GROUP CHARACTERISTICS

- Gram-positive cocci in chains
- Catalase (-)
- Nutritionally fastidious
- Hemolytic a-, B-, or none
- Some are encapsulated
- Facultative anaerobes
- Requires enriched medium and 10% CO2

CLINICALLY SIGNIFICANT PATHOGENS

- Group A – Streptococcus pyogenes
- Group B – Streptococcus pneumoniae
- Group D
- Streptococcus pneumoniae
- Viridans Group

CLASSIFICATION OF STREPTOCOCCI

1. **SMITH & BROWN CLASSIFICATION**
- Hemolytic reaction of Streptococcus in BAP

2. **BERGEYS'S/ACADEMIC CLASSIFICATION**
- Based on the physiologic divisions of Streptococcus or thermal requirement

3. **LANCEFIELD'S CLASSIFICATION**
- Based on the presence of serologically active **carbohydrate C-polysaccharide** (cell wall CHO)

BERGEY'S/ACADEMIC CLASSIFICATION (THERMAL REQUIREMENT)

PYOGENIC STREPTOCOCCI	Neither 45°C nor 10°C Produce pus Mostly B-hemolytic	**S. pyogenes**
VIRIDANS STREPTOCOCCI	Grows at 45°C Normal mouth flora	**S. salivarius** **S. mutans** **S. mitis** **S. sanguis** **S. sanguinosus**
ENTEROCOCCUS GROUP	Grows at 45° and 10°C	**S. faecalis**
LACTIC GROUP	Grows at 10°C	**S. cremoris** **S. lactis**

SMITH & BROWN CLASSIFICATION (HEMOLYTIC REACTION)

ALPHA HEMOLYTIC	Partial hemolysis Greenish discoloration	**S. pneumoniae** **S. viridans**
BETA HEMOLYTIC	Complete hemolysis of RBC Clear zone of hemolysis surrounding bacterial colony	**S. pyogenes** **S. agalactiae**
GAMMA HEMOLYTIC	Non-hemolytic or indifferent strep No hemolysis of RBC	**S. faecalis**

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