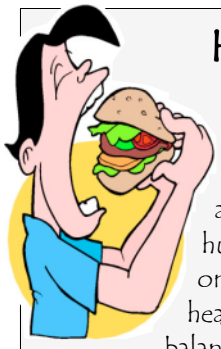
Food for Thought!

By Jenna Poole

Every creature in the animal kingdom is a predator of some kind and can be divided into one of three groups according to their eating and food-finding habits – the carnivores, the herbivores and the omnivores. Each of these names has its origin in the old language of Latin, with the "vore" part of each word meaning "to devour" or "to eat". Then in turn "carni" translates as "flesh", "herbi" as "vegetation" and "omni" as "everything", to identify exactly what makes up their diet.



HUMANS

Carni-herbi-or-omni-vores?!

Most people would agree that the natural human diet is omnivorous, and that a healthy diet should have a balance of those foods that contain all the essential vitamins and minerals our bodies need. We have incisors and canines at the front of our jaw to help us bite and tear meat, but we have large flat molars at the back that allow us to chew plant matter efficiently as well.

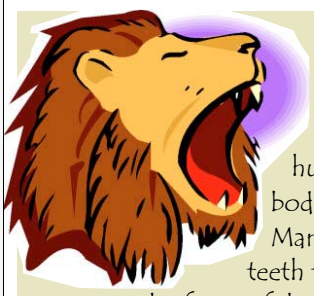
However some people chose an herbivorous diet as vegetarians or vegans, either for health or ethical reasons.

Others such as the Inuits of Canada, Alaska and Greenland have developed an almost completely carnivorous diet due to circumstance. Their natural environment produces little plant matter, though before the days of food transport they would have foraged for roots, berries and even seaweed. They therefore have a very high proportion of meat in their diets, from the animals they hunt and kill themselves. Nutritionally this high-fat diet may help them keep warm and survive the harsh weather conditions that they experience day-to-day.

Herbivores

Herbivores are animals that feed on living or dead plants and lower plants (such as fungi, algae and bacteria). Within this group there are *folivores* that eat only leaves, *frugivores* only fruit, and *granivores* only seeds. As plant matter tends to be of a lower nutritional value than meat, herbivores need to eat a lot more of it to survive and will spend most of their waking hours devoted to looking for food. On the bright side vegetation is usually more readily available and doesn't run away when you try to eat it!

Plant matter is mostly made up of a compound called cellulose, which is not easily digestible for most animals. Herbivores have adapted to this problem by developing different types of digestive systems, with high levels of internal bacteria and microbes to help to break down the cellulose. Cows for example have several stomachs that help them get the most from all the grass and plants that they constantly graze throughout the day.



Carnivores

In comparison to herbivores, carnivores eat only the meat or flesh of other animals. Some species hunt live prey, while others eat carrion (the dead bodies of other animals).

Mammalian carnivores have evolved very different teeth to those of herbivores. They have long, pointed canines at the front of the jaw, which together with incredibly strong muscles at the back of the jaw, ensure a strong and deadly bite. They also have specially sharpened pre-molars and molars, known as carnassials that effectively tear through flesh.

Meat is very slow to digest and uses a lot of energy. This is why species such as lions hunt in family groups, share the meal, and often sleep or relax for a long time before their next meal. Large snakes such as the Indian python have been known to last up to 2 years between meals!

Omnivores

Omnivores are those species that eat both plant and animal matter. These tend to be known as opportunistic species because they will eat almost anything that they stumble across, especially if their preferred food is scarce.

An omnivore's diet is often affected by seasons, the Grizzly bear for example is known to travel long distances for their favourite food (salmon) but will also forage for insects, grasses, plant roots and nuts along the way. They will also kill any moose, deer or bison that they come across, all before returning to their winter hibernation.