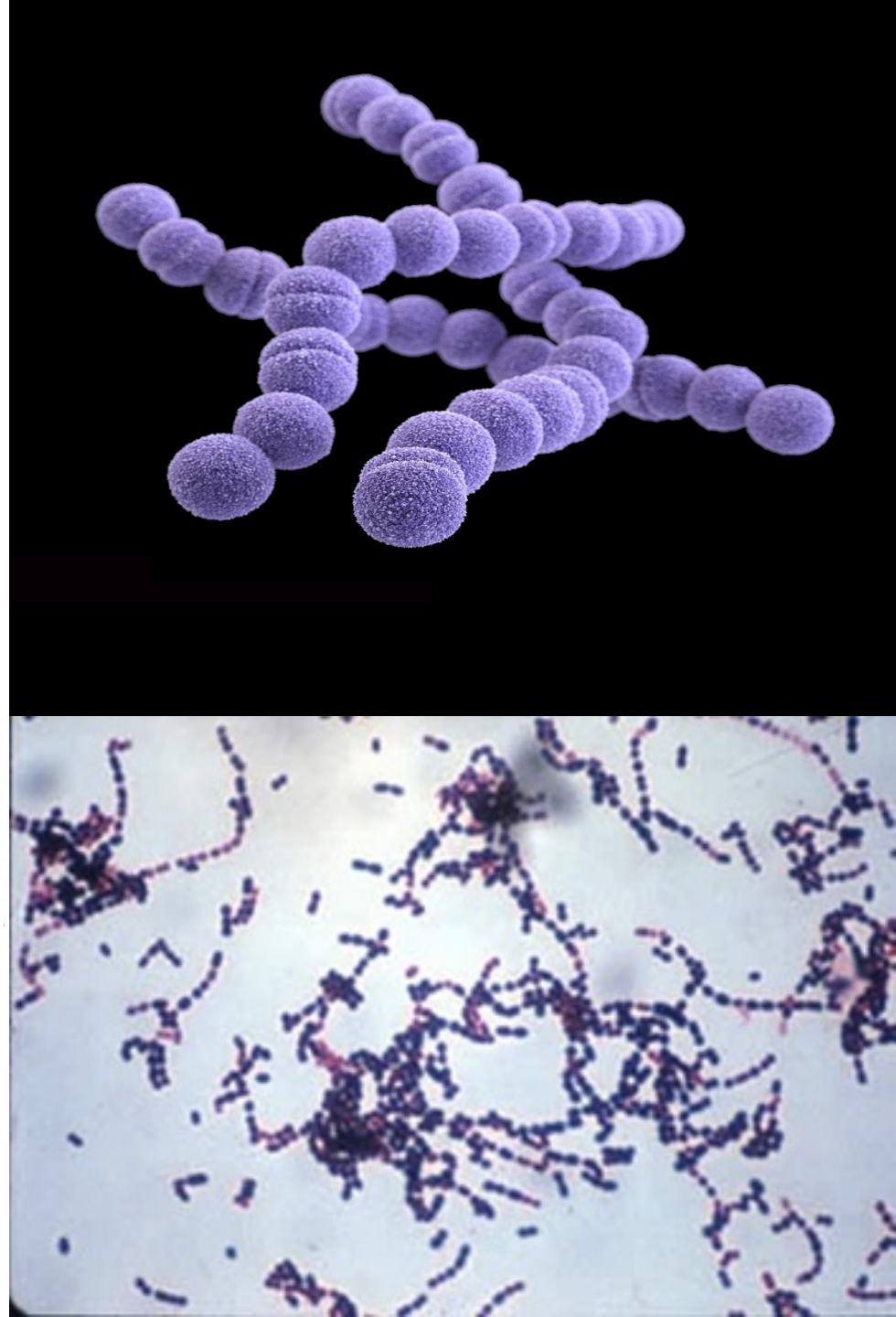


## Streptococci

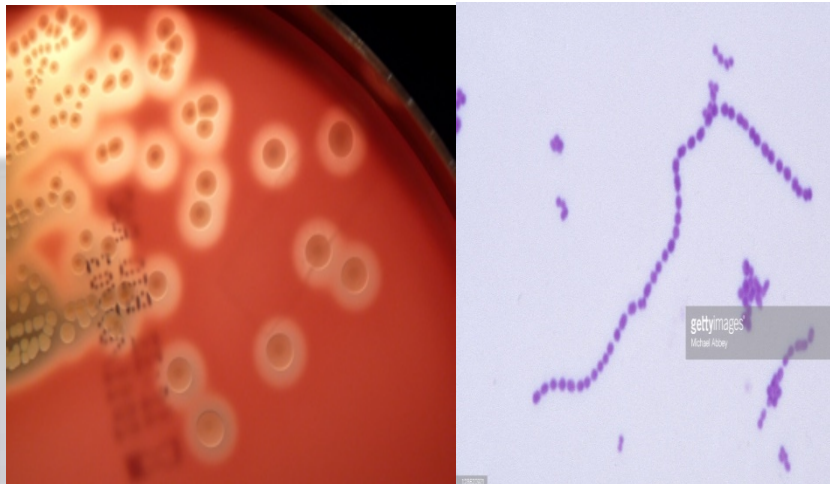
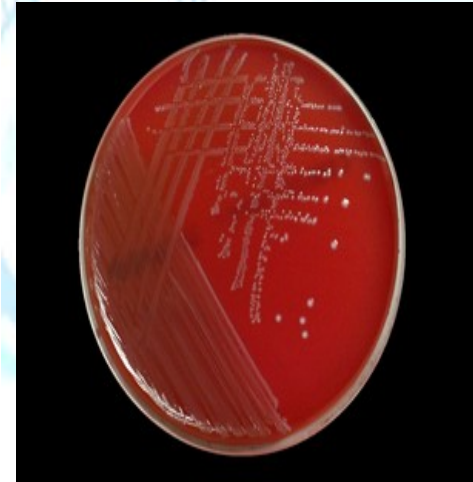
### General Characteristics of Streptococci

