

# **OVERVIEW OF STI/RTI**

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## **Sexually Transmitted Infections (STI) / Sexually Transmitted Diseases (STD)**

- ❖ Infections caused by germs such as bacteria, viruses, protozoa or fungi that are passed from one person to another through sexual contact.
- ❖ Non- sexual modes of transmission?????

YES.....

## **Reproductive Tract Infections (RTI)**

- Any infection of the reproductive tract.
- Include both STI and non-sexually transmitted infections.
- May not be sexually transmitted and can be caused by disturbance of the normal endogenous flora and by medical interventions that may provoke iatrogenic infection.

## **Routes Of Transmission Of STI/RTI**

- Unsafe sex
- Procedures like unsafe abortions, unsafe delivery, etc.
- Unsafe blood transfusions.

**RTI in both men and women include STI and are mainly due to unsafe sexual practices**

**RTI in women also include  
Break in normal vaginal flora (candida and bacterial vaginosis)  
Postpartum and post abortion infections  
Following procedures**

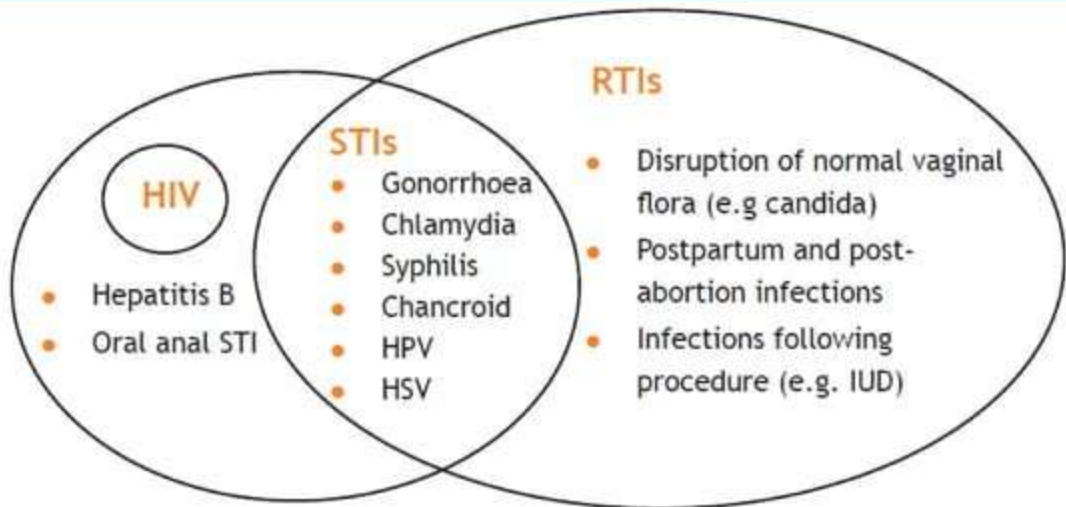


Figure 1: Reproductive tract Infections (RTI); Sexually Transmitted Infections (STI); and HIV Infection

## **Factors that increase the risk of RTI**

- Poor general health
- Poor genital hygiene
- Poor menstrual hygiene
- Unhygienic practices by service providers during delivery, abortion , MTP and IUCD
- RTI –undiagnosed and untreated - infertility , ectopic pregnancy & cervical cancer.

## **Factors that increase the risk of STI**

- Unprotected sex
- Multiple Partners
- Sex with Partner having sore on the genital region, urethral discharge or infected vaginal discharge
- Previous STI infection in the past year

