**Contagious disease:** A disease that is transmitted through contact. Example:

**CDS, NCDS:** An illness due to a specific infectious agent or its toxic products capable of being directly or indirectly transmitted from man to man, animal to man or from the environment to man or animal is called communicable disease. Example: . NCD is a medical condition or disease, which is not infectious, not passed from person to person. Example: cardiovascular diseases (like heart attacks and stroke), Cancers, Diabetes

**HIV/AIDS:**

Agent: Human Immunodeficiency Virus.

Source: Spread through contact with the blood, semen, pre-seminal fluid, rectal fluids, vaginal fluids, or breast milk of a person infected with HIV.

Mode of transmission: Sexual act, Blood transmission, Mother to child. High risk group: Injecting drug users, Commercial sex workers, Male sex with male, Female garment workers, Migrant people, Transport workers.

Control and Prevention: Getting tested and know your partner’s HIV status, Having less risky sex, Using condoms, Limiting number of sexual partners, Getting tested and treated for STDs, Talking to health care provider about pre-exposure prophylaxis (PrEP), Not injecting drugs

**Dengue:**

Agent: four types of viruses (DENV-1, DENV-2, DENV-3, DENV-4)

Source: [mosquito](https://en.wikipedia.org/wiki/Mosquito) of the [Aedes](https://en.wikipedia.org/wiki/Aedes" \o "Aedes) [type](https://en.wikipedia.org/wiki/Genus)

Mode of transmission: Transmitted through vector, Travel to dengue-endemic area, Blood transfusion, Mother to baby

High risk group: Pregnancy, Infant, Elderly, Obesity, Peptic ulcer diseases, Thalassemia, HIV infected people

Control and Prevention: combat the vector mosquitoes, environmental management and chemical methods, Proper solid waste disposal and improved water storage practices, covering containers to prevent access by egg laying female mosquitoes

**Malaria**:

Agent: ‎Plasmodium spread by ‎[mosquitos](https://en.wikipedia.org/wiki/Mosquitos)

Source: an infected female [Anopheles](https://en.wikipedia.org/wiki/Anopheles) mosquito

Mode of transmission: 1.Feamle anopheles mosquito bite, 2.Blood- Blood transfusion, Organ transplant, 3.Congential malaria – From a mother to her child during pregnancy

High risk group: Children, Pregnant women, People with HIV/AIDS, International travelers from non-endemic areas

Control and Prevention: combat the vector mosquitoes, environmental management and chemical methods, Proper solid waste disposal and improved water storage practices, covering containers to prevent access by egg laying female mosquitoes

**Chikungunia:**

Agent: chikungunya virus

Source: Aedes aegypti and Aedes albopictus mosquitoes

Mode of transmission: Chikungunya virus is transmitted to people through mosquito bites. Mosquitoes become infected when they feed on a person already infected with the virus. Infected mosquitoes can then spread the virus to other people through bites.

High risk group: Travelers going to the Caribbean, Central America, South America, sub-Saharan Africa, southeast Asia, and the Indian subcontinent,

Control and Prevention: Because no approved [vaccine](https://en.wikipedia.org/wiki/Vaccine) exists, the most effective means of prevention are protection against contact with the disease-carrying mosquitoes and controlling mosquito populations by limiting their [habitat](https://en.wikipedia.org/wiki/Habitat)

**Zika:**

Agent: Zika virus

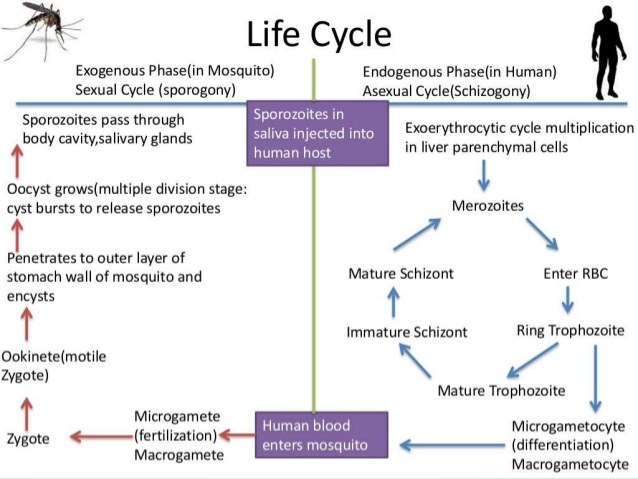
Source: Aedes mosquitoes

Mode of transmission: Aedes mosquito bite, During pregnancy, Sexual relations, Blood transfusion

High risk group: pregnant women, those planning a pregnancy, sexual partners of those who are pregnant or planning a pregnancy

