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# PATHOPHYSIOLOGY

## UNIT 5

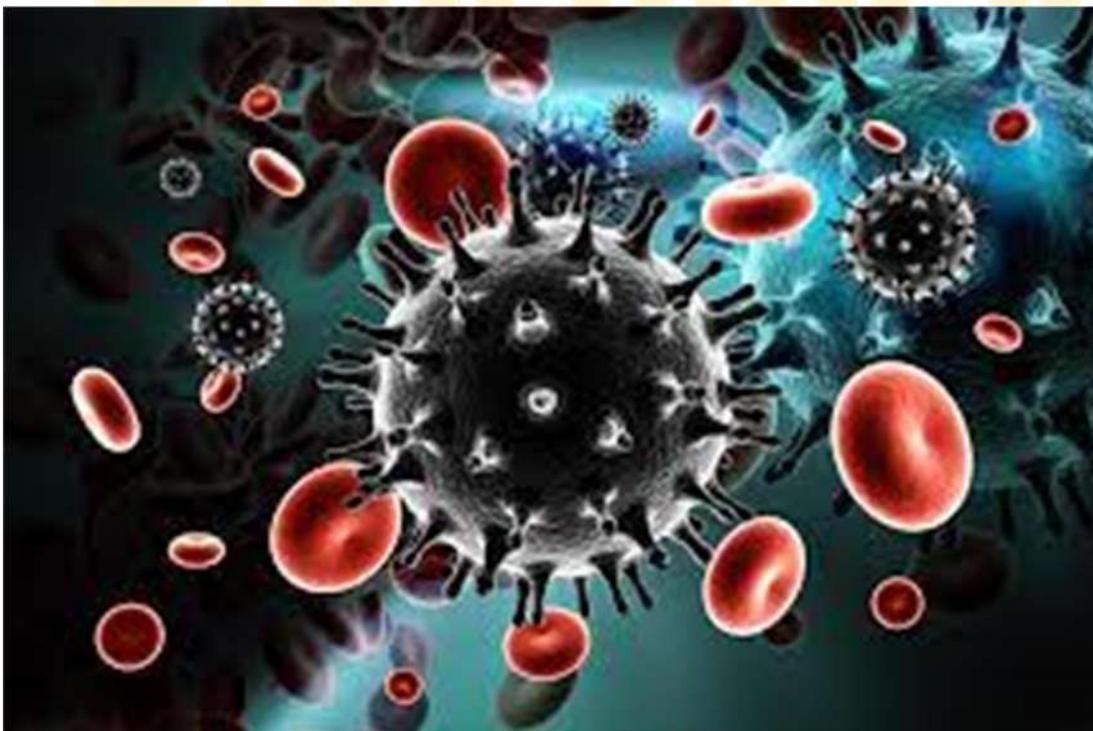
TOPIC :