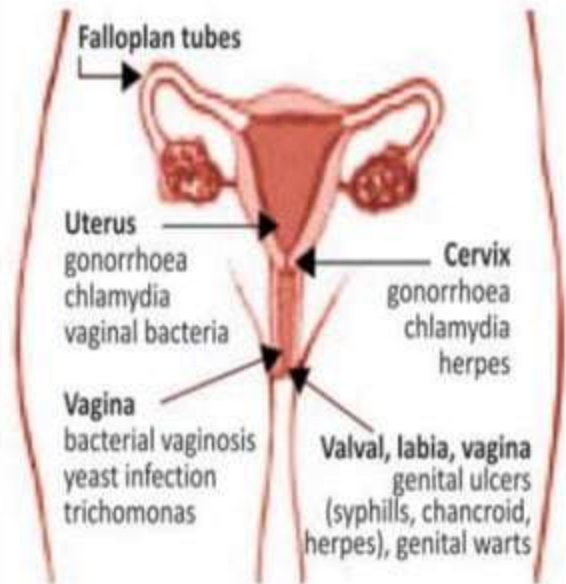
## **Risk groups**

- Adolescent girls and boys
- Women who have several partners
- Female and male sex workers and their clients
- Men and women are away from home for long duration
- MSM including trans-genders.
- Street children, prison inmates, etc.



## Where STI/RTI occur in females ?

### Female anatomy

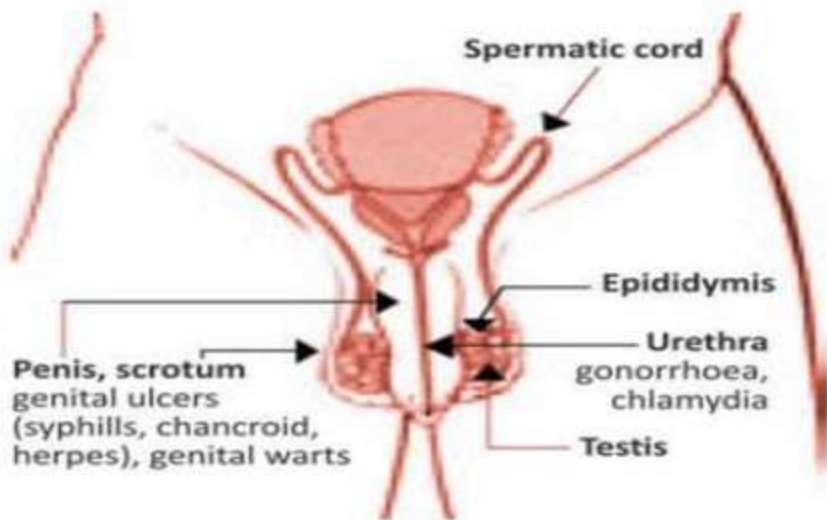


- Vagina and cervix : Lower reproductive tract infections.
- Uterus, fallopian tubes, and ovaries- Upper reproductive tract infections.

## Where STI/RTI occur in males?

- Urethra : Lower reproductive tract.
- Epididymis and testes : Upper reproductive tract.

### Male anatomy



## The most common RTI but not always sexually transmitted:

- **Bacterial Vaginosis (BV)** - A RTI in women that is caused by an imbalance in the vagina's normal environment and overgrowth of bacteria in the vagina.
- **Vaginal yeast infection-** A RTI in women that occurs when the normal environment in the vagina changes and there is overgrowth of yeast, commonly candida albicans.

## Over 20 STI, But the most common

STI	Organism	Signs and symptoms
<b>Syphilis (M&amp; F)</b>	Treponema Pallidum	Sores - Heal on their own.Untreated - Serious complications or death
<b>Gonorrhoea (M&amp; F)</b>	Neisseria gonorrhoea	Infertility, ophthalmia neonatarum.
<b>Chlamydia (M&amp; F)</b>	Chlamydia trachomatis	Often asymptomatic.
<b>Trichomoniasis (M&amp; F)</b>	Trichomonas vaginalis	often asymptomatic
<b>Chancroid</b>	Haemophilus ducreyi	lymph node swelling and painful ulcers
<b>Genital herpes</b>	Herpes simplex virus	Painful genital ulcers
<b>Genital and cervical warts</b>	Human papilloma virus (HPV)	Cervical cancer.
<b>HIV infection</b>	Human immunodeficiency virus	Weakens the immune system and causes AIDS.

