings to avoid Hypoxemia.
- Be more sensitive and attentive to patients who have issues explaining themselves with words because of gastroesophageal reflux disease (GERD).
- Unexplained changes in behaviour can be because of constipation or faecal impaction.
- Keep a close watch for Seizures, as these can be often and severe in mentally retarded patient.
- Bracing helps in neuromuscular scoliosis with cerebral palsy.
- Osteoporosis or osteopenia is noticed among 50 percent mentally challenged patients.

*Fig. 6.2.2: Care for Mentally Challenged*

## 6.2.12 Infectious Patient

Based on the severity of the infection, the treatment is planned either at home or hospital for:

- Patients suffering from infection complications and those presenting difficult diagnostic and therapeutic challenges, such as non-specific fever.
- Post-operative infections.
- Tropical disease like malaria.
- Systemic infection, such as sepsis.
- Immunological disorder, such as HIV, or CVID.

**Taking care of patients with infectious disease**

- Use proper personal protective equipment (PPE).
- Always follow proper cleaning and disinfecting procedure.
- Identify and properly isolate infectious disease.
- Keep your hands clean by rinsing them with soap and water
- If required, don’t hesitate to consult a superior or a doctor.

## Exercise

1. Geriatrics in simple words means giving health care to older people and supporting their families and other caregivers.
   a. True
   b. False

2. Which of the followings are the areas geriatric providers may choose to assess?
   a. Family situation and availability
   b. History of past illness
   c. Used and required services
   d. All the above

3. If you experience a spinal cord injury, doctor may use myelography to assess your condition.
   a. True
   b. False

4. Which of the followings are the causes of paralysis?
   a. Traumatic brain injury
   b. Birth defects
   c. Cerebral palsy
   d. All the above

5. Special patient care means different things such as changing position, exercises, nutrition, etc.
   a. True
   b. False

6. Which of the followings are the symptoms of immobile patients?
   a. Metabolic system
   b. Cardiovascular system
   c. Skin
   d. All the above

7. Which conditions require special and compassionate care?
   a. Diabetes
   b. Breathing disorder
   c. Paralysis
   d. All the above

8. Infectious deceases are caused by microbes like bacteria, viruses, fungi and parasites are examined and treated
   a. True
   b. False

## Notes

Skill India

GOVERNMENT OF INDIA
MINISTRY OF SKILL DEVELOPMENT & ENTREPRENEURSHIP

N·S·D·C National Skill Development Corporation
Transforming the skill landscape

Healthcare Sector Skill Council

# 7. Assist Nurse in Critical Care Units

Unit 7.1 - Intensive Care at Healthcare Facilities

Unit 7.2 - Cardiopulmonary Resuscitation (CPR)

HSS/N5130

## Key Learning Outcomes

**After completion of this module, the participants will be able to:**

1. Enumerate the roles & responsibilities of CFW (ACS) in critical/intensive care unit (ICU)
2. List the equipment used in critical care unit
3. Identify the standard precautions practices
4. Explain the disinfecting and sterilization protocols in Intensive/Critical Care Unit
5. Describe the process of transporting patients
6. Explain about pressure sores
7. Describe the process of providing back care
8. Describe the process of care of unconscious and bed ridden patient

# UNIT 7.1: Intensive Care at Healthcare Facilities

## Unit Objectives

**After completion of this unit, the participants will be able to:**

1. Enumerate the roles & responsibilities of CFW (ACS) in critical/intensive care unit (ICU)
2. List the equipment used in critical care unit
3. Identify the standard precautions practices
4. Explain the disinfecting and sterilization protocols in Intensive/Critical Care Unit
5. Describe the process of transporting patients
6. Explain about pressure sores
7. Describe the process of providing back care
8. Describe the process of care of unconscious and bed ridden patient

## 7.1.1 Critical/Intensive Care Unit (ICU)

Critical/Intensive Care Unit (ICU) is a specially staffed and well-equipped hospital ward dedicated to the management of patients with life threatening illness and complication arising due to Covid 19. The patients at critical care unit require intensive nursing duly supported by CFW (ACS). CFW (ACS) plays an important role by assisting the nurses in taking care of the patients. They always work under the close supervision, guidance and observation of the health care team, including nurses.

### Functions of Critical/Intensive Care Unit

1. To provide life support care and monitor vital signs
2. To provide treatment by trained medical personnel
3. To initiate cardio-pulmonary resuscitation whenever required
4. To perform emergency, diagnostic, and therapeutic procedures
5. To decrease the mortality rate

### Type of Critical Care Unit

- Intensive Coronary Care Unit (ICCU)
- Neonatal Intensive Care Unit (NICU)
- Paediatric Intensive Care Unit (PICU)
- Burn Care Unit
- Neurological Intensive Care Unit

## 7.1.2 Roles & Responsibilities of CFW (ACS)

The prime role of CFW (ACS) is to assist the nurses in implementation of the nursing care plan which includes activities such as:

- Patient positioning including keeping the patient in a prone position
- Maintaining patient daily living activities
- Disinfecting, cleaning/sterilizing the ICU/CCU
- Measuring intake and output & maintaining record
- Care of the invasive lines such as central line care, arterial line care, and peripheral line care
- Sample collections such as urine, sputum, blood, stool, etc.
- Endotracheal suctioning
- Steam inhalation
- Nebulization of patients
- Maintaining critical care units and related equipment and articles
- Transportation of patients and specimens

**Equipment in Critical Care Unit**

ECG Machine

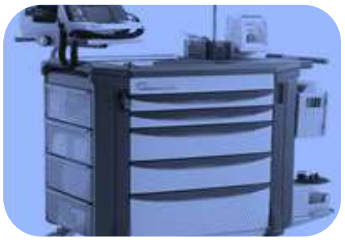
B.P. Apparatus

Defibrillator

Mechanical Ventilator, Ambubag

O2 cylinder

Suction Apparatus



Crash Cart

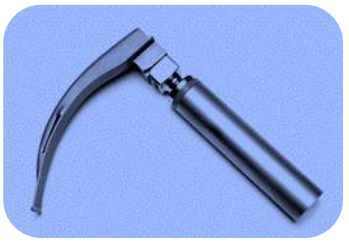
Cardiac Monitor

Pulse oximeter

*Fig. 7.1.1: Equipment in critical care unit*

Tracheotomy set

Catheterizer

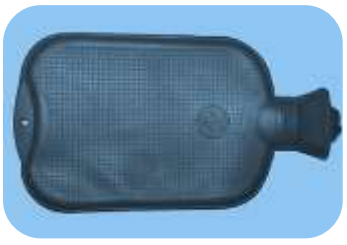


Laryngoscope

Ryles tube, NG tube

Dressing material

Emergency and lifesaving drugs



Rubber goods like hot water bottle, ice cap

Nebulizer


Humidifier

Pipe Gases

Syringe Pump

*Fig. 7.1.2: Equipment in critical care unit*

## 7.1.3 Function of CFW (ACS)

The purpose of healthcare services is to effectively meet the total health needs of the community. The role of hospitals in maintaining and restoring the health and wellbeing of the community is very crucial. The main functions of the CFW (ACS) are as follows:

**Promotive Functions:** According to WHO, "Health promotion is the process of enabling people in order to increase in awareness about diseases and taking preventive measures to improve health. It is not directed against any particular disease or focused on treatment/cure, but is intended to strengthen the patient through a variety of approaches such as health education, environmental modification, nutritional support, lifestyle and behavioural changes."

The CFW (ACS) has to assist the nurses in various aspects of health and nutrition.

**Emergency Services functions:** The CFW (ACS) assists the healthcare team in CPR. This helps in streamlining care of the patients requiring emergency medical services and thus improve the outcome.

The duties of the CFW (ACS) during patient hospitalization include:

- Recording health-related information of a patient
- Shifting her/him to a room and aiding in personal care activities
- Ensuring basic comforts for stay
- Informing the nursing staff about the condition of the patient
- Cleaning the equipment
- Ensuring the patient's overall care till discharge

Hence, the CFW (ACS) functions in many departments, for example, clinical, nursing, laboratory, dietary, laundry, housekeeping, sanitation, etc.

The duties may vary according to the situation. The CFW (ACS) plays a significant role in providing the right care to patients.

The sessions included in the unit explain the skills required by a CFW (ACS) for performing related tasks. The tasks include providing support for personal care, identifying the vital signs, making bed for the patient and care for the body after death. These require the CFW (ACS) to act in a way, considering the psychological needs of patients and their caretakers.

All healthcare workers must use standard precautions while handling any item that may contain blood or other body fluids as all body fluids can transport invisible infections.

## 7.1.4 Standard Precautions Practice

The standard precautions that must be used during patient care includes:

1. **Hand Washing Procedure**
   - Wash your hands before and after every patient contact.
   - Wash your hands before and after every task even if you have worn gloves.

2. **Use of Personal Protective Equipment (PPE)**

   Gloves
   - Wear gloves whenever you touch body fluids, even when you empty a urine bag, urinal or bed pan.
   - Remove your gloves and discard them away after each use.
   - Most hospitals and nursing homes use red bags to discard gloves and other things that are not sharp.
   - Never use gloves more than once. They must be discarded after every use.
   - Wash your hands immediately after taking off your gloves.

   Masks, Eye Protection and Face Shields
   - Use personal protective equipment like a mask, eye protection and face shields if you are near a patient care activity that may involve a splash or spray of body fluids.
   - Use a special mask or an Ambu-bag when you are doing CPR or rescue breathing.
   - Ensure that all single use personal protective equipment is disposed of immediately after use.

   Gowns
   - Wear a plastic gown when dealing with body secretions as it prevents body fluids from going through the gown to your clothes.
   - Remove the gown and discard it away as per bio medical protocol.
   - Wash your hands immediately after taking the gown off.

3. **Patient Care Equipment and Supplies**
   - Be careful when handling dirty patient care equipment and keep them away from your clothing or another patient.
   - Do NOT share single-use patient supplies with other patients.
   - Ensure that all single-use patient care equipment and supplies are discarded in the proper manner.
   - Ensure that all patient care supplies, like urinals and bedpans have the patient's name and room number written on them.

4. **Environmental Control**
   - Ensure all visibly dirty items such as bedside tables and night stands are cleaned regularly.
   - Routinely clean all wheelchairs, beds, rails and walkers.
   - Do not keep food items in patient care areas or in the medication/ patient refrigerator.

5. **Linen**
   - Keep the linen cart covered.
   - Keep all linen off the floor.
   - Keep dirty linen and all other objects away from your body and clothing.
   - Place dirty linen in the proper bag.

6. **Patients' Beds and Chairs**
   - Do not sit on patients' beds or chairs. Sitting on patient beds and chairs can spread infections to patients and residents from our uniform.

## 7.1.5 Disinfecting/Sterilization Protocols in Intensive Care Unit

In a hospital, disease causing organisms or germs are present everywhere such as on surfaces, medical equipment, patient's body, food, medication or samples developed during various tests. It is very important to follow safety measures in order to control the spread of diseases. One of the many important processes used to control the spread of disease is sterilization. Sterilization is the process by which all infection causing microorganisms, including bacteria are killed. Sterilization can be achieved by physical, chemical means such as heat, chemicals, radiation, high pressure, and filtration. All the equipment used in the hospital must be sterilized before they are used for any procedure. Even if the equipment is cleaned with a detergent, it is important to sterilize the equipment before it is used on a patient. The oldest method of sterilization followed in a hospital is heating. Sterilization is done by using moist heat and dry heat.

The various methods used for sterilization are:

- Heat sterilization
- Chemical sterilization
- Radiation sterilization
- Sterile filtration

## 7.1.6 Process of Packing Instruments for Sterilizations

Before sterilization, the instruments need to be cleaned and then packed in cloth. This process is called packing. As a CFW (ACS), your role is to assist in the packing of instruments for sterilization.

These are the steps that you must follow to pack instruments for sterilization:

**Step 1:** Wash your hands well with warm water and soap before you begin the process.

**Step 2:** Place the cloth used to pack the instruments on a clean table. The cloth used has four strings at the corners.

**Step 3:** Clean the instruments to be sterilized with a detergent.

**Step 4:** Place the instruments on the cloth and arrange them on the cloth. Ensure that they do not penetrate out of the cloth.

**Step 5:** Pack the cloth tightly and tie the strings of the cloth around the pack.

**Step 6:** Hand over the pack to the nurse who would then place the instruments in the autoclave for sterilization.

**Step 7:** Once the instruments are placed in the autoclave by the nurse, ensure that the valves on the lid are tightly closed.

**Step 8:** Keep a watch on the pressure and observe the time.

**Step 9:** The instruments should not be autoclaved for more than 20 minutes.

As a CFW (ACS) you must keep in minds these steps:

- Use clean water and good quality antiseptic soap for washing hands.
- Maintain personal hygiene.
- Maintain proper sanitary levels in the working area.
- Take utmost care while sterilizing. Do not hurry.

## 7.1.7 Standard Safety Precautions

**Standard precautions** are the minimum infection prevention practices that should be used in the care of all patients, all the time. These practices are designed to protect the healthcare worker and to prevent the healthcare worker from spreading infections among patients.

Standard precautions include:

| | |
|---|---|
| 1. | Hand hygiene |
| 2. | Use of personal protective equipment (e.g., gloves, gowns, masks) |
| 3. | Assist for safe injection practices |
| 4. | Safe handling of potentially contaminated equipment or surfaces in the patient environment |
| 5. | Respiratory hygiene/cough etiquette |

*Fig. 7.1.3: Standard precautions*

**Isolation precautions** are used for protecting patients, families, visitors, and healthcare workers by stopping the spread of germs from one person to another.

When patients are placed in isolation, there will be a sign at the door of their hospital rooms to remind visitors and healthcare workers which isolation precautions are needed. All healthcare workers and visitors need to follow these guidelines. Healthcare workers should not eat or drink in isolation rooms and should always clean their hands before entering the room and upon exiting the room.

**Respiratory hygiene and cough etiquette** are measures to prevent infection and decrease the transmission of respiratory illness such as influenza or cold viruses in healthcare facilities where patients, employees, and visitors may not be immediately recognized as having a respiratory infection. These standard precautionary measures help in preventing the spread of disease.