- **Sexually transmitted diseases : AIDS, Syphilis, Gonorrhoea**

## Sexually transmitted diseases

### HIV / AIDS

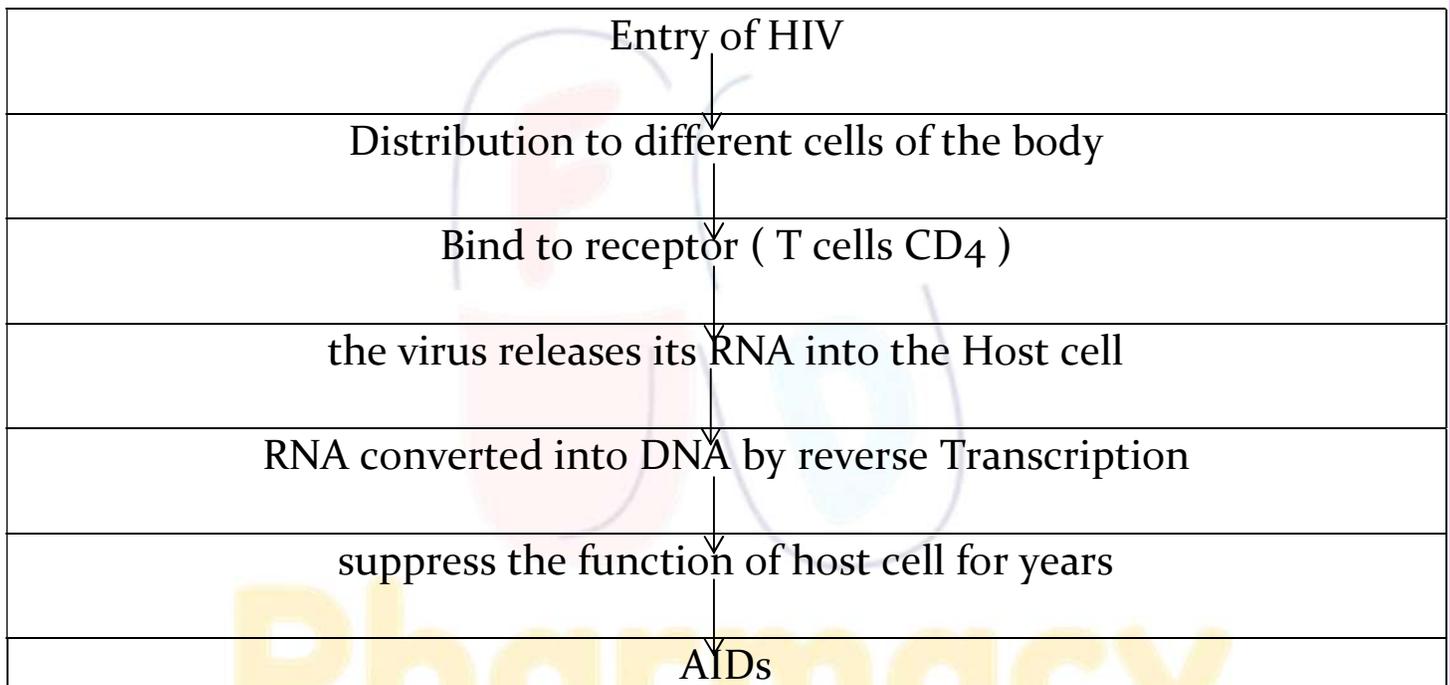
- HIV, or human immunodeficiency virus, is a virus that attacks the immune system and can lead to acquired immunodeficiency syndrome (AIDS). A widely used diagnostic test for AIDS is enzyme linked immuno-sorbent assay (ELISA).
- AIDS was first reported in 1981 and in the last twenty-five years or so, it has spread all over the world killing more than 25 million persons.
- AIDS is caused by the Human Immune deficiency Virus (HIV), a member of a group of viruses called retrovirus, which have an envelope enclosing the RNA genome.
- Transmission of HIV-infection generally occurs by
  - Sexual contact with infected person.
  - By transfusion of contaminated blood and blood products.
  - By sharing infected needles as in the case of intravenous drug abusers.
  - From infected mother to her child through placenta.



## Etiology

- Its causative agent is HIV ( Human Immunodeficiency virus ).
- HIV belongs to Retroviridae family so it is also called Retrovirus is causative agent of AIDs

## Pathogenesis



## Clinical Manifestations

- ✚ Fever and headache.
- ✚ Chills.
- ✚ Muscles aches and pains.
- ✚ Joint pain and fatigue.
- ✚ Swollen, lymph nodes mainly on the neck.
- ✚ Mouth ulcers and sore throat.
- ✚ Night sweat.
- ✚ Others infection also appears like skin disease etc

## Non Pharmacological Managements

- ❖ AIDS has no cure; prevention is the best option.
- ❖ Follow the all precaution (wearing the mask, sterilize the hand etc.) prior to any activities.
- ❖ Take the nutritious diet and make diet chart as per the instruction by the physician

## Pharmacological Management

- ❖ Treatment of Opportunistic infections according to need.
- ❖ **Prophylaxis against Opportunistic infections** : Cortimoxazole  
Prophylaxis is used in a dose of 960 mg orally /d. or three times per week. in case of intolerance, 100 mg of Dapsone is used per day.
- ❖ **Prophylaxis against TB** : Isoniazid is used
- ❖ **Anti- Retroviral drugs** : These drugs are used for prophylaxis of viral infections and to suppress HIV. these are used in combination : like Zidovudine + Lamivudine + Nevirapine.

