Heterotrophic Bacteria Encyclopedia Article

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Contents

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Heterotrophic cells must ingest biomass to obtain their energy and nutrition. In direct contrast, autotrophs are capable of assimilating diffuse, inorganic energy and materials, and using these to synthesize biochemicals. Green plants, for example, use sunlight and simple inorganic molecules to photosynthesize organic matter. All heterotrophs have an absolute dependence on the biological products of autotrophs for their sustenance--they have no other source of nourishment.

All animals are heterotrophs, as are most **microorganisms** (the major exceptions being microscopic algae and blue-green **bacteria**). Heterotrophs can be classified according to the sorts of biomass that they eat. Animals that eat living plants are known as herbivores, while those that eat other animals are known as carnivores. Many animals eat both plants and animals, and these are known as omnivores. Animal **parasites** are a special type of carnivore that are usually much smaller than their prey, and do not usually kill the animals that they feed upon.

Heterotrophic microorganisms mostly feed upon dead plants and animals, and are known as decomposers. Some animals also specialize on feeding on dead organic matter, and are known as scavengers or detritivores. Even a few vascular plants are heterotrophic, parasitizing the roots of other plants and thereby obtaining their own nourishment. These plants, which often lack **chlorophyll**, are known as saprophytes.

Heterotrophic bacteria, therefore, are largely responsible for the process of organic matter decomposition. Many pathogenic (disease-causing) bacteria are heterotrophs. However, many species of heterotrophic bacteria are also abundant in the environment and are considered normal flora for human skin. The recycling of minerals in aquatic ecosystems, especially in estuaries, is also made possible by heterotrophic bacteria. Although monitored by health officials, the presence of heterotrophic bacteria in public water supplies is seldom considered a **public health** threat.