STI	Organism	Signs and symptoms
<b>Hepatitis B &amp; Hepatitis C</b>	HBV,HCV	Liver damage, liver failure
<b>Donovanosis</b>	Calymmatobacterium granulomatis or Kleibsella Granulomatis	Ulcers at the site of infection. Ulcers can grow together - permanent scarring and genital destruction.
<b>Lymphogranuloma venereum (LGV)</b>	Chlamydia trachomatis	Prevents drainage of the lymph nodes in the genital area. Destruction and scarring of surrounding tissue
<b>Molluscum contagiosum</b>		Benign skin and secondary bacterial infections
<b>Genital scabies (M &amp;F)</b>	Itch mite, sarcoptes scabiei	
<b>Pubic lice (M &amp;F)</b>	Pubic lice (Phthirus pubis).	

## Signs and Symptoms of STI/RTI

### Men :

- **Urethral discharge and Genital itching :** chlamydia, gonorrhea and trichomonas infection
- **Genital ulcer:** T. Pallidum, H. Ducreyi.
- **Swollen and/or painful testicles:** chlamydia, gonorrhea



## Women

- **Unusual vaginal discharge:**  
BV, Chlamydia, gonorrhoea, trichomonas infection, vaginal yeast infection
- **Genital itching:** BV, trichomonas infection, vaginal yeast infection
- **Abnormal and/or heavy vaginal bleeding:**  
chlamydia, gonorrhea
- **Bleeding after intercourse:**  
chlamydia, gonorrhoea, chancroid and genital herpes
- **Lower abdominal pain :** chlamydia, gonorrhoea
- **Persistent vaginal candidiasis:** HIV/AIDS
- **Dyspareunia**

## **Complications of STI/RTI in males**

- Phimosis, paraphimosis and urethral stricture
- Inflammation of testes
- Infertility
- Carcinoma of the penis

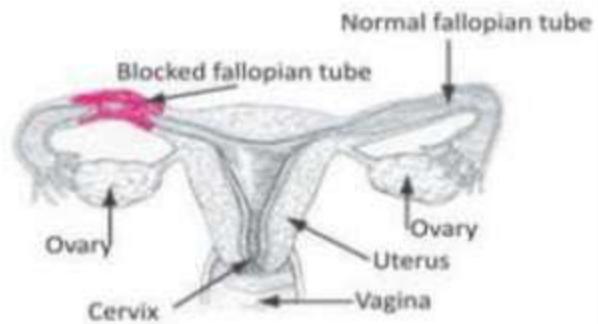


## **Complications of STI/RTI in females**

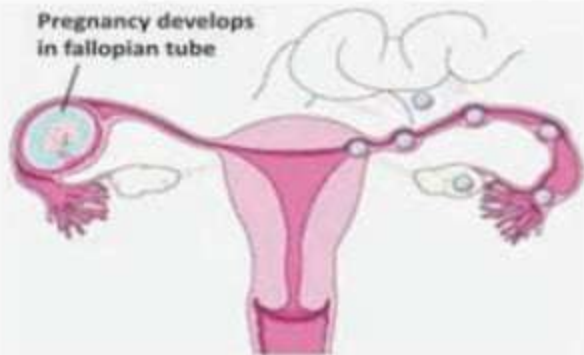
- Pelvic inflammatory disease
- Adverse outcomes of pregnancy:
  - Fetal wastage - spontaneous abortion or stillbirth.
  - Low birth weight due to premature delivery or intra-uterine growth retardation.
  - Congenital or perinatal infections - eye infections causing blindness, infant pneumonias and mental retardation.
- Infertility
- Ectopic pregnancy
- Cervical cancer



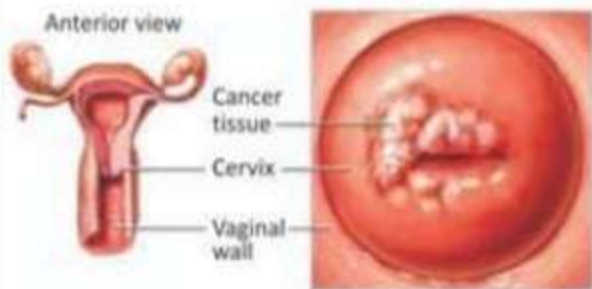
**Pelvic Inflammatory Disease**



**Female Infertility**



**Ectopic Pregnancy**



Cervix viewed through speculum with patient in lithotomy position





## Human Papilloma Virus (HPV)

- Non- sexual mode of transmission.
- Skin to skin contact.
- Cervical warts – Ca??
- Pink or flesh-colored warts- raised, flat, or cauliflower shaped.
- Often- no symptoms.