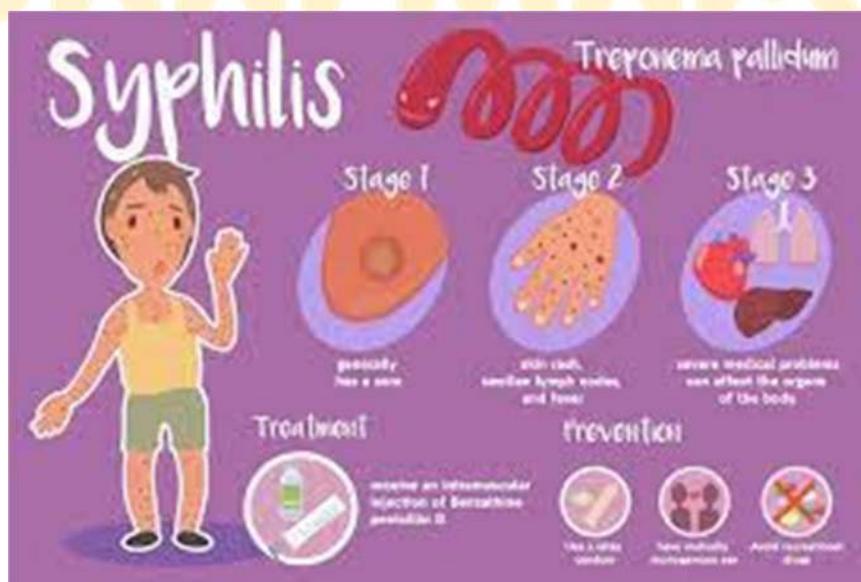
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## Syphilis

→ Syphilis is a sexually transmitted infection caused by the bacterium *Treponema pallidum*. It can affect both men and women and is spread through vaginal, anal, or oral sex with an infected person.

→ On the appearance of symptoms, it is categorized as

1. **Primary syphilis** : Appearance of a painless sore, known as a chancre, at the site of infection. The sore may be on the genitals, anus, or mouth and typically lasts 3-6 weeks before disappearing
2. **Secondary syphilis** : This is characterized by a widespread rash that can appear all over the body, including the palms of the hands and soles of the feet. Other symptoms may include fever, swollen lymph nodes, sore throat, and fatigue.
3. **Latent syphilis** : This stage has no visible symptoms, but the infection persists and can be detected through blood tests.
4. **Tertiary syphilis** : This stage can occur years after the initial infection and can cause serious complications such as damage to the brain, nerves, eyes, heart, blood vessels, liver, and bones.



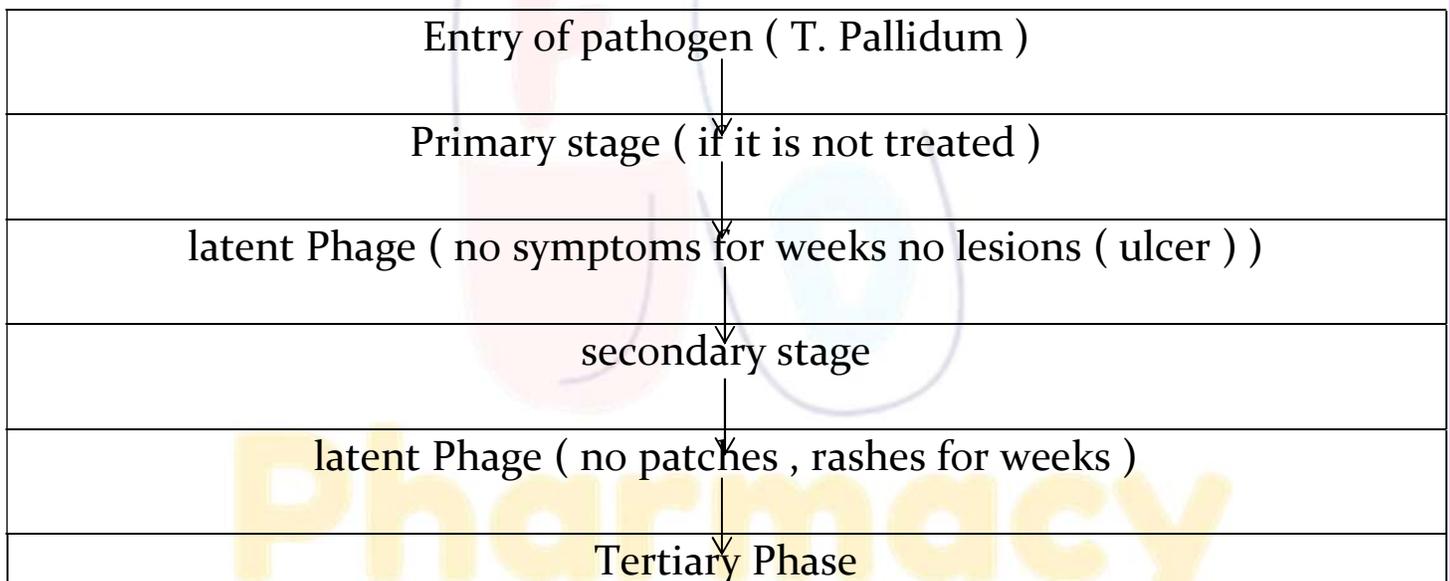
## Etiology

- It is caused by *Treponema Pallidum*.