Control and Prevention:

**Life cycle of malaria parasite:**

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**Puberty:** Is the time of life when a young man or woman becomes capable of reproduction. Begins when the pituitary gland sends a signal to the ovaries or testes to produce estrogen or testosterone sometime between the ages of 8 -16

**Adolescent:** Adolescence can be defined as the developmental period between childhood and adulthood – beginning with the changes associated with puberty and culminating in the acquisition of adult roles and responsibilities

**Maternal health:** Maternal & child health refers to primitive, preventive, curative & rehabilitation health care for mothers & children. Maternal health care consists of: Antenatal care, Intranatal care and Postnatal care

**Common health problem among mothers, children and adolescent age group:**

Maternal-

❖ Anxiety  
❖ Depression  
❖ Sexual violence/abuse  
❖ Sexually transmitted Infections (STIs)  
❖ Tobacco, alcohol, and substance abuse  
❖ Imbalance nutrition  
❖ GDM  
❖ APH ( Ante Partum hemorrhage)  
❖ PPH ( post partum Hemorrhage)  
❖ Abortion  
❖ Premature birth  
❖ Still birth  
❖ Low birth weight  
❖ Child birth complications etc.

Children-

❖ Infectious Disease– DD, Pneumonia parasitic infestation etc.  
❖ Deficiency diseases—undernutrition, Iodine deficiency etc.  
❖ Childhood Obesity  
❖ Drug Abuse  
❖ Smoking  
❖ Child Abuse and Neglect  
❖ Breathing problems  
❖ Accidents  
❖ Poisoning etc.

Adolescent age group-

• Early pregnancy and childbirth.  
• STIs—HIV/AIDS.  
• Accidents and Injuries of all kinds  
• Mental health problems including depression and suicide.  
• Violence and family trouble.  
• Alcohol, tobacco and other drugs abuse  
• Irresponsible Sexual act problems  
• Under nutrition and obesity over weight.  
• Unhealthy life style  
• Violations of rights of adolescents.  
• Antisocial activities etc

**Way of preventing those health problem:**

**Diabetes (DM):**

Concept: A disease in which blood glucose levels are above normal

Causes: Heart disease, Blindness, Kidney failure

Prevention: Achieve and maintain healthy body weight, Be physically active – at least 30 minutes of regular  
activity on most days, Eat a healthy diet, avoiding sugar and saturated fats intake, Avoid tobacco use – smoking increases the risk of diabetes and cardiovascular diseases

**Heart attack:**

Concept: When heart muscle is damaged or dies due to lack of oxygen.

Causes: caused by a blood clot that gets stuck in a narrow part of an artery to the heart. Clots are more likely to form where atherosclerosis has made an artery narrower.

Prevention: Quit smoking, Eat a healthy diet, Control your blood sugar if you have diabetes, Exercise, Lose weight if you're overweight, Control your blood pressure if you have hypertension

**Cancer:**

Concept: Generic term for a large group of diseases that can affect any part of the body. Characterized by an (a) abnormal growth of cells, (b) ability to invade adjacent tissues & even distant organs, and (c) the eventual death of the affected patient if the tumor has progressed beyond that stage when it can be successfully removed. Cancer can occur at any site or tissue of the body and may involve any type of cells.

Causes: 1. Environmental factors : a) Tobacco, b)Alcohol, c) dietary factors, d) occupational exposure, e) Customs, habits, life-styles, f)Viruses, g) Parasites, h) Radiation, Sunlight, air & water pollution, Medication(oestrogen), pesticides etc. 2. Genetic factors: Retinoblastoma occurs in children of the same parents. However, genetic factors are less conspicuous and more difficult to identify.

Prevention: A. Primary Prevention: Control of Tobacco and Alcohol Consumption, Personal Hygiene, Radiation, Occupational Exposures, Immunization, Foods, Drugs and Cosmetics, Air Pollution, Treatment of Precancerous Lesions, Legislation, Cancer Education. B. Secondary Prevention: Cancer Registration (a. Hospital-Based Registration, b. Population-Based Registration), Early Detection of Cases, Treatment.

**Breast cancer:**

Concept:

Causes: Do not know the actual cause. Breast cancer is always caused by damage to a cell's DNA.

Prevention: A. Primary Prevention: Current knowledge of the etiology of breast cancer offers little prospect of primary prevention, however, the aim should be towards elimination of risk factors and promotion of cancer education. The average age of menarche can be increased through a reduction in childhood obesity and an increase in strenuous physical activity and the frequency of ovulation decreased by an increase in strenuous physical activity. There is also good reason for reducing fat intake in diet. B.Secondary Prevention: Breast screening leads to early diagnosis of breast cancer, which in turn influence treatment and, hopefully, mortality. An important component of secondary prevention is follow-up, i.e., to detect recurrence as early as possible; to detect cancer in the opposite breast at an early stage and to generate research data that might be useful.