Important elements include:

| |
|---|
| Ask family members, visitors, and care providers to stay home if they are sick. |
| Use of posted signs with instructions and pictures about how to cover your cough and wash your hands. |
| Availability and use of tissues when coughing and sneezing, and reminders to dispose of used tissues properly. |
| Use of a mask for a person who is coughing. |
| Physical Distancing of the person with a respiratory infection from others. |
| Stressing hand hygiene after contact with respiratory secretions. This applies to the patient, family members, visitors, employees, and care providers. |

*Fig. 7.1.4: Respiratory hygiene and cough etiquette*

## 7.1.8 Role of CFW (ACS) in Transporting Patients

Moving an injured patient to and within the hospital must be performed with care. The hospital transportation system for patients is internal, external and various methods of triage. Internal transportation includes the use of trolleys, stretchers, lifts, escalators, etc., for transporting patients, equipment and other supplies, whereas, external transportation includes ambulances, relief vans, trains, or manual labourers, etc.

## 7.1.9 Triage Levels

- Red tag (highest priority): Severe breathing difficulty, cardiac arrest, burns involving respiratory tract, heart attack, poisoning, etc.
- Green tag (second priority): Severe burns, spinal injury, moderate haemorrhage, multiple fractures, head injuries
- White tag (least priority): Minor fracture, minor bleeding, moderate or minor burns
- Black tag (Dead)

## 7.1.10 Role of CFW (ACS) in Intake and Output Records

| | |
|---|---|
| **Intake records** | The intake records contain the measurement of a patient's fluid intake by mouth, feeding tubes or intravenous catheters. |
| **Ouput records** | The output records contain measurement of output from kidneys, gastrointestinal tract, drainage tubes, and wounds. Accurate 24 hours measurement and recording is an essential part of patient assessment. |

*Fig. 7.1.5: Intake and output records*

The purpose of intake and output calculation is to:

- Ensure accurate record keeping.
- Prevent circulatory overload
- Prevent dehydration
- Aid in analysing trends in fluid status
- Contribute to accurate assessment record.

Assisting the nurse in measuring intake and output:

| |
|---|
| Explain the purpose and procedure for measuring intake and output to the patient. |
| Record the volume of fluids consumed, as instructed by the nurse. |
| Keep track of fluid volumes used to irrigate drainage tubes or flush feeding tubes. |
| Wash hand. |
| Wear gloves. |
| Measure and record the volume of voided urine, urine collected in catheter drainage bag, liquid stool on other. |
| Wash hand post procedure. |
| Monitor and record vital signs under the supervision of a nurse. |

*Fig. 7.1.6: Measuring intake and output*

## 7.1.11 Care of Pressure Ulcer

A pressure sore is an area of the skin that breaks down when something keeps rubbing or pressing against the skin.

**Causes**

When there is too much pressure on the skin for too long, the blood flow to the area gets reduced.

Without enough blood, the skin dies and this results in the formation of pressure sores.

The patients likely to get pressure sores:

| |
|---|
| Use a wheelchair or stay in bed for a long time |
| Are an older adult |
| Cannot move certain parts of their body without help |
| Have a disease that affects blood flow, including diabetes or vascular disease |
| Have Alzheimer's disease or any another condition that affects their mental state |
| Have fragile skin |
| Cannot control their bladder or bowels |
| Do not get enough nutrition |

*Fig. 7.1.7: Patients likely to get pressure sores*

### Symptoms

Pressure sores are categorized into four stages, on the basis of how severe the symptoms are. Stage I is the mildest stage. Stage IV is the worst.

| | |
|---|---|
| **Stage I** | A reddened, painful area on the skin that does not turn white when pressed. This is a sign that a pressure ulcer is forming. The skin may be warm or cool, firm or soft. |
| **Stage II** | The skin blisters or forms an open sore. The area around the sore may be red and irritated. |
| **Stage III** | The skin now develops an open, sunken hole called a crater. The tissue below the skin is damaged. You may be able to see body fat in the crater. |
| **Stage IV** | The pressure ulcer has become so deep that there is damage to the muscle and bone, and sometimes to tendons and joints. |

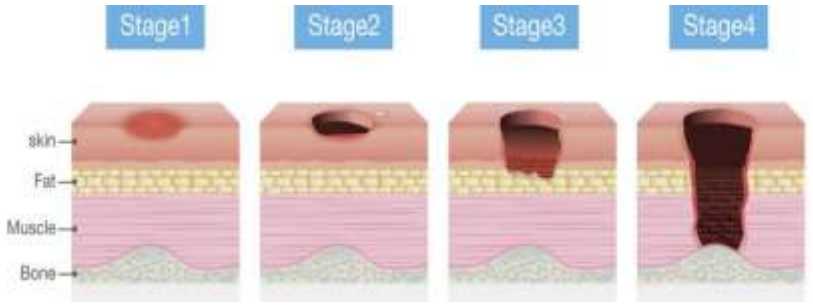



*Fig. 7.1.8: Stages of pressure sores*

Pressure sore tends to form where skin covers bony areas, such as:

| | |
|---|---|
| Buttocks | Elbow |
| Hips | Heels |
| Ankles | Shoulders |
| Back | Back of head |

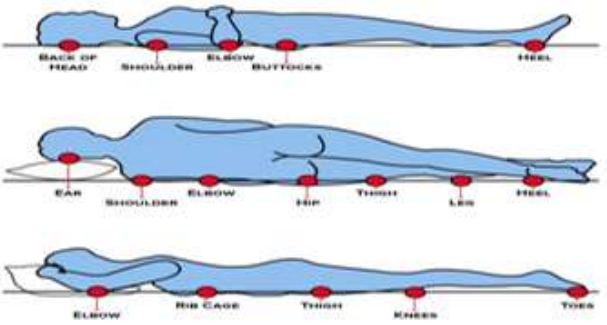


*Fig. 7.1.9: Areas of pressure sores*

**Caring for a Pressure Sore**

Stage I or II sores are relatively mild and will heal if careful care is provided.

Stage III and IV sores are severe, are harder to treat and the healing may take a longer time.

Relieve the pressure on the area by:

| |
|---|
| Providing special pillows, foam cushions, booties, or mattress pads to reduce the pressure. |
| Using water- or air-filled pads to help support and cushion the area. |
| Changing patient positions often. |
| Changing position of patient on wheelchair in every 15 minutes. |
| Changing position of patient on bed, by moving the patient every 2 hours. |

*Fig. 7.1.10: Way to relieve of pressure*

**Avoid further injury or friction**

| |
|---|
| Powder the sheets lightly so that the patient'sskin doesn't rub on them in bed. |
| Avoid slipping or sliding as you change patient's position. Try to avoid positions that put pressure on the sore. |
| Care for healthy skin by keeping it clean and moisturized. |
| Check the skin for pressure sores every day. |
| If the pressure sore changes or a new one forms, inform the nurse or healthcare team. |

*Fig. 7.1.11: Ways to avoid friction*

## 7.1.12 Back Care

**Definition**

Scientific form of massaging the back using different massaging strokes to provide cutaneous stimulation and thus promote comfort.

**Purpose of Providing Back Care**

| |
|---|
| To stimulate the circulation and give general relief |
| To prevent bedsore |
| To give comfort to the patient |
| To relieve muscle tension |
| To promote physical and mental relaxation |
| To relieve insomnia |
| To stimulate blood circulation |
| To assess the condition of skin |

*Fig. 7.1.12: Purpose of providing back care*

**Equipment Needed**

- Alcohol 25%
- Talcum powder
- Bath towel

**Procedure of providing back care**

| | |
|---|---|
| | Help the patient to turn on his abdomen or on his side with his back toward the nurse and his body near the edge of the bed so that he is as near the operator as possible. |
| | If the supine position is used and the patient is a woman, pillow under the abdomen removes pressure from the breasts and favor relaxation. |

*Fig. 7.1.13: Procedure of providing back care*

## 7.1.13 Care of Unconscious and Bed Ridden Patient

**Consciousness**

A state of awareness of yourself and your surroundings. Ability to perceive sensory stimuli and respond appropriately to them.

**Unconsciousness**

Abnormal state - client is unresponsive. Unconsciousness is not a disease rather it is a symptom that something is not right with the patient. It varies in length and severity. An example of a brief state of unconsciousness is fainting and of prolonged consciousness is deep coma. Coma is a deepest state of unconsciousness.

**Signs and Symptoms**

An unconscious patient:

| |
|---|
| Is unresponsive to activity, touch, sound, or other stimulation |
| Is unaware of his surroundings |
| Makes no purposeful movements |
| Does not respond to questions or to touch |
| Is Confused |
| Is always drowsy |
| Unable to speak or move parts of his or her body |
| Experiences loss of bowel or bladder control (incontinence) |
| Has respiratory changes |
| Has abnormal pupil reactions |

*Fig. 7.1.14: Symptoms of an unconscious patient*

CFW (ACS) plays an important role in care of unconscious patients by assisting the nurses in the implementation of nursing diagnosis, maintaining patent airway, ensure patient safety from fall, maintaining fluid balance and managing nutritional needs, maintaining skin integrity, and preventing urinary retention.

## Exercise

1. List the standard precautions that should be followed in an intensive care unit.

_____

_____

_____

_____

2. What are the important elements of respiratory hygiene?

_____

_____

_____

_____

3. Name some areas where pressure sores are likely to form.

_____

_____

_____

_____

# UNIT 7.2: Cardiopulmonary Resuscitation (CPR)

## Unit Objectives

**After completion of this unit, the participants will be able to:**

1. Explain the meaning of Cardio Pulmonary Resuscitation (CPR)
2. List the steps of providing CPR to an adult
3. List the steps of rescuing a child
4. Explain how to perform CPR Using automated external defibrillator (AED)

## 7.2.1 Cardiopulmonary Resuscitation (CPR)

Cardiopulmonary resuscitation is provided to a patient when the heart and breathing of the patient has stopped due to a cardiac arrest. It circulates blood which contains oxygen to the essential organs of the body. Chest compressions, a ventilator and an AED are used for this purpose.

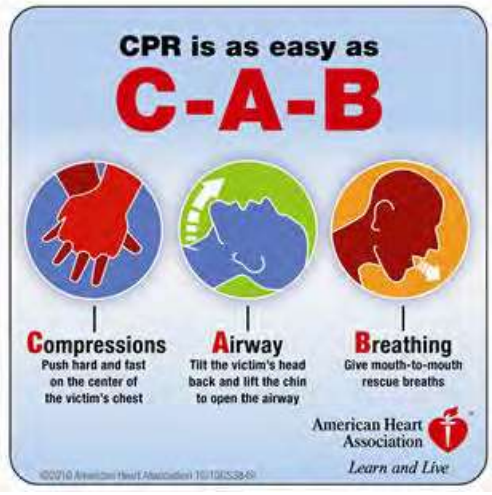



*Fig. 7.2.1: Cardiopulmonary resuscitation*

### Compressions

Chest compressions are an important element of a CPR. To ensure good results and proper CPR, high quality chest compressions must be provided.

Ensure that:

1. Patient is on a firm, flat surface to allow for adequate compression. In a non- healthcare setting this would typically be on the floor or ground, while in a healthcare setting this may be on a stretcher or bed.

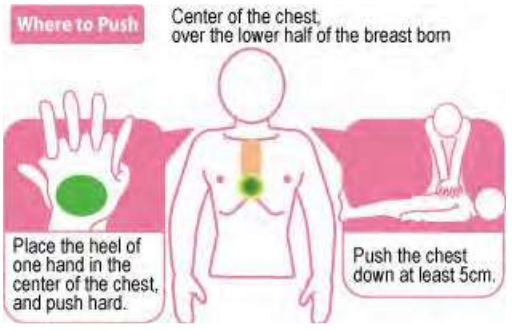



*Fig. 7.2.2: Compressions*

2. The chest is uncovered to facilitate proper hand placement and notice chest uncurl.
3. Position the hands such that the heel of one hand is in the middle of the chest and the other hand on top.
4. Arms are kept as straight as possible, while the shoulders are positioned directly over the hands to facilitate proper compressions. Elbows should be locked to keep the arms straight.
5. The rate of the compressions should be in the range of 100 per minute to 120 per minute, and the depth of the compressions should be at least 2 inches.
6. The chest must be given time to totally recoil before the next compression to enable the blood to flow back into the heart after the compression.
7. If a CPR has to be given to an adult patient, it involves 30 chest compressions followed by 2 ventilations.

### Ventilations

These provide oxygen to a person who does not appear to be breathing. They may be given through various methods such as:

### Mouth-to-Mouth

- Using the head-tilt/chin-lift method.
- Close the nostrils using fingers and seal the person's mouth with your mouth.
- Provide ventilations by blowing air into the person's mouth. Ventilations should be provided at the rate of one at a time. Break the seal slightly between ventilations to take respite and then after taking a breath re-seal the mouth.

### Pocket mask

Pocket masks are CPR breathing barriers which form a layer between your mouth and the person's mouth. These barriers prevent you from coming in contact with the patient's blood, vomitus and saliva. They also stop you from breathing in the air exhaled by the patient.

The process of using a pocket mask involves:

- Collecting the mask and the valve.
- Ensuring that the air passage is clear.
- Putting the mask over the mouth and nose of the person.
- Placing the lower part of the mask below the mouth up to the chin.
- Fixing the mask firmly.

## 7.2.2 Rescue of Child

**Checking an injured or ill child/infant**

**Steps**

- Check for responsiveness.
- Check for breathing.
  - Bend the head back and pull up the chin.
    - For a child: Shut the nose with your fingers, then seal the child's mouth completely.
    - Infant: Completely seal the infant's mouth and nose.
  - Blow in air for about 1 second to ensure that the chest rises distinctly.
  - Give continuous rescue breaths.
- Do a fast scan for severe bleeding

*Fig. 7.2.3: Check for responsiveness*

*Fig. 7.2.4: Check for Breathing*

**In case of conscious chocking – child cannot cough, speak or breathe**

- Give 5 blows on the back: Give firm blows on the back keeping the palm of a hand in between the infant's shoulder blades.
- Give 5 thrusts on the chest: Keep two or three fingers at the middle of the infant's chest just beneath the nipple line and compress the breastbone approximately 1½ inches.

- Continue the care: Continue giving 5 back blows and 5 chest thrusts until the:
  - Object is thrown out of the mouth.
  - Infant is able to cough forcefully, cry or breathe.
  - Infant becomes unconscious.

