

SAFALTA CLASSTM

An Initiative by **अमरउजाला**

DISEASE: रोग

A disorder of structure or function in a human, animal especially one that produces specific symptoms or that affects a specific location and is not simply a direct result of physical injury.

TYPES OF DISEASE:

संक्रामक

1. INFECTIOUS DISEASE (COMMUNICABLE DISEASE/ CONTAGIOUS DISEASE): Infectious diseases are disorders caused by organisms — such as bacteria, viruses, fungi or parasites.

(Pathogen रोगजनक) जीवाणु

2. NON INFECTIOUS DISEASE (NON COMMUNICABLE DISEASE/NON CONTAGIOUS DISEASE): A disease that is not contagious is called a noninfectious disease. These diseases are not caused by pathogens.

3. GENETIC DISEASE: A genetic disorder is a health problem caused by one or more abnormalities in the genome.

Salivary gland → Parotid gland - Ear
 → Sublingual gland - tongue
 → Submandibular

NAME OF DISEASE	CAUSED BY	INFECTED ORGAN संक्रमित अंग	TRANSMITTED BY	TYPE OF VACCINE
INFLUENZA Flu	MYXOVIRUS, A RNA VIRUS	Respiratory passages: epithelial lining of trachea and bronchi. श्वसन नली	DROPLET — दीक	KILLED VIRUS
COMMON COLD — सर्दी खांसी	Large variety of viruses, commonly rhino-virus (RNA Virus)	RESPIRATORY TRACT श्वसन नली	DROPLET —	Intramuscular injection.
SMALL POX चेचक WHO	Variola zoster* (a DNA virus)	Respiratory passages, then skin श्वसन नली त्वचा	Droplet Infection (Wounds in skin)	Living attenuated virus applied
CHICKEN POX चेचक	Varicella zoster	Blistering Skin rash	Air-borne droplets Contact	Living attenuated virus
MUMPS गिलसुआ	A PARAMYXO VIRUS (RNA VIRUS)	PAROTID GLAND (Salivary gland)	DROPLET —	Living attenuated virus
MAESLES खसरा Cold + rashes	A PARAMYXO VIRUS (RNA VIRUS)	Respiratory passages, spreading to skin and intestines. —	DROPLET	Living attenuated virus

enzyme linked Immuno Sorbent Assay (ELISA)

NAME OF DISEASE	CAUSED BY	INFECTED ORGAN	TRANSMITTED BY	TYPE OF VACCINE
<u>Poliomyelitis (polio)</u> 2014 <u>Pak-AF</u>	Poliovirus (RNA Virus)	Pharynx and intestines, then blood; occasionally motor neurons in spinal cord, paralysis may occur. Brain → Paralysis	Droplet infection or via human feces ↓ <u>मलब</u> ↓ Water → <u>India</u>	Living attenuated virus given orally
Yellow fever <u>पीला</u> High Fever + <u>ज्वर</u> + Yellow	An arbovirus i.e arthropod-borne virus (RNA Virus)	Lining of blood vessels and liver <u>यकृत</u> Yellow <u>Bilirubin</u>	Vector- arthropods e.g ticks, mosquitoes STD Sexually	LIVE ATTENUATED VACCINE
<u>AIDS (Acquired Immuno Def. Syn)</u> (ELISA)	Retrovirus (RNA virus) <u>HIV</u> (Human Immuno def. Virus)	T- LYMPHOCYTES (WBC)	Sexual intercourse homo- and hetrosexuals	NO VACCINE
<u>Ebola hemorrhagic fever</u> ↓ Bleeding	Ebola Virus disease (EVD)	Fatal illness in Humans, Fever Blood Vessel <u>नसों</u>	It is transmitted to people from wild animals	NO VACCINE
<u>Zika disease</u> ↓ Pregnant ↓ Child - Mentally retard	Zika Virus (mosquito borne disease)	<u>BRAIN</u>	<u>AEDES MOSQUITO</u> STD	NO VACCINE
<u>DENGUE</u>	DENGUE VIRUS	PLATELETS ↓ 0 + 0 ↓ Bleeding	<u>AEDES MOSQUITO</u> ↓ Tiger mosquito	LIVE ATTENUATED VACCINE

