Infection Control in the Health care setting

Introduction

Infections are a significant cause of illness, disease and death for residents that reside in certain living situations including nursing facilities. Residents of long-term care facilities are particularly at risk for infection due to the increased severity of illness experienced by residents being cared for in the facilities.

The resident is more at risk because of multiple underlying diseases, medications that reduce resistance to microorganisms, and use of medical devices such as urinary catheters to treat symptoms. Infection control is one of the most important aspects of providing a safe environment for residents. Nurse aides must understand and follow the facility's infection control policies and procedures.

Section B. Microorganisms (germs, pathogens)

1. Only seen with a microscope

2. Found in our everyday environment2. Found in our everyday environment

a. Air

b. On our skin

c. In our bodies

d. In food and in water

e. On surfaces

3. Have certain requirements to survive

a. Oxygen (aerobic)

b. No oxygen (anaerobic)

c. Warm temperature

d. Moist environment

e. Darkness for growth

f. Food – dead tissue or live tissue

g. Natural Immune Response

Body defenses

a. Beneficial in maintaining balance in our bodies and in our environment

b. Microorganisms may cause illness, infection and disease

c. External defenses to prevent illness, infection and disease

 Skin as a barrier

 Intact mucous membranes

 Cilia

 Coughing/Sneezing

 Acid in the stomach

 Tears

 Internal defenses

 Inflammation

 Fever

 Natural immune response Chain of Infection

1. Must have a causative agent (pathogen)

a. Bacteria

b. Viruses

c. Fungi

d. Protozoa

2. Must have a reservoir for the pathogen to grow

a. Humans with diseases

 Symptomatic

 Asymptomatic

b. Animals/insects

c. Food/water

d. Environment

e. Inanimate objects such as clothing, bedding, mops, resident care devices

3. Must have a point of entry

a. Breaks in the skin

b. Mucous membranes that are not intact

c. Respiratory system

d. Gastrointestinal system

e. Urinary system

f. Reproductive system

Must have a point of exit

a. Saliva/other respiratory secretions

b. Urine

c. Feces

d. Drainage from wounds

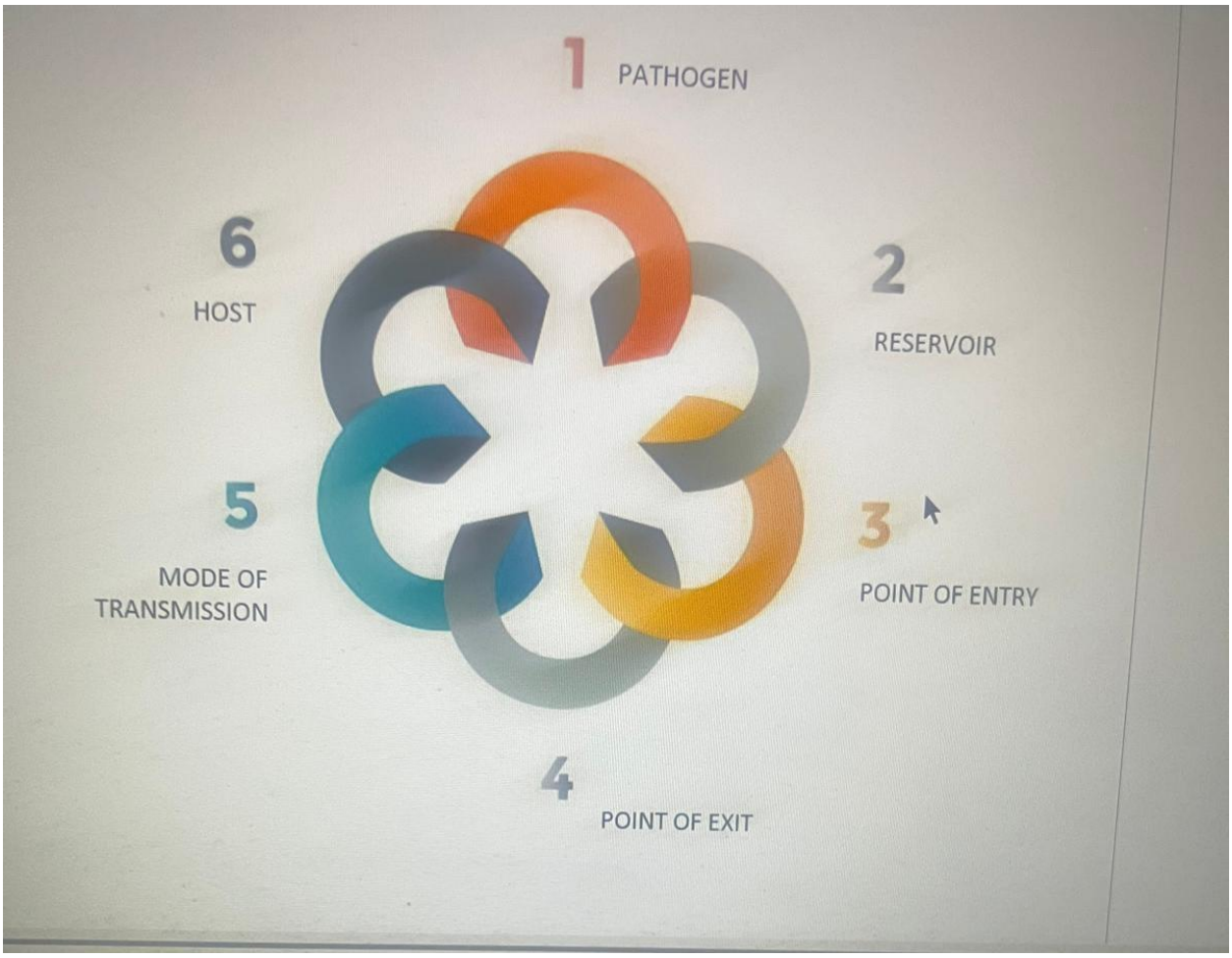
e. Reproductive secretions

f. Blood

g. Tears (minor risk)

5. Must have a mode of transmission

a. Contact



 Direct contact – person to person

 Indirect contact – inanimate contaminated objects to person

b. Airborne

 Inhaling small pathogens that float in the air

c. Bloodborne

 Microorganisms that are present in human blood and can cause disease

d. Droplet

 Drops of secretions put into the air through sneezing, coughing or talking

e. Food and fluids

f. Vectors

 Mosquitoes, parasites

6. Must have a host of individuals to harbor the infectious pathogens. General approaches to prevent and control infections

1. Medical asepsis (Clean technique)

a. Practice(s) used to remove or destroy pathogens to prevent spread of infection from one person/place or object to another person/place or object.