*Fig. 7.2.5: Back blow*

*Fig. 7.2.6: Chests thrust*

**AED—Child and Infant Younger Than Age 8**

- Turn on AED.
- Follow the voice and/or visual prompts.
- Wipe bare chest dry.

*Fig. 7.2.7: Back blow*

**Attach Pads:** If pads risk touching each other, use front-to-back pad placement.

*Fig. 7.2.8: Front to back pad placement*

Plug in connector, if necessary

- Perform CPR: After delivering the shock, or if no shock is advised:
  - Perform about 2 minutes (or 5 cycles) of CPR.
  - Continue to follow the prompts of the AED.

*Fig. 7.2.9: Plug in connector*

## 7.2.3 Performing CPR for an Adult

**Step 1: Check the scene for immediate danger:** Check that you're not putting yourself in harm's manner by administering the CPR to somebody unconscious. Do whatever you think is necessary to move yourself and the other person to safety.

**Step 2: Assess the victim's consciousness:** Gently tap on his or her shoulder and ask them if they are ok, in a loud and clear voice. If he or she gives a positive response then the CPR is not needed. Instead, give basic first aid and take measures to treat shock, and assess whether or not does the victim needs emergency services. If the victim does not respond, continue with the subsequent steps.

**Step 3: No need to check for a pulse:** Else you waste precious time.

**Step 4: Do Check for breathing:** Check that the air passage is unblocked.

**Step 5: Position the victim on the back:** Make sure the person is lying flat on the back.

**Step 6:** **Put the heel of one hand on the person's breastbone.** A pair of finger-widths on top of the meeting space of the lower ribs, precisely within the middle of the chest.

**Step 7:** **Put your second hand above the first one.**

**Step 8:** **Place your body over your hands,** in order to straighten your arms.

**Step 9:** **Perform thirty chest compressions.**

**Step 10:** **Minimize pauses in chest compression.**

**Step 11:** **Make sure the airway is open.**

**Step 12:** **Give 2 rescue breaths (optional).**

**Step 13:** **Repeat the cycle of thirty chest compressions.**

## 7.2.4 CPR Using AED

**Step 1:** Use an automated external defibrillator or AED.

Ensure that the area is clear of puddles or standing water.

**Step 2:** Expose the person's chest totally. In case of a lady, remove any necklaces or bras and also check for body piercings, or whether person may be using a pacemaker.

**Step 3:** Press Analyse on the AED machine.

If a shock is required for the patient, the machine can notify you. If you do shock the victim, ensure nobody is touching him/her.

**Step 4:** Do not remove the pads from the person and repeat CPR for another five cycles before using the AED again.

## Tips

Cardiopulmonary Resuscitation (CPR) is a technique that saves lives. CPR includes chest compressions as well as mouth-to-mouth resuscitation.

While performing CPR:

- Ensure scene safety.
- Check for response.
- Shout for nearby help/activate the resuscitation team; can activate the resuscitation team at this time or after checking breathing and pulse.
- You must be extra careful when you perform CPR on babies and infants.
- Check for no breathing or only gasping and check pulse (ideally simultaneously).
- Immediately begin CPR, and use the AED/defibrillator when available. CPR consists of cycles of 30 chest compressions and two breaths.
- If the baby is not breathing, perform gentle compressions using maximum three fingers.
- Always wear gloves to avoid any direct contact with the patient's potentially infected body fluids.

## Exercise

1. Describe how to provide quality chest compressions.

_____

_____

_____

_____

2. Describe how to provide CPR.

_____

_____

_____

_____

## Notes

Skill India
कौशल भारत-कुशल भारत

सत्यमेव जयते
GOVERNMENT OF INDIA
MINISTRY OF SKILL DEVELOPMENT
& ENTREPRENEURSHIP

N·S·D·C
National
Skill Development
Corporation
Transforming the skill landscape

Healthcare
Sector
Skill Council

# 8. Health & Hygiene

Unit 8.1 - General Practices for an Outbreak/Pandemic

Unit 8.2 - Safety and Sanitisation Guidelines

Unit 8.3 - Other Common Practices & Guidelines

Unit 8.4 - COVID 19 Vaccination

**HSS/N9622**

## Key Learning Outcomes

**After completion of this module, the participants will be able to:**

1. Discuss the difference between disease outbreak, epidemic and pandemic
2. Identify correct behavioural practices to be followed to prevent self-infection and spread of the disease to a certain extent
3. Explain social distancing, self-quarantine and self-isolation
4. Identify potential fomites and personal protective equipment (PPE) to be used at workplace
5. Describe common practices and guidelines pertaining to management of waste, measures for dealing with stress and anxiety, and procedure of reporting symptoms
6. Explain the role of healthy nutrition in Covid-19 including general immunity boosting measures.
7. List the side effects of vaccines, their signs and symptoms and the AEFI (Adverse effects following immunization) of COVID vaccination
8. List the COVID specific care facilities, portals and resources for latest updates about COVID protocols

# UNIT 8.1: General Practices for an Outbreak/Pandemic

## Unit Objectives

**After completion of this unit, the participants will be able to:**

1. Differentiate between disease outbreak, epidemic and pandemic
2. Explain the rules and guidelines for epidemic/pandemic
3. Distinguish between self-quarantine and self-isolation
4. Discuss norms for maintaining social distance during a pandemic

## 8.1.1 Disease Outbreaks, Epidemics and Pandemics

### What is a Disease Outbreak?

The term 'outbreak' means 'sudden breaking out' or 'occurrence' of a disease, or anything unpleasant. Disease outbreak specifically refers to a sudden occurrence and exponential rise of a disease beyond anyone's expectation and across any community, geographical area, or a country.

Disease outbreak is often caused by an infection which is transmitted to a person from another person, animal, environment or any other source. It may also be caused due to exposure to chemicals or radioactive materials. However, there are times when the cause of outbreak remains unknown. In fact, there is no certainty about the duration of a disease outbreak, for it may last a few days, weeks, months, or even years.

As per the World Health Organisation (WHO) data, disease outbreak happens every year in the form of influenza or the like in different parts of the world. At times, even a single case of an infectious disease is enough for it to be categorized as an outbreak. This is more so in case of a rare disease or that which has serious public health implications, for example, foodborne botulism.

DDT or mercury related diseases are examples of chemical related outbreaks, for example, Zika outbreak in 2015. Aedes mosquito spread the Zika virus in Brazil, America and South East Asia. It caused brain anomalies in the new borns when pregnant women were infected. Most of these infections were asymptomatic.

### What is an Epidemic?

Epidemic refers to an infectious disease that spreads actively and substantially across a specific location affecting large number of people within a short span. In fact, epidemics of 21st century are observed to be spreading more rapidly to far off regions than others.

For example, no one had heard of Severe Acute Respiratory Syndrome (SARS) before 2003, but it affected over 8,000 people and killed one out of ten of them. Similarly, epidemic of Middle East Respiratory Syndrome (MERS) across Middle East in 2012-2013, and the Ebola epidemic in West Africa in 2014 caused fear and panic as well as inflicted massive damage to the economy. Ebola epidemic of 2014 was a viral haemorrhagic fever caused by the Ebola virus. It spreads from infected bats and fluids of infected humans. It was located in the Sub-Saharan Africa mainly.

### What is a Pandemic?

When an epidemic spreads across various countries, it becomes pandemic. It affects larger number of people across the globe, causing greater number of deaths as compared to an epidemic. In addition to adversely affecting people, it has a drastic impact on the economy at large. Since pandemics pose far greater challenge than disease outbreaks and epidemics, the measures undertaken to deal with them are quite stringent, such as partial or complete lockdown imposed during covid 19 in 2020.

Influenza pandemic have been the most widely reported. There have been five of them in the past 140 years-the most severe was in 1918 (Spanish flu) and the most recent being the swine flu (2009). It happens when a new strain of the influenza virus is transmitted from any animal species to humans.

The following figure shows some key highlights of a pandemic:

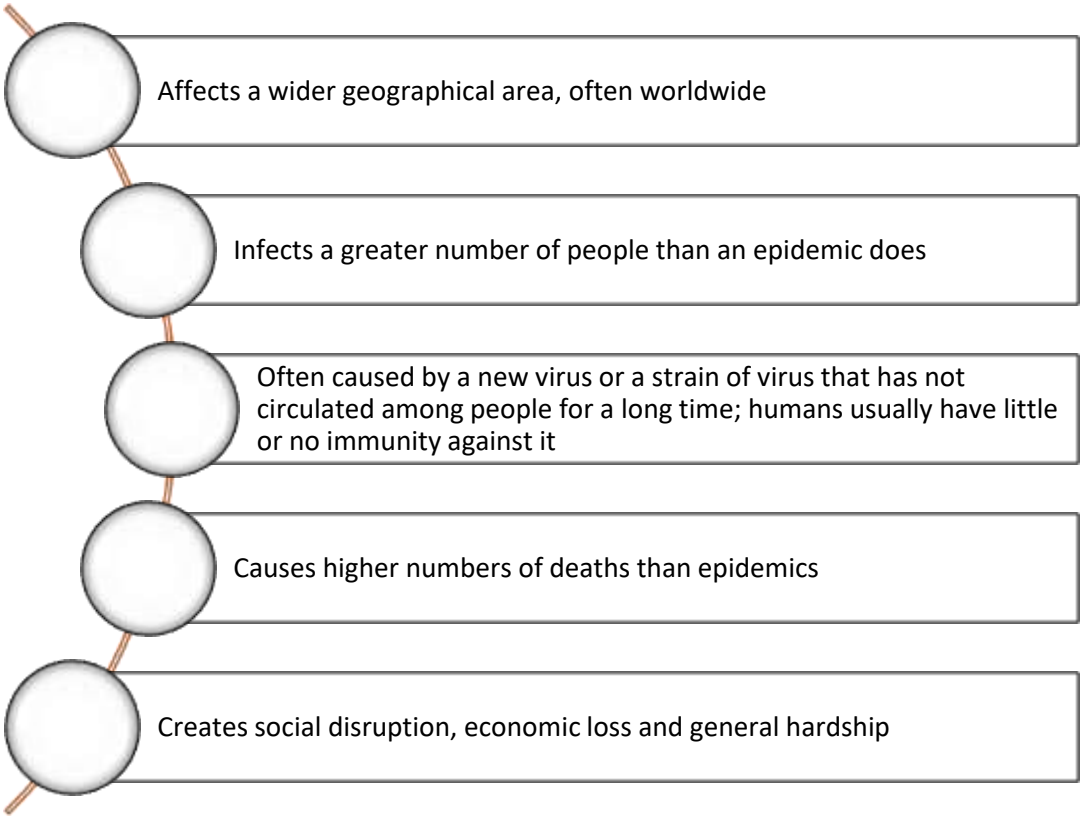



*Fig. 8.1.1: Key highlights of a pandemic*

## 8.1.2 Rules and Guidelines during Epidemic/Pandemic

As explained earlier, epidemics and pandemics have a tremendous impact on a large population—across a specific location or various countries respectively. The most significant defence against the outspread of disease is rules and guidelines. It is imperative to adhere to these guidelines for prevention and control of disease. However, first one needs to understand how the viruses/pathogens spread in humans though different means.

The spread of viruses/pathogens in humans is shown in the following figure:

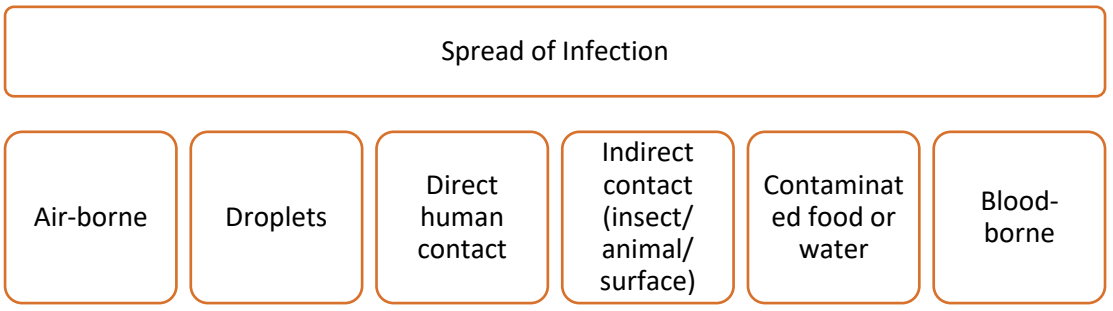



*Fig. 8.1.2: Spread of infection*

There are four main guidelines to be followed during an epidemic/a pandemic, as shown in the following figure:


*Fig. 8.1.3: Guidelines to be followed during epidemic/pandemic*

### Personal Hygiene

Personal hygiene is significant for prevention of infectious diseases and promotion of overall well-being. It refers to self-care practices for maintaining cleanliness at personal level and preserving health. These practices include bathing every day, washing hands with soap, wearing clean clothes, brushing teeth, grooming and so on. Personal hygiene entails maintaining not only cleanliness but also healthy habits as preventive measures for safeguarding oneself from catching any infection. It becomes all the more important to follow these practices during epidemics and pandemics as the nature of the disease is infectious, i.e., it spreads by coming in contact with infected people or things. Therefore, maintaining personal hygiene is not an option but a compulsion to secure oneself from becoming vulnerable to any infection.

Some points for maintaining personal hygiene are shown in the following image:


*Fig. 8.1.4: Maintaining personal hygiene*

### Hand Hygiene at Workplace

At work, our hands are exposed to all types of surfaces during the day, as everything we do involves hands in one way or the other—be it when shaking hands with people, eating meals, working on laptop, using mobile phone or common landline phone and so on. This makes them prone to various germs and viruses that can lead to sickness. It is for this reason that proper hand washing is on the top of personal hygiene routine. In fact, it is also one of the simplest and most effective ways to protect oneself and family members from falling prey to illnesses such as cold, cough, flu and gastroenteritis (these can all be contracted or passed on through poor hand hygiene). It is imperative to follow proper hand washing techniques at home and workplace to prevent the spread of diseases.

