

Methods of Locomotion

Animal

Biped
Quadrupeds
Spiders
Caterpillars

In walking, and for many animals running, the motion of legs on either side of the body alternates, i.e. is out of phase. Other animals, such as a horse when galloping, or an inchworm, alternate between their front and back legs. An alternative to a gait that alternates between legs is hopping or saltation, where all legs move together. As a main means of locomotion, this is usually found in bipeds or semi-bipeds. Among the mammals saltation is commonly used among macropods (kangaroos and their relatives), jerboas, springhares, kangaroo rats, hopping mice, gerbils, and sportive lemurs. Certain tendons in kangaroo hind legs are very elastic, allowing kangaroos to effectively bounce along conserving energy from hop to hop, making hopping a very energy efficient way to move around in their nutrient poor environment. Saltation is also used by many small birds. Frogs and fleas also hop.

Limbless locomotion There are a number of terrestrial and amphibious limbless vertebrates and invertebrates. These animals, due to lack of appendages, use their bodies to generate propulsive force. Where the foot is important to the legged mammal, for limbless animals the underside of the body is important. Some animals such as snakes or legless lizards move on their smooth dry underside. Other animals have various features that aid movement. Molluscs such as slugs and snails move on a layer of mucus that is secreted from their underside, reducing friction and protecting from injury when moving over sharp objects. Earthworms have small bristles (setae) that hook into the substrate and help them move. Some animals such as leeches have suction cups on either end of the body allowing two anchor movement.

Mechanical

Wheels
Track