## Crabs (Pubic Lice)



- Crabs: Lice
- The creatures crawl from one person to another during close contact.
- Symptoms: Intense itching, tiny eggs attached to pubic hair, or crawling lice.

## Scabies



- It is not always an STD, as it can spread through any skin-to-skin contact.
- But among young adults, the mites are often acquired during sex.
- Symptoms: Intense itching especially at night and a pimple-like rash.



## Gonorrhoea



- Symptoms:
- Burning during urination and discharge, skin rashes or spread to the joints and blood.
- In Men: Discharge from the penis, swollen testicles , **red and tender urethra**
- In Women: **purulent / muco-purulent Vaginal discharge**, pelvic pain, spotting.



## Syphilis

- Without treatment, it can lead to paralysis, blindness, and death.



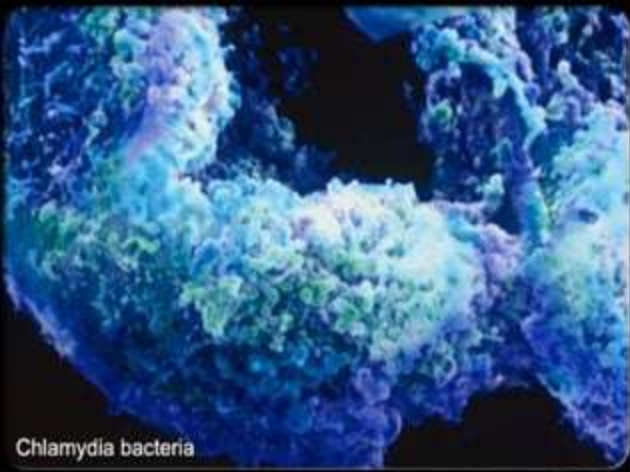
### Signs and Symptoms:

firm, round, painless sore on the genitals or anus. Spreads through direct contact with this sore.

Rash on the soles, palms, or other parts of the body swollen glands, fever, hair loss, or fatigue.

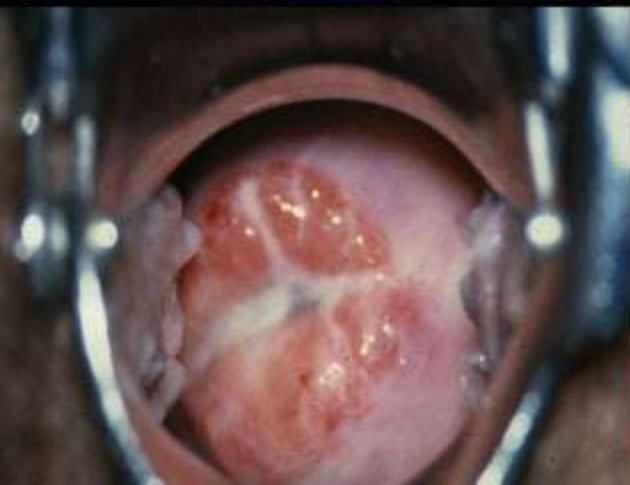
- Heart  
brain, liver, nerves, and

## Chlamydia



Chlamydia bacteria

- May infect the rectum and throat.
- Symptoms in Men:  
Burning and itching at the tip of the penis, discharge, painful urination.
- Symptoms in Women:  
Vaginal itching, discharge that may have an odor, pain during sex, painful urination. **Red cervix which bleeds.**





# Herpes Simplex Virus Type 1

- Usually not an STD;
- Spreads easily among household members or through kissing.

Spread to the genitals through oral or genital contact with an infected person.

No cure, drugs can shorten or prevent outbreaks.

Signs and Symptoms: Occasional cold sores or “fever blisters” on the lips. Small blister or sores on the genitals.