2. Practices to promote medical asepsis

a. Wash hands with soap and water according to the Centers for Disease Control and Prevention (CDC) guidelines (Procedural Guideline #6). This is the single most important practice to prevent infection. List of some situations that require hand washing:

 Anytime hands are visibly soiled

 After personal use of the toilet

 Before and after caring for a resident's personal care, assisting to toilet, feeding and procedures

 Before and after eating or handling food

 After coming in contact with a resident's skin, mucous membranes or body fluid

 After contact with any infectious materials

 After removing gloves

 After blowing or wiping nose or covering mouth while coughing

 After handling any soiled materials

 After handling used linens, bedpans or urinals

b. Proper use of gloves (discussed under Standard Precautions)

c. Following CDC recommendations for Respiratory Hygiene/Cough Etiquette

 Combination of measures designed to minimize transmission of pathogens via droplet/airborne routes. Cover mouth and nose during coughing and sneezing

 Use tissues to contain any respiratory secretions/promptly dispose of tissue

 Wear a mask when coughing to decrease environmental contamination (follow facility policy)

 Turn head away from others when coughing; try to maintain a distance of 3 feet from other

d. Proper use of hand sanitizer (follow facility policy)

e. Wash resident hands before and after meals

f. Clean used equipment and place in approved storage, avoid cross contamination between clean and dirty (follow facility policy)

3. Methods to kill/control pathogens

a. Disinfection

 Use of chemical disinfectants to clean equipment

b. Sterilization

 Process of killing all microorganisms

4. **Caring for supplies and equipme**nt

a. Disposable equipment

 Use once and discard in appropriate container

b. Clean non-disposable equipment (follow facility policy)

 Disinfectants

 Soap and hot water

 Disposable wipes, cloths 20

General approaches to prevent and control infection

5. Other measures of asepsis

a. Keep equipment and supplies, linens, etc. from touching clothing

b. Never shake linen, used or unused

c. Always clean from cleanest area to the soiled area

d. When cleaning, clean away from you to prevent contamination of clothing

e. Pour contaminated liquids into appropriate places, designated hoppers, toilets (follow facility policy)

f. Clean equipment used on multiple residents between each resident (follow facility policy)

6. Standard precautions (CDC recommendations/takes the place of Universal Precautions)

a. Based upon the premise that every person is potentially infected or colonized with an organism that could be transmitted to others in a healthcare setting

b. The primary strategy for preventing healthcare associated transmission of infections among residents and healthcare personnel

c. The nurse aide must be knowledgeable about and closely follow the facility policies

d. Components of Standard Precautions CDC guidelines 2007 (Handout Common Infectious Diseases)

