

Heterotrophic nutrition

Heterotrophic nutrition is the mode of nutrition in which organisms depend upon other organisms to survive. All animals and non green plants are heterotrophic.

Heterotrophic organisms have to acquire and take in all the organic substances they need to survive.^[1]

All heterotrophs (except blood and gut parasites) have to convert solid food into soluble compounds capable of being absorbed (digestion). Then the soluble products of digestion for the organism are being broken down for the release of energy (respiration). All heterotrophs depend on autotrophs for their nutrition. Heterotrophic plants have only four types.

The three main types of heterotrophic nutrition are:

1. Holozoic nutrition the word holozoic is made from two words- holo= whole and zoikos= animals and literally means animals which eat their food whole. Complex food is taken into a specialist digestive system and broken down into small pieces to be absorbed. This consists of 5 stages ingestion, digestion, absorption, assimilation and egestion.
E.g.: human
2. Saprobiontic/saprophytic nutrition: Organisms feed on dead organic remains of other organisms. E.g.: decomposers
3. Parasitic nutrition Organisms obtain food from other living organisms (the host), with the host receiving no benefit from the parasite. When a parasite is present inside the body of the host, it is known as an endoparasite. These parasites suck and feed on the blood of the host. E.g.: tapeworms
4. Symbiotic nutrition Two organisms live in close association to benefit each other or one of the two benefits the other whilst it itself suffers neither loss but nor does it gain. E.g.: fungi and algae, rizobium and leguminous plants roots.

References

1. Heterotrophic nutrition and control of bacterial density(<http://www.int-res.com/articles/meps/22/m02p101.pdf>)

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