Some key highlights of maintaining hand hygiene at workplace are shown in the following figure:

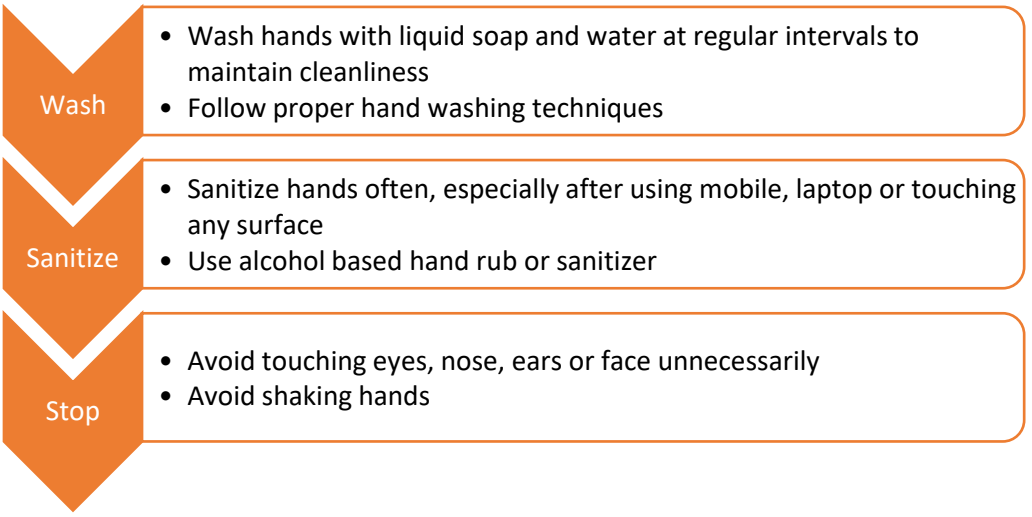



*Fig. 8.1.5: Maintaining hand hygiene at workplace*

## Steps

The detailed process for maintaining hand hygiene is shown in the following set of images:


*Fig. 8.1.6: Maintaining hand hygiene with soap and water*


*Fig. 8.1.7: Maintaining hand hygiene with alcohol-based sanitizers*

### Respiratory Hygiene

As the name suggests, respiratory hygiene is all about undertaking preventive measures to prevent the transmission of infection via the respiratory tract. It helps reduce the spread of viruses and pathogens, especially during epidemic or pandemic of an infectious disease.

The effective practices to maintain respiratory hygiene at workplace are shown in the following figure:

| | |
|---|---|
| Cough/Sneeze Etiquette | • Cough or sneeze in the elbow<br>• Use tissues to clean after coughing/sneezing |
| Face Masks | • Wear appropriate face mask at work place<br>• Avoid touching face and mask unnecessarily<br>• Dispose it off properly in closed bins after use |

*Fig. 8.1.8: Maintaining respiratory hygiene at workplace*

The cough/sneeze etiquette is shown in the following image:


*Fig. 8.1.9: Cough and sneeze etiquette*

Guidelines for using face masks are given in the following figure:

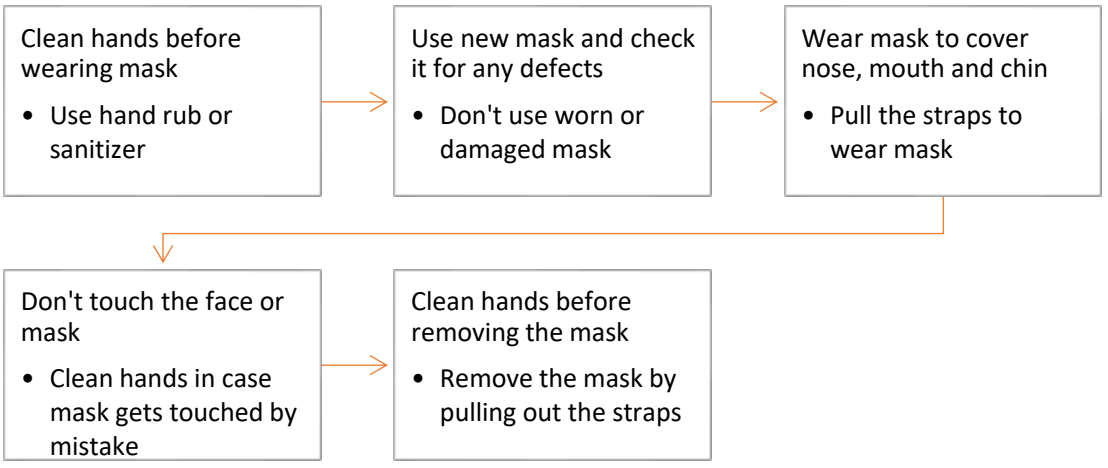



*Fig. 8.1.10: Guidelines for using face masks*

## Steps

The following image shows steps to wear and dispose a surgical mask:

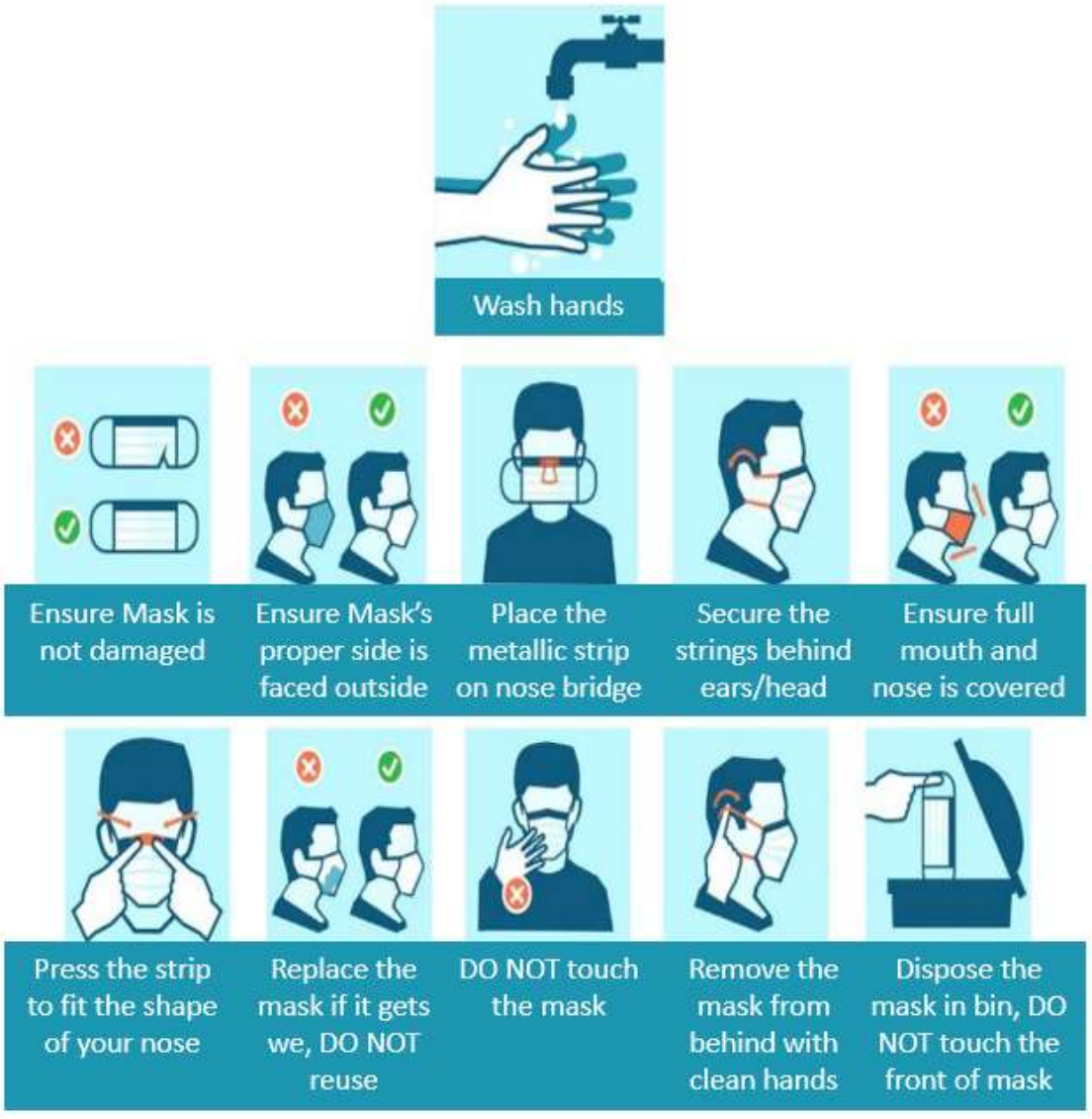



*Fig. 8.1.11: Wearing a surgical mask*

## Steps

The following image shows steps to wear a non-surgical mask:

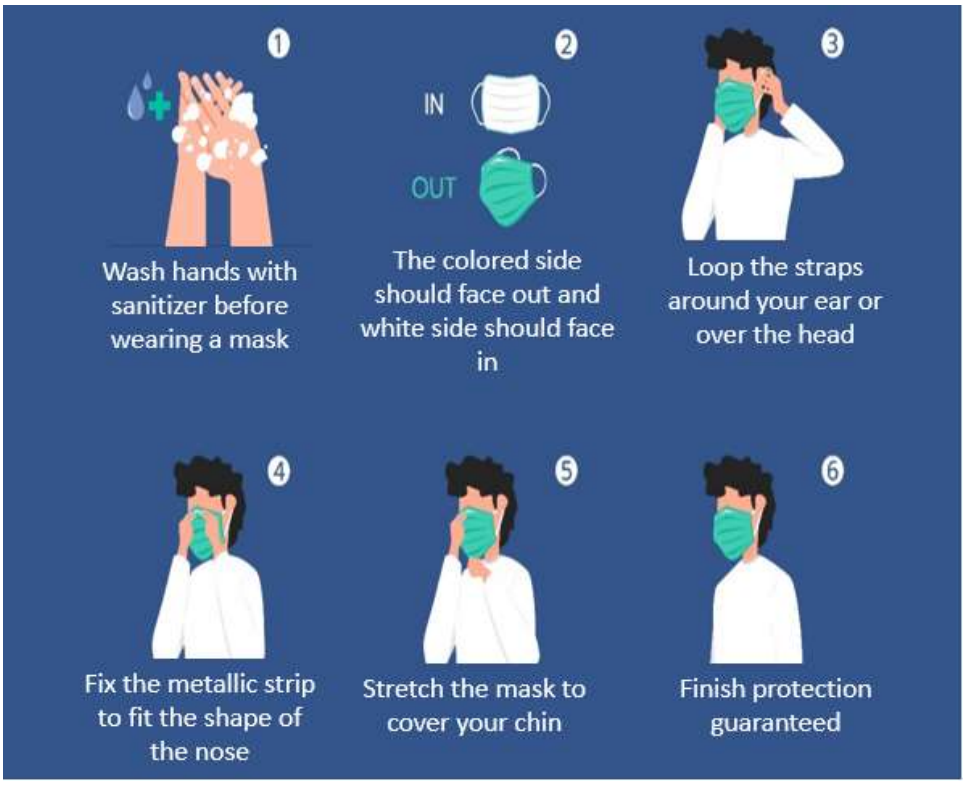



*Fig. 8.1.12: Wearing a non-surgical mask*

### Types of Face Masks

Face masks play a significant role in protecting the wearer from catching any kind of infection. There are mainly two types of masks, namely, medical masks and non-medical masks (fabric masks) but there are different styles as shown in the following image

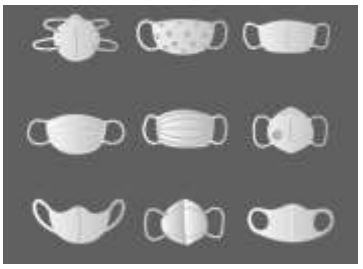


*Fig. 8.1.13: Types of face masks*

Face masks are worn to protect the wearer and the people surrounding him/her from infection that is carried in the droplets sprayed from coughing, sneezing and talking. They are typically worn to cover the nose and the mouth. There are many types of face masks available and they can be broadly divided into those worn by the healthcare staff and those worn outside a hospital.

Masks worn by non-healthcare givers are largely to protect themselves from dust and microbes. The protection offered depends on the material used and the number of layers. Some common types of masks used by people when they step out of the house are shown in the following images:

Cloth Masks

Surgical Masks

N95 Masks

*Fig. 8.1.14: Common type of face masks worn in public place or workplace*

**Cloth Masks –** A simple bandana made of cotton may be fashionably apt but offers virtually no protection from disease bearing droplets. Neck gaiters and balaclavas are effective only if made of cotton. Masks made of synthetic material may lead to more harm than good. There are anecdotal reports of masks made from old T shirts, but these are also equally non effective. For a cloth mask to be effective it should be made of tightly woven 100% cotton and sewn in three layers. Adding a polypropylene filter (which carries an electrostatic charge to trap small particles) can increase the filtration efficiency of a cloth mask to up to 70%. These are reusable masks and should be washed daily after use.

**Surgical Masks –** These are flat thin paper like masks which filter out 60% of inhaled particles. It provides barrier protection against large droplets but does not have an airtight seal. They are of single use type and should be discarded after each use. When a middle layer of melt blown yarn and a nose clip is added, they are effective in filtration of approximately 95 % of particles.

**N95 Masks –** These are personal protective devices and are made of melt blown yarn. They are able to filter out 97% of air borne particles. They are tight-fitting masks and have to be worn carefully lest some leakage occurs. People suffering from respiratory distress should not use an N 95 mask. They can be reused a number of times provided proper sanitizing methods are used to disinfect the masks. Masks that have a valve protect the user from the air borne particles that are outside but do not protect the people surrounding the user if he/she is infected.

### Social Distancing

We come in contact with people at work place who could be asymptomatic carriers of infection, which makes us all vulnerable unknowingly. An asymptomatic person is someone who shows no symptoms is spite of being infected. In certain cases, even the infected person does not know that he or she is infected without symptoms and is a potential carrier of infection.

Something as simple as talking, coughing or sneezing is enough to spread the infection from an infected person to others. It so happens that tiny droplets that are sprayed while talking, coughing or sneezing may contain virus that is transmitted to the person close by.

That is why social distancing becomes all the more important. Social distancing simply means maintaining physical distance of at least 1 meter (3 feet) from others. It is an effective preventive measure to protect oneself from catching any infectious disease from an infected person. This helps to slow down the spread of disease and safeguard those who are not infected.

The following image shows the sitting arrangement ideal for maintaining social distancing:

*Fig. 8.1.15: Social distancing at workplace*

## Workplace Hygiene

Workplace hygiene is as important as personal hygiene. It has various verticals spanning the work area, meeting etiquette and so on, and has a significant role in prevention of a disease outbreak. It not only helps in keeping oneself safe but also protects others and the environment.

