null - fun grouping of cocci
- single: streptococci, diplococci, streptococci
- cocco bacilli

Pseudomonas - curved rod
- spirilla - coiled + right
- cheta - spirochete - flexible filament

Structure outside the cell wall
- glycocalyx - sugar coat
  - gelatinous substance
  - for adherence outside the cell
  - made inside the cell
  - contains polysaccharide
  - peptidoglycan

- unorganized, loosely attached to the cell wall = slime layer
  - biofilm

- organized, firmly attached to the cell wall = capsule
  - protects bacteria from phagocytosis
  - assists in survival
  - pathogenic = virulence
  - lipopolysaccharide (LPS) = endotoxin - produces glycocalyx that helps it attach to cells of 3.

Flagella = rotate, swim & types of flagellar arrangement
- Motility
  - run, tumble
  - move toward a favorable condition
    - toward or away = taxis
    - chemical stimuli = chemotaxis
    - light stimuli = phototaxis

- + stimulus = toward
- - stimulus = away & tumble

- chemosensory stimuli = chemical phototaxis = light
FLAGELLA = (PROKARYOTIC FLAGELLA) 
- rotates circular 
- consists of filament hook, basal body.

Arrangement

a) Axitrichous

b) Peritrichous - numerous flagella around the entire surface

→ POLAR FLAGELLA

c) Monotrichous - single flagella at one end of the cell.

d) Lophotrichous - tuft/group of (one pole) flagella at one end (one pole)