- Gram-positive spherical/ovoid cocci arranged in long chains; commonly in pairs
- Non-spore-forming, nonmotile
- Can form capsules and slime layers
- Facultative anaerobes
- Do not form catalase, but have a peroxidase system
- Most parasitic forms are fastidious and require enriched media
- Small, nonpigmented colonies
- Sensitive to drying, heat, and disinfectants.



## Human Streptococcal Pathogens:

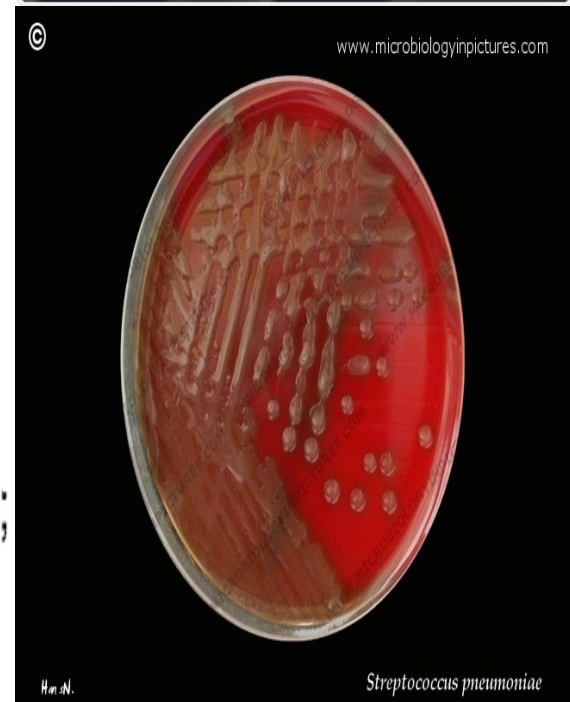
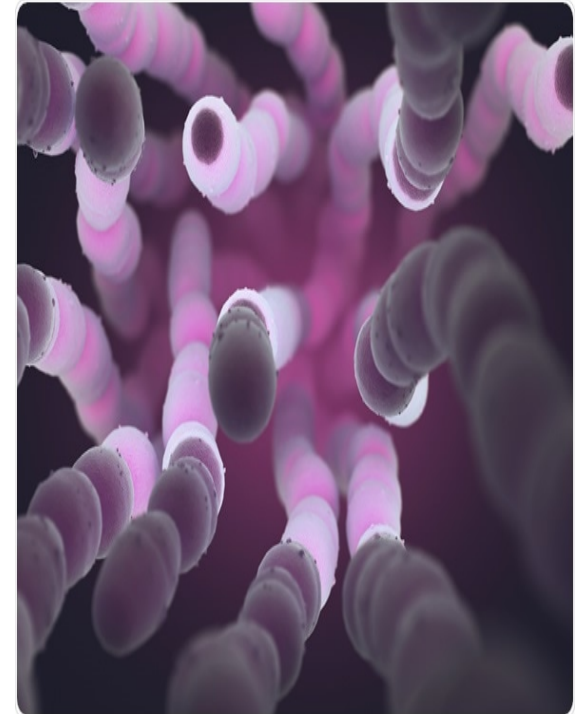
- *S. pyogenes* : cause :- Respiratory System Infection , Skin Infection , Rheumatic Fever , Scarlet Fever , Genital Tract .
- *S. viridians* : cause subacute of endocarditis .
- *S. faecalis* :cause urinary tract infection in the case of contamination .



- ***Streptococcus Pneumoniae*: The Pneumococcus**
- Causes 60–70% of all bacterial pneumonias
- Small, lancet-shaped cells arranged in pairs and short chains
- Culture requires blood or chocolate agar
- Growth improved by 5–10% CO<sub>2</sub>
- Lack catalase and peroxidases – cultures die in O<sub>2</sub>.

### **Epidemiology and Pathology**

- 5–50% of all people carry it as normal flora in the nasopharynx;  
infections are usually endogenous





# Treatment and Prevention

- Traditionally treated with penicillin G or V
- Increased drug resistance
- Two vaccines available for high risk individuals:
  - Capsular antigen vaccine for older adults and other high risk individuals – effective 5 years
  - Conjugate vaccine for children 2 to 23 months.



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Han et al.

*Streptococcus pneumoniae*

# Thank You

## Questions?

Comments and opinions would be appreciated.