

NUTRITION IN BACTERIA

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- Bacteria are very simple microscopic organisms but their life process are so complex as the complex higher organism.

Modes of Nutrition

1. Autotrophic nutrition
2. Heterotrophic nutrition
3. Symbiotic nutrition

AUTOTROPHIC BACTERIA

- Bacteria which synthesize their own food are called Autotrophic Bacteria.

kinds of autotrophic bacteria:-

1. Photosynthetic bacteria
2. Chemosynthetic bacteria

1. Photosynthetic bacteria:-

- a) Green sulphur bacteria-eg- Chlorobium
- b) Purple sulphur bacteria-eg- Chromatium
- c) Purple non sulphur bacteria-eg- Rhodospirillum, rhodomicrobium.
- d) Photo-organotrophs-eg- Rhodospirillum.

AUTOTROPHIC BACTERIA

2. Chemosynthetic bacteria:-

- a) Chemo-organotrophs-eg- methanococcus
- b) Chemolithotrophs
 - ⦿ Sulphur bacteria- eg- Thiobacillus denitrificans.
 - ⦿ Iron bacteria-eg- Ferrobacillus.
 - ⦿ Hydrogen bacteria-eg-Hydrogenases.
 - ⦿ Methane bacteria-eg- Methanobacterium.
 - ⦿ Nitrifying bacteria-eg- Nitrobacter, Nitrosomons

HETEROTROPHIC BACTERIA

- These bacteria cannot synthesize their food from simple inorganic substances, so they depend upon other organism for their food.

Types:-

1. Parasites:- pathogenic and non-pathogenic
2. Saprophytes-

SYMBIOTIC BACTERIA

- Some bacteria live in association with other organism to get benefit to each other .
- Relationship is termed as symbiosis.
- Eg- *Rhizobium leguminosarum* from symbiotic association with roots of leguminous plants producing root nodules.