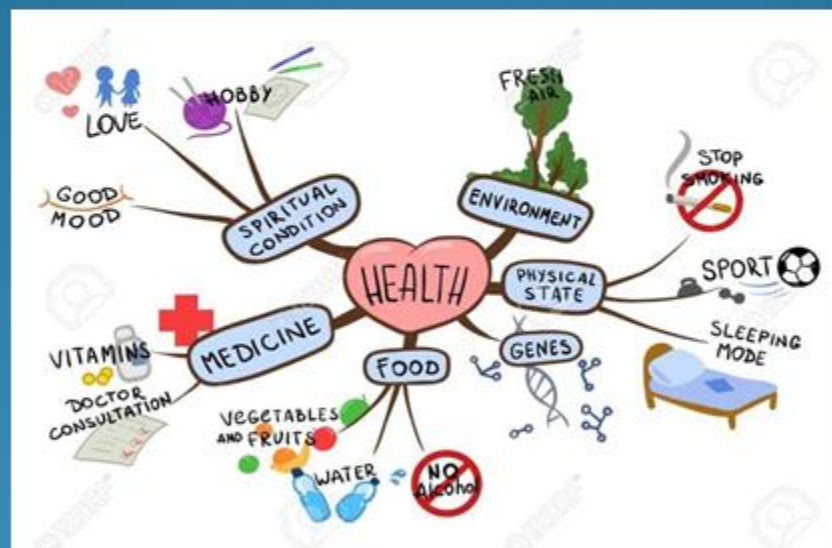


**INVITED SPECIAL LECTURE
ON
“HEALTH FOR YOUR SAKE”
BY**

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CHENNAI**

**18TH FEBRUARY 2020,10.30 A.M
@ D BLOCK CONFERENCE HALL**



GUEST LECTURE ON HEALTH FOR YOUR SAKE

18.02.2020

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A few harmful microbes, for example less than 1% of bacteria, can invade our body (the host) and make us ill. Microbes cause infectious diseases such as flu and measles.

There is also strong evidence that microbes may contribute to many non-infectious chronic diseases such as some forms of cancer and coronary heart disease. Different diseases are caused by different types of micro-organisms. Microbes that cause disease are called pathogens.

Infectious disease	Microbe that causes the disease	Type of microbe
Cold	Rhinovirus	Virus
Chickenpox	<i>Varicella zoster</i>	Virus
German measles	Rubella	Virus
Whooping cough	<i>Bordatella pertussis</i>	Bacterium
Bubonic plague	<i>Yersinia pestis</i>	Bacterium
TB (Tuberculosis)	<i>Mycobacterium tuberculosis</i>	Bacterium
Malaria	<i>Plasmodium falciparum</i>	Protozoan
Ringworm	<i>Trichophyton rubrum</i>	Fungus
Athletes' foot	<i>Trichophyton mentagrophytes</i>	Fungus

It is important to remember that:

- A pathogen is a micro-organism that has the potential to cause disease.

- An infection is the invasion and multiplication of pathogenic microbes in an individual or population.
- Disease is when the infection causes damage to the individual's vital functions or systems.
- An infection does not always result in disease!

To cause an infection, microbes must enter our bodies. The site at which they enter is known as the portal of entry.

Microbes can enter the body through the four sites listed below:

- Respiratory tract (mouth and nose) e.g. influenza virus which causes the flu.
- Gastrointestinal tract (mouth oral cavity) e.g. *Vibrio cholerae* which causes cholera.
- Urogenital tract e.g. *Escherichia coli* which causes cystitis.
- Breaks in the skin surface e.g. *Clostridium tetani* which causes tetanus.

To make us ill microbes have to:

- reach their target site in the body;
- attach to the target site they are trying to infect so that they are not dislodged;
- multiply rapidly;
- obtain their nutrients from the host;
- avoid and survive attack by the host's immune system.