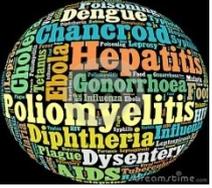




Communicable Disease

Mr. Pankaj Kusum Ramdas Khuspe

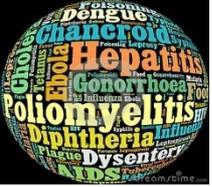




Communicable disease

- Transmitted from one person to another person or
- from a reservoir to a susceptible host.
E.g.: Tuberculosis etc



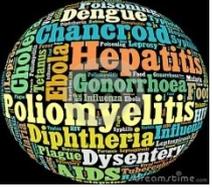


Communicable disease

“Transmitted from one person to another person or from a reservoir to a susceptible host.”

E.g.: Tuberculosis etc.





Communicable Disease

Communicable Period: time period require for transmission of infectious agent from reservoir to a susceptible host.

Controlled by

- Improvement of personal hygiene
- Improvement of social hygiene
- Awareness about health
- Awareness about disease.





Types of Communicable Disease

Depending upon source:

1. Respiratory Infections:

E.g.: Tuberculosis etc

1. Intestinal Infections:

E.g.: Hepatitis etc

1. Arthropod Borne Infections:

E.g.: Plague etc

1. Surface Infections:

E.g.: Leprosy etc

1. Sexually Transmitted Disease:

E.g.: AIDS etc





Mode of Transmission of Communicable Disease

Human pathogen transmission

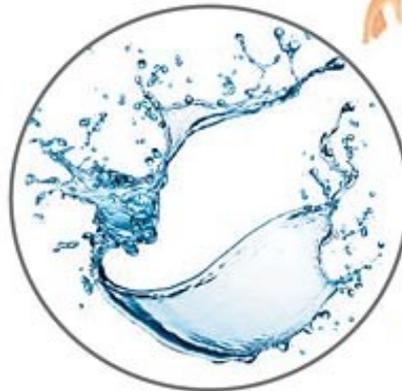
Infection caused by airborne transmission



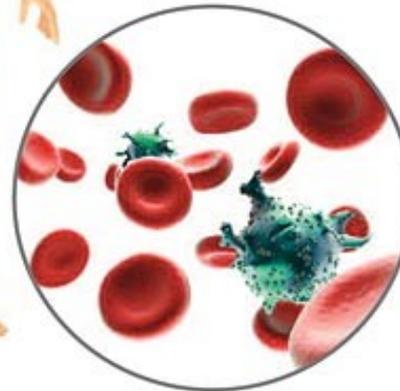
Infection caused by contact and faeces



Infection caused by contaminated water

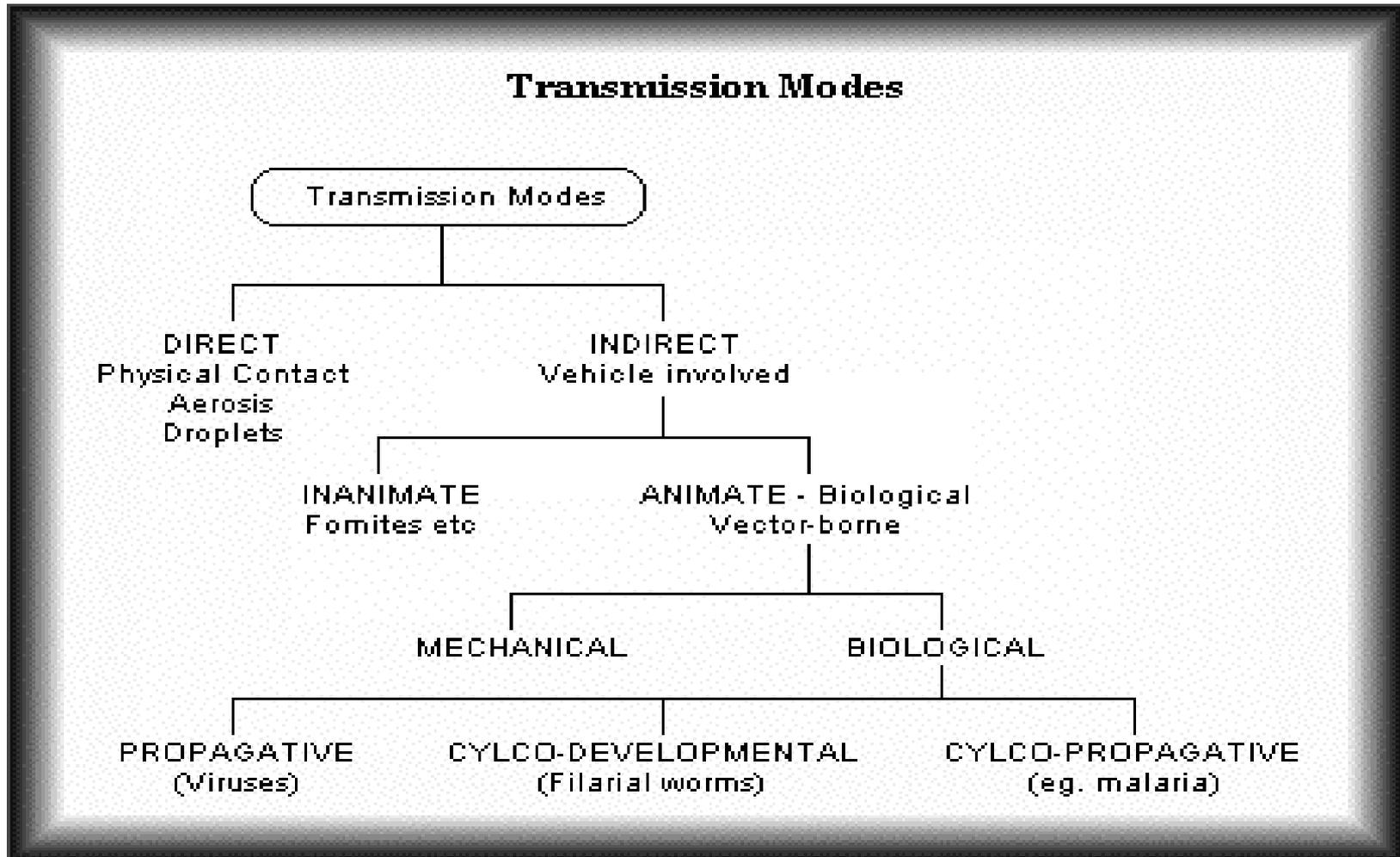


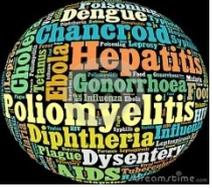
Infection caused by pathogens in blood-stream and tissues





Mode of Transmission

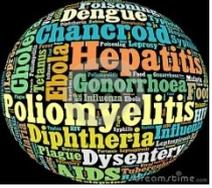




Respiratory Infections

- Through respiration;
 1. Tuberculosis
 2. Chicken pox
 3. Measles
 4. Influenza
 5. Diphtheria
 6. Whooping cough

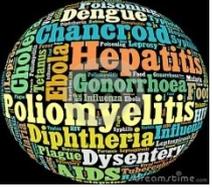




Tuberculosis

- Most important specific communicable disease in world.
- Mainly in developing countries.
- Specific infectious disease primarily affecting the lungs(Pulmonary tuberculosis-most common).
- It also affect all other vital organs like intestine, brain, bones, joints, lymph glands, skin etc.
- Incubation period:
 - From weeks, months to years depending upon dose of infection & immunity of patient.

