

Streptococcus pneumonia/Diplococcus pneumonia/Pneumococci

- Normal flora of nasopharynx and oropharynx (URT)
- Appearance: diplo
- (+) to Hemolysis test
- Alpha hemolytic

Morphology	- Lancet shaped or bullet shaped diplococci under microscope
Growth/Colony Growth Requirement	- Requires 5-10% Carbon Dioxide <u>DOME shaped colonies</u> ➤ Young colonies ➤ Raises/elevated ➤ 24hrs of incubation <u>Craterlike/Nail head/Checker</u> ➤ Aged colonies ➤ Seen after 48 hours of incubation
Tests for Identification and Susceptibility	• <u>Bile solubility test</u> positive -For identification of Pneumococci -Required media: BAP (add 10% Sodium deoxycholate) - (+) Result: lysis of colonies • Susceptible to Optochin -a.k.a. Taro P -Tests that will differentiate Pneumococci from other alpha hemolytic Streptococci -Chemical name: ethyl hydrocupreine hydrochloride
Virulence factor	Polysaccharide capsule - <u>neufeld quellung</u> (+)
Causes	- Number 1 cause of adult bacterial meningitis and most common agent of otitis media - One major cause of lobar pneumonia, pericarditis

- **Francis Test**- skin test for pneumonia

	Pneumococci	Streptococci
Bile Solubility	+	-
Inulin fermentation	Ferment inulin	Does not ferment
Capsular swelling	+	-
Quinidine and Optochin	S	R

- **Hemolysis Test**- carried out to differentiate Streptococcus pyogenes and Streptococcus pneumoniae from other Streptococcus

Viridans Streptococci – S. mitis group(S. sanguis, S. mitis), S. mutans, S. salivarius, S. bovis

- or Alpha hemolytic Streptococci
- Means GREEN