Name :onwuka Adaora rosemary

Department::Nursing science

Matric no\_:18/mhs02/161

Course: physiology

Question

Discuss the physiology of Balance.

**Answer**

The physiology of balance: vestibular function. The vestibular system is the sensory apparatus of the inner ear that helps the body maintain its postural equilibrium. The information furnished by the vestibular system is also essential for coordinating the position of the head and the movement of the eyes.

The body's balance system works through a constant process of position detection, feedback and adjustment using communication between the inner ear, eyes, muscles, joints and the brain. Deep inside the ear, positioned just under the brain, is the inner ear.

* balance is mediated by the vestibular nuclei in the brain stem
* the labyrinth (a part of the inner ear), is a major organ of our vestibular (balance) system
* the three semicircular canals of the labyrinth is 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 main inputs into the balance system are the:
* vestibular labyrinths
* visual system (eyes)
* somatosensory system, especially proprioception
* the main outputs from the vestibular nuclei are:
* vestibulo-ocular