



## Public Health man

Syllabus: 1) Know the modes of transmission of the following diseases; diphtheria, tuberculosis, measles, mumps, whooping cough, chicken pox, typhoid fever, dysentery, diarrhea, small-pox, malaria, ringworm, scabies, plague, cholera, measures adopted by the sanitary authorities to prevent their spread and steps which should be taken by private individuals in cases of infection.

- 2) Describe how to disinfect a room and its contents and how to eradicate pests such as mosquitoes, rats, bed bugs and flies.
- 3) Describe mode employed in his locality of disposing garbage.
- 4) Educate five families in proper disposal of garbage.

Know the modes of transmission of the following diseases;

### Diphtheria:

**MODE OF TRANSMISSION**

- Droplet infections
- Can also be transmitted directly to susceptible persons from infected cutaneous lesions.
- Transmission by objects contaminated by nasopharyngeal secretions of patients is also possible.

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# Tuberculosis

**Mode of transmission:-**

- Tuberculosis is mainly transmitted by
  - droplet infection
  - droplet nuclei
- Tubercle bacilli from an infected person are excreted as droplet during coughing, sneezing or speaking.
- When inhaled the droplet may reach the respiratory bronchiole & establish an infection.
- Tuberculosis is not spread by the formites used by the patient .



# Measles



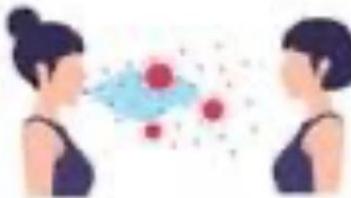
## TRANSMISSION

- Measles is **highly contagious**; approximately **90%** of susceptible household contacts acquire the disease.
- **Maximal dissemination** of virus occurs by **droplet spray** during the prodromal period (**catarrhal stage**).

# Mumps

## Mode of transmission:-

- The virus is spread from human reservoir by direct contact, air-borne droplets and fomites contaminated by saliva and urine.



## whooping cough

### Mode of Transmission

It spreads from one person to another through:

- Respiratory droplets(coughing,sneezing,saliva etc)
- Airborne transmission
- Close contact



## Chicken pox

### Mode of Transmission

- It is a highly contagious disease infecting up to 90% of non-immune people who are exposed to the disease.

**Chickenpox is transmitted by the following routes**

- Airborne respiratory droplets
- Direct contact with the vesicle fluid.
- Indirect contact through clothes /linen freshly soiled by vesicle fluid.
- Chickenpox can also be spread from people with shingles. A person with shingles can spread the VZV virus to others who have never had chickenpox.



## Typhoid fever

### MODE OF TRANSMISSION

- Typhoid fever is transmitted via the faecal-oral route or urine-oral routes
- This may take place directly through soiled hands contaminated with faeces or urine of cases or carriers or indirectly by the ingestion of contaminated water, milk, food or through flies



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## Dysentery

### Mode of transmission

- The route of transmission of **shigella** is fecal oral route. The bacilli are excreted in feces and through poor sanitation and bad hygiene, food and water can then become contaminated. Flies also frequently cause **contamination of food** and are prevalent mode of spread of dysentery.

## Diarrhea

### TRANSMISSION

- Most of the diarrheal agents are transmitted by the fecal-oral route
- Cholera: water-borne disease; transmitted through water contaminated with feces.
- Some viruses (such as rotavirus) can be transmitted through air
- Nosocomial transmission is possible
- Shigellosis (blood dysentery) is mainly transmitted person-to-person
- Shigellosis is a water-washed disease; transmitted more when there is scarcity of water

## Small-pox

### Smallpox Disease Transmission

Transmission can happen in one of several ways:

- › Face-to-face contact
- › Direct contact with infected fluids and contaminated objects
- › Through the air
- › The virus can cross the placenta, but the incidence of congenital smallpox is relatively low.
- › Smallpox transmission does not occur through animals or insects.

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## Malaria

### Mode of transmission

- 1. Vector transmission** - Malaria is transmitted by the bite of certain species of infected, female, anopheline mosquitoes.
- 2. Direct transmission** - Malaria may be induced accidentally by hypodermic intramuscular and intravenous injections of blood or plasma, e.g., blood transfusion, malaria in drug addicts .
- 3. Congenital** – rare

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## Cholera

### Mode of Transmission of Cholera

Cholera is an acute gastrointestinal tract infection caused by the consumption of food and water contaminated with the gram-negative bacterium *Vibrio cholerae*. The common causes which could contaminate the *Vibrio cholerae* in an endemic area are:

- Unimproved water sources
- Non-potable water
- Water pipeline leaks
- Open defecation
- Poor sanitation

Poor hygiene



## **2) Describe how to disinfect a room and its contents and how to eradicate pests such as mosquitoes, rats, bed bugs and flies.**

### Eradicating Common Pests

#### Mosquitoes

1. **Eliminate Standing Water:** Mosquitoes breed in standing water. Remove or empty containers that collect water.
2. **Use Repellents:** Apply insect repellent containing DEET or other recommended ingredients.
3. **Install Screens:** Ensure windows and doors have screens to keep mosquitoes out.
4. **Insecticides:** Use mosquito-specific insecticides if needed, and follow the product instructions carefully.

#### Rats

1. **Seal Entry Points:** Inspect your home for gaps or cracks and seal them.
2. **Keep Clean:** Maintain a clean environment; store food in airtight containers and dispose of trash regularly.
3. **Set Traps:** Use snap traps or live traps with bait (peanut butter, cheese). Place traps along walls and in areas where you've noticed activity.

4. **Rodenticides:** Use rodenticides if necessary, but follow the safety instructions carefully and consider professional assistance if needed.

### **Bed Bugs**

1. **Wash and Heat Treat:** Wash bedding, clothing, and other infested items in hot water and dry them on high heat.
2. **Vacuum:** Vacuum the bed, mattress, and surrounding areas thoroughly. Dispose of the vacuum bag immediately.
3. **Bed Bug Mattress Covers:** Use protective covers designed to trap and kill bed bugs.
4. **Insecticides:** Apply bed bug-specific insecticides to infested areas. Follow product instructions and consider professional pest control services for severe infestations.

### **Flies**

1. **Eliminate Food Sources:** Keep food sealed and dispose of waste properly.
2. **Clean Drains:** Flies can breed in drains. Clean them regularly with a drain cleaner or a mixture of baking soda and vinegar.
3. **Use Traps:** Place fly traps or fly paper in areas where flies are active.
4. **Insecticides:** Use fly sprays or insecticides as needed, and follow the safety instructions.

## **3) Describe mode employed in his locality of disposing garbage.**

- **Drop-off Centers:** Some areas have centralized drop-off points where residents can bring their waste, recyclables, and compostables. These centers are often used for items that aren't collected curbside, like large appliances or hazardous materials.
- **Waste-to-Energy Plants:** In some regions, waste is burned in facilities designed to convert it into energy. This method reduces the volume of waste and can generate electricity or heat.
- **Landfills:** Although less environmentally friendly, landfills are still common. Waste is buried in designated areas, though modern landfills are managed with efforts to control leachate and methane emissions.
- **Composting:** Organic waste, such as food scraps and yard trimmings, is collected separately and processed into compost. This can either be done at home or through municipal composting programs.
- **Recycling Programs:** Many localities have structured recycling programs where materials like paper, glass, metal, and certain plastics are sorted and processed for reuse.
- **Hazardous Waste Collection:** Special collection days or facilities are designated for hazardous materials such as chemicals, batteries, and electronics, ensuring they are disposed of safely.