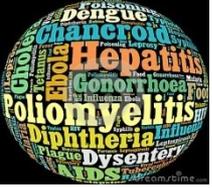




Predisposing Factors

1. Over crowded population,
2. Malnutrition,
3. Poverty,
4. Alcoholism
5. Drug addiction
6. HIV infection etc.





Causative Organism

Mycobacterium Tuberculosis

Mode of Transmission

Tuberculosis is mainly spread by,

- 1. Droplet infection (Produced by sputum of positive patient)**
- 2. Coughing**

Not spread by fomites (plates & other article)



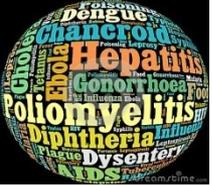


Investigation

Mainly by,

1. Sputum examination
2. Chest X- Ray
3. Mantoux test etc.





Prevention & Control

Control programmes:

The National Tuberculosis programme (NTP)

And

The district Tuberculosis programme (DTP).

1. Raising the resistance of the population to the disease by:

- i. Good social conditions:
 - Satisfactory housing & adequate diet.
- i. BCG (Bacille Calmette Guerin) Vaccination:
 - After birth





Prevention & Control

2. Reduction of the human infection by:

- i. Detection & isolation of maximum number of case:
 - Sputum examination
 - X – ray examination
 - Mx Test.
- i. Chemoprophylaxis:
 - Prevention by Suitable anti TB agent

3. Elimination of tuberculous infection in milk:

By pasteurization of milk.

4. Chemotherapy:

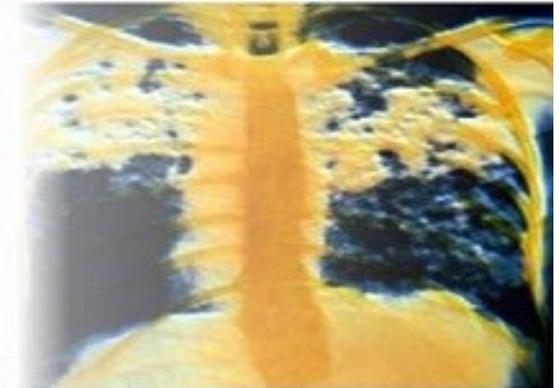
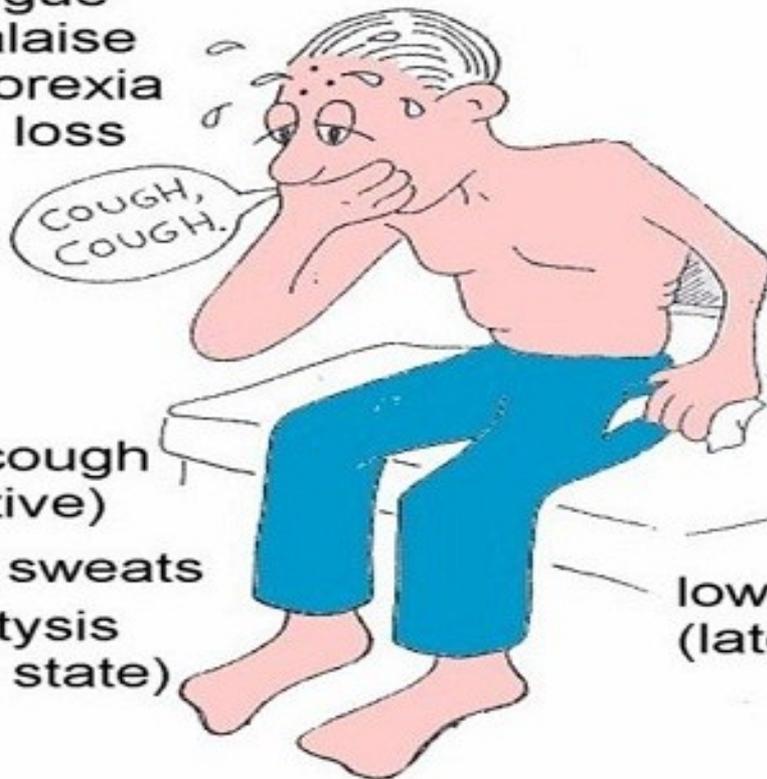
1. First line agents: Isoniazid
2. Second line agents: Ethionamide





TUBERCULOSIS (TB)

- fatigue
- malaise
- anorexia
- wt. loss



chronic cough
(productive)

night sweats

hemoptysis
(advanced state)

low grade temp.
(late afternoon)

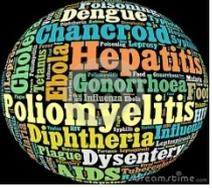
Treatment:

TB medications 6 to 12 months
bedrest until symptoms
resp isolation until
negative sputum
frequently out-pt basis

Diagnostic:

TB skin test
chest x-ray
bacteriologic
sputum studies





Chicken Pox

- Also called – **Varicella**
- Occur mainly in Children **under 10 years** of age.
- Uncommon in adults.
- **Incubation Period :**
About 14 – 16 days.





Causative Organism

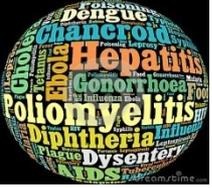
Varicella- Zoster Virus (v-z Virus)

Mode of Transmission

Chicken pox is mainly spread by,

- 1. Droplet infection**
- 2. Freshly contaminated fomites used by patients can transmit disease.**
- 3. Virus can cross placental barrier & may affect foetus.**





Sign & Symptoms

1. Fever
2. Appearance of rash in the form of crop on trunk, face and limbs.
3. Macules (small flat colored spot on skin) appear first and with in 24 hrs. lesions are appear.
4. them lesions becomes dry to form scabs.

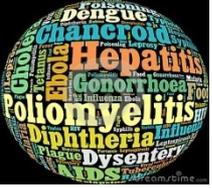




Prevention & Control

1. By administering specific V. Zoster immunoglobulin.
2. Use of local antiseptics like chlorhexidine.
3. If bacterial infection progress give antibiotics.
4. Transmission prevented by isolation of patient for 5-7 days.
5. Sterilization of all articles used by patient after cure .





Influenza



- Also called – **Flu**
- Acute & highly infectious disease of respiratory tract.
- Occur people of all ages.
- **Incubation Period :**
About 1–2 days(24-48 Hrs.).





Causative Organism

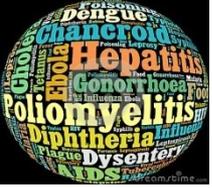
Influenza Virus (A,B,C)

Mode of Transmission

Influenza is mainly spread by,

- 1. Droplet infection**
- 2. Freshly contaminated fomites.**
- 3. Direct contact**

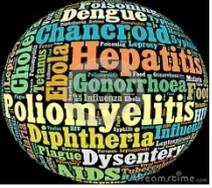




Sign & Symptoms

1. Fever up to 102°C
2. Malaise, Chills, headache, backache,
3. Loss of appetite
4. Face is flushed.
5. If ignored other severe effect occur.





Prevention & Control

1. By administering polyvalent influenza virus vaccine.
2. Isolation of suspected case
3. Spitting in public places should be avoided.
4. People must be educated about healthy habits.

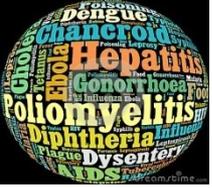




Treatment

1. Bed rest until fever has subsided.
2. Analgesics (Paracetamol etc)
3. Dry cough suppressant (Noscapine etc).
4. Anti viral may be used.



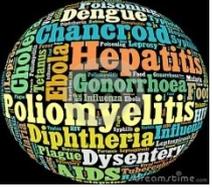


Whooping Cough



- Also called – **Pertusis**
- highly infectious disease of respiratory tract.
- Occur people of all ages. Occasionally after age 10 yrs.
- Mostly occur in unimmunized children under the age of 5 yrs.
- **Incubation Period :**
About 7–14 days.





