STD	Causative agent	Pathogenesis	Clinical appearance	Dx	Treatment	Notes
Gonorrhea	**N. Gonorrhea** - **Gram negative** diplococci - Fastidious, and **only grows on enriched chocolate agar.**	1. Bacteria (**diplococci**) attaches to the urogenital epithelium. 2. N. gonorrhea **competes** with the resident microbiota. 3. **Transcytosis** of the bacteria intracellularly. 4. The bacteria is detected by PRR's of macrophages, dendritic cells. 5. these cells secrete **cytokines**. 6. cytokines allow the recruitment of **PMN's** 7. PMNs attach to the bacteria, and it will be **phagocytosed**. 8. this attachment/bacteria-PMN complex forms the **neutrophil-rich exudate.**	**Men**: **Acute symptoms,** always restricted to **urethra**. **Women**: 50% are **asymptomatic** or have mild symptoms. - Asymptomatic cases may develop into disseminated infections **Retrograde spread in women** (infection spreads to the endometrium, fallopian tube, ovaries, etc.) → developing: - Endometritis - Ovarian abscesses	1. Culture: **Blood agar.** 2. Gram staining: **Gram negative diplococci.** Samples: Exudates (throat, urine, cervical swabs) 3. **NAATs: Screening test of choice.**	Patient and his/her sexual partner must be treated. **First line therapy: Ceftriaxone + Azithromycin**	- Antimicrobial resistance - **Second most common** STI, after Chlamydia.

			- PID: Pelvic inflammatory disease. → **Forms purulent discharge** → **Disseminated:** **1. Pustular rash** **2. Suppurative arthritis in involved joints.**			
Chlamydia	**Chlamydia trachomatis.** **Obligate intracellular.** **Has two forms (unique life cycle):** 1. Infectious, extracellular, metabolically inactive form: **Elementary Bodies**	Infect epithelial cells of the urethra, endocervix, endometrium, fallopian tubes, **conjunctiva,** etc**.**	**Women**: - **Mostly asymptomatic** - Ascends (retrograde infection or spread) causing PID. - **Cervicitis** - Urethritis - Proctitis **Men**: - Mostly **asymptomatic**. - Urethritis - Proctitis	Samples: - Exudates - **First catch urine** - Cervical/throat swabs 1. Culture (not used- bacteria is obligate intracellular) 2. **NAATs: test of choice.**	Patient and his/her sexual partner must be treated. **Doxycycline or Azithromycin**	**Most common bacterial STD.** - Transmission: 1. sexually 2. **Inanimate objects** (survives extracellularly) 3. **Eye-to-eye** 4. Droplets 5. Hands - **Leading cause of preventable blindness: Trachoma**

	2. Noninfectious, intracellular, metabolically active form: **Reticulate Bodies**					- **More common in Endemic areas** (Children act as reservoirs through conjunctival transmission).
Nongonococcal urethritis	**1. Mycoplasma genitalium** **2. Ureaplasma urealyticum** - **Smallest** free-living bacteria - **Do not have a cell wall.** - Cell membrane contains **sterols**.		Can cause NGU and PID (pelvic inflammatory disease).	**NAATs: test of choice. (PCR)**	**Azithromycin** - Poor response to doxycycline - unlike chlamydia trachomatis. - Resistant to penicillin (no cell wall).	- **Resistant to Penicillin (interferes with the synthesis of cell walls)** - Antimicrobial resistance
Candidiasis	**C. Albicans (80-92%)** C. glabrata - Part of the gut and vaginal flora. - **Opportunistic pathogenic** yeast.		- **Recurrent infection (>= 4 episodes a year)** in some cases. - Susceptibility: determined genetically.	- **Wet mount of discharge (KOH)** → recognition of yeast/hyphae. - Self-diagnosis: unreliable	Oral or Topical antifungal treatment. **Topical**: -More **rapid** relief. -**Pregnant** women: **Topical** imidazole	- Common in **postmenopausal women** (29-49%)

			Risk factors: - Diabetes - HIV - **Antibiotic use** - **Pregnancy** Last two: cause changes in vaginal ecology. Causes: - Pruritis - Dysuria - Dyspareuria - **White cottage cheese-like discharge** - **pH<4.5: unlike trichomonas infection or BV.**	- **Culture** in patients with persistent discharge or recurrent symptoms unresponsive to azole tx.	**Immunosuppressed: 7-14 days topical therapy is recommended.** **Oral**: -Preferred. - **Oral azoles are contraindicated in pregnancy.**	