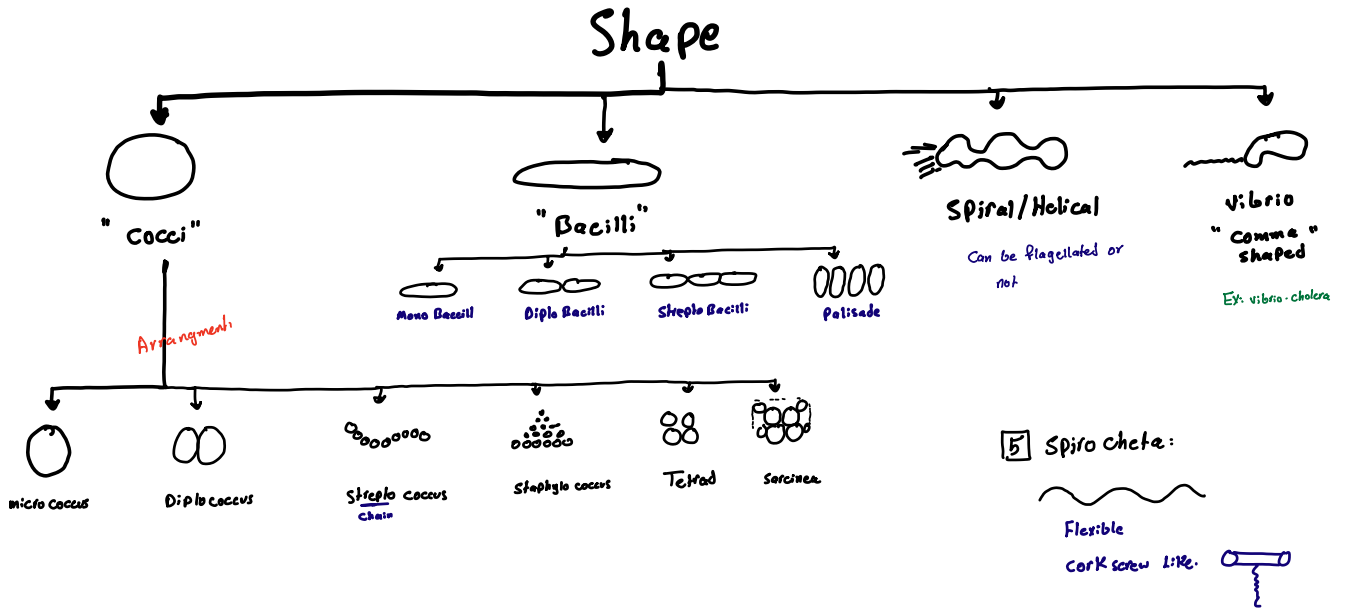
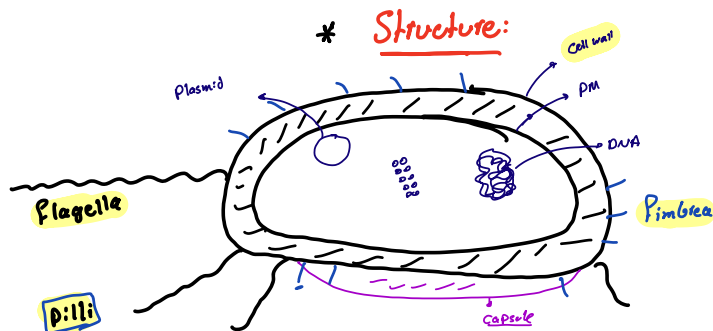
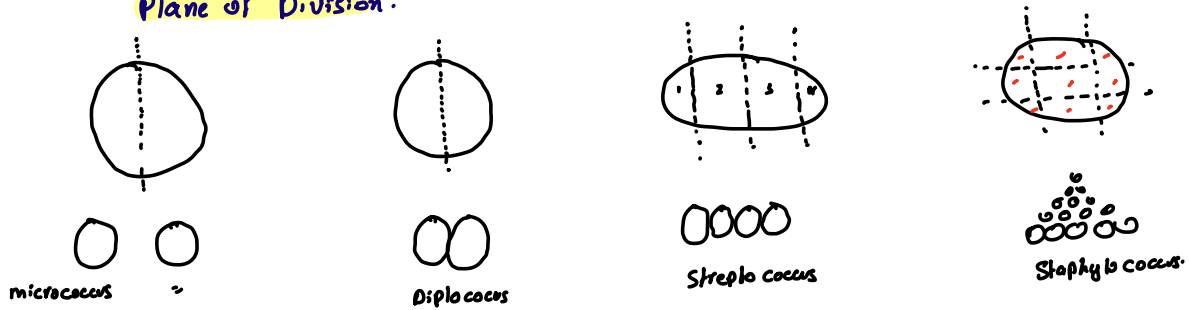


Bacterial structure & Classification



why Bacteria have diff arrangements?

Plane of Division.