In all cases, facility policy will be the standard. Hand hygiene involves washing:

 when using friction with soap and warm water for twenty seconds

In all cases, facility policy will be the standard. Hand hygiene involves washing:

 when using friction with soap and warm water for all cases;

 if hands are visibly soiled;

 before direct contact with patients;

 after contact with blood body fluids or excretions, mucous membranes, non-intact skin, wound dressings;

 immediately after removing gloves;

 between resident contacts; and

 between tasks and procedures on the same resident to prevent cross contamination as needed

General approaches to prevent and control infection

(cont'd)

Personal Protective Equipment (PPE) (Procedural Guideline #4) Gloves are:

 used when touching blood, body fluids, secretions, excretions, mucous membranes, non-intact skin, contaminated items or contact with resident;

 removed after contact with a resident or surrounding environment including medical devices;

 not worn again (the same pair) for the care of more than one resident; and

 never washed or reused.

HAND WASHING (Hand Hygiene)

A. Purpose: To remove germs from the hands and prevent the spread of infection.

B. Guidelines and Precautions

1. Handwashing is the single most important method in preventing and controlling infection.

2. Handwashing should be done at the following times:

a. When coming on and going off duty.

b. Before and after caring for each resident.

c. Before applying gloves and after removing gloves.

d. Before and after eating, drinking, smoking, using lip balm, touching contact lenses, wiping nose, using toilet.

e. After contact with blood, body fluids and contaminated items

f. Whenever hands are obviously soiled.

3. Precautions

a. Always keep your fingertips pointed down while washing your hands.

b. Avoid leaning against sink or splashing uniform during Handwashing.

c. Do not touch the inside of the sink or faucet handles with clean hands.

d. Note where paper towels are located.

C. Procedural Guidelines

1. Turn on warm water.

2. Wet

Gowns are:

 used during procedures/resident care activities when contact of clothing/exposed skin is anticipated from blood, body fluids, secretions and excretions

 never reused; and

 placed (used gowns) in an appropriate container according to facility policies and procedures.

Mask, eye protection and face shield are used:

 during procedures/resident care activities likely to generate splashes/sprays of blood, body fluids and secretions.

Multiple use Resident care equipment is:

 handled in a manner that prevents transfer of pathogens to others or the environment; wear gloves if visibly contaminated; and

 always performed with proper hand hygiene after using the equipment.

Environmental control guidelines:

 follow facility procedures for cleaning and disinfecting environmental surfaces/equipment. Textiles and laundry guidelines:

 keep linen away from clothing.

 handle in a manner that prevents transfer of pathogens to you/others/environment.

 place soiled linen in specified containers; and

 never mix soiled linen with clean linen.

General approaches to prevent and control infection

(cont'd)

7. Transmission-based precautions (CDC recommendations/formerly Isolation Precautions)

a. Used for residents who are known to be or suspected of being infected or colonized with infectious microorganisms that require additional measures to prevent transmission

Airborne precautions - Use in addition to Standard Precautions; use for residents with known/suspected infection spread by microorganisms dispersed by air currents.

 Resident Placement - Private room, keep doors closed at all times, resident should not leave room

 Gowns - Must wear when entering the room

 Mask and Eye Wear - For known or suspected pulmonary tuberculosis, respirator mask worn by all prior to entering room (according to facility policies and procedures)

 Hand Hygiene – Must wash hands before gloving and after gloves are removed

 Resident Transport - Limit as possible/place mask on resident

 Resident Care Equipment - Clean and disinfect according to facility policy and

 manufacturers' recommendations before use on another resident

Droplet precautions - Use in addition to Standard Precautions; use for residents with known/suspected infections spread by droplets generated by coughing, sneezing, talking

 Resident Placement - Private room or with resident with same disease

 Gowns - Must wear when entering the room

 Mask, Face Shield, and Eye Wear - Wear mask when working within three feet of resident

 Hand Hygiene - Hands must be washed before gloves and after gloves are removed

 Resident Transport - Limit as possible/place mask on resident

 Resident Care Equipment - Clean and disinfect according to facility policy and manufacturers' recommendations before use on another resident.

Module 2

WHAT IS NORMAL AGING?

The aging process happens during an individual's lifespan. We are all involved in this process and no one can escape it. When one is young, aging is associated with growth, maturation, and discovery. Many human abilities peak before age 30, while other abilities continue to grow through life. The great majority of those over the age of 65 today are healthy, happy, and fully independent. In spite of this, some individuals begin to experience changes that are perceived as signs of deterioration or decline. We must try to forget the stereotypes and look at older individuals as unique individuals, each with a particular set of resources and challenges.