Some key points for maintaining workplace hygiene are given in the following figure:

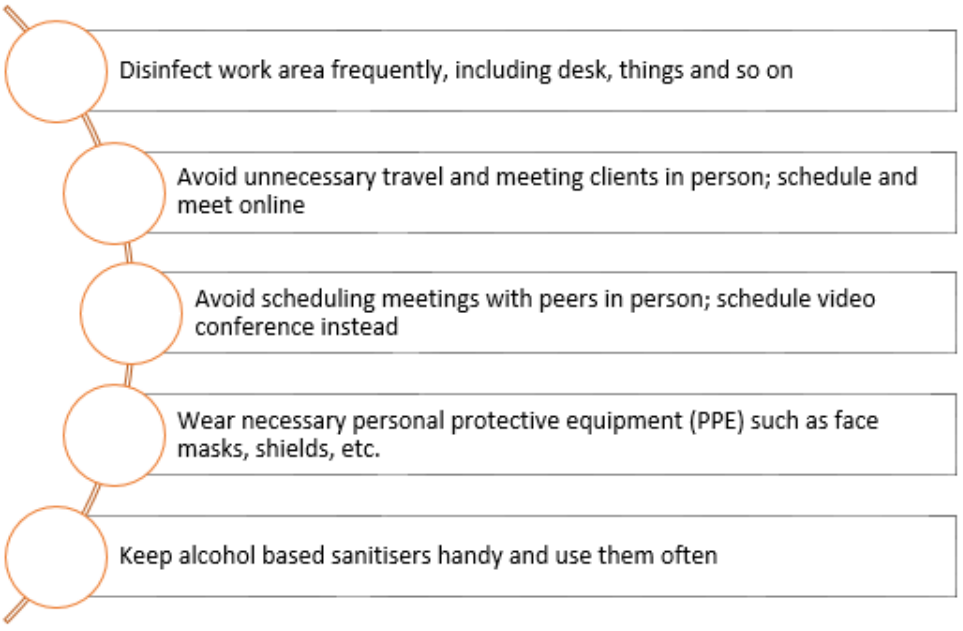



*Fig. 8.1.16: Maintaining workplace hygiene*

The following figure summarises the do's and don'ts to be practiced at workplace:

**Do's**

- Use non-contact greeting methods
- Clean hands at the door and keep washing hands regularly
- Disinfect surfaces such as doorknobs, tables and desks regularly
- Stay home if you are feeling sick
- Stay at home if anyone in your family is sick
- Use video conferencing instead of physical meetings
- Ensure you meet people in well-ventilated rooms and spaces

**Don'ts**

- Shake hands when meeting someone
- Touch your face and leave your mouth uncovered while coughing and sneezing
- Travel unnecessarily
- Get too much stressed if work is not going as planned
- Feel lonely and depressed; instead ensure you talk to people who will uplift your mood

*Fig. 8.1.17: Good practices while moving out of home*

## 8.1.3 Self-quarantine vs. Self-isolation

Several preventive measures are undertaken during an epidemic or a pandemic to contain the spread of the disease. Self-quarantine and self-isolation are two such effective ways to prevent the transmission of infection from an infected person to non-infected persons. Both of them are based on social distancing on a broader level, for in both the instances an individual needs to separate oneself from others for a certain period. However, although they are similar, there is a difference between the two.

### What is Self-quarantine?

Self-quarantine entails isolating oneself at home or any other place for a period of minimum fourteen days or so. It is meant for people who have been exposed to someone infected with the virus, have travelled during an epidemic/a pandemic, have attended any public gathering, or have been amidst a crowd. If a person has been in any of the above or similar situation then it is not an option but mandatory as per the guidelines that he or she should self-quarantine to prevent any infection or disease from spreading further. If any of the symptoms of infection begin to develop, then the person should contact a medical provider on a priority basis and follow the advice.

### What is Self-isolation?

Self-isolation also entails isolating oneself at home or any other place for a period of seventeen days or so. However, it is meant for people who have already tested positive for the virus/infection that has led to the epidemic/pandemic. This is the key difference between self-isolation and self-quarantine. In this case, the person has already caught the infection and needs to isolate to contain the spread of the virus and recover from the disease.

Every disease outbreak, epidemic or pandemic has certain signs and symptoms. For example, in case of Covid 19, symptoms entail fever, cold, cough, shortness of breath and so on. It is recommended to go for the test in case of development of any of these symptoms and follow the advice of the medical provider. As long as the symptoms are manageable, it is often advised to self-isolate at home, but in case of severe complications, the individual is admitted to the hospital.

Both, self-quarantine and self-isolation, involve maintaining personal hygiene and adhering to the guidelines as given in the following figure:

| |
|---|
| Stay in a well-ventilated room |
| Restrict movement |
| No direct contact or face to face interaction with anyone |
| Wear face masks to prevent the spread of virus |
| Keep your utensils and belongings separate |
| Stock up your essentials or go for contactless delivery |
| Stay active by doing some exercise or yoga |

*Fig. 8.1.18: Guidelines for self-quarantine and self-isolation*

Guidelines for environmental sanitation during self-quarantine and self-isolation are mentioned in the following figure:

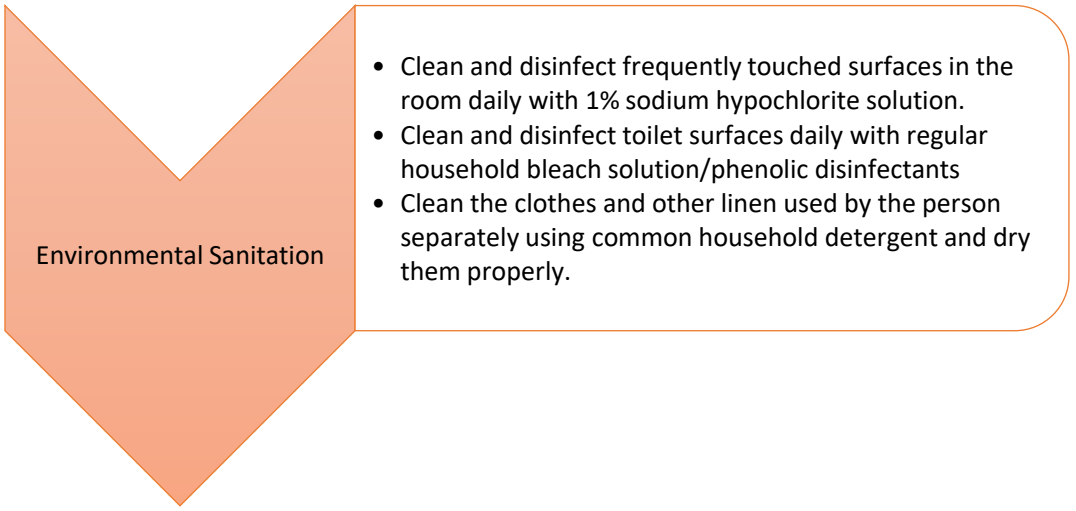



*Fig. 8.1.19: Environmental sanitation guidelines for self-quarantine and self-isolation*

## 8.1.4 Social Distancing

As explained earlier, social distancing refers to maintaining physical distance of at least 1 meter (3 ft.) between oneself and others. It also entails not going out in crowded areas or public gatherings during a disease outbreak, an epidemic, or a pandemic. Social distancing combined with strict adherence to personal hygiene routine, respiratory hygiene and workplace hygiene is highly effective in containing the spread of infections/diseases.

### Why Practice Social Distancing?

Social distancing protects those who are not infected, as it limits the opportunities of coming in contact with contaminated surfaces or infected people, especially outside home. It is all the more effective in case the epidemic is caused due to a communicable disease, for in such cases the virus can spread from the infected person to other people through droplets of cough or sneeze. The best defence is to wear appropriate face mask and maintain social distance during all interactions, even at home.

Some tips for social distancing are shown in the following figure:

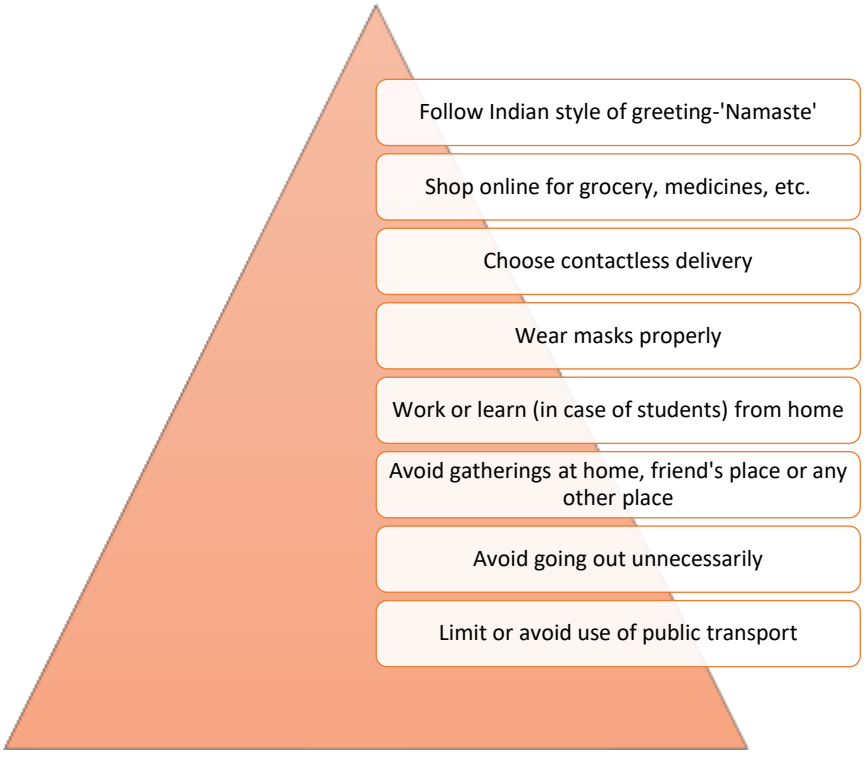



*Fig. 8.1. 20: Social distancing tips*

Some practices while meeting people out of home are shown in the following image:


*Fig. 8.1.21: Greeting while avoiding physical distance*

## Exercise

1. If soap and water are not available, one can clean hands with which of the following?
   a. Tissues
   b. Cloth
   c. Sanitizer
   d. Surf

2. Personal hygiene includes which of the following?
   a. Hand hygiene
   b. Workplace hygiene
   c. Social distancing
   d. Work from home

# UNIT 8.2: Safety and Sanitisation Guidelines

## Unit Objectives

**After completion of this unit, the participants will be able to:**

1. Discuss personal and workplace hygiene practices
2. Explain potential fomites at workplace
3. Describe appropriate use and disposal of Personal Protective Equipment (PPE)

## 8.2.1 Personal & Workplace Hygiene Practices

Good personal hygiene is an effective means to protect oneself and others from illnesses in general and catching infection during a disease outbreak, an epidemic or a pandemic. Personal hygiene entails adopting healthy practices to upkeep personal cleanliness and appearance. It is often mistaken to be akin to cleanliness but it is much broader than that as it includes habits required to maintain health and wellbeing. These practices include washing hands, sanitising hands, bathing, oral care, self-care and so on. In case of people who do not adhere to personal hygiene routine on a regular basis, their body becomes a breeding ground for all types of germs and viruses.

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. 8.2.1: Hand Washing Technique*

*Fig. 8.2.2: Washing hands with soap and water*

## Steps

The following figure shows the steps to wash hands properly:

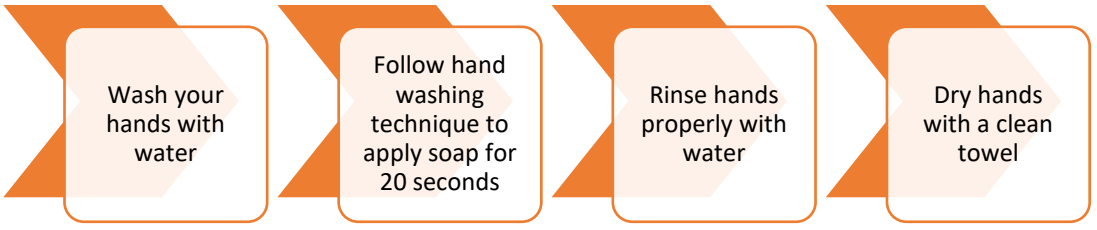



*Fig. 8.2.3: Steps to wash hands properly*

The Centers for Disease Control and Prevention (CDC) recommend washing hands at certain times, as shown in the following figure:

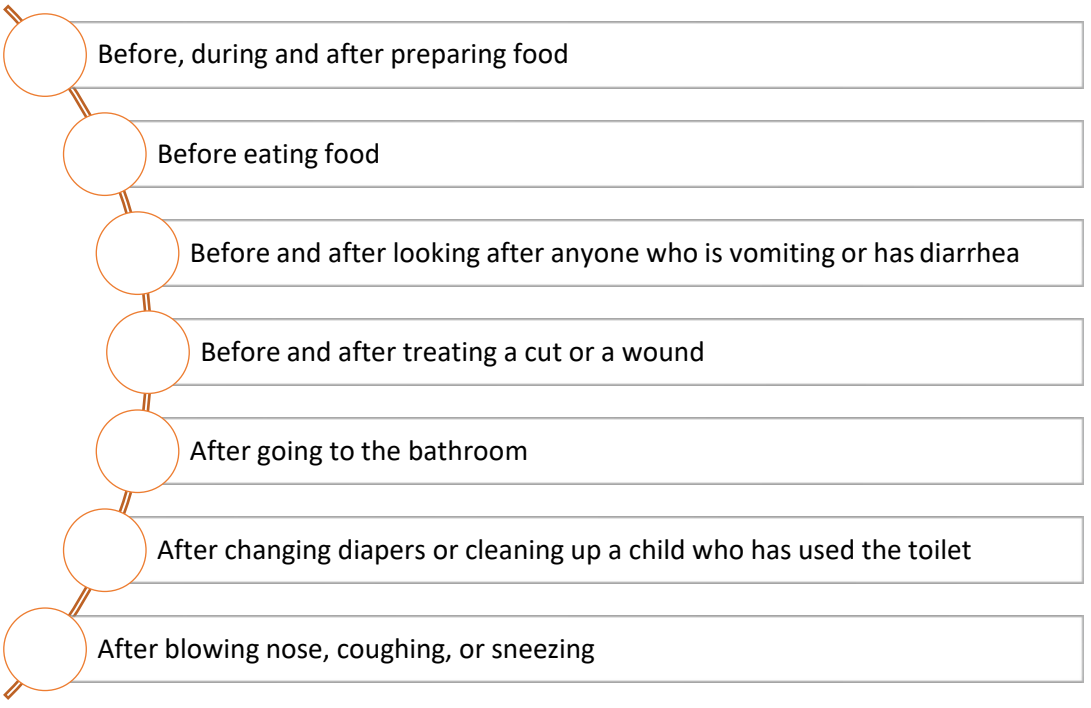



*Fig. 8.2.4: Key times to wash hands as recommended by CDC*

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. 8.2.5: Use of hand sanitiser*