BACTERIA: जीवाणु

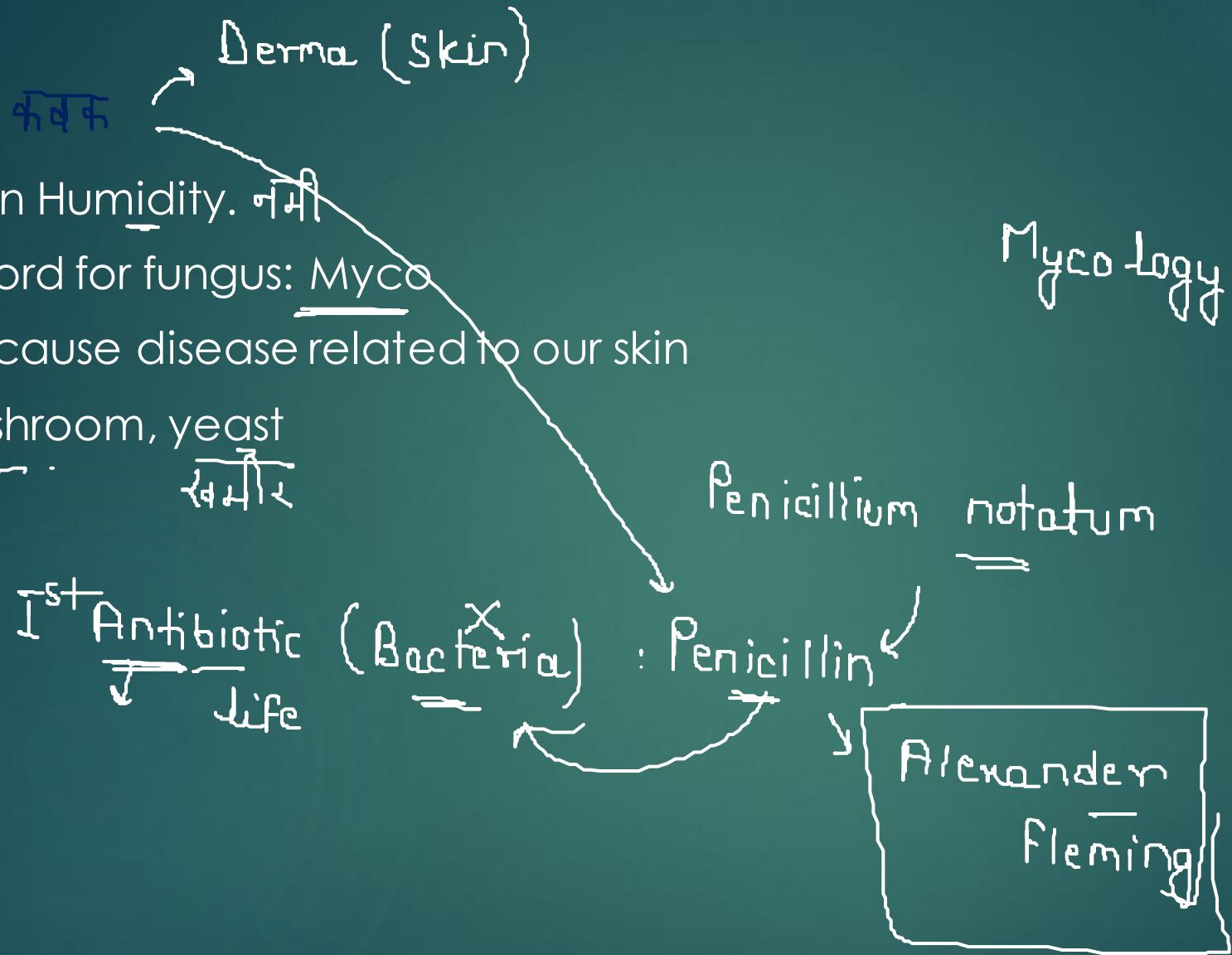
- ▶ Bacteria is a pure living thing
- ▶ It consists Prokaryotic cell.
- ▶ Unicellular organism एककोशिकीय जीव
- ▶ Discovered by "Antony Van Leeuwenhoek."