## Mode of transmission

- Sexual intercourse
- Direct mucus membrane contact
- Mother to child
- Infected blood transfusion

## Pathogenesis



## Clinical manifestations

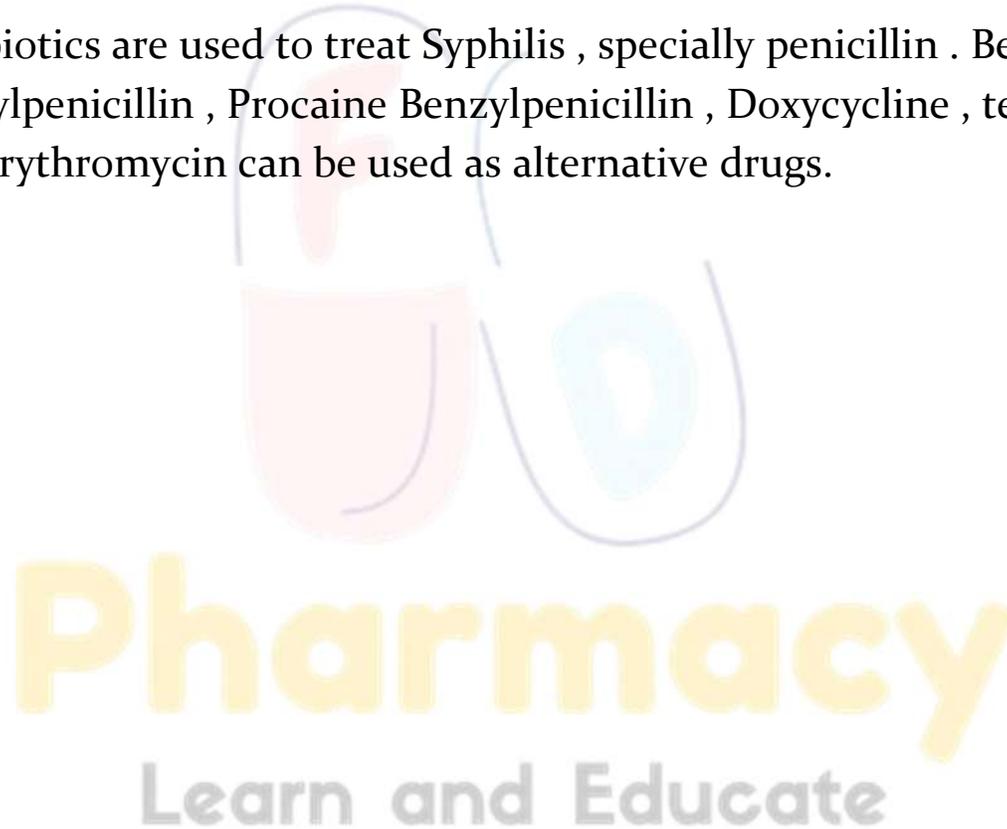
- ✚ **Primary stage** : First stage involves a painless ulcer on the sex organs , rectum or mouth
- ✚ **Second stage** : Patches and rashes on skin
- ✚ **Final stage** : It damage brain , heart , eyes, blood vessels , liver , bones and joints.

## Non Pharmacological management

- ❖ Prevention of syphilis involves practicing safe sex, including using condoms correctly and consistently, limiting the number of sexual partners, and getting regular STI testing.
- ❖ Early diagnosis and treatment of syphilis are important for preventing complications and reducing the risk of transmission

## Pharmacological managements

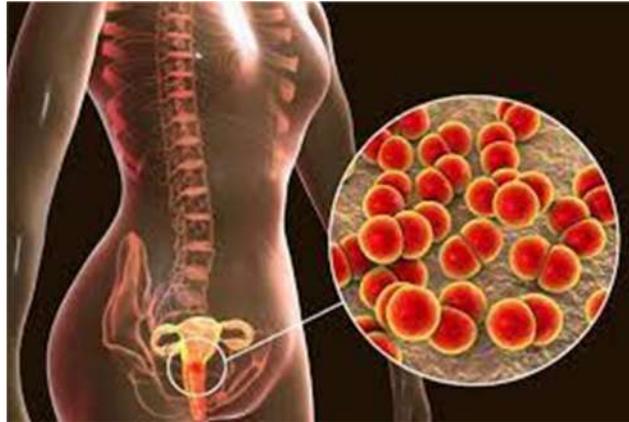
- ❖ Antibiotics are used to treat Syphilis , specially penicillin . Benzathine Benzylpenicillin , Procaine Benzylpenicillin , Doxycycline , tetracycline and erythromycin can be used as alternative drugs.