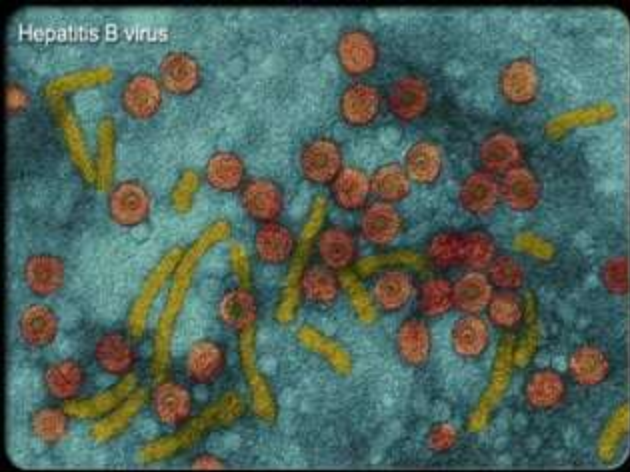


# Herpes Simplex Virus

## Type 2

- Highly contagious
- Spread through intercourse or direct contact with a herpes sore.
- No cure.
- Symptoms: Fluid-filled blisters that form painful, crusted sores on the genitals, anus, thighs, or buttocks. Can spread to the lips through oral contact.





## Hepatitis B

- Severe liver damage.
- Spreads through contact with blood and other body fluids, sex, needle sharing, and at birth, sharing razors and toothbrushes.
- No cure, effective vaccine
- Symptoms:
- Nausea, belly pain, dark urine, fatigue, and a yellowing of the skin or eyes with acute infection. liver cirrhosis and liver cancer.



# HIV

Spreads through unprotected sex, needle sharing, or being born to an infected mother.

Early symptoms of HIV Infection:

flu-like symptoms 1-2 months after infection:  
swollen glands

a fever, headaches, and fatigue.

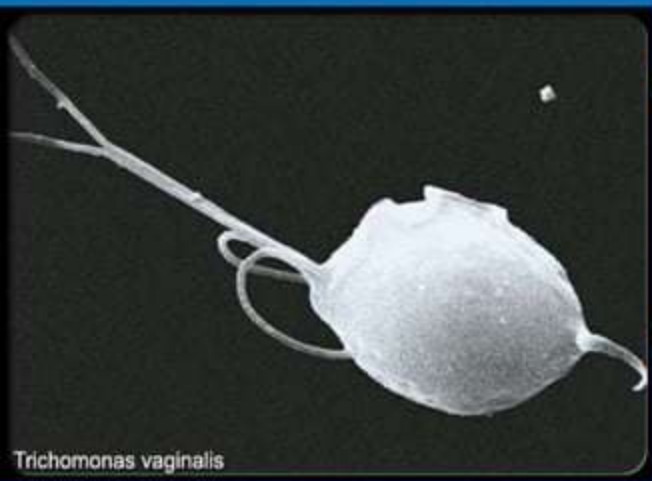
Canker sores in the mouth





# Trichomoniasis

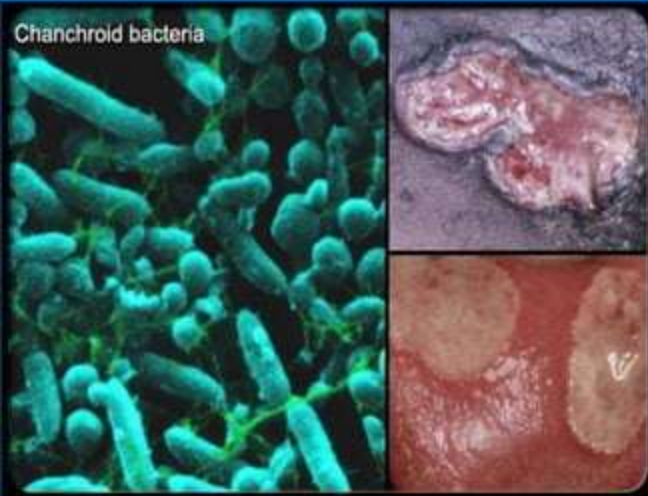
- Spreads during sexual contact. It can be cured with prescription drugs.
- Signs and Symptoms in Men: mild discharge or slight burning during urination.
- Signs and Symptoms in Women: **Frothy yellow-green discharge with a strong odor**, vaginal itching, or pain during sex or urination.