NAME OF DISEASE	CAUSED BY	INFECTED ORGAN	TRANSMISSION	TYPE OF VACCINE
TUBERCULOSIS (TB) क्षय रोग / थक्ष्मा रोग / तपेदिक 2030 India - 2025	<u>Imp</u> मसिनेवाला Mycobacterium tuberculosis	X Lungs, small intestine	Droplets, Drinking milk from infected cattle.	BCG living attenuated bacteria. Antibiotics e.g. streptomycin.
Whooping <u>cough</u> (<u>Pertussis</u>)	<u>Bordetella pertussis</u>	Upper <u>respiratory</u> tract, inducing violent coughing	<u>droplets</u>	Killed bacteria
<u>Gonorrhoea</u> (STD)	Neisseria gonorrhoeae	Reproductive organs: mainly mucous membranes of urinogenital tract	Contagion by sexual contact	Antibiotics, e.g. penicillin, streptomycin

<p>Syphilis</p> <p><u>STD</u></p>	<p>Treponema palladium</p>	<p>Reproductive organs, then eyes, bones, joints, central nervous system, heart and skin.</p>	<p>Contagion by sexual contact</p>	<p>Toxoid</p>
<p>Tetanus</p> <p>(Lock & jaw disease)</p>	<p>Clostridium tetany</p> <p>6 month</p>	<p>Blood.</p> <p>Toxin produced which affects motor nerves of spinal cord and hence muscles, causing lockjaw and spreading to the muscles.</p>	<p>Wound infection</p>	<p>toxoid</p>
<p>Cholera हैजा</p> <p>* → Contagious disease</p>	<p>Vibrio cholerae</p>	<p>Alimentary <u>canal</u>: mainly small intestine.</p> <p>आहार नली</p>	<p>Fecal contamination food - or water borne of material contaminated with feces from infected person.</p>	<p>Killed bacteria: short-lived protection and not always effective Antibiotics e.g. tetracyclines, chloramphenicol</p>
<p>leprosy कृच्छ रोग</p>	<p>Mycobacterium leprae</p>	<p>Skin</p>	<p>Wound infection</p>	<p>Killed Bacteria</p>

Fungus: कवक

- ▶ Found in Humidity. नमी
- ▶ Root word for fungus: Myco
- ▶ Mainly cause disease related to our skin
- ▶ Eg: Mushroom, yeast



Disease	Pathogen responsible	Mode of transmission	Main symptoms
Ring worm	Microsporum, Trichophyton	Direct contact from unbathed cats and dogs or objects handled by infected individuals	Contain one or more blistered areas on skin and scalp. Cause partial and temporary baldness in children
Athlete's foot	Trichophyton	Bad foot hygiene where skin remains warm and moist for long periods.	Painful itching or burning sensation in the infected areas. Crack appears in the skin, mass of loose dead skin clings between toes.
Madura foot	Maurella Mycetomi	Fungi gain entry through some minor injury to the skin.	

PROTOZOA:

- ▶ Unicellular organism
- ▶ Eukaryotic organism
- ▶ Parasite in human body
- ▶ First organism

Disease	Causal Agent
Amoebiasis	Entamoeba histolytica
Primary Amoebic meningoencephalitis	Naegleria fowleri
Giardiasis	Giardia Lamblia
Trichomoniasis	Trichomonas vaginalis
African Sleeping Sickness	Trypanosoma brucei
Leishmaniasis (Kala - azar)	Leishmania donovani
Toxoplasmosis	Toxoplasma gondii
Malaria	Plasmodium spp.
Babesiosis	Babesia microti
Pneumocytosis (PCP)	Pneumocystis carinii

NON INFECTIOUS DISEASE:

Non infectious diseases are generally caused by a combination of genetic and environmental factors other than pathogens.