Prejudice toward stereotyping of and/or discrimination against older persons or the elderly is called

ageism

Normal Aging

The changes in aging individuals' experience are not necessarily harmful. With age, hair thins and turns gray. Skin thins become less elastic, and sag. There is a slowing down of functions, which goes forward throughout adulthood – loss of function of bodily organs. In the gastrointestinal system, for example, production of digestive enzymes diminishes, reducing the body's ability to break down and absorb the nutrition from food. Some of these losses may not be noticeable until later in life.

Scientists theorize that aging likely results from a combination of many factors. Genes, lifestyle, and disease can all affect the rate of aging. Studies have indicated that people age at different rates and in different ways. Normal aging brings about the following changes:

Eyesight – loss of peripheral vision and decreased ability to judge depth. Sense of balance may be affected

Decreased clarity of Hearing – loss of hearing acuity, especially sounds at the higher end of the spectrum. Also, there is a decreasing ability to distinguish sounds when there is background noise.

 Taste – decreased taste buds and saliva. Senses of taste decrease.

Touch and smell – decreased sensitivity to touch and ability to smell.

Arteries and cardiovascular system: stiffen with age. Additionally, fatty deposits build up in your blood vessels over time, eventually causing arteriosclerosis (hardening of the arteries). Blood flow decreases. Heart pumps are less efficient. Blood vessels narrow more; these precipitates increased blood pressure.

Bladder and the urinary system: – increased frequency in urination. The ability of kidney filtering urine decreases. Bladder muscle tone weakens. The bladder holds less urine, which causes more frequent urination. The bladder may not be empty completely, causing greater risk of infection.

Body Fat – increases until middle age, stabilizes until later in life, then decreases. Distribution of fat shifts – moving from just beneath the skin to surround deeper organs. Hence, the older person in summer will need layers of light clothing and warmer clothes in cooler weather.

Bones and Skeletal system – somewhere around age 35, bones lose minerals faster than they are replaced.

With age, muscles weaken and loose tone. Body movement slows. Bones lose density. They become more brittle, making them more susceptible to fractures. Height is gradually getting lost.

Brain and nervous system: – loses some of the structures that connect nerve cells, and the function of the cells themselves is diminished. “Senior moments” increase. Some Short-term memory loss may occur. Long term memory or memory of past events usually remains sharp.

Responses and reflexes slow down.

Sensitivity of nerve endings in the skin decreases.

Lungs and the respiratory system – somewhere around age 20, lung tissue begins to lose its elasticity, and rib cage muscles shrink progressively. Maximum breathing capacity diminishes with each decade of life. Lung strength and capacity decrease. Oxygen in the blood decreases

Voice weakens.

Metabolism – medicines and alcohol are not processed quickly. Prescription medication requires adjustment. Reflexes are also slow while driving, therefore an individual might want to lengthen the distance between him and the car in front and drive more cautiously. The main organ of metabolism in the body is the Liver.

 Muscles – muscle mass decline, especially with lack of exercise.

Sexual Health – Women go through menopause; vaginal lubrication decreases and sexual tissues atrophy. In men, sperm production decreases and the prostate enlarge. Hormone levels decrease.

The aging process also brings social and emotional change and loss into our lives. Inevitably, as we age, older relatives die, then some of our friends may grow frail and die, then loss of a spouse affects many. Physical losses and social losses that can accompany aging may be very difficult emotionally. Grief and sadness are normal reactions to such situations, and we cannot stamp out these reactions in our older relatives or ourselves. Just as the physical losses of later life can be compensated for, so can the social and emotional losses be overcome.

The physical aging process can be influenced in a variety of ways. Excess capacity is built into the human system. The bulk of the changes that take place over the years can be strongly affected by exercise levels and other lifestyle characteristics.

People who live in areas with especially long-life expectancy have the following characteristics, apart from hereditary or genetic influences:

 Dietary and Nutritional Factors – diets tend to be low in animal fats and high in vegetables and whole grains.

 Moderate Consumption of Alcohol – some alcohol is consumed, although alcoholism is uncommon.

 Physical Activity Throughout Life

 Sexual Activity Continues in Later Years – sexually active and free to express themselves in this way. Sexual activity is safer in a stable union. At this age, part of reality is the loss of significant others.

Social Involvement – respected, valued, and remains in community life.

Physical Environment – challenging and free from pollutants

In general, the lessons are clear. Regular physical activity, a balanced diet, social involvement, moderate or no drinking, and no smoking, can significantly decelerate the aging process

ETHICS

Ethical conduct – rules of conduct that may differ from one facility to another, a system of moral principles governing the appropriate conduct for a person or group; a resident is valuable person who deserves ethical care.