## Steps

The following figure shows the steps to use sanitiser for cleaning hands:

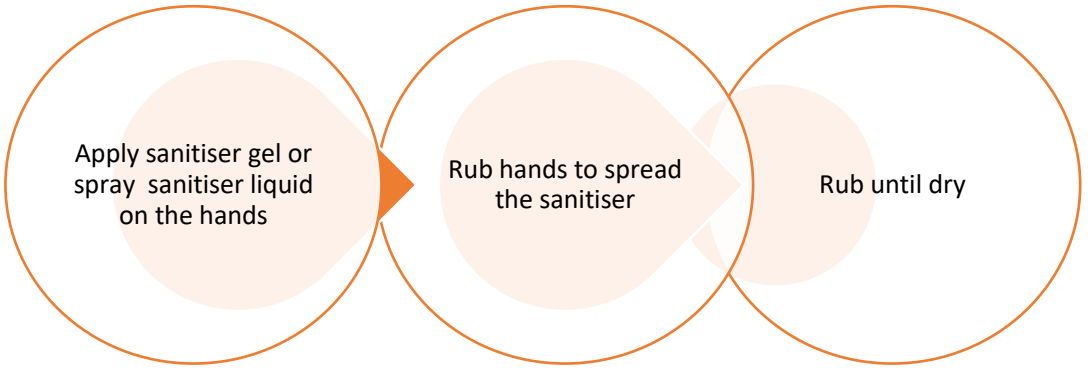



*Fig. 8.2.6: Steps to sanitise hands properly*

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.

**Steps**

The following figure shows the steps to perform cleaning and disinfection of work area:

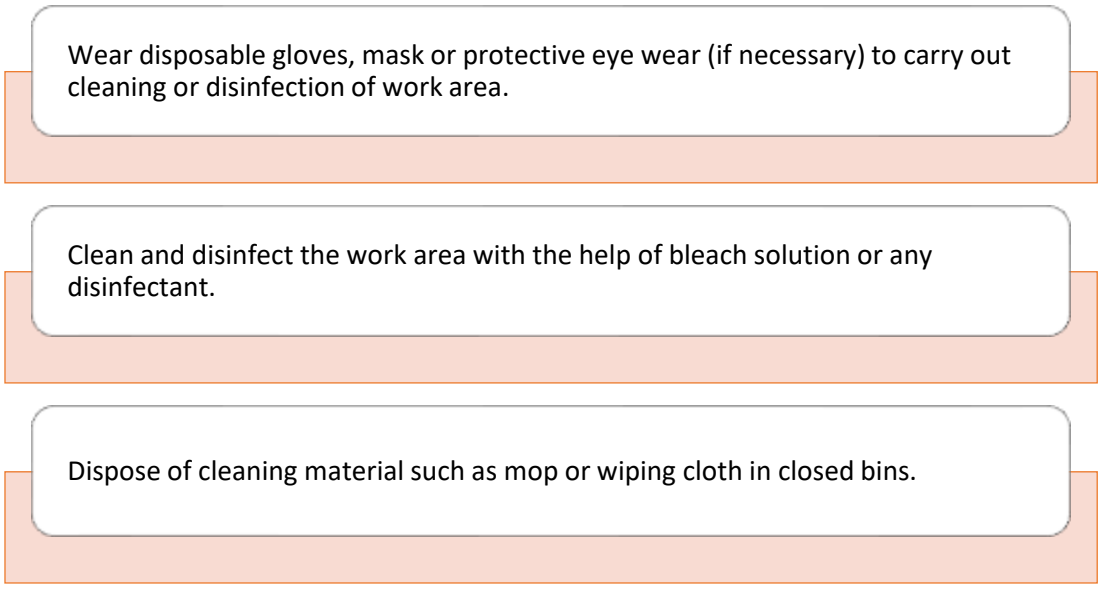



*Fig. 8.2.7: Steps to perform cleaning and disinfection of work area*

## 8.2.2 Potential Fomites at Workplace

Fomites refer to all those objects or surfaces that can become contaminated with viruses when touched by an infected person and can further transmit the infection to those who touch the surfaces next. It is all the more important to clean and disinfect fomites as viruses and germs survive for hours or even months on these surfaces, if not cleaned. Example of fomites include doorknobs, light switches, remote controls, elevator buttons and so on.

Fomites are not just pertinent with respect to disease outbreak, epidemic or pandemic but even in normal circumstances these fomites lead to rapid indirect transmission of viruses, leading to spread of communicable diseases. Thus, cleaning and disinfection of these fomites with a disinfectant solution must be carried out on frequent basis for a healthy workplace environment. Any lapse can be a threat to the health of one and all. Moreover, on a personal level, one can ensure not to touch these surfaces directly but to use any disinfectant tissue or wipe and dispose of it immediately in a closed bin.

A list of potential fomites at workplace is shown in the following figure:

| | |
|---|---|
| Potential fomites at workplace | Common areas such as pantry, printing stations, etc. |
| | Vending machines, coffee mug handles, etc. |
| | Conference or meeting rooms |
| | Door handles or doorknobs |
| | Electronic devices such as laptops |
| | Telephone receivers |
| | Elevator buttons |
| | Desks or countertops |

*Fig. 8.2.8: Potential fomites at workplace*

## 8.2.3 PPE to be used at Workplace

PPE refers to 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. PPE should be used in combination with other recommended preventive measures such as maintaining personal hygiene, respiratory hygiene and social distancing, for lack of doing so makes the person vulnerable to viruses and infections.

Let us take an example of Covid 19 pandemic to understand the use of PPE. Covid 19 virus gets transmitted from one person to another through close contact and droplets. Thus, wearing appropriate type of PPE is imperative depending upon the work setting and risk of exposure. The type of PPE used in order to protect oneself is different from the type used when caring for an infected person, as health care workers need extra protection in terms of respirators and fluid resistant gowns. Although PPE is one of the effective means to prevent the spread of virus, it gives benefit only when followed with other preventive measures explained earlier.

## Steps

The steps to put on PPE for precaution are given in the following figure:

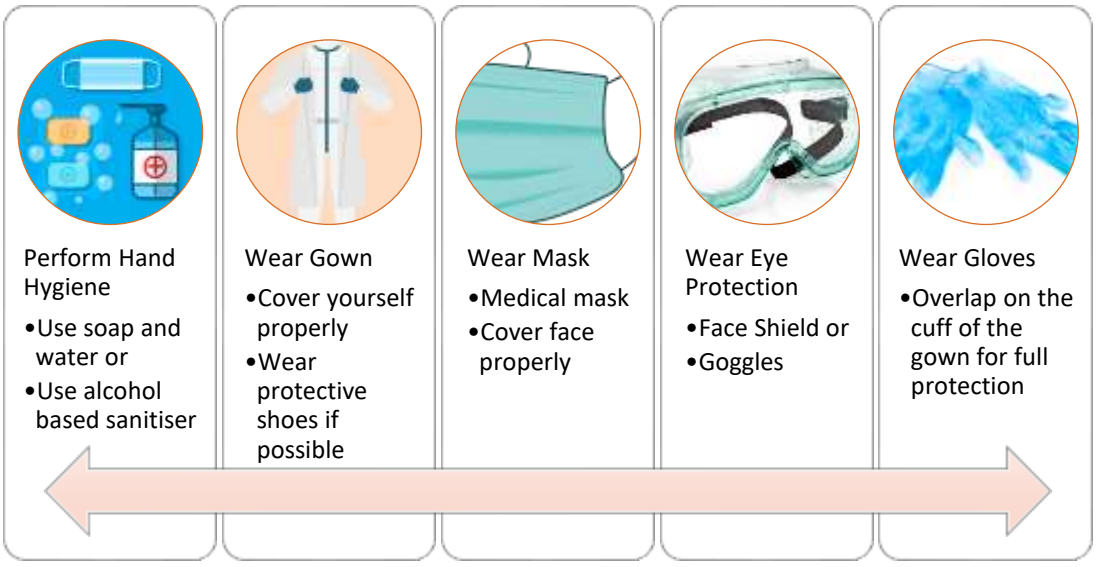



*Fig. 8.2.9: Steps to put on PPE*

The guidelines for use of PPE are given in the following figure:

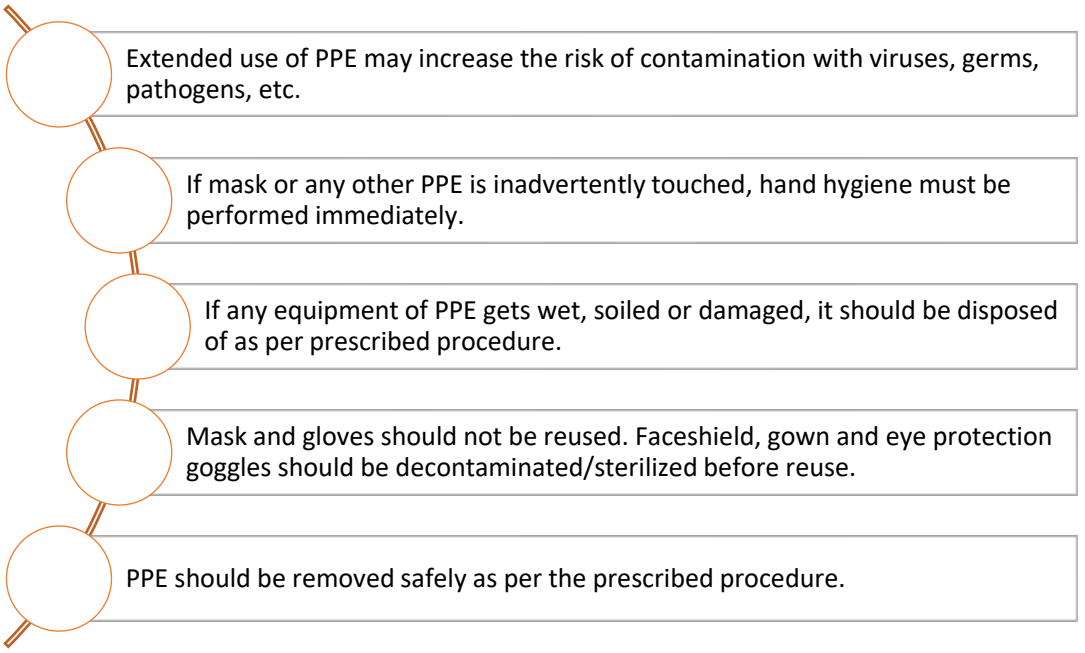



*Fig. 8.2.10: Guidelines for use of PPE*

## Steps

The steps to take off PPE after use are given in the following figure:

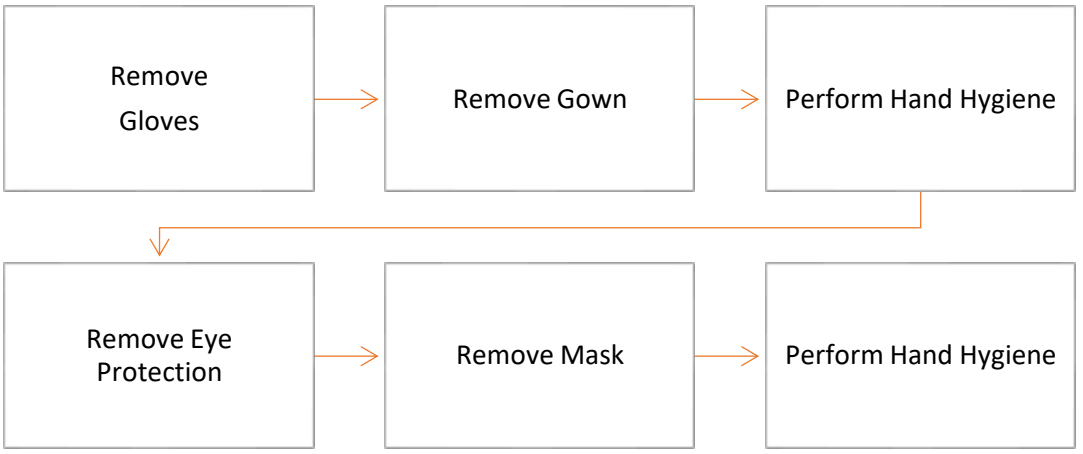



*Fig. 8.2.11: Steps to take off PPE*

The different PPE required by different professionals is shown in the following set of images:


*Fig. 8.2.12: PPE for healthcare professionals*


*Fig. 8.2.13: PPE for grocery, poultry, or other professionals who work with wet products*


*Fig. 8.2.14: 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 set of images:


*Fig. 8.2.15: Procedure to remove PPE for healthcare professionals*


*Fig. 8.2.16: Procedure to remove PPE set, boots, leg cover and gloves*


*Fig. 8.2.17: Procedure to remove goggles and masks*

## Tips

- Washing hands is the quickest and simplest way to get rid of viruses.
- Workplace hygiene entails wearing necessary PPE as well as disinfecting the work area.
- Surface touched frequently become potential fomites capable of spreading the infection.
- PPE should be worn in the following sequence: gown, mask, eye protection and gloves.
- PPE should be removed in the following sequence: gloves, gown, eye protection and mask.

