

BIOLOGY

WHY DO WE FALL ILL : PART III

(AFTER CLASSIFICATION OF INFECTIOUS AND NON INFECTIOUS DISEASES):

THE ENTIRE DIVERSITY SEEN IN THE LIVING WORLD CAN BE CLASSIFIED INTO A FEW GROUPS.

SOME DISEASE CAUSING ORGANISMS ARE :

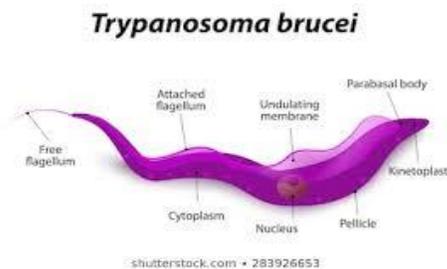
- VIRUSES
- BACTERIA
- FUNGI
- SINGLE-CELLED ANIMALS OR PROTOZOANS
- MULTICELLULAR ORGANISMS SUCH AS WORMS OF DIFFERENT KINDS.

The chart given below is the classification of some common diseases .

THESE EXAMPLES MUST BE LEARNT BY HEART.

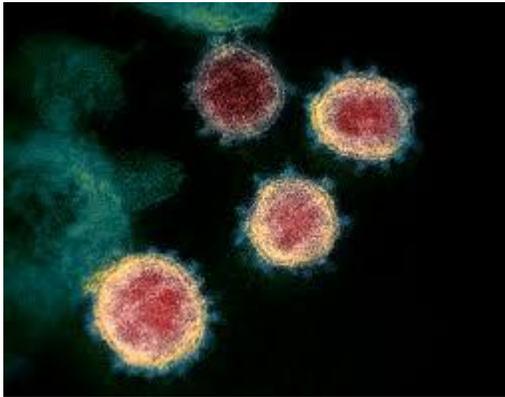
Infectious agent	Disease
Virus	Common cold, influenza, dengue fever, AIDS
Bacteria	Typhoid fever, cholera, tuberculosis, anthrax
Fungi	Many common infectious disease
Protozoan	Malaria, kala azar
Worms	worm infections, elephantiasis

FEW INFORMATION REGARDING THE DISEASE CAUSING ORGANISM (NCERT DAIGRAMS)





ASCARIS



SARS VIRUS

Where do the disease-causing germs live in our body?

There are a number of tissues and organs in our body where these microbes can get attached to.

- The point of entry decides where they will go. For instance, any microbe that enters through the nose is likely to settle at the lungs.
- The signs and symptoms of a disease as only those organs and tissues issues seem affected where these microbes enter.

INFLAMMATION

- Our body has an immune system in which it creates the cells that can fight against the disease-causing germs.
- This process of recruiting cells to kill the infectious agents present in our body is called Inflammation.
- The inflammation process shows different effects on our body such as fever or swelling.
- We can say that the likelihood we are going to be affected by the disease is determined by the immune system of our body.

SHORT NOTE ON AIDS :

AIDS or **Acquired Immune Deficiency Syndrome** is a disease caused by the HIV virus. In this condition, a person's immune system becomes too weak to fight any kind of infection or disease.

- AIDS is usually the last stage of HIV infection; a stage where the body can no longer defend itself and thus spawns various diseases. AIDS, when untreated, leads to death
- AIDS is an advanced HIV infection or late-stage HIV.
- Someone with AIDS may develop a wide range of health conditions like – pneumonia, thrush, fungal infections, TB.
- There is also an increased risk of developing a medical illness like cancer and brain illnesses.

Symptoms of AIDS

As AIDS is a virus infection, the symptoms related to acute HIV infection can be similar to flu or other viral illnesses, like –

- Fever
- Muscle & Joint Pain
- Headaches
- Sore throat
- Night Sweats
- Red rashes
- Mouth sores
- Tiredness
- Swollen lymph glands
- Weakness
- Weight Loss
- Diarrhoea

Cure for AIDS

There is no specific or perfect cure for AIDS, but with proper diagnosis, treatment and support, one can fight it and live a relatively healthy and happy life. One needs to take treatment correctly and deal with any possible side-effects.

Medicines are used to stop the virus from multiplying.

One major treatment for HIV/AIDS is called antiretroviral therapy (ART).

TABLE OF COMMON DISEASES:

**CAUSATIVE ORGANISM MODE OF TRANSMISSION
CONTROL AND PREVENTION :**

Disease	Causative Organism	Mode of Transmission	Control	Prevention
Malaria	Plasmodium	Bite of female Anopheles	Quinine	Breaking contact between female Anopheles and man, eliminating Anopheles
Diarrhea	Protozoan, bacteria, viruses	Contaminated food and water	ORS or salt-sugar solution	Proper sanitation, personal hygiene
Cholera	Vibrio cholerae	Contaminated food and water	Antibiotics, ORS or salt-sugar solution	Proper sanitation, vaccination
Typhoid	Salmonella typhi	Contaminated food and water	Use of antibiotics	Proper sewage system, using chlorinated or boiled water
Tuberculosis	Mycobacterium tuberculosis	Cough/sneeze droplets, contaminated milk	Use of antibiotics	Awareness to maintain cleanliness in public places and BCG vaccine for children
Hepatitis	Hepatitis viruses (A-G)	Contaminated food and water for some forms, through body fluids for others	Rest, antiviral injection, food rich in carbohydrates	Good sanitation, safe drinking water, use tested blood, disposables needles and syringes
Rabies	Rabies virus	Bite of infected animal	No cure after the diseases develops	Wash the wound antirabies serum, course of vaccine shots, pets should be vaccinated,
AIDS	Human immunodeficiency virus (HIV)	Infected blood, semen, breast milk, mother to fetus	No cure yet, a combination of drugs slows down progress of the diseases	Screening of blood and donors, use of disposable needles and syringes, not sharing blades and razors, safe sex practices.
Influenza	Myxovirus	Cough/sneeze droplets	No cure, bed rest, aspirin and fluids provide relief	Keeping away from infected person

THE CONTENT IS PURELY PREPARED FROM HOME .