

PROKARYOTES (part 1)

- For every 1 human cell in your body, you have 10 bacteria cells.
- There are two types of prokaryotes: BACTERIA and ARCHAEA. (Archaea used to be classified as bacteria. They tend to be the “extremophiles” who survive in harsh conditions.)
- Prokaryotes do not have a true nucleus. They have a clump of DNA but it does not have an envelope around it.

ANATOMY of an “basic” BACTERIA

NOTE: The “cillin” antibiotics interfere with the enzyme robot that does the cross-linking. Without these links, the cell wall is too weak and the bacteria falls apart.

MORPHOLOGY (means “shape”)

(SIZE: 1 to 3 μm)

FIMBRIAE (*fim-bree-eye*) are little “hairs” that allow the bacteria to stick to surfaces. They are more common in Gram negatives.

coccus
(cocci)

diplococcus

bacillus
(bacilli)

vibrio

PILI (*pie-lie*) are similar to fimbriae (some people think the names are interchangeable) but are longer, and thicker. They are used to move (like rock climbers use grappling hooks). A “sex pilus” is very long and can grab another bacteria and “reel it in” until they touch. Then DNA can be shared.

streptococcus

staphylococcus

spirillum
(spirilli)

spirochete