

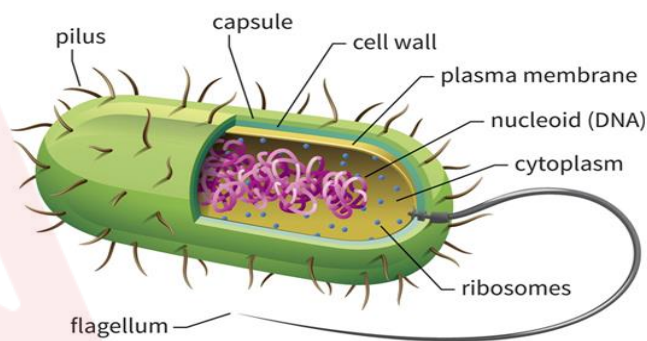
**One Liner Shots (Prokaryotic Cell & It's Components)**

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One liner shots  
**PROKARYOTIC CELL  
& ITS COMPONENTS**

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**Definition of a Prokaryotic Cell**

Cells that do not have true nuclei and membrane-bound organelles are usually called Prokaryotic cells. In simple words, Prokaryotic cells are single-celled microorganisms. These are considered to be the earliest on earth. Prokaryotes include Archaea and Bacteria cells. The photosynthetic prokaryotes, including cyanobacteria, can perform photosynthesis.

**Different Components of a Prokaryotic Cell**

NAME	DESCRIPTION
<b>Capsule</b>	Many prokaryotes have a sticky outermost layer called the capsule, which is usually made of polysaccharides (sugar polymers). It is an outer protective covering found in the bacterial cells, in addition to the cell wall. It helps in moisture retention, protects the cell when engulfed, and helps in the attachment of cells to nutrients and surfaces.
<b>Cell Wall</b>	It is the outermost layer of the cell which gives shape to the cell. The cell wall is composed of mucopolypeptide or peptidoglycan.

<b>Cell Membrane</b>	Just below the cell wall lies the cell membrane. This is semi-permeable. It functions to prevent leakage and allow the exchange of essential materials between the inside and outside of the cell.
<b>Cytoplasm</b>	It is the jelly-like semi-fluid structure within the plasma membrane where the cell's important parts float. Although prokaryotes lack membrane-bound organelles, all the cell organelles are suspended in them.
<b>Pilli</b>	Pilli is the hair-like tubular substance that outgrows a prokaryotic cell. It can be found in gram-negative bacteria.
<b>Flagella</b>	These are extended structures in the form of a whip that helps in the locomotion of a cell.
<b>Plasmids</b>	Plasmids are non-chromosomal DNA structures. These are not involved in reproduction.
<b>Ribosome</b>	In prokaryotes, the ribosome is 70S type. Here, proteins are made from messenger RNA. Prokaryotes have the 70S ribosome, which is made of 30S (smaller) and 50S (larger) subunits. Ribosomes occur in groups called polysomes.
<b>Nucleoid Region</b>	It is the region in the cytoplasm where the genetic material is present. Nucleons are naked and are called Nucleoids. Nucleoid is the genetic material in prokaryotic cells. It does not consist of any nuclear membrane. Many bacteria contain small circular DNA known as Plasmids.

### Some Interesting Facts About Prokaryotes

- ★ Prokaryotes are single-celled organisms belonging to the domains Bacteria and Archaea.
- ★ Prokaryotic cells are much smaller than eukaryotic cells, have no nucleus, and lack membranous cell organelles.
- ★ A cell wall encloses all prokaryotic cells. Many also have a capsule or slime layer made of polysaccharides.
- ★ Prokaryotes often have appendages (protrusions) on their surface.
- ★ Most prokaryotic cells have a single circular chromosome. They may also have smaller pieces of circular DNA called plasmids.
- ★ Some prokaryotic cells possess cilia and flagella, which help in locomotion.
- ★ Reproduction in Prokaryotes occurs in 2 ways. One is sexually by conjugation, and another is asexually by binary fission.
- ★ Recombination is the process in which genes from one bacteria are transferred to the genome of other bacteria.