Ethical Responsibilities - Ethical standards differ from legal issues in that ethics refers to moral principles, values, or conduct not necessarily included in the law.

Ethical treatment of residents:

 Respecting residents' rights and privacy. The right to have all treatments in the resident room with the curtain drawn. The right to not have the medications they are on discussed in the hallway or with anyone else.

 Respecting residents' individuality and autonomy.

 Right to have personal independence, to be themselves and to make moral decisions and act on them

 Maintaining respectful communication. Speaking to the residents as an adult. It is never okay to speak to them as a child. Speaking to the residents at a respectful tone. Do not raise your voice or yell at a resident.

Listen to the residents when they are speaking to you. It is never okay to ignore them or tune them out. Also, listen to the resident's story even if you have heard it a hundred times before.

 Having an appropriate body language.

Health Insurance Portability and Accountability Act of 1996 (HIPAA) - a law which protects the privacy of individually identifiable health information and includes; the HIPAA Security Rule, which sets national standards for the security of electronic protected health information, and the confidentiality provisions of the Patient Safety Rule, which protect identifiable information being used to analyze patient safety events and improve patient safety. The HIPAA Privacy Rule can be found at: www.hhs.gov/ocr/privacy/

HHSC reviews and investigates allegations of:

a. Abuse – The willful infliction of injury, unreasonable confinement, intimidation, or punishment resulting in physical harm, pain, or mental anguish.

b. Neglect – The failure to provide goods and services necessary to avoid physical harm, mental anguish, or mental illness.

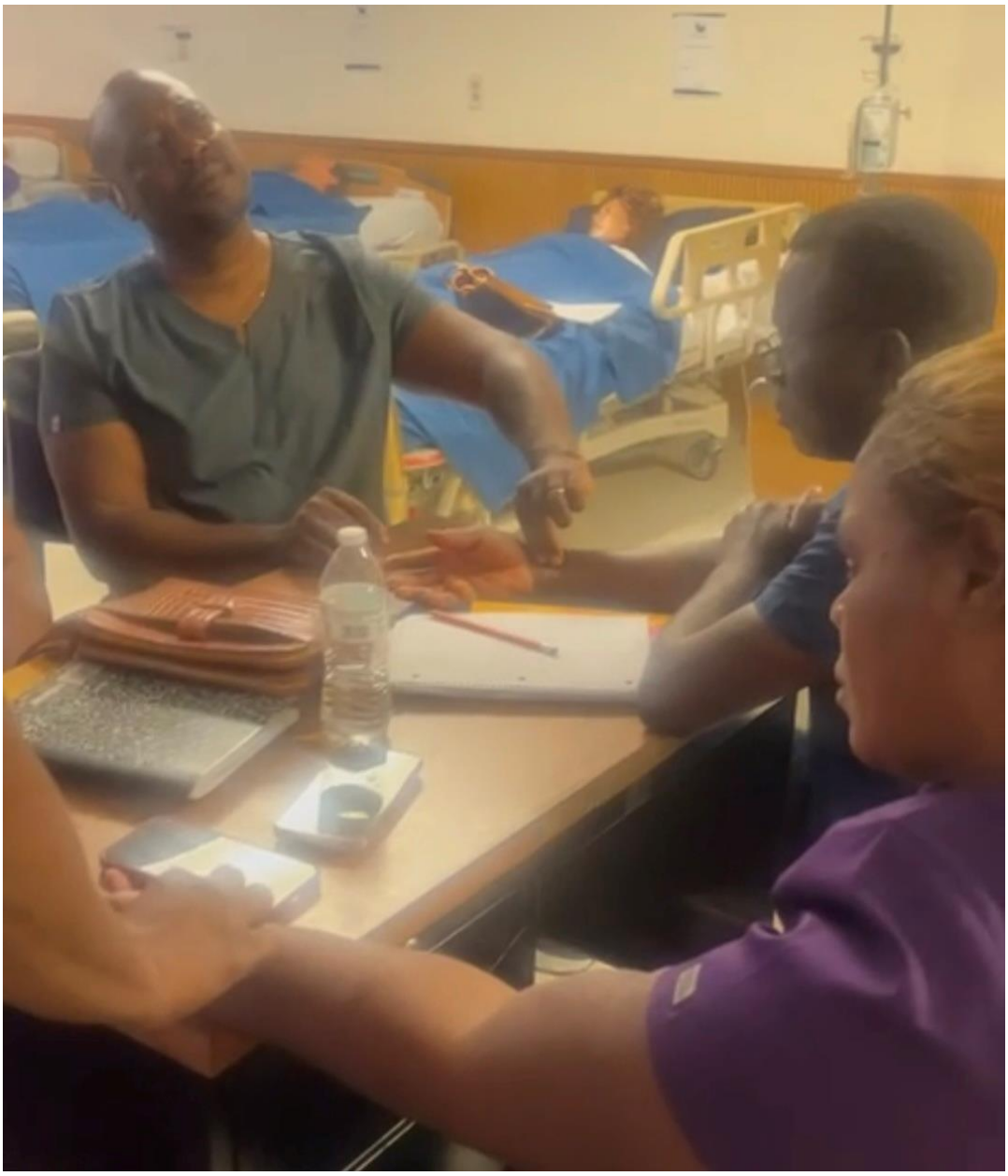
c. Misappropriation of resident property – The deliberate misplacement, exploitation, or wrongful temporary or permanent use of a resident's belongings or money without the resident's consent.

