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COURSE: Physiology

**ASSIGNMENT QUESTION**

Discuss the physiology of balance

**THE PHYSIOLOGY OF BALANCE**

The sense of balance or equilibrioception is the perception of balance and spatial orientation. It helps prevent humans and nonhuman animals from falling over when standing or moving. Equilibrioception is the result of a number of sensory systems working together: the eyes (visual system), the inner ears (vestibular system), and the body's sense of where it is in space (proprioception) ideally need to be intact. Balance is mediated by the vestibular nuclei in the brain stem, the vestibular system, the region of the inner ear where three semicircular canals converge, works with the visual system to keep objects in focus when the head is moving.

The labyrinth (a part of the inner ear), is a major organ of our vestibular (balance) system

the three semicircular canals of the labyrinth are associated with sensing rotary motion the brain senses the direction and speed of rotation of the head by the movement of fluid in the semicircular canals, balance is maintained by the interactions between the labyrinth and other systems in the body, such as the visual and skeletal systems.

The information these organs deliver is proprioceptive in character, dealing with events within the body itself, rather than exteroceptive, dealing with events outside the body, as in the case of the responses of the cochlea to sound. Functionally these organs are closely related to the cerebellum and to the reflex centres of the spinal cord and brainstem that govern the movements of the eyes, neck, and limbs.