<i>Vitamin</i>	<i>Diseases and their symptoms</i>	<i>Available from</i>
A (Retinol)	poor vision, night-blindness	spinach, carrots, butter, mangoes
B ₁ (Thiamine)	extreme weakness, beri-beri	eggs, meat, yeast
B ₂ (Riboflavin)	retarded growth, bad skin	green leafy vegetables, beans, peas, milk
B ₁₂ (Cyanocobalamin)	anaemia	non-vegetarian food like meat
C (Ascorbic acid)	scurvy, swollen gums, loose teeth	lime, lemon, oranges
D (Calciferol)	rickets, brittle bones in children which break or bend easily	milk, fish, liver oil
K (Phylloquinone)	excessive bleeding due to injury	green leafy vegetables
Diseases Caused due to Deficiency of Minerals		
<i>Name of minerals</i>	<i>Diseases and their symptoms</i>	<i>Available from</i>
Calcium	brittle bones, excessive bleeding, bad muscular movement	milk, green leafy vegetables
Phosphorus	bad teeth and bones	pulses, cereals, milk
Iron	anaemia, lack of red blood cells	green vegetables, pulses, meat
Iodine	goitre, enlarged thyroid gland	fish, salt from sea water
Copper	low appetite, retarded growth	pulses and leafy vegetables

Cancer:

TUMOR VERSUS CANCER	
Tumor is a development of a lesion or lump in the body due to an abnormal cellular growth	Cancer is a disease caused by an uncontrolled division of abnormal cells in a part of the body
Can be benign or malignant	Malignant
May not be fatal	Can be fatal
Can be treated by watchful waiting or surgical removing	Can be treated by surgical removal, chemotherapy, & radiotherapy

Heart attack:

CARDIAC ARREST

CARDIAC ARREST IS AN "ELECTRICAL" PROBLEM, OCCURRING WHEN THE HEART MALFUNCTIONS & STOPS BEATING UNEXPECTEDLY.

An irregular heartbeat, caused by an electrical malfunction, triggers cardiac arrest. The heart is unable to pump blood to the brain, lungs, and other organs.

Within seconds a person will become unresponsive and stop breathing. If not treated within minutes, death occurs.

HEART ATTACK

A HEART ATTACK IS A "CIRCULATION" PROBLEM, OCCURRING WHEN BLOOD TO THE HEART IS BLOCKED.

Blocked artery prevents oxygen-rich blood from reaching the heart. If this blocked artery is not reopened, the unnourished part of the heart begins to die.

Discomfort in chest, shortness of breath, cold sweats, nausea, and/or vomiting may occur. Unlike cardiac arrest, the heart doesn't stop beating during a heart attack.

Genetic Disease:

- ▶ A disease caused by an abnormality in an individual's genome.

Examples of Genetic Disease:

1. Diabetes Mellitus: It is a group of metabolic disorders characterized by a high blood sugar level over a prolonged period of time. Symptoms often include frequent urination, increased thirst, and increased appetite.
 - ▶ It is caused by the deficiency of Insulin Hormone.
2. Heart attack:



3. Hemophilia: Hemophilia is a rare disorder in which your blood doesn't clot normally because it lacks sufficient blood-clotting proteins (factor IX).

▶ Also known as Royal Disease/ Christmas Disease.

4. Color blindness: It is also known as color vision deficiency, is the decreased ability to see color or differences in color.

5. Thalassemia: Thalassemia is an inherited blood disorder in which the body makes an abnormal form of hemoglobin. The disorder results in excessive destruction of red blood cells, which leads to anemia.

6. Sickle cell anemia: It is one of a group of disorders known as sickle cell disease. Sickle cell anemia is an inherited red blood cell disorder in which there aren't enough healthy red blood cells to carry oxygen throughout your body