Causative Organism

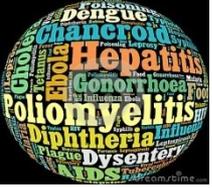
Bordetella Pertusis

Mode of Transmission

Influenza is mainly spread by,

- 1. Droplet infection**
- 2. Article freshly infected by discharges.**

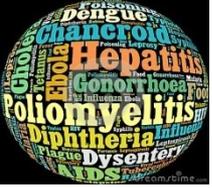




Prevention, Control & Treatment

1. Children immunized by D.P.T vaccine (Diphtheria, pertussis & tetanus vaccine).
2. Patient put to bed in well ventilated room.
3. Discharges from nose and throat should collect properly on paper and disinfected.
4. Erthromycin



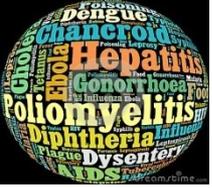


Measles



- Also called – **Rubeola**
- Occur in children of 3-5 yrs of ages.
- **Incubation Period :**
About 8–14 days.





Causative Organism

Rubeola virus

Mode of Transmission

Influenza is mainly spread by,

- 1. Droplet infection**
- 2. Direct contact**





Sign & Symptoms

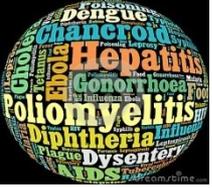
1. Stage 1(Catarrhal stage)

- Fever
- Running nose
- Cough
- Appearance of red spot in mouth
- Watering of eyes etc

1. Stage 2(Stage of eruption)

- Red rash seen at back of ears & foreheads along hairline
- Rash spread all over body.





Prevention

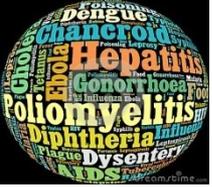
1. Active immunization:

- By live attenuated measles virus over one year age.

1. Passive immunization

- By Human normal immunoglobulin.





Control

1. Isolation of patient for 7 days after onset of rashes.
2. Immunization of contacts
3. Article should be properly disinfected.

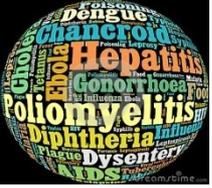




Arthropod born disease

1. Malaria
2. Plague
3. Filariasis

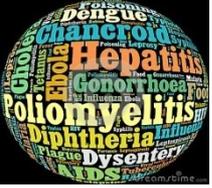




Malaria

- Occur in most topical regions.
- **Protozoa disease.**
- Transmit by bite of **anopheles mosquitoes**
- **Incubation Period :**
About 9–30days.





Causative Organism

Plasmodium vivax

Plasmodium ovale

Plasmodium malariae

Plasmodium falciparum

Mode of Transmission

Influenza is mainly spread by,

- 1. Droplet infection**
- 2. Direct contact**





Mode of Transmission

Malaria is mainly spread by,

- 1. Vector transmission:**

By bite of female anopheles mosquito

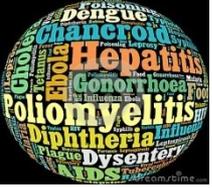
- 2. Direct transmission:**

By injections of infected blood or plasma

- 3. Congenital:**

Infected mother to new born





Sign & Symptoms

1. Cold Stage

- Onset of Fever with chills and sensation of extreme cold.

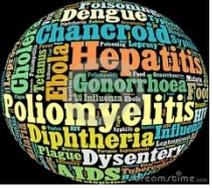
1. Hot Stage

- Temperature rise upto 106
- Intense headache.

3.Sweating stage:

- Fever decreases with sweating.





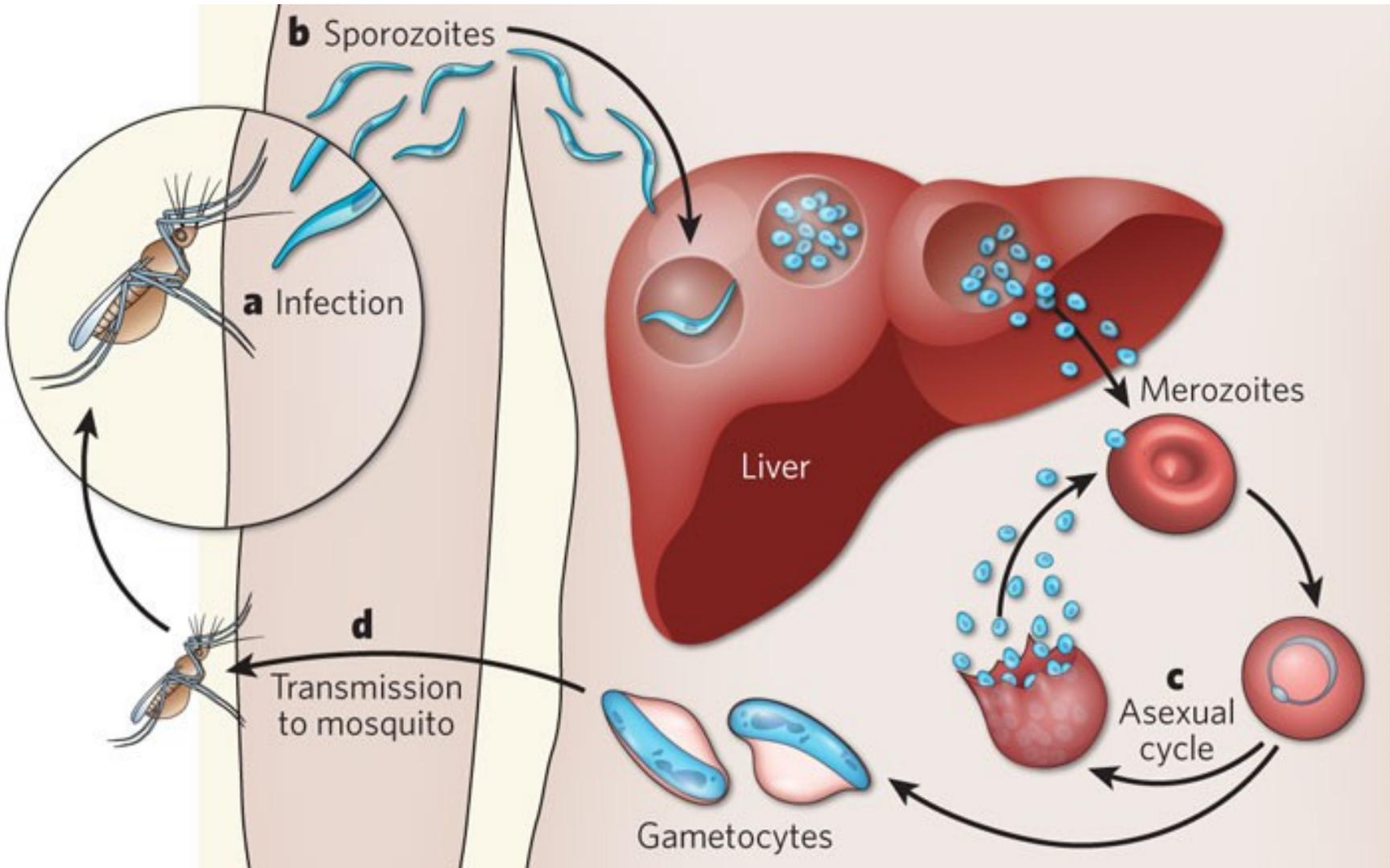
Prevention

1. Prevention against mosquito bite
2. Anti larval measures
3. Anti adult mosquito measures
4. Control of human reservoir





