

Health and disease

➤ **Health:**

It is state of physical and mental well beings

➤ **Disease:**

It is an example of poor health, often caused by presence of pathogens or foreign agents in the body.

➤ **Types of disease:**

There are 2 types of diseases

- 1- communicable disease
- 2- Non- communicable disease

1- Communicable diseases:

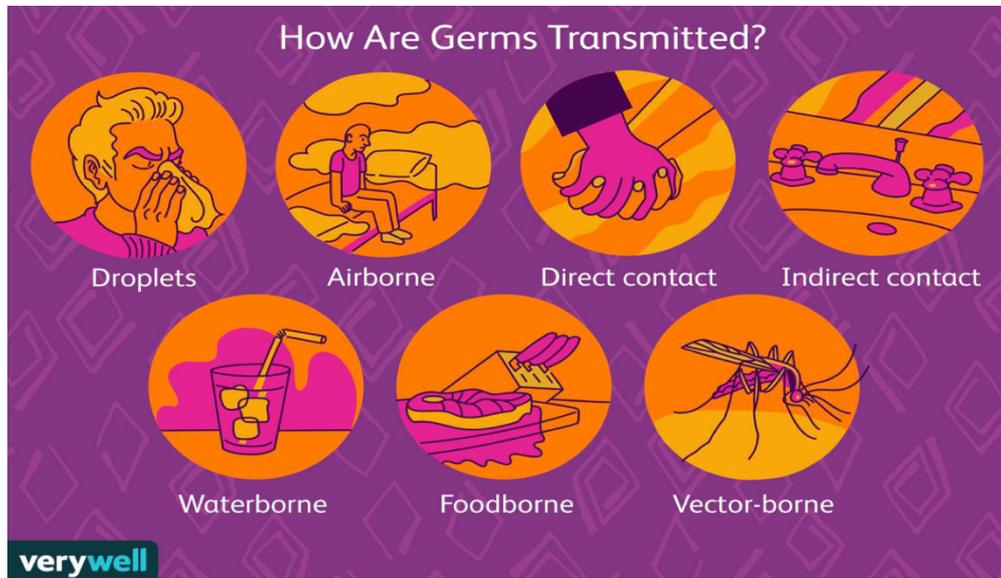
a) **Communicable** diseases are caused by **microorganisms** called **pathogens** which can **spread** between individuals or individuals and animals.

b) **For example:** Covid-19, chickenpox, flu , measles etc.

c) **Caused by:** these diastase caused by Viruses, bacteria, parasite and fungi

d) sometime ps these are called **contagious** or **infectious disease** which spread person to person.

Type of pathogen	Description	Human diseases caused by pathogens of that type
Bacteria <i>Escherichia coli</i> 	Single-celled organisms without a nucleus	Strep throat, staph infections, tuberculosis, food poisoning, tetanus, pneumonia, syphilis
Viruses <i>Herpes simplex</i> 	Thread-like particles that reproduce by taking over living cells	Common cold, flu, genital herpes, cold sores, measles, AIDS, genital warts, chicken pox, small pox
Fungi <i>Death cap mushroom</i> 	Simple organisms, including mushrooms and yeasts, that grow as single cells or thread like filaments	Ringworm, athlete's foot, tinea, candidiasis, histoplasmosis, mushroom poisoning
Protozoa <i>Giardia lamblia</i> 	Single-celled organism with a nucleus	Malaria, "traveler's diarrhea" giardiasis, trypanosomiasis ("sleeping sickness")



2- Non Communicable diseases:

- Non-communicable diseases are **not caused by pathogens** and **cannot be passed on** between individuals
- Their **effects** on health tend to be **longer-lasting** examples are **asthma, CHD** and most **cancers**
- However, the **risk** of developing non-communicable diseases may be **increased** by certain **factors** including (**diet, stress and life situations**) as these factors may have a profound effect on both physical and mental health.



Risk Factors in Non-Communicable Diseases

Risk factor	Disease risk factor is linked to	Explanation of how risk factor may cause disease
Smoking	Lung disease, lung cancer and cardiovascular disease	Chemicals in cigarette smoke (such as tar and nicotine) damage the alveoli in the lungs and the endothelial lining of the arteries.
Obesity caused by a poor diet	Type 2 diabetes	Excess consumption of sugar as a result of a poor diet reduces the body's sensitivity to insulin
Consuming alcohol	Liver disease and impaired brain function	The breakdown of alcohol by cells of the liver produces substances which can be toxic to liver cells in high concentrations. The neurones of the brain are also damaged by alcohol, reducing brain function.
Exposure to carcinogens	Cancer	Exposure to ionising radiation (eg. X-rays) or certain chemicals can damage DNA in cells leading to uncontrolled cell division, causing cancer
Smoking and consuming alcohol when pregnant	Poor development of foetus (unborn baby)	Carbon monoxide in cigarette smoke reduces the amount of oxygen transported around the mother's body, reducing the oxygen delivered to the foetus. Substances in alcohol can impair the development of the brain in a foetus.

Different type of Disease sometime Interact:**I. Weak immune system:**

People who have problems with their immune system have increased chances of suffering infectious disease more rapidly like **influenza virus (flu)** effect more rapidly to weak immune system because this body are less likely to able to defend itself against pathogens.

II. Viruses

living in cells can be the trigger for **cancers**; the HPV virus can infect cells of the cervix in women resulting in cervical cancer developing in some cases, whereas some strains of the hepatitis virus can cause liver cancer.

III. Allergic reactions:

Immune reactions initially caused by a pathogen can trigger **allergies** such as **skin rashes** and severe symptoms of **asthma**

IV. Mental health

Severe **physical ill health** can lead to **depression** and other **mental illness**; both can negatively impact the immune system and lifestyle

Factors that affect your health

There are many factors that affect our health

- ✓ **Poor diet:** balanced and healthy diet provides our body everything, but poor diet affect your physical and mental health
- ✓ **Stress:** continuously stress leads to mental and physical health problems
- ✓ **lifestyle:** happy and positive people around us affecting the health, think positive live positive gives you a healthy and happy lifestyle



Non- communicable disease can be costly

Level	Examples of Costs	
	Human	Financial
Individual	Reduces quality of life and mental health	Reduces ability to work and earn money
Local Community	Affects people around the individual who care for them	Increased cost of healthcare to treat the individual
Nation	Increased social issues such as obesity, and reduced morale	Increased cost of research into preventing non-communicable disease.
Globally	Increased deaths	Reduced supply of labour, and hence efficiency of economies

Fig 1. Examples of the Costs of Non-Communicable Disease.