# UNIT 8.3: Other Common Practices & Guidelines

## Unit Objectives

**After completion of this unit, the participants will be able to:**

1. Discuss the importance and process of identifying and reporting symptoms to the concerned authorities
2. Explain the importance and mechanism of proper collection, transportation and safe disposal of waste
3. Select different types of waste and various types of colour coded bins/containers used for disposal of waste
4. Discuss the ways of dealing with stress and anxiety and providing support during an epidemic or a pandemic

## 8.3.1 Identifying and Reporting Symptoms

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. 8.3.1: Steps to be followed for identification and reporting of symptoms*

## 8.3.2 Handling Waste

Waste management has a significant role to play in controlling the spread of infection. It entails following prescribed procedures for proper collection, segregation, transportation and disposal of waste. During a disease outbreak, an epidemic or a pandemic, waste from households and organisations can transmit infectious germs and viruses and thus pose risk to the health of people. That is why it is imperative to follow health and safety guidelines for waste management at home as well as workplace.

### Steps

The guidelines to dispose of waste outside home during a pandemic, for example Covid 19, are given in the following image:


*Fig. 8.3.2: Disposing waste during pandemic*

*Image Credit: Creator— Maria Tsakona and Levi Westerveld, Grida.no. 2020. Quick Tips For Safe Handling Of Waste During The COVID-19 Pandemic | GRID-Arendal. [online] Available at: <https://www.grida.no/resources/13574>*

**Procedure for safe disposal of non-healthcare waste:**

1. Waste should be collected in a plastic rubbish bag and tied properly.
2. The plastic bag should then be placed in a second bin bag and tied properly.
3. Waste should be stored safely in a suitable and secure place until the individual's test results are known. This is applicable in case any individual at home or workplace is suspected to have caught the infection.
4. Waste should be kept away from children.
5. Waste should not be thrown in communal waste areas until negative test results are known, or the waste has been stored for at least 72 hours.
6. If storage for at least 72 hours is not appropriate, arrange for collection by the local waste collection authority.

Waste management entails the processes as shown in the following image:

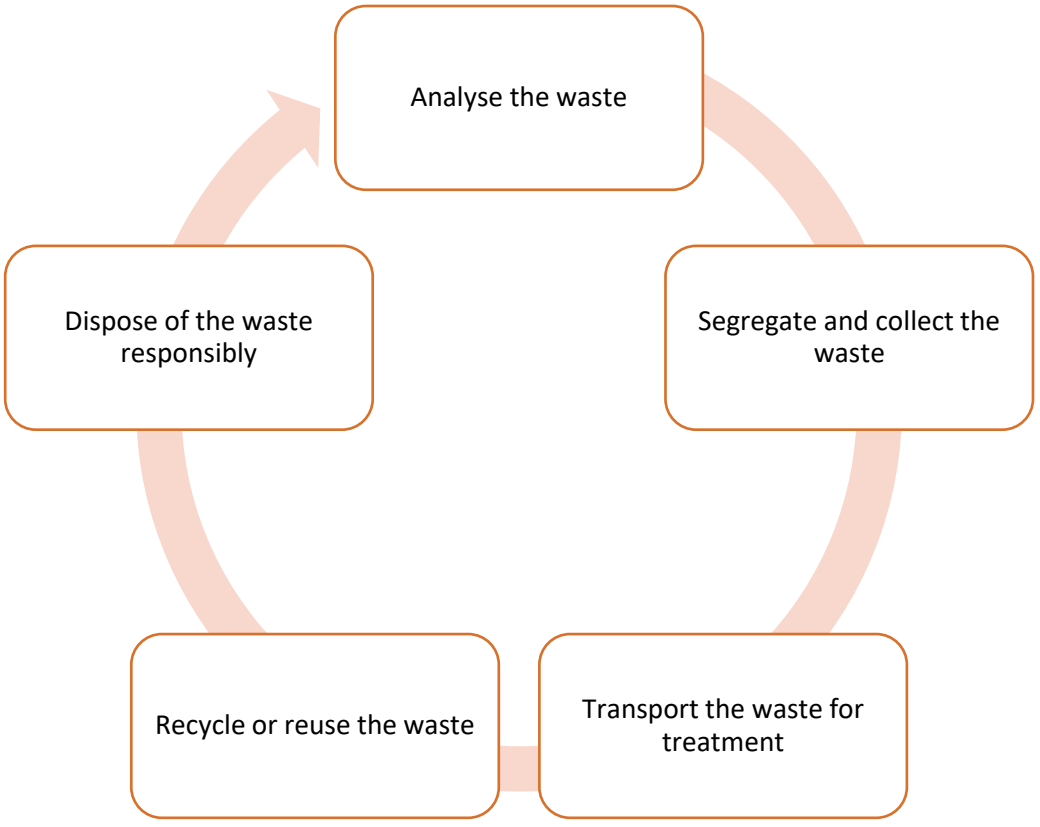



*Fig. 8.3.3: Steps of waste management*

**Procedure for safe disposal of greywater or water from washing PPE, surfaces and floors:**

1. WHO recommends that after each time utility gloves or heavy-duty, reusable plastic aprons are used, they should be cleaned with soap and water, and then decontaminated with 0.5% sodium hypochlorite solution.
2. Single-use gloves made of nitrile or latex, and gowns should be discarded after each use and not reused as they could have come in touch with infectious waste.
3. Hand hygiene should be performed after PPE is removed.
4. If greywater includes disinfectant used in prior cleaning, it does not need to be chlorinated or treated again.

**Procedure for Safe Disposal of Healthcare Waste**

The procedure for disposal of healthcare waste may vary according to the state guidelines on disposal of waste. The following figure shows general information for safe disposal of healthcare waste:


*Fig. 8.3.4: Safe disposal of healthcare waste*

During a disease outbreak, an epidemic or a pandemic, health of waste- collection workers is very much at risk, given the nature of their job wherein they are exposed to all types of waste. The following image shows how waste-collection workers can minimise risks during a pandemic, for example during Covid-19:


*Fig. 8.3.5: Guidelines for waste- collection worker*

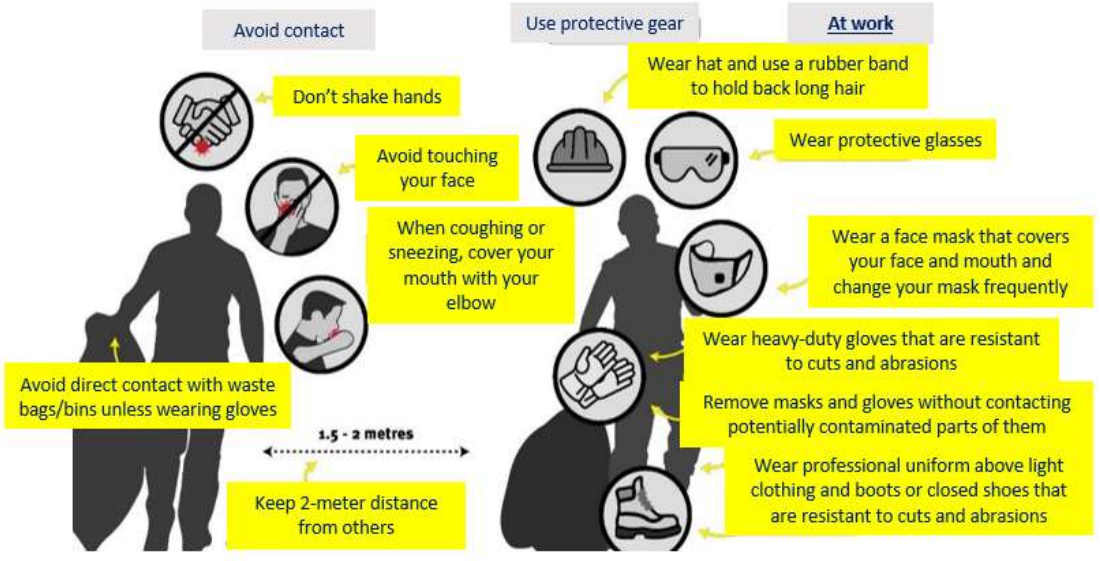



*Fig. 8.3.6: Guidelines for waste- collection worker*

The following image shows how waste-collection workers can minimise risks during a pandemic, for example during Covid-19:

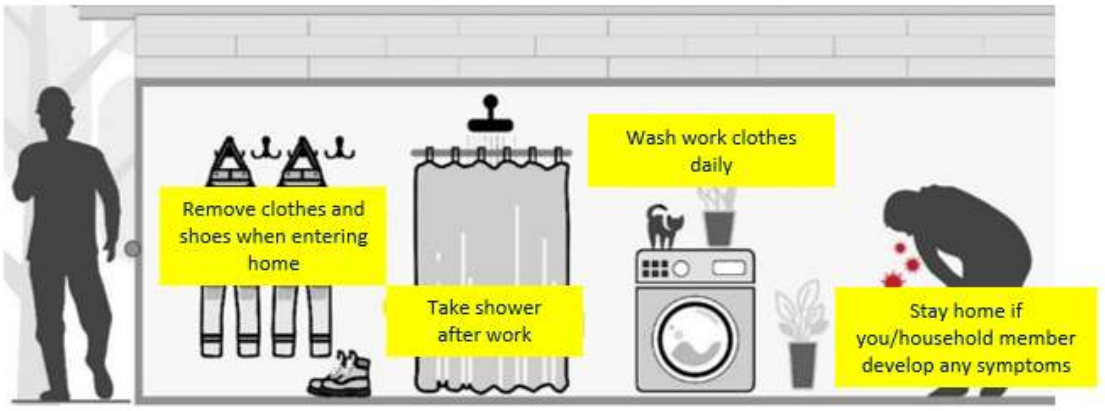



*Fig. 8.3.7: Guidelines for waste- collection worker*

*Image Credit: Creator— Maria Tsakona and Levi Westerveld, Grida.no. 2020. Quick Tips For Safe Handling Of Waste During The COVID-19 Pandemic | GRID-Arendal. [online] Available at: https://www.grida.no/resources/13574*

## 8.3.3 Dealing with Stress and Anxiety during a Disease Outbreak

A disease outbreak, an epidemic or a pandemic brings about numerous challenges worldwide. On one hand, we need to deal with the virus and the illness, and on the other hand, we need to deal with the inherent fear, which is the springboard of stress and anxiety. In a way, we need to strengthen both our body and mind to be able to deal with such a challenging situation.

We need to understand the impact of stress and anxiety on our physical and mental health. It poses unnecessary pressure on our body and mind, which lowers our immunity and makes us more vulnerable to viruses and illnesses. To make matters worse, we do not even realise when it begins to build up and overpowers our thinking.

You need to ask yourself certain questions to identify stress and anxiety, such as – Are you fearful and worried about your own health and health of your loved ones? Do you have difficulty sleeping or concentrating? Is your physical and mental health getting worse? Do you constantly fear catching the infection?

If the answer to any of these questions is yes, then you need to change your mindset and take the following practical measures for your safety and security:

| | |
|---|---|
| People diagnosed with a disease and their family/neighbours often feel sad, stressed, confused, scared or angry. Such people should: | • Talk to people you know will provide help and listen.<br>• Share your feelings with close friends and family. |
| People in self-quarantine or self-isolation should: | • Maintain a healthy lifestyle.<br>• Take proper diet.<br>• Ensure a healthy routine, proper sleep, exercise and social contact with loved ones at home and by email and phone with other family and friends.<br>• Do not smoke or consume alcohol/ other drugs to deal with your emotions.<br>• Ask for professional counselling if extremely stressed. |
| People living in contamination zones/areas most affected should: | • Gather information to analyse the risk and necessary precautions.<br>• Find a credible source you can trust such as Arogya Setu app, WHO website or a local health authority.<br>• Restrict watching too much news or media coverage of the pandemic/epidemic to avoid worry and agitation.<br>• Focus on personal and inter-personal skills that have helped you to recover from a tragic/difficult experience in the past. |

*Fig. 8.3.8: Guidelines for dealing with stress and anxiety*

# UNIT 8.4: COVID 19 Vaccination

## Unit Objectives

**After completion of this unit, the participants will be able to:**

1. Differentiate between different types of vaccine
2. Explain the role of healthy nutrition in Covid-19 including general immunity boosting measures.
3. List the side effects of vaccines, their signs and symptoms and the AEFI (Adverse effects following immunization) of COVID vaccination
4. Explain Cold chain management
5. Explain about vaccine safety and security and avoiding misuse
6. List the COVID specific care facilities, portals and resources for latest updates about COVID protocols

## 8.4.1 Coronavirus Disease (COVID-19)

Coronavirus disease (COVID-19), is an infectious disease caused by a newly discovered coronavirus (SARS-CoV-2), which has spread rapidly throughout the world. In March 2020, the World Health Organization (WHO) declared the COVID-19 outbreak a pandemic. The pandemic has severely ravaged health systems, and economic and social progress globally.

While countries, including India, have taken strong measures to contain the spread of COVID-19 through better diagnostics and treatment, vaccines will provide a lasting solution by enhancing immunity and containing the disease spread.

## 8.4.2 Role of Healthy Nutrition in COVID-19

The COVID– 19 pandemic has affected every aspect of our lives. It has made us realize that nutrition plays a very important role of in supporting our immune system and giving it strength to fight and recover from the disease.

### Tips for maintaining a healthy diet

A healthy diet is important not just to cope up with the effects of Coronavirus but also to prevent other health problems such as diabetes, obesity, heart disease from developing.


*Fig.8.4.1: Tips for maintaining a healthy diet*

### Maintaining food safety during COVID– 19

To prevent spread of any food-borne disease, it is important to keep in mind the following points:

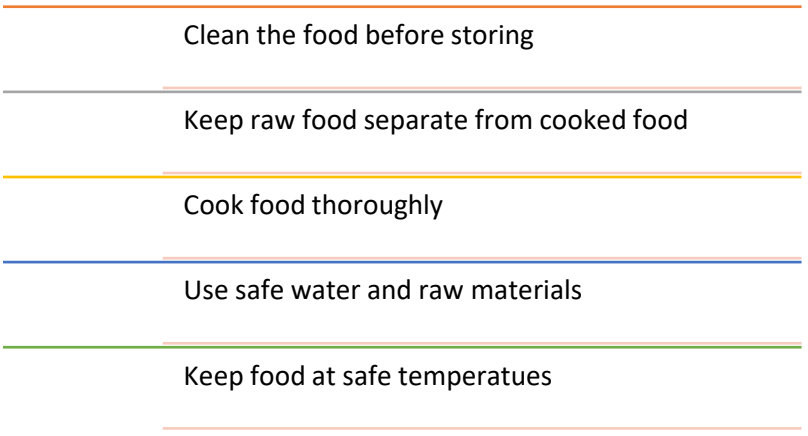



*Fig. 8.4.2: Maintaining food safety during COVID– 19*

## 8.4.3 Vaccines for COVID-19

In order to respond quickly and effectively to the COVID-19 pandemic, a broad range of candidate COVID-19 vaccines are being investigated globally using various technologies and platforms. These include viral-vectored, protein subunit, nucleic acid (DNA, RNA), live attenuated and inactivated vaccines.