Trichomonas vaginalis

# Chancroid

- Bacterial STD common in Africa and Asia but rare in the U.S.
- genital sores that can spread the bacteria from one person to another.



Symptoms in Men: Painful bumps on the penis that may develop into pus-filled open sores, pain in the genitals and groin.

Symptoms in Women: Painful, bumps in the genital area that can develop into open sores, swollen lymph nodes in the groin.

## LGV (Lymphogranuloma Venereum)



- More common in MSM. Can be cured with
- Symptoms: Open sores on the genitals or anus, headache, fever, fatigue, and swollen lymph glands in the groin. If acquired through anal sex, LGV may cause rectal bleeding or discharge.

## Pelvic Inflammatory Disease



- Not an STD itself, PID is a serious complication of untreated STDs, especially chlamydia and gonorrhea.
- Signs and Symptoms: Lower abdominal pain, fever, unusual discharge, painful intercourse, painful urination, and spotting.



## Urethral Discharge

- Urethral Discharge (Pus or muco-purulent)
- Pain or burning while passing urine
- Increased frequency of urination
- Systemic symptoms like malaise, fever

Tab. Azithromycin 1 gm  
OD Stat +  
Tab. Cefixime 400 mg  
OD Stat

### KIT 1/Grey



Treat all recent partners

## Cervical Discharge

- Nature and type of discharge (quantity, color and odor)
- Burning while passing urine, increased frequency
- Genital complaints by sexual partners
- Low backache  
*(Take menstrual history to rule out pregnancy)*

Tab. Azithromycin 1 gm  
OD Stat +  
Tab. Cefixime 400 mg  
OD Stat

### KIT 1/Grey



Treat partners when symptomatic

## Painful Scrotal Swelling

- Swelling and pain in the scrotal region
- Pain or burning while passing urine
- Systemic symptoms like malaise, fever
- History of urethral discharge

Tab. Azithromycin 1 gm  
OD Stat +  
Tab. Cefixime 400 mg  
OD Stat

### KIT 1/Grey



Treat all recent partners

## Vaginal Discharge

- Nature and type of discharge (quantity, color and odor)
- Burning while passing urine, increased frequency
- Genital complaints by sexual partners
- Low backache  
(Take menstrual history to rule out pregnancy)

Tab. Secnidazole 2 g  
OD Stat +  
Cap. Fluconazole 150 mg  
OD Stat

### KIT 2/Green



Treat partners when symptomatic

## Genital Ulcer-Non Herpetic

- Genital ulcer, single or multiple, painful or painless
- Burning sensation in the genital area
- Enlarged lymph nodes

Inj. Benzathine penicillin  
(2.4 MU) - 1 vial  
Tab. Azithromycin (1 gm) -  
Single dose

### KIT 3/White



Treat all sexual partners for past 3 months

If allergic to Inj. Penicillin:  
Doxycycline 100 MG  
(Bid for 15 days)  
Azithromycin 1GM (Single dose)

### KIT 4/Blue



## Genital Ulcer - Herpetic

- Genital ulcer or vesicles, single or multiple, painful, recurrent
- Burning sensation in the genital area

Tab. Acyclovir 400 mg

TDS for 7 days

### Kit 5/Red



No partner treatment

## Lower Abdominal Pain (LAP)

- Lower Abdominal Pain
- Fever
- Vaginal Discharge
- Menstrual irregularities like heavy, irregular vaginal bleeding
- Dysmenorrhoea, dyspareunia, dysuria, tenesmus
- Lower backache
- Cervical motion tenderness

Tab. Cefixime 400 mg OD stat +  
Tab. Metronidazole 400 mg  
BD X 14 days +  
Doxycycline 100 mg BD X 14 days

### Kit 6/Yellow



Treat male partners with Kit 1

## Inguinal Bubo (IB)

- Swelling in inguinal region which may be painful
- Preceding history of genital ulcer or discharge
- Systemic symptoms like malaise, fever etc

Tab. Azithromycin 1 gm  
OD Stat +  
Tab. Doxycycline 100 mg  
BD for 21 days

### Kit 7/Black



Treat all sexual partners for past 3 weeks

