In more complex organisms, internal organs bulge into the coelom which serves as a protective buffer between the organs and the external environment. Therefore it provides a cavity in which organs can grow, develop and function independently of other organs. It also permits space for development of sexual organs thus a large number of gametes can be produced and provides a space for young to grow in those animals which give birth to live young.

Since the coelom separates the gut from the body wall, muscular movements of the body wall, associated with locomotion, can be separated from muscular movements of the gut wall (peristalsis) and help to churn the food. More power of locomotion results as well in more variation in movement of both sets of muscles, permitting different parts of the gut to become differentiated for different functions which allows a greater variety of diets.

The coelomic space permits a longer digestive tracted scelop, which is important in herbivores since grass is hard to diges. In some organisms with a fluid filled coelom such as echinodorms, the fluid can circulate inside the body permitting the rapid passated interials from one part of the body to another and thus allowing larger bodies to be developed.

## **Pseudocoelomate**

Some organisms are pseudocoelomate therefore the cavity exists, but it is lined by the mesoderm only on the inside of the body wall but not on the gastrovascular cavity side. This cavity originates differently than a true coelom. Pseudocoelom can be found in nematodes.

## Haemocoel

In arthropods and molluscs, the coelom is almost completely replaced during the development by another cavity called the haemocoel. It developes from the cavities