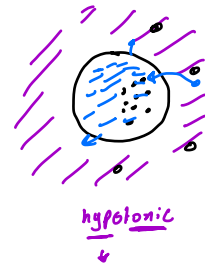


* Cell wall :

essential

Fx:

- ① Shape
- ② Rigidity
↳ Resistant to high pressures (osmotic pressure)
- ③ Growth & Division

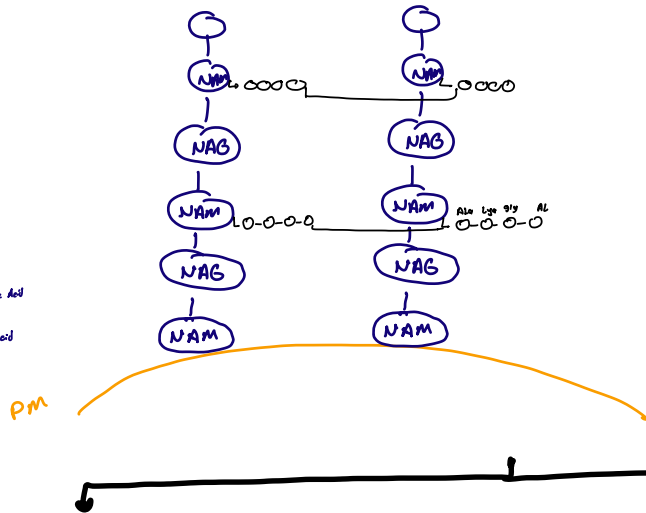


مكونه

* Peptidoglycan (PG):

- 2 repeated sugars cross linked by Tetra peptide.
- Attachment of Tetra peptide: NAM.

NAG: N-Acetyl glucosic Acid
NAM: N-Acetyl muramic Acid



Gram +ve

Gram -ve.

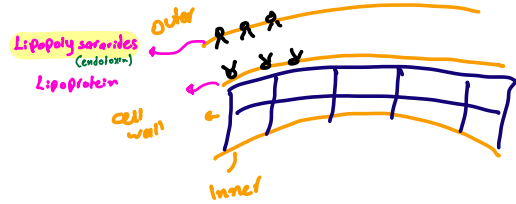
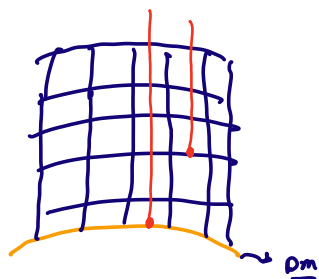
- Very Thick cell wall
- Inner membrane
- respond well to AB.
- ↑ PG

- . very thin cell wall
- . Inner & outer membrane
- . Poor respond to AB.
- PG ↓

Tichoic Acid & Lipo Tichoic Acid:

Glycerol (G)
ribitol (R) = Carbo
PPE

Fxn: Anchor PG with PM.



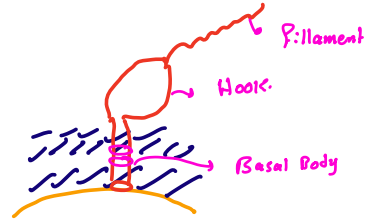
* Flagella:

Non-essential

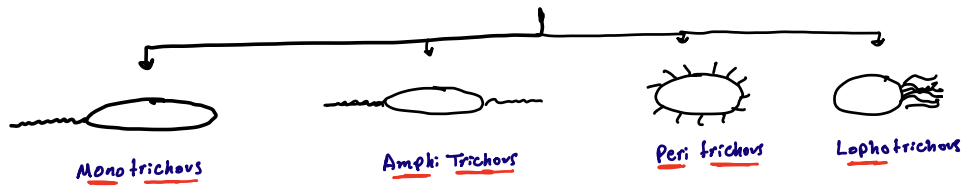
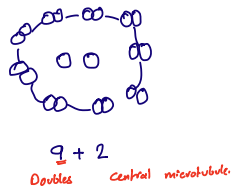
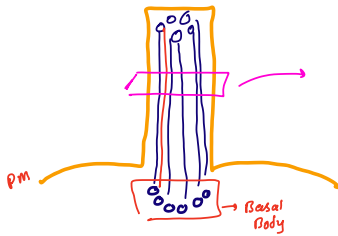
Fxn → Motility

Made of → Flagellin

- 3 parts:
- 1 Basal Body
 - 2 hook
 - 3 Filament

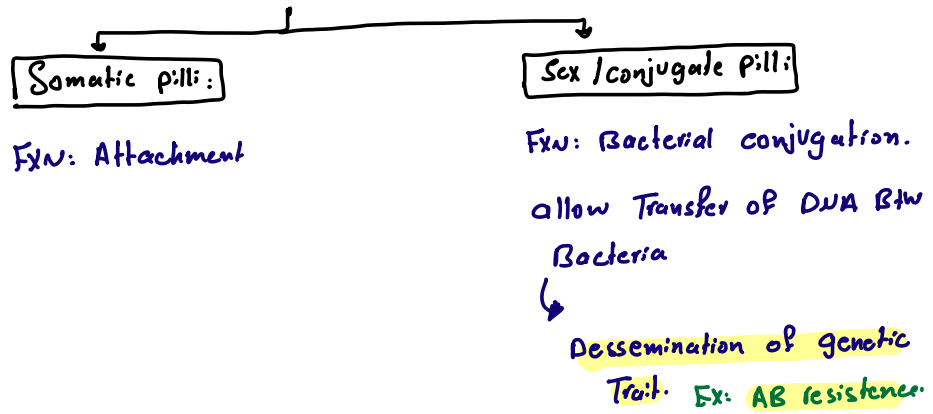


→ Membrane bound cylinders (Each $0.2 \mu\text{m}$)



* Pilli :

- Hair like Appendages
- Found on **Both**: G+ve & **G-ve**.
- **No** role in mobility.
- **Arrangement**: Peritrichous.



* Fimbriae:

- Short pilus
- Attachment.
- More than pilus & shorter.