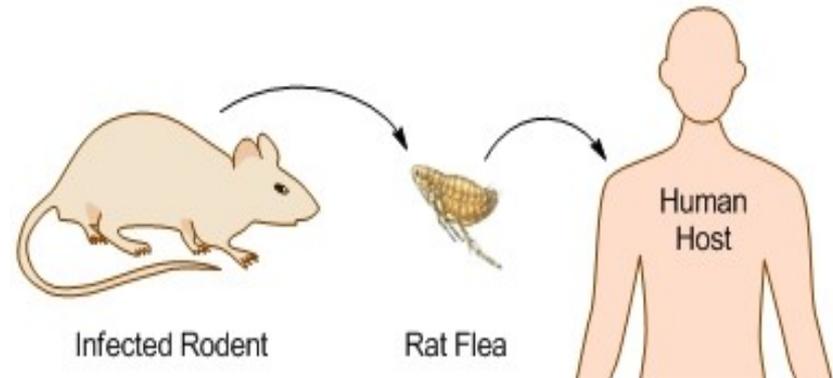
Malaria Life cycle





Plague

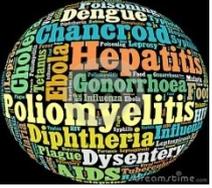
- Zoonotic or zoonosis disease (infection transmitted to man by infected rat fleas)
- Vector - **Rat**



Incubation Period :

About 9–30days.





Causative Organism

Yersinia pestis

Incubation period

3- 6 days.





Sign & Symptoms

Main symptoms of Pneumonic plague

Systemic:

-Fever

Central:

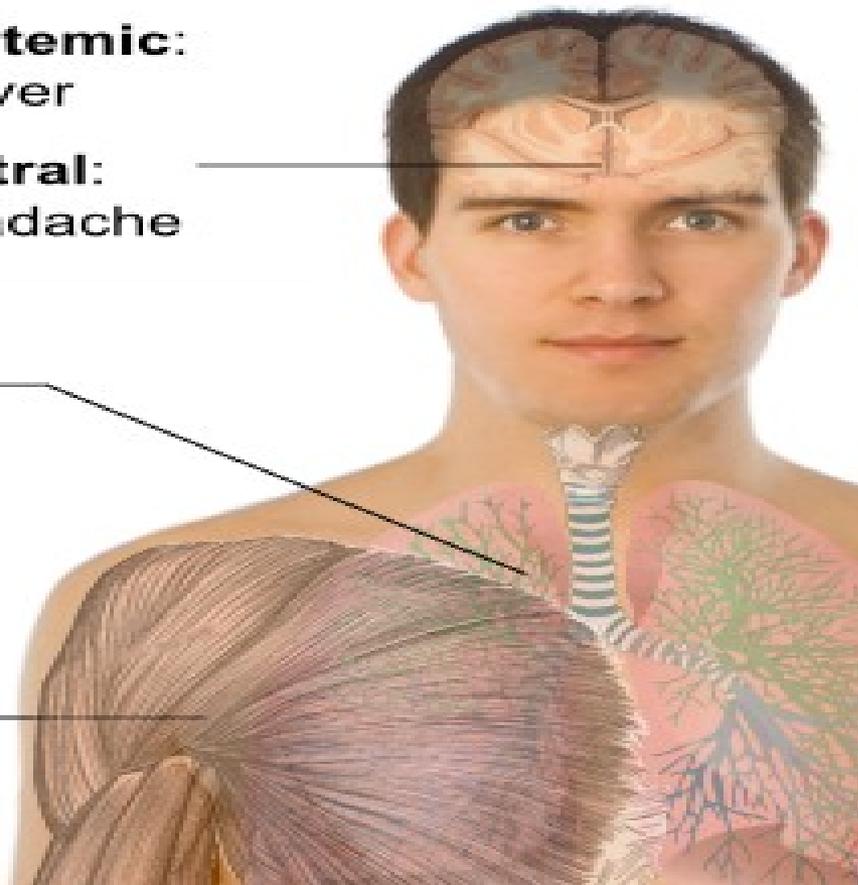
-Headache

Respiratory:

- Cough
- Hemoptysis
- Dyspnea
- Chest pain

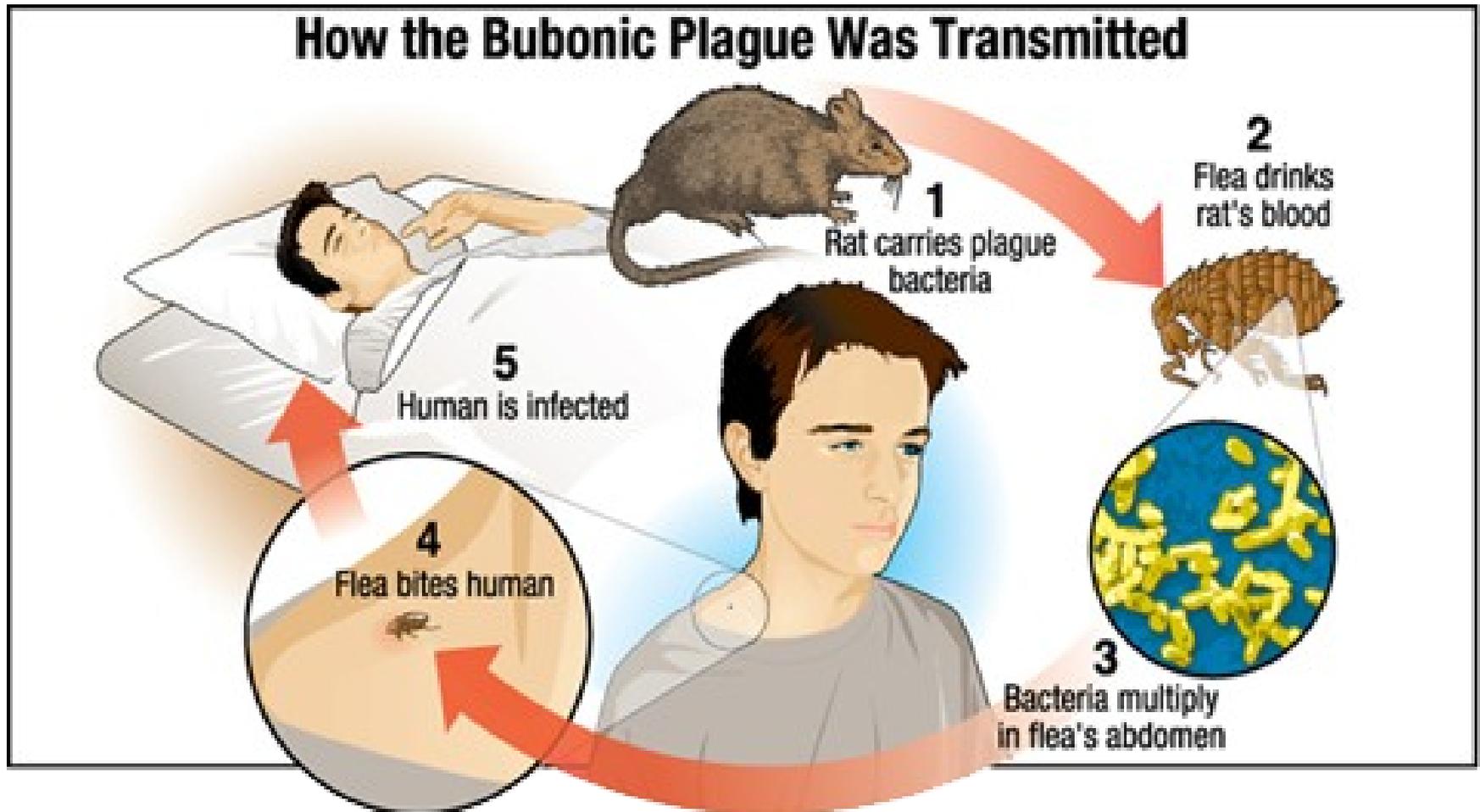
Muscular:

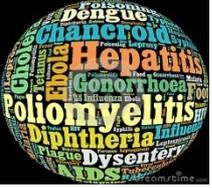
-Weakness





Plague Transmission





Prevention & Control

1. General measures

- Prophylaxis for prevention bites of fleas – by controlling rats.
- Early diagnosis, notification, isolation & disinfection of excretions like sputum etc
- Attendant must wear protective measures like gloves etc.