Module 3

Vital signs are measurements of different physiological statistics, often taken by health professionals, in order to determine basic body functions. Taking vital signs normally means the recording of body temperature, blood pressure, respiration rate, and pulse.

Normal vital signs can change due to different factors such age, sex, weight, exercise, and health

Conditions.



For the average healthy adult, normal vital signs are:

Temperature: 97.8 - 99°F

Blood Pressure: 120/80 mm/Hg

Respiratory Rate: 16 - 20 respirations per min

Heart Rate (Pulse): 60 - 100 beats per minute

In order to take and record vital signs, the following equipment is needed:

thermometer (to measure temperature)

sphygmomanometer (measuring Blood pressure) TEMPERATURE

Body temperature refers to the amount of heat produced and sustained by the body processes.

Changes in body temperature are usually indicators of underlying problems such as disease or other abnormal conditions.

The metabolism of nutrients generates heat within the body. This heat is lost from the surface through convection, radiation, and evaporation of perspiration.

The production and loss of heat are generated and controlled in the hypothalamus and the brainstem.

Fever is usually an increase in heat generation, although certain conditions (e.g. congestive heart failure) can produce small increases in the body temperature through damage to the heat loss function.

Unusually low body temperatures can be caused by interference with regulatory centers or problems of the hypothalamus.

The average adult temperature is around 98.6°F, taken orally. The temperature taken under the arm (axillary temperature) is usually 0.5°F to 1°F lower than temperature taken orally, whereas

Temperatures taken via the anus (rectal temperature) can be 0.5°F to 1°F higher than oral temperature.

VARIATIONS DUE TO METHODS OF MEASUREMENT

Temperature results can vary depending on different methods of measurement.

In general, oral, rectal, gut, and core temperatures are well-correlated, with oral temperature measuring

the lowest.

Oral temperatures can be affected by smoking, intake of food (drinking and chewing), as well as breathing (if the mouth is open, where air can reach into the mouth).

Temperatures taken under the arm, inside the ear, and via other skin-based temperature methods correspond very poorly with the core body temperature.

The body uses skin as a mechanism to increase or decrease the core body temperature, which makes

Temperatures taken by skin-based methods are more variable than others.

VARIATIONS DUE TO OUTSIDE FACTORS

Temperature can also be affected by various outside factors.

With the intake of food or drinks that are rich in calories, the temperature will increase. Diets that are calorie-restricted will reduce temperature. The consumption of alcohol will show a small decrease in temperatures during the day, but increased temperatures during the night.

Physical activity can also increase body temperatures. In adults, a high increase usually requires difficult exercise or a physical workout that is sustained over time; children, however, can reach higher temperatures with minimal physical activities, such as playing.

The emotional or mental state of mind of a person can also interfere with temperature. A person with a A higher level of excitement may also have an increased temperature.

A person's sleep patterns can also affect body temperatures. In general, temperatures drop at night and throughout the night. Higher temperatures at night will occur if short-term sleep deprivation is present, and lower temperatures will occur if long-term sleep deprivation is present.

Having poor sleep quality or insomnia can lead to a decrease in temperature. Other factors that may affect body temperature include shift work (changes to it), waking up at unusual times, or jet lag.

METHODS OF MEASUREMENT

Sites used for temperature measurement include:

oral temperature (in the mouth)

rectal temperature (in the anus)

tympanic temperature (in the ear)

axillary temperature (under the arm)

vaginal temperature (in the vagina)

on the skin of the forehead

in the gut by swallowing a small thermometer

over the temporal artery

Temperature readings will vary depending on which body part is measured, but typical daytime

temperatures for healthy adults are:

rectal, vaginal and tympanic temperature: ~ 99.7°F

oral temperature: ~ 98.2oF

axillary temperature: ~ 97.6°F

MEASURING DEVICES

The device used to measure temperature is called a thermometer.