## 8.4.4 Types of COVID 19 Vaccines in India

As per the Indian council of Medical Research (ICMR), the following vaccines are in different stages of clinical trials in India:

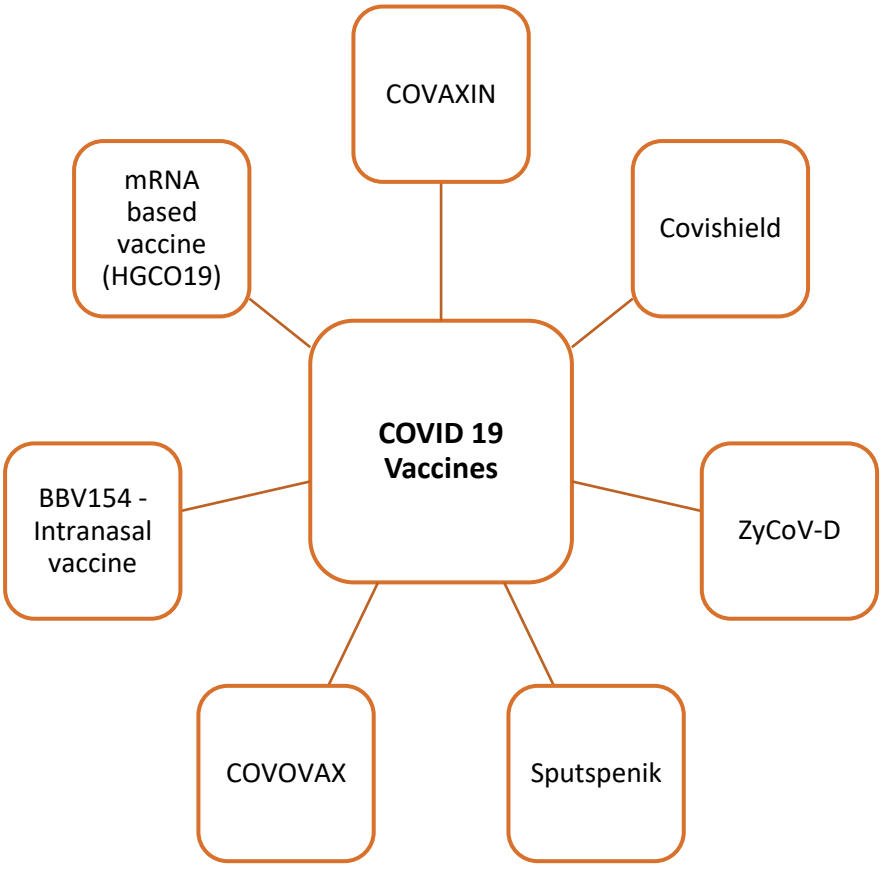



*Fig. 8.4.3: Types of COVID 19 vaccines in India*

**COVAXIN**

COVAXIN™, India's indigenous COVID-19 vaccine is developed by Bharat Biotech in collaboration with ICMR.

**Covishield**

Covishield is developed by Oxford University in partnership with The Serum Institute of India (SII) and Indian Council of Medical Research.

**ZyCoV-D**

ZyCoV-D is developed by **Zydus Cadila**.

**Sputnik**

Sputnik is manufactured in Russia but is approved for use in India and is being imported.

**COVOVAX**

COVOVAX is developed by The Serum Institute of India (SII) and Indian Council of Medical Research.

**BBV154 - Intranasal vaccine**

Bharat Biotech is conducting multicenter study to evaluate the reactogenicity, safety, and immunogenicity of an intranasal adenoviral vector COVID-19 vaccine (BBV154).

**mRNA based vaccine (HGCO19)**

mRNA based vaccine (HGCO19) is developed by Gennova Biopharmaceuticals, in partnership with HDT Biotech Corporation.

**Side-Effects of Vaccine**

The common side effects of COVID 19 vaccines in some individuals could be mild fever, pain, etc. at the site of injection. Some of the side-effects of Covishield® and Covaxin® are as follows:

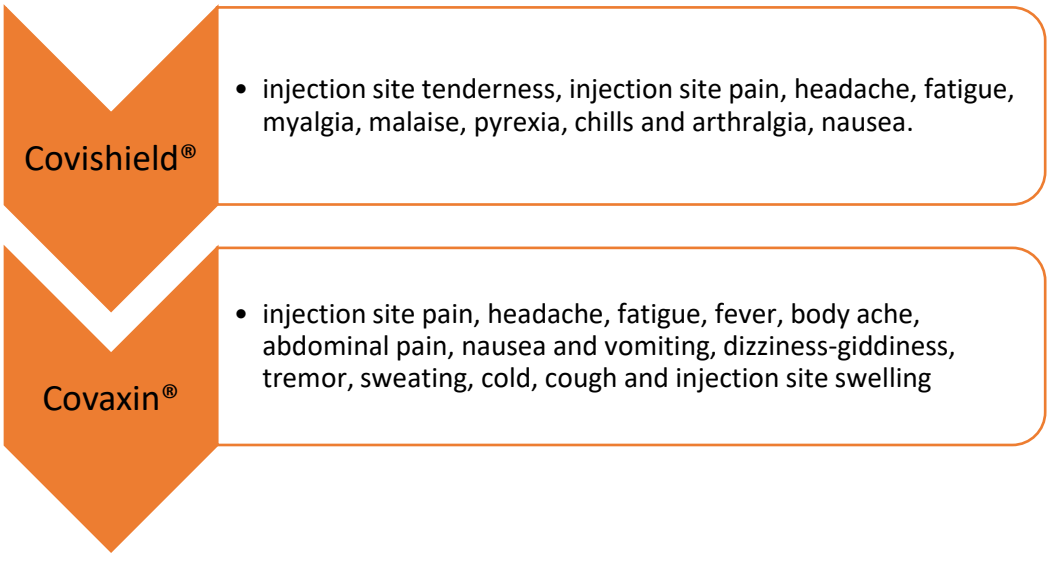



*Fig. 8.4.4: Side-Effects of COVID 19 vaccines*

## 8.4.5 Cold Chain Maintenance at Session Site

As there will be no expiry date on the vial of the vaccine, cold chain maintenance is of prime importance. The following points need to be ensured at session site:

| |
|---|
| Ensure an extra vaccine carrier with conditioned ice packs for immediate replenishment of ice packs in the vaccine carrier |
| Review and check vaccine carrier temperature and records |
| Mark date and time of opening vial |
| Discard all open vaccine vials need after 4 hours of opening or at the end of session |
| Ensure backup vaccine carrier and icepacks at the session site |
| Never expose the vaccine carrier, the vaccine vial or icepack to direct sunlight |
| Keep the vaccines inside the vaccine carrier with the lid closed |
| At the end of the session, vaccine carrier with all icepacks and unopened vaccine vials should be sent back to the distributing cold chain point |
| Intact sealed vials returned on the previous session day should be clearly marked and kept separately to be used first on the following session day |

*Fig. 8.4.5: Cold chain maintenance at session site*

## 8.4.6 Vaccine Safety and Security

Safety and security of each dose of COVID-19 vaccine is of paramount importance and Adequate safety and security measure must be undertaken at location of vaccine storage, during transport and at session site. State/District administration needs to ensure adequate security arrangement for vaccines at:

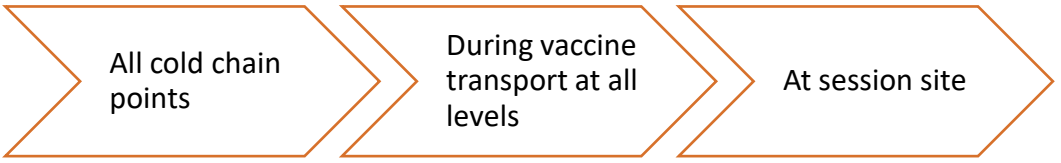



*Fig. 8.4.6: Vaccine Safety and Security*

Stringent vigilance mechanism must be in place to protect pilferage and theft. Any such activity should be immediately reported, and prompt police action should be initiated with clear accountability.

## 8.4.7 COVID Specific Portals

The following COVID specific portals provide information about COVID specific care facilities and resources for latest updates about COVID protocols.

- https://www.mohfw.gov.in/
- https://www.mygov.in/covid-19
- https://www.nhp.gov.in/whatsnew
- https://www.india.gov.in/spotlight/resources-overcome-covid

## Exercise

1. Identify which of the following statements are true or false.
   a. Disease outbreak, epidemic and pandemic are all same types of infection outbreaks.
   b. Non-surgical mask is a substitute of surgical mask.
   c. Self-quarantine is done at home and self-isolation is done in a hospital.
   d. Hands should be washed after every meal.

2. Which of the following is not one of the processes of waste management discussed in this unit?
   a. Collection
   b. Transportation
   c. Treatment
   d. Disposal

3. List two effective ways of dealing with stress and anxiety.

   _____

   _____

   _____

   _____

4. Name the manufacturers of the following vaccines.
   a. COVAXIN _____
   b. Covishield _____
   c. Sputinik _____
   d. ZyCoV-D _____

## Notes

Skill India

सत्यमेव जयते
GOVERNMENT OF INDIA
MINISTRY OF SKILL DEVELOPMENT
& ENTREPRENEURSHIP

N·S·D·C
National
Skill Development
Corporation
Transforming the skill landscape

Healthcare
Sector
Skill Council

# 9. References

# References

## References

*https://safety- security.uchicago.edu/emergency_management/all_hazard_safety_procedures/social_distancing/*

*https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/social- distancing.html*

*https://www.mohfw.gov.in/pdf/SocialDistancingAdvisorybyMOHFW.pdf*

*https://www.verywellmind.com/the-dos-and-don-ts-of-social-distancing-4800573*

*https://www.who.int/docs/default-source/coronaviruse/getting-workplace-ready-for- covid-19.pdf*

*https://www.osha.gov/Publications/OSHA3990.pdf*

*https://www.mohfw.gov.in/pdf/Guidelinesondisinfectionofcommonpublicplacesincludi ngoffices.pdf*

*https://ishrae.in/mailer/ISHRAE_COVID-19_Guidelines.pdf*

*https://www.gov.uk/government/publications/covid-19-decontamination-in-non- healthcare-settings/covid-19-decontamination-in-non-healthcare-settings*

*https://www.who.int/publications-detail/water-sanitation-hygiene-and-waste- management-for-covid-19*

*https://economictimes.indiatimes.com/news/politics-and-nation/guidelines-issued- for-handling-of-waste-generated-during-covid-19-patients-*

*https://www.cdc.gov/coronavirus/2019-ncov/daily-life-coping/managing-stress- anxiety.html*

*https://www.mohfw.gov.in/pdf/MindingourmindsduringCoronaeditedat.pdf*

*https://www.mohfw.gov.in/pdf/RevisedPsychosocialissuesofmigrantsCOVID19.pdf*

*https://www.who.int/docs/default-source/coronaviruse/mental-health-considerations.pdf?sfvrsn=6d3578af_2*

*http://nimhans.ac.in/wp-content/uploads/2020/04/MentalHealthIssuesCOVID- 19NIMHANS.pdf*

*https://www.who.int/*

*https://www.healthline.com/health/stress-and-anxiety*

*https://www.sfh-tr.nhs.uk/media/8304/infectious-outbreak-incident-policy-including- major-outbreak.pdf*

*https://hr.uw.edu/coronavirus/return-to-on-site-work/covid-19-employee-symptom- attestation/*

*https://apic.org/monthly_alerts/outbreaks-epidemics-and-pandemics-what-you-need- to-know/*

*https://www.ncbi.nlm.nih.gov/books/NBK143067/*

*https://www.mohfw.gov.in/pdf/Guidelinesondisinfectionofcommonpublicplacesincludi ngoffices.pdf*

*https://hub.jhu.edu/2020/03/23/how-to-self-quarantine-self-isolate/*

*https://newsnetwork.mayoclinic.org/discussion/whats-the-difference-between- quarantine-and-isolation/*

*https://www.towerhamletsccg.nhs.uk/downloads/about/publications/policies/corpor ate/NHS-THCCG-CG4-Incident-reporting-policy-and-procedure.pdf*

*https://www.google.com/search?q=spread+from+surface&safe=active&source=lnms&tbm=isch&sa=X&ved=2ahUKEwjW-62x0Y3qAhVQU30KHbhcANcQ_AUoAXoECA0QAw&biw=1536&bih=722#imgrc=3mXjmSkPB EURtM*

*https://www.google.com/search?q=emotional+health+in+covid+19&safe=active&source=lnms&tbm=isch&sa=X&ved=2ahUKEwiV9OGJ-4_qAhUQWX0KHUBkA6AQ_AUoAXoECBwQAw&biw=1536&bih=722#imgrc=Hx3LiwKmvPdr xM*

*https://www.mohfw.gov.in/pdf/Guidelinesforhomequarantine.pdf*

*https://blog.marketresearch.com/covid-19-how-it-is-different-from-previous- pandemics-and-how-it-is-impacting-world-economies*

*https://www.cdc.gov/coronavirus/2019-ncov/hcp/hand-hygiene.html*

*https://www.who.int/gpsc/5may/tools/who_guidelines-handhygiene_summary.pdf*

*http://www.nie.gov.in/images/leftcontent_attach/COVID-SARI_Sample_collection_SOP_255.pdf*

*https://www.icmr.gov.in/*

## Notes

# Customised Crash Course Programme for COVID Warriors

Skill India

Healthcare Sector Skill Council


***Corporate Office*:**

**Healthcare Sector Skill Council**
520- 521, 5th floor, DLF Tower A, Jasola District Centre,
New Delhi - 110025, India Tel: 011-41017346, 40505850
Email: info@healthcare-ssc.in
Website: www.healthcare-ssc.in

***Registered Office*:**

**Healthcare Sector Skill Council**
23, Institutional Area, Lodi Road,
The Mantosh Sondhi Centre,
New Delhi – 110 003, (India)


**Price: ₹**