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Discuss on immunization and prevention

Immunization and Prevention

1. Immunization (Definition)

Immunization is the process of protecting individuals against infectious diseases by giving vaccines that stimulate the body's immune system to produce immunity.

It helps the body recognize and fight disease-causing organisms.

It can be active (vaccines) or passive (antibodies given directly).

It prevents illness, disability, and death.

2. Types of Immunization

a. Active Immunization

The body produces its own antibodies after exposure to a vaccine or disease.

Long-lasting protection

Examples: Measles vaccine, Polio vaccine, Hepatitis B vaccine.

b. Passive Immunization

Ready-made antibodies are given.

Provides immediate but short-term protection

Examples: Tetanus antitoxin, Rabies immunoglobulin.

3. Importance of Immunization

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3. Importance of Immunization

Prevents the spread of infectious diseases

Protects individuals and the community (herd immunity)

The 3 Levels of Prevention

A. Primary Prevention

Aims to stop diseases before they occur.

Immunization

Good hygiene

B. Secondary Prevention

Aims to detect diseases early and begin treatment to stop progression.

Examples

Screening (BP check, HIV test, Pap smear)

Early diagnosis and prompt treatment

Growth monitoring in children

C. Tertiary Prevention

Aims to reduce disability and improve quality of life after disease has occurred. Long-term treatment for chronic diseases (diabetes, hypertension)

4. Prevention of Diseases

Disease prevention involves actions taken to avoid disease or reduce its impact.

The 3 Levels of Prevention

A. Primary Prevention

Aims to stop diseases before they occur.

Examples

Immunization

Good hygiene

Safe water and sanitation

Health education

Use of insecticide-treated nets

Healthy lifestyle (diet, exercise)

B. Secondary Prevention

Aims to detect diseases early and begin treatment to stop progression.

Examples

Early diagnosis and prompt treatment

Growth monitoring in children

C. Tertiary Prevention

Aims to reduce disability and improve quality of life after disease has occurred.

Examples

Rehabilitation (physiotherapy)

Long-term treatment for chronic diseases (diabetes, hypertension)

Support groups

Surgery to correct complication

Immunization is a form of primary prevention

Prevention of Immunization

Immunization is one of the most effective ways to prevent infectious diseases.

1. Prevents infection

Vaccines help the body produce antibodies, which protect you from diseases like:

Measles

Polio

Tetanus

Hepatitis B

Tuberculosis (TB)

Yellow fever

2. Prevents disease severity

Even if a vaccinated person gets infected, the illness is usually milder and less dangerous.

3. Prevents complications and death

Vaccination reduces:

Severe disability

Long-term complications

Hospitalization

Death from vaccine-preventable diseases

4. Prevents spread to others

Immunization protects:

Babies too young to be vaccinated

People with weak immune systems

5. Prevents outbreaks and epidemics

When many people are immunized, diseases struggle to spread—reducing chances of outbreaks.

6. Prevents long-term health problems

Some diseases have lifelong complications (e.g., paralysis from polio). Vaccination stops these.