1. Chemoprophylaxis

- Protect by using suitable drugs.

1. Vaccination

- Two vaccines used
 1. Killed vaccine
 2. Attenuated vaccine





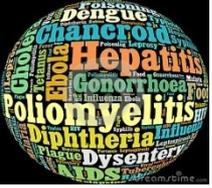
Filariasis



- Group of diseases caused by nematodes – Filariasis.
- Caused to man by blood sucking arthropods

- **Incubation Period :**
not less than three months





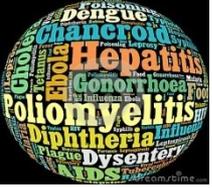
Causative Organism

Wuchereria bancrofti

Brugia malayi

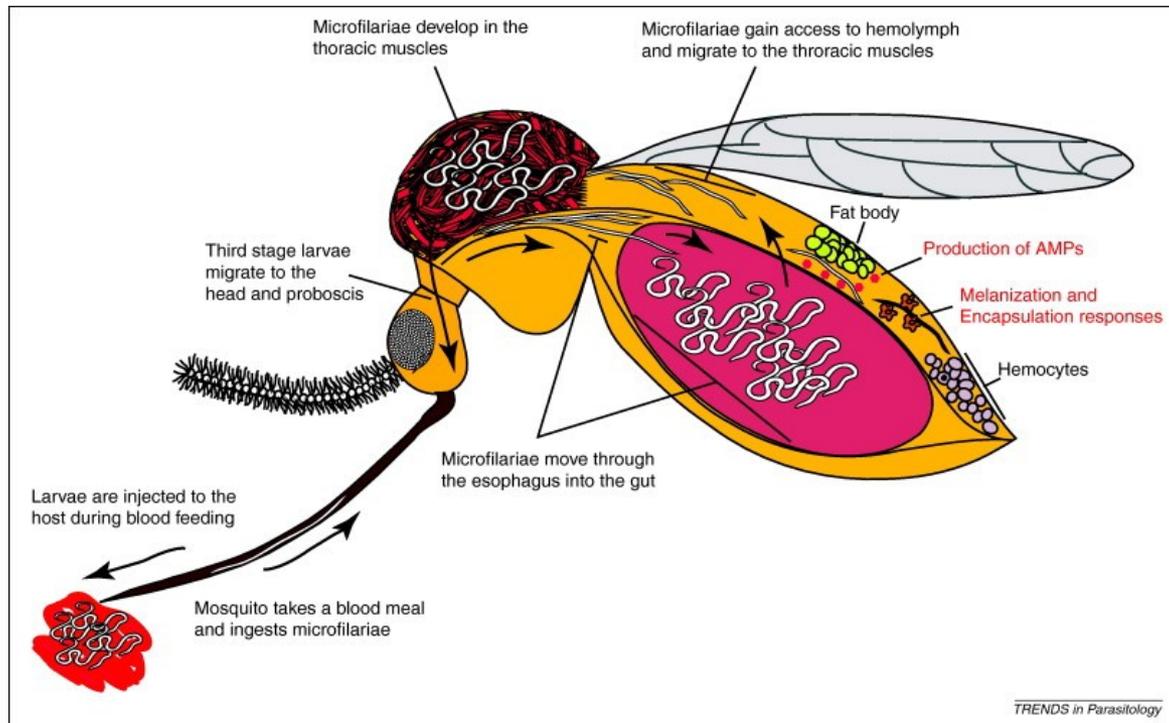
Brugia timri





Mode of Transmission

Infection transmitted by bite of infected mosquitoes.





Prevention & Control

I. Measures to reduce mosquitoes

- Eliminate breeding place
- Kill larvae by larvicide e.g: kerosene
- Use mosquito net

I. Measure to prevent personal protection

- Wear protective clothing
- Use insect repellants

I. Common treatment

- In endemic treat whole population by diethyl carbamiazine citrate (DEC)





Surface Infections

1. Rabies
2. Trachoma
3. Tetanus
4. Leprosy





Rabies

- Also called – **Hydrophobia**
- Caused by virus Infect CNS & salivary glands.
- **Incubation Period :**
 - varies with patient to patient
 - Shorter in children
 - Also depends upon site of infection
 - Face : 30 days
 - Hands: 40 days
 - Legs: 60 days
- Whole minimum time is 9 days – 4 to 8 weeks.



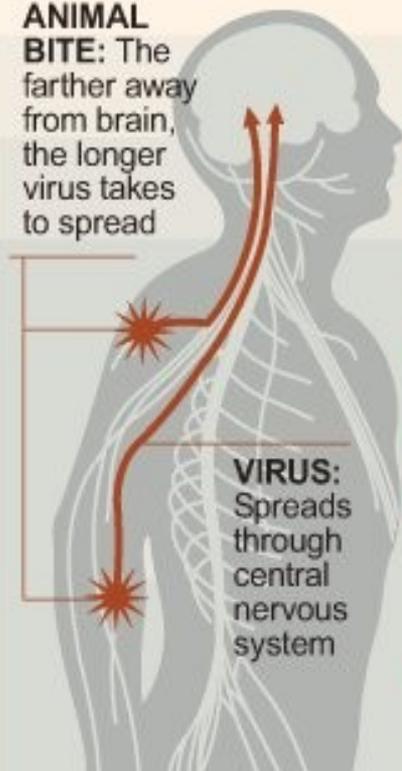


Rabies

Rabies

How it spreads

ANIMAL BITE: The farther away from brain, the longer virus takes to spread



VIRUS: Spreads through central nervous system

Common carriers of rabies

Infected animals: Show no fear for humans; act very agitated



Dog: Another common rabies source

Symptoms in humans

- Fever, depression
- Agitation
- Painful spasms followed by excessive saliva
- Death within a week without vaccine

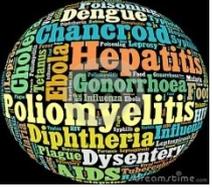
+ **Treatment:** Hospitalization, immune globulin injections, anti-rabies vaccine

☑ **Foaming at mouth after drinking:** Produced by spasms in throat

SOURCE: *The World Book Medical Encyclopedia*

KRT





Causative Organism

Lyssa virus type - I

Mode of Transmission

Mainly spread by,

1. Zoonosis
2. Spreads by wide range of animals
3. Mostly by bites or lick on broken skin





Sign & Symptoms

Animals	Human
may appear sick, crazed, or vicious (“mad dog”)	Pain, tingling, and/or itching at bite site.
nocturnal animals alert during the day may also appear overly friendly, docile, or confused	nonspecific – fever, chills, fatigue, muscle aches later – high fever, agitation, confusion
	extreme hydrophobia and aerophobia death during later stages





Prevention

1. Pre-exposure prophylaxis

- Risky persons like zoo keepers should be immunized.
- Compulsory vaccination of pets & stray dogs.

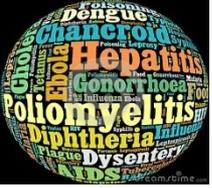
1. Post-exposure prophylaxis

❖ Prompt & proper treatment

❖ Also take following measures,

- Wash area of bite using plenty of soap & water for about 5 min.
- Excise damaged tissue
- Apply antiseptics like tincture of iodine
- Vaccination: 1 ml vaccine at 0,3,7,14,30 & 90 days.