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## Gonorrhoea

- Gonorrhoea is a sexually transmitted disease , caused by Neisseria Gonorrhoea ( a bacteria ) and most commonly affects the Genitourinary Tract .( all organs involved in formation and excretion of urine , and all the organs involved in reproduction ).
- It can penetrates mucosal Surface easily.



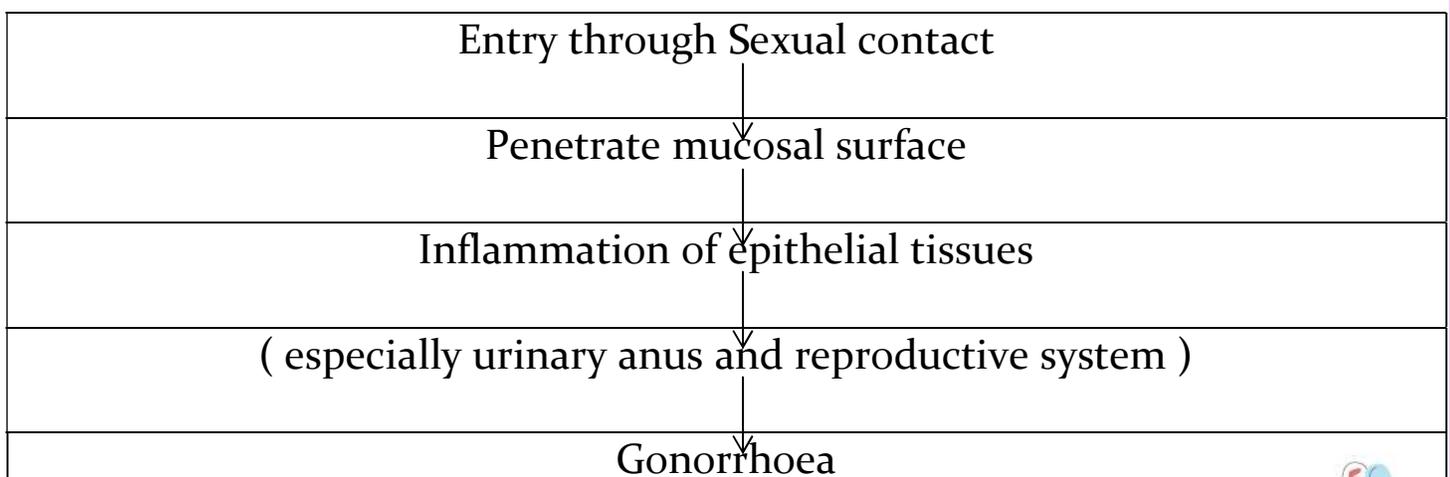
### Etiology

- Neisseria Gonorrhoea bacteria

### Mode of transmission

- Sexual contact with penis , vagina , mouth or anus of an infected partner.
- Mother to child

### Pathogenesis



## Clinical manifestation

- In females
  - ✚ Increased vaginal Discharge
  - ✚ Pain during Urination
  - ✚ Disturb MC
  - ✚ Vaginal Bleeding after sexual intercourse
  - ✚ Purulent ( pus) discharge
- In Males
  - ✚ Pain during urination ( Dysuria )
  - ✚ Pus discharge from penis
  - ✚ Itching of penis
  - ✚ Pain during sexual activity

## Non-pharmacological managements

- ❖ Prevention of gonorrhoea involves practicing safe sex, including using condoms correctly and consistently, limiting the number of sexual partners, and getting regular STI testing.
- ❖ Early diagnosis and treatment of gonorrhoea are important for preventing complications and reducing the risk of transmission

## Pharmacological management

- ◇ Antibiotics are used to treat gonorrhoea C
- ◇ Eftriaxone + azithromycin or Cefixime + azithromycin
- ◇ And drugs can be used according to needs like pain killers