**Different types of diabetes:** Type 1 diabetes: lack of insulin production, Type 2 diabetes: Results from the body's ineffective use of insulin (most common), A third type of diabetes is gestational diabetes

**Complication of diabetes:** Brain: Neuropathy, Eye: Retinopathy, Heart: Cardiopathy, Kidney: Nephropathy, Testes: Impotence, Ovaries: Infertility etc

**SRH (sexual and reproduction health problem**): The result of conditions, either in an individual, a relationship or a society, that require specific action for their identification, prevention and treatment

**Common SRH:** Sexually transmitted infections (STI)-> Bacterial(Gonorrhea, Syphilis), Viral(HIV, Hepatitis B virus), Fungal(yeast infection), Parasites(Scabies) , Sexually transmitted diseases (STD)->

**Prevention of SRH:**

• The most effective way is to avoid contact of body parts or fluids which can transmit infection  
• Proper use of condoms reduces contact and risk  
• Laboratory test  
• Vaccine - available to protect against some viral STIs such as hepatitis A, hepatitis B  
• Condoms - only provide protection when used properly as a barrier, and only to and from the area that it covers  
• Abstinence most effective means of protection against pregnancy and STIs  
• Abstinence is being able to say no to sex and communicating this to one’s partner  
• One should not feel guilty about decision to be abstinent

**Weather:** conditions of the atmosphere over a short period of time

**Climate:** conditions of the atmosphere over long periods of time (30- year standard averaging period)

**Climate change/global warming:** a gradual increase in the overall temperature of the earth's atmosphere generally attributed to the greenhouse effect caused by increased levels of carbon dioxide, CFCs, and other pollutants.

**Health and other impacts of global warming:**

• More extreme weather events: storms, cyclones  
• Heat waves: more frequent, more intense, and longer  
• Air pollution: increase in levels of ground ozone, more allergens  
• Rapid glacier melting: landslides, flash floods, and reduced water availability  
• Disturbed rainfall patterns: more droughts, more extreme precipitation events, floods, and disrupted water supply  
• Warmer temperatures: warmer minima  
• Sea-level rise: inundation, saltwater intrusion, loss of land

• Injuries, disability, drowning  
• Heat stress  
• Water and food-borne diseases  
• Malnutrition  
• Vector-borne diseases  
• Psychological stress

**Mental health:** A state of well-being in which the individual realizes his or her own abilities, Can cope with the normal stresses of life, Can work productively and fruitfully, Able to make a contribution to his or her community

**Types of mental health problems:** Anxiety, Anxiety disorder, Stress

**Cause of stress and coping mechanism:** To invest own conscious effort, To solve personal and interpersonal problems, In order to try to master, minimize or tolerate stress and conflict

**Injury:** Injuries are caused by acute exposure to physical agents such as mechanical energy, heat, electricity, chemical, and ionizing radiation interacting with the body in amounts or at rates that exceed the threshold of human  
tolerance.

**Types of injury:** Accidental or Unintentional, Intentional – Homicidal, Suicidal

**Accidental injury:** Motor vehicle injury, Pedestrian, motorcyclist & bicyclist, Fire, Occupational injury/workplace injury (Construction work– Building, Road; Tannery, Day laborer, Desk job)

**RTA (road traffic accident):**

Causes:

Prevention: Epidemiology: you can’t prevent it if you don’t understand it. Data collection is key. Education: awareness, attitudes, cultural beliefs. Enforcement: rules, life safety codes etc. Engineering: changing the environment to make it safer. Evaluation: did the changes made in education, enforcement, and engineering have the desired outcome on incidence?

**Obesity**: An abnormal growth of adipose tissue due to an enlargement of fat cell size (Hypertropic) or an increase fat  
cell number (Hyperplastic) or a combination of both.

**Types of obesity:**

**How to measure obesity**: Skinfold thickness, Waist circumference, WHR, Broca’s index, BMI or QI, Measuring fat cell

**Causes of obesity:** Genetic factor, Age, Sex, Socioeconomic factor, Physical inactivity, Eating habit, Family tendency, Endocrine factor, Drugs ,alcohol, Education, Ethnicity

**Management and prevention of obesity:**

• Follow a healthy eating plan- balance of energy IN and energy OUT

• Focus on portion size

• Be active- walk, bike or physical exercise  
• Reduce screen time- use of TVs, computers, DVDs, and videogames because they limit time for physical activity  
• Keep track of your weight, body mass index, and waist circumference