Control

1. Educate the people
2. Create awareness about rabies
3. Regular vaccination of people.
4. Yearly vaccination of dogs & pets





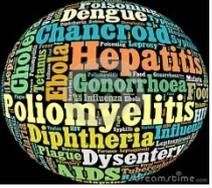
Tetanus

- Also called – **lock jaw**.
- Fatal infectious disease.
- Characterized by increased muscle tone & spasms.

Incubation Period

3-14 days





Causative Organism

Clostridium tetani

Mode of Transmission

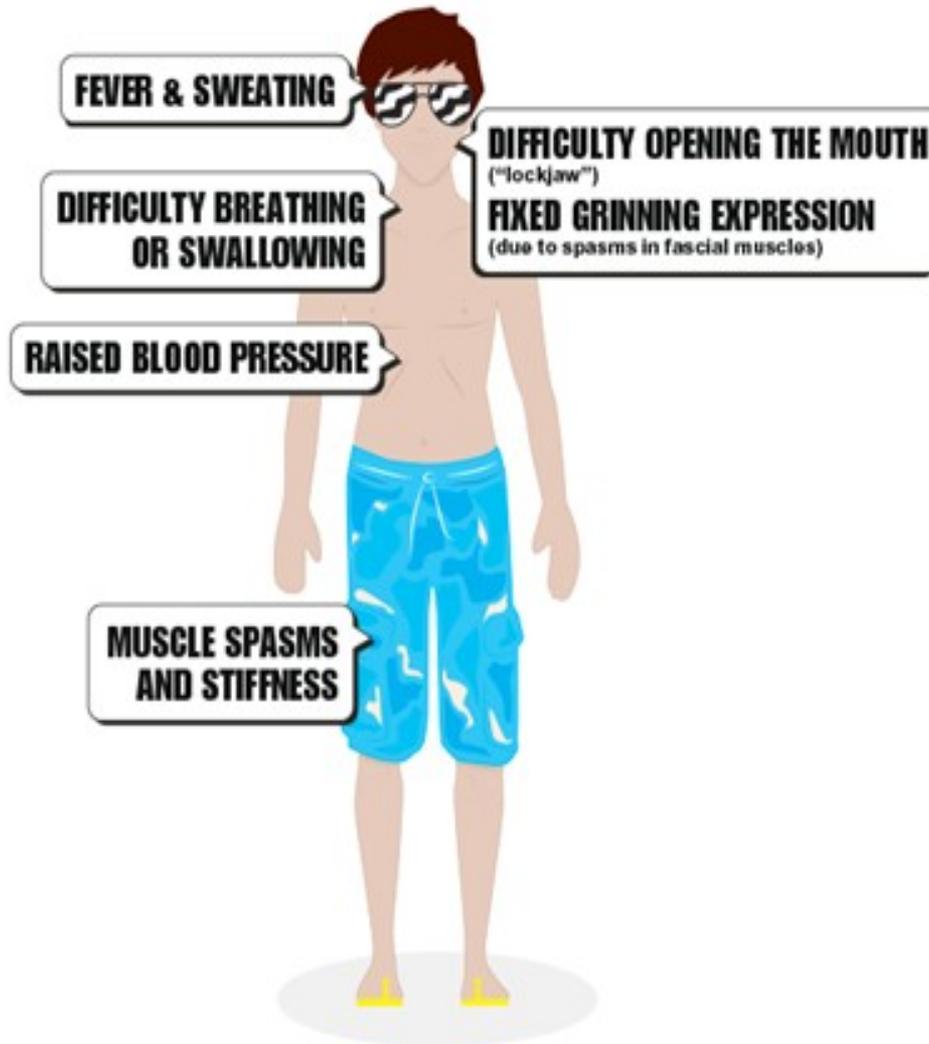
mainly spread by,

- 1. Occur after acute injury.**
- 2. Also occur after burns, ear infection, surgery etc.**





Sigh & Symptoms





Prevention & Control

1. Active immunization

1. Vaccination using DPT vaccine
2. By using purified tetanus toxoids.

2. Passive immunization

1. With human tetanus immuno-globin (TIG) or anti tetanus serum.

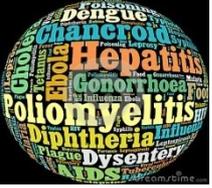
3. General measures

1. By cleansing of wounds reduce further risk

4. Miscellaneous

1. In case of deep puncture use suitable antibiotic therapy is started





Trachoma

- Also called – **Granular Conjunctivitis**
- Is a serious & contagious eye disease
- Affecting conjunctiva & the cornea
- Mostly prevalent in unsanitary surrounding condition

Incubation Period :

About 4 – 10 days.





Causative Organism

Chlamydia trachomatis

Mode of Transmission

Mainly spread by,

- 1. Personal direct contact**

E.g: shaking of hands etc.

- 2. Indirect contact**

E.g: through common towels etc.

- 3. Through flies**





Sign & Symptoms

Symptoms

- ✓ Cloudy Cornea
- ✓ Discharge from Eye
- ✓ Swelling of the Lymph Nodes in Front of the Ears
- ✓ Swollen Eyelids
- ✓ Turned in Eyelids

Symptoms take 5-12 days to appear after infection





Prevention & Control

1. Isolation of trachoma cases
2. In schools & institutes careful examination
3. Any article of patient e.g: towels etc. must not be used by any other
4. Maintain personal hygiene
5. Avoid over crowding.



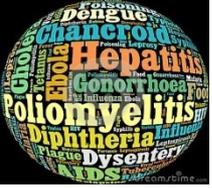


Treatment

By using

- Sulphonamides &
- Antibiotics etc.

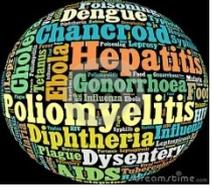




Leprosy

- Also called – **Hansens disease**
- Chronic infections of human.
- Affect & damage superficial tissue especially skin and peripheral nerves.
- **Incubation Period :**
About 3–5 years





Causative Organism

Mycobacterium leprae

Mode of Transmission

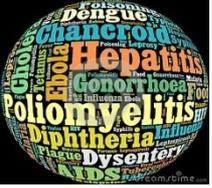
Mainly spread by,

1. Direct transmission

Prolonged close contact with an infected person.

2. Through air borne droplets

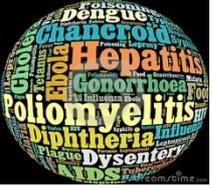




Sign & Symptoms

1. Initially nerve damage causes numbness of skin on face, hands & feet.
2. Affected skin may become thickened & discolored.
3. Loss of sensation
4. Lack of sensation leads to injury or even loss of fingers or toes.

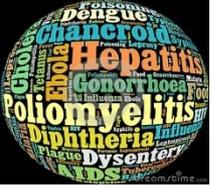




Prevention & Control

1. Isolation of patient
 2. Early diagnosis & chemotherapy
 3. Treated with some specific drugs such as dapsona etc.
 4. Create awareness about leprosy
 - Avoid over crowding
 - Bad personal hygiene
 - Avoid of sharing of cloths etc
1. For prophylactic purposes use BCG vaccine

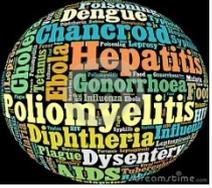




Sexually transmitted diseases (STD)

1. Gonorrhoea
2. Syphilis
3. AIDS





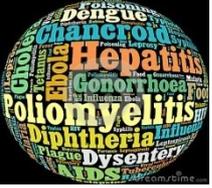
Gonorrhoea

- Causes infection by gonococci
- Produce local complications like urethritis, endometritis etc.
- Also produce systemic complications like dermatitis, meningitis etc.