A thermometer consists of two important parts: the temperature sensor (e.g. bulb on mercury thermometers), where slight physical change in temperature occurs, as well as a way of converting this physical change into a number (e.g. scale on mercury thermometers).

Digital Temperature

BLOOD PRESSURE

Blood pressure (BP) is the pressure exerted by circulating blood upon the walls of bloods vessels. Without further specification, “blood pressure” usually refers to the arterial pressure of systemic circulation. During each heartbeat, blood pressure varies between a systolic (maximum) and diastolic (minimum) pressure.

Due to pumping by the heart and resistance to flow in blood vessels, blood pressure decreases as the Circulating blood moves away from the heart through the arteries.

Blood pressure drops most rapidly along the small arteries and arterioles, and continually decreases as Blood moves through the capillaries and back through the veins to the heart

Valves in veins, gravity, and pumping from contracting skeletal muscles can also influence blood pressure at different places in the body.

Blood pressure measurement, without specification, usually refers to the systemic arterial pressure that is measured on the inside of the elbow (at the brachial artery) at a person's upper arm.

The measurement is usually expressed as systolic pressure over the diastolic pressure. For example, a normal blood pressure reading is 120/80 mmHg, with systolic pressure being the higher number, and diastolic pressure being the lower number.

DEFINITION SYSTOLIC AND DIASTOLIC

Systolic:

Diastolic:

This is the blood pressure at the time when the heart is contracting, specifically the maximum arterial pressure during contraction of the left ventricle of the heart.

This time, at which ventricular contraction takes place, is called systole.

A systolic sound is a heart sound that is heard during systole, the time the heart contracts, between the normal first and second heart sound.

This is the blood pressure at the time when the heart is in relaxation and dilatation (expansion) period, specifically the minimum arterial pressure during relaxation and dilatation of the heart's ventricles when the ventricles fill with blood.

A diastolic sound is a heart sound that is heard during diastole, the time the heart relaxes.

LOW BLOOD PRESSURE

The medical term for low blood pressure is “hypotension”, and this is a blood pressure low enough that Blood flow to organs is insufficient, and symptoms of low blood pressure can occur.

Signs or symptoms of low blood pressure include dizziness, feeling lightheaded, or even fainting.

Such symptoms mostly occur when a person goes from a sitting or lying position to a standing position, and is called orthostatic hypotension.

If blood pressure is low enough to cause insufficient blood flow to organs, it can result in stroke, heart attack, kidney failure, and, most severely, shock.

To determine the cause of low blood pressure, blood tests, cardiac testing for arrhythmias, or radiologic Studies may be performed.

The treatment for low blood pressure can be determined by its cause.

Causes for low blood pressure include:

Pregnancy: During pregnancy, a woman's circulatory system expands very quickly, which can cause blood pressure to drop rapidly. After giving birth, blood Pressure levels usually return to a normal, pre-pregnancy level.

Heart Problems: Some heart problems can cause low blood pressure as they might prevent the body from circulating enough blood. These heart conditions include heart valve problems, bradycardia (extremely low heart rate), heart attack, or heart failure.

Dehydration: Dehydration causes the body to lose more water than it is taking in. Mild Dehydration may cause dizziness, weakness, or fatigue. Vomiting, severe diarrhea, fever, overuse of diuretics, and/or exhausting physical Activity can all lead to dehydration.

Loss of Blood: High blood loss caused by a major injury or internal bleeding will reduce the amount of blood in the body, which will lead to a drastic drop in blood pressure.

Endocrine Problems: Hypothyroidism (underactive thyroid) or hyperthyroidism (overactive Thyroids can cause low blood pressure.

Additionally, other conditions such as adrenal insufficiency (Addison's disease), low blood sugar (hypoglycemia), and, in some cases, diabetes,

Severe Infection: Septicemia can occur when an infection in the body enters the bloodstream. Conditions such as septicemia can lead to life-threatening drop in blood pressure (septic shock).

Severe Allergic Reaction: Anaphylaxis is a severe and potentially life-threatening allergic reaction. Triggers of anaphylaxis include foods, certain medications, insects venoms, and latex.

This condition can cause itching, hives, breathing problems, and swollen throat, and a drop in blood pressure.

Lack of Nutrients: Deficiency of vitamins B-12 and folate can lead to anemia.

Anemia is a condition in which the body doesn't produce enough red blood cells, causing low blood pressure.

