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### **SUSCEPTIBLE HOST**

Meaning:

A susceptible host is an individual who is at risk of being infected by a disease-causing agent (pathogen) because their body's defense mechanisms (immunity) are unable to resist or fight off the infection.

In simple terms, it means a person (or animal) who can catch the disease if exposed to the infectious agent.

Explanation:

In the chain of infection, a susceptible host is the final link. Infection can only occur when:

1. A pathogen leaves its source or reservoir,
2. Finds a mode of transmission,
3. Enters a new host that is susceptible.

If the new host is not susceptible (for example, has immunity or has been vaccinated), the chain of infection is broken, and disease will not occur.

### **FACTORS AFFECTING SUSCEPTIBILITY**

The likelihood of a person becoming infected depends on several factors:

1. Age:

Infants and the elderly are more susceptible because their immune systems are weaker.

2. Nutritional Status:

Poor nutrition weakens the body's defenses.

3. Immunity:

Lack of previous exposure or vaccination increases susceptibility

4. Health Status:

People with chronic diseases (e.g., diabetes, HIV, cancer) are more vulnerable.

5. Genetic Factors:

Some individuals have inherited resistance or susceptibility to certain infections.

**6. Environmental Factors:**

Poor sanitation, overcrowding, and unhygienic conditions can increase risk.

**7. Lifestyle and Behavior:**

Smoking, alcohol use, unsafe sex, and poor hygiene increase the risk of infection.

Examples of Susceptible Hosts:

A newborn baby exposed to measles virus.

A person with HIV exposed to tuberculosis.

An unvaccinated person exposed to hepatitis B virus.

## **PREVENTION AND CONTROL MEASURES**

To protect susceptible hosts and break the chain of infection:

1. Immunization (Vaccination) – boosts immunity.
2. Good Nutrition – strengthens body defenses.
3. Health Education – promotes hygienic practices.
4. Isolation and Quarantine – prevents exposure.
5. Use of Protective Equipment – gloves, masks, etc.
6. Treatment of Underlying Diseases – e.g., control of diabetes or HIV.