Incubation Period

3-10 days





Causative Organism

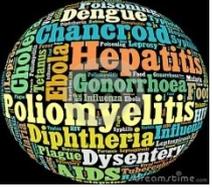
Neisseria gonorrhoeae

Mode of Transmission

Mainly spread by,

- 1. Sexual intercourse with infected person**
- 2. May transfer from mother to new born child.**





Sigh & symptoms

1. In male

include purpulent (with pus) urethral mucous membrane with dysuria (painful urination)

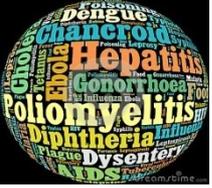
1. In female

Include dysuria, frequent urination, increased vaginal secretions etc.

1. In childrens

Accidental contamination of eye

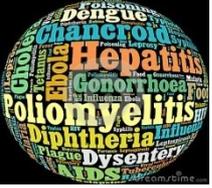




Prevention & Control

1. Detection of cases of gonorrhoea
2. Cases of gonorrhoea is identified & investigated.
3. Use of contraceptive device
4. Avoid unsafe sexual contact.
5. Create awareness about STD's





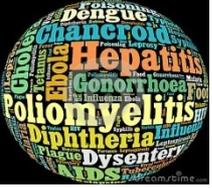
Syphilis

- Is chronic systemic infection

Incubation Period :

About 10days – 10 weeks.
average periods is 3 weeks.





Causative Organism

Treponema pallidum

Mode of Transmission

Mainly spread by,

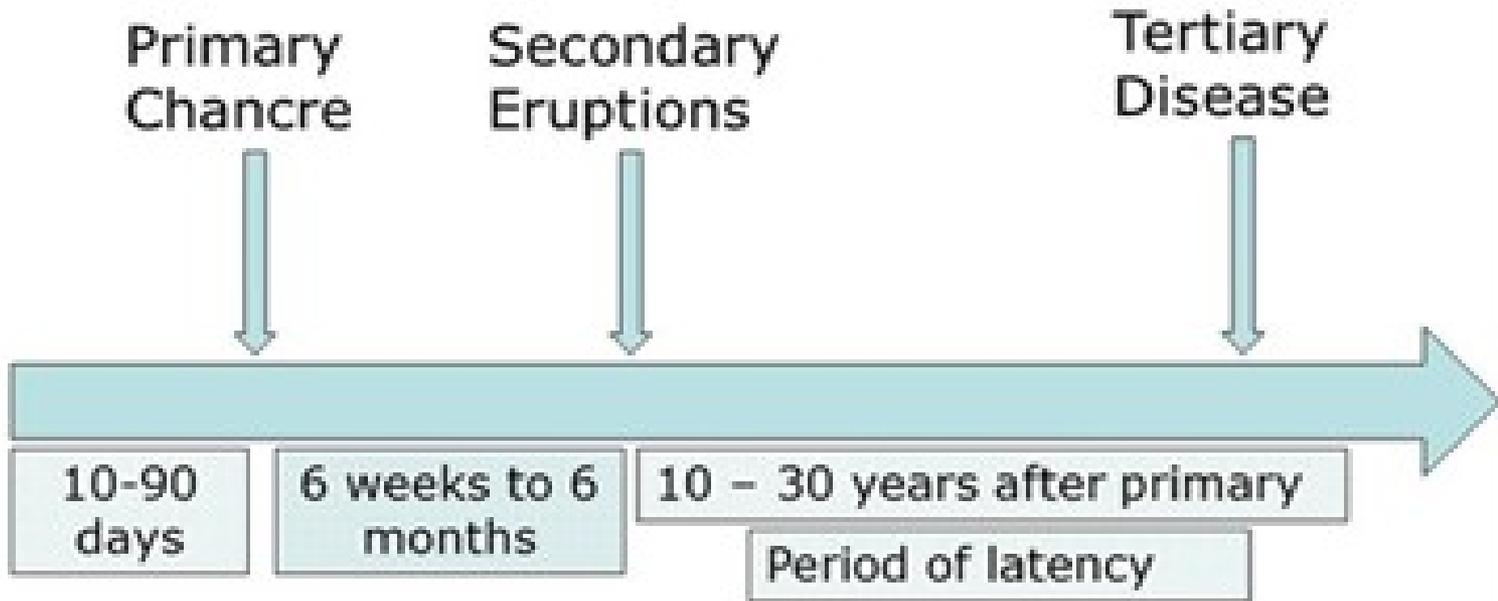
1. By sexual contact with infected partner
2. Less common
 - Through blood transmission
 - Mother to child etc.





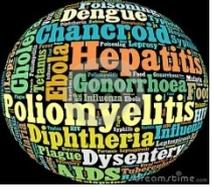
Stages

Syphilis course of disease if untreated



Courtesy: Michael Pentella, PhD





Prevention & Control

1. Detection of cases
2. Use of contraceptive device
3. Avoid unsafe sexual contact.
4. Create awareness about STD's.





Acquired Immuno Deficiency Syndrome (AIDS)

- Chronic infection with HIV
- Reduce immunity to other infections.

- **Incubation Period :**

For Adult's: 8 –10 years

For Children's below 5 years: within 2 years





Causative Organism

HIV (Human immuno deficiency virus)

Mode of Transmission

- Sexual contact with infected person
- Through infected blood products or blood transfusion
- By sharing contaminated needles or syringes
- Infected mother to fetus
- Also through body fluids like semen etc
- Also through unsterilized piercing, blades etc.





Sign & Symptoms

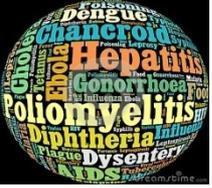
1. 1st symptoms appear within 6 weeks of infection

- Swollen lymph nodes
- Fever
- Fatigue
- Rash
- Sore throat etc.

1. Other symptoms are

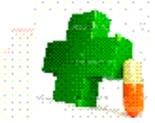
- Fever persisting for more than one month
- Unexpected weight loss
- Diarrhea
- Tuberculosis etc

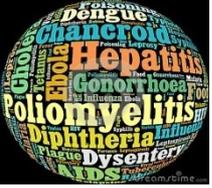




Prevention & Control

1. Create awareness about HIV in children
2. Use protective measures like condoms etc.
3. Screening of all blood products and tissue for transplant
4. Use sterilization method for instruments used for piercing of nose & ear lobes.
5. Use of disposable single used needle & syringes
6. By avoiding pregnancy by infected women





Prevention & Control

7. Use proper protection by health care workers like hand gloves while handling infected patients.
8. Proper behavior with infected people.



CORRECT AND COMPLETE INFORMATION IS THE KEY TO AIDS PREVENTION

HOW HIV/AIDS CAN SPREAD



Through unprotected sex



Receiving HIV infected blood



By using unsterilised needles
or needles previously used



From HIV Positive mother
to her baby

HIV/AIDS DOES NOT SPREAD



Through touch



Through mosquito bites



By working together



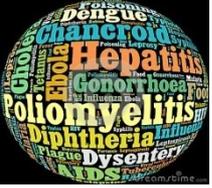
*By sharing food, clothes
and toilets*



NATIONAL AIDS CONTROL ORGANIZATION, MINISTRY OF HEALTH & FAMILY WELFARE, GOVERNMENT OF INDIA, Website: www.naco.nic.in

 Printed at New Print Presses Pvt. Ltd.





Intestinal Infections

1. Poliomyelitis
2. Cholera
3. Typhoid fever
4. Hepatitis
5. Food poisoning
6. Hook worm infection





Poliomyelitis

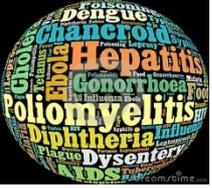
- Acute systemic disease
- Caused by an RNA
- Replicate mainly in GIT
- May reach CNS, damage spinal cord
- Occasionally reach & damage medulla & motor cortex
- Result in various degree of paralysis.

Incubation Period

7 – 14 days.

In some cases 4 – 35 days





Causative Organism

Polio virus type 1, 2, 3

Mode of Transmission

Mainly transmit by,

1. Through fecal – oral route
2. During acute stage
 - a. Droplet
 - b. Contaminated fingers of patient





Sign & Symptoms





Prevention & Control

1. Immunization
 - a. Salk (inactivated) polio vaccine
 - b. Sabin vaccine or oral polio vaccine(OPV)
2. Isolation of the patient.
3. Supply of safe drinking water.
4. Improvement in personal hygiene.

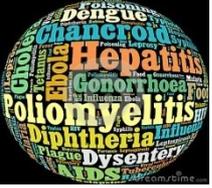




Cholera

- Severe acute GIT infection
- **Incubation Period :**
Few hours – 5 days.

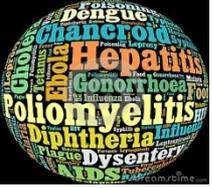




Sign & Symptoms

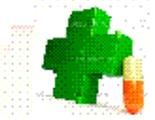
1. Severe watery diarrhea,
2. Occasional vomiting.
3. Weakness.
4. Dehydration.
5. Sub normal temp.
6. Electrolyte imbalance.

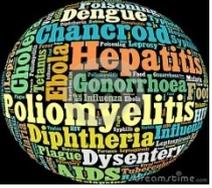




Prevention & Control

1. Strict personal hygiene.
2. Using boiling drinking water.
3. Early detection of cases.
4. Proper and immediate treatment.
5. Disinfection of infective discharges & clothing must be done
6. Sanitation should be maintained.
7. For prevention use vaccine.
8. Treatment is done by,
 - a. By giving ORS,
 - b. Antibiotics.





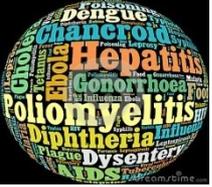
Typhoid Fever

- Acute infectious illness
- Affect GIT.
- Enteric fever – Typhoid & Paratyphoid fever.

Incubation Period :

About 5 –20 days.





Causative Organism

Salmonella typhi,

Salmonella paratyphi A

Salmonella paratyphi B

Mode of Transmission

Mainly transmit by,

1. Through fecal – oral route.
2. Contaminated drinking water by sewage.
3. Contaminated of food from flies.





Sign & Symptoms

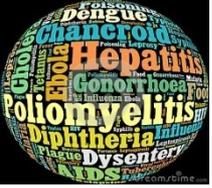




Prevention & Control

1. Strict personal hygiene.
2. Using boiling drinking water.
3. Early detection of cases.
4. Proper and immediate treatment.
5. Disinfection of infective discharges & clothing.
6. Sanitation should be maintained.
7. For prevention use vaccine.
 1. Monovalent anti typhoid vaccine
 2. Bivalent vaccine
 3. TAB
8. Treatment is done by,
 - a. By antibiotics.

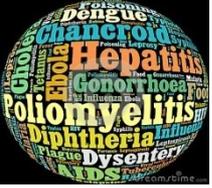




Hepatitis

- Also known as - **Jaundice**
- Necrosis of liver cells - bile juice (yellow color) travel back into blood – yellow colorization of body, eyes and urine develop.
- **Incubation Period :**
About 2 weeks – 6 months.





Causative Organism

Hepatitis A Virus (HAV)

Hepatitis B Virus (HBV)

Mode of Transmission

- Ingestion of contaminated food or water
- Person to person spread via the faeco-oral route.
- Transmitted by food.





Prevention & Control

1. Blocking the route of transmission:

- a. Physical isolation of patient
- b. Protective clothing should be wear while handling patient.

2. Self care measures

- a. Rest, Plenty of food
- b. High calorie diet

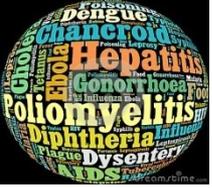
3. Safe water supply

- a. Supply safe water
- b. Contaminated water treated with chlorine.

4. Immunization

1. By using HAV vaccine
2. By using HBV Vaccine

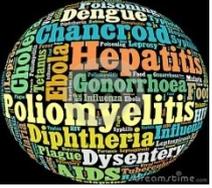




Food Poisoning

- Acute inflammation of lining of stomach & intestine.
- Caused by consuming food & drink contaminated
 - by toxins of bacteria or
 - inorganic chemical substances and
 - poisons derived from plants & animals.





Types of Food Poisoning

2 types:

1. Non – bacterial food poisoning

E.g.: Heavy metal poisoning etc.

1. Bacterial food poisoning

Due to living bacteria and its toxins.

1. Salmonella food poisoning:

1. Staphylococcal food poisoning:

2. Botulism:

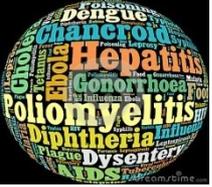




Non Bacterial Poisoning

- Due to non bacterial reason like mushroom poisoning, fruit contaminated by pesticide etc.
- It also include metal poisoning.





Bacterial Food Poisoning

Salmonella Food Poisoning

Causative agent:

Salmonella Typhi marium

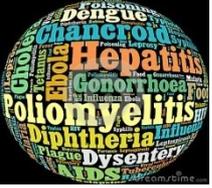
Mode of Transmission:

By eating raw, or under cooked contaminated eggs, meat or milk etc.

Incubation period:

6-48 hrs.





Bacterial Food Poisoning

Staphylococcal Food Poisoning

Causative agent:

Staphylococcal Aureus

Mode of Transmission:

By eating contaminated salads, custards, eggs, meat or milk etc.

Incubation period:

1-8 hrs.





Bacterial Food Poisoning

Botulism

Causative agent:

Clostridium botulinum

Mode of Transmission:

due to improperly cooked food like pickled fish, home made cheese, low acid food etc.





Prevention & Control

1. Food sanitation

1. Avoid ill person from food handling.
2. Carefully handling of hands & clean dishes and utensils.
3. Don't used unwashed utensils
4. Do not use food that have unusual odor or spoiled taste.

2. Meat inspection

3. Refrigeration

4. Care fully inspection and testing of food from hotels & restaurants on time to time.

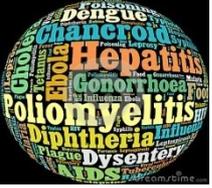




Hook Worm Infection

- Also called **Ancylostomiasis**
- Caused due to small worms
- Attach to walls of intestines and causes bleeding and poisoning.





Causative Organism

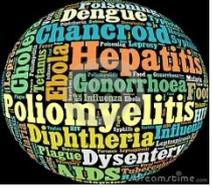
Ancylostoma duodenale

Nector americanus

Mode of Transmission

1. Tiny worms penetrate the base of feet of those working in field.
2. Also transmit through arms & legs.





Sign & Symptoms

1. Patient appear pale and weak
2. Suffer from ringing of ears
dizziness, headache etc.
3. In severe case heart is enlarged
4. Nausea & vomiting are
frequent.
5. Mental development is
retarded.





Prevention & Control

1. By using or providing sewage system
2. Sanitary latrines provide to avoid open air defecation.
3. Human waste & excreta should not be used in fields
4. Shoes should be worn by all workers.



Don't be afraid to take a **big step**.
You can't cross a chasm in two small jumps.

David Lloyd George



ANY QUESTION ???

Thank You...😊😊😊