Some medications can also cause low blood pressure. These medications include:

Alpha Blockers

Beta Blockers

Diuretics

Certain antidepressants (tricyclic antidepressants)

Drugs for Parkinson's disease

Sildenafil (Viagra), particularly in combination with heart medication nitroglycerine

TYPES OF LOW BLOOD PRESSURE

Low blood pressure is often broken down into different categories, depending on its cause as well as other factors.

Types of low blood pressure include:

Postural/Orthostatic Hypotension: Sudden drop in blood pressure when standing up from a sitting or lying position, leading to symptoms of dizziness, feeling lightheaded, blurred vision, and even fainting.

It can occur for a variety of reasons, including pregnancy,

dehydration, prolonged bed rest, diabetes, heart problems, burns, excessive heat, large varicose veins, and certain Types of neurological disorders.

Medications that can cause this type of low blood pressure include certain antidepressants, drugs to treat high blood pressure, medications for erectile dysfunction, and/or medications for Parkinson's disease.

Postprandial Hypotension: Sudden drop in blood pressure after eating.

Most likely to affect people with high blood pressure or People suffer from autonomic nervous system disorders.

To help reduce the symptoms, a person could eat smaller portions, eat low-carbohydrate meals, or lower the dose of blood pressure medications.

Neutrally Mediated Hypotension: This form of hypotension mostly affects young people.

The cause seems to be miscommunication between the heart and brain. This can decrease blood pressure after standing for longer periods, with leading symptoms such as nausea, dizziness, and fainting.

Shy-Drager Syndrome: (multiple system atrophy with orthostatic hypotension)

This rare disorder causes progressive damage to the autonomic nervous system, which controls involuntary functions such as blood pressure, heart rate, breathing, and digestion.

Although this condition can be associated with muscle tremors, problems with coordination and speech, slowed movement, and incontinence, its main characteristic is severe orthostatic hypotension in combination with very high blood pressure when lying down.

TREATMENT AND DRUGS

If symptoms that occur are only mild, treatment is not required.

If low blood pressure causes severe symptoms, the treatment depends on the underlying cause;

The primary cause should be addressed rather than treating low blood pressure.

If low blood pressure is caused by medication, treatment options would be to change the dose of that medication, or stop taking the medication completely.

There are several medications that, used alone or together, can be taken to treat orthostatic hypotension

(low blood pressure when standing up). For example, the drug fludrocortisone is commonly used to treat this type of low blood pressure; it helps to boost blood volume, therefore raising blood pressure.

The drug midodrine (Orvaten, Proamatine) is often used to raise standing blood pressure levels in people with chronic orthostatic hypotension. It works by restricting the ability of blood vessels to expand, therefore raising blood pressure.

HIGH BLOOD PRESSURE

High blood pressure (hypertension) is a medical condition in which the force of blood against artery walls are high enough that it can cause serious health problems, such as heart disease.

Hypertension typically develops over the course of many years and eventually affects nearly everyone.

High blood pressure can easily be detected.

Leaving high blood pressure uncontrolled increases, the risk of severe health problems such as heart attack and stroke.

In most people with high blood pressure, signs or symptoms are not present.

Though a few people with early-stage high blood pressure may experience headaches, dizziness, or nosebleeds, these symptoms usually don't occur until hypertension has reached a severe or life-threatening

stage.

TYPES OF HIGH BLOOD PRESSURE

High blood pressure is classified into two types:

Primary (essential) hypertension: There is no identifiable cause of primary hypertension.

This form of high blood pressure usually develops slowly

over the course of many years.

Secondary hypertension: Secondary hypertension is caused by an underlying

condition.

This form of high blood pressure usually appears suddenly

and results in higher blood pressure than primary

hypertension.

Various conditions and medications can lead to secondary hypertension, including:

kidney problems

adrenal gland tumors

defects in blood vessels born with (congenital)

medications (birth control pills, cold remedies, decongestants,

over-the-counter pain relievers, and some prescription drugs)

illegal drugs (cocaine, amphetamines, etc.

BLOOD PRESSURE TESTING

The measurements of blood pressure are classified into four general categories:

Normal Blood Pressure: -blood pressure is considered normal at 120/80 mmHg

Prehypertension: -systolic pressure ranging from 120 to 139 mmHg or

diastolic pressure ranging from 80 to 89 mmHg

-prehypertension tends to get worse over time

Stage 1 hypertension: -systolic pressure ranging from 140 to 159 mmHg or

diastolic pressure ranging from 90 to 99 mmHg.

Stage 2 hypertension: -systolic pressure of 160 mmHg or higher or

diastolic pressure of 100 mmHg or higher

In blood pressure reading, both numbers are important. However, after the age of 50, the systolic

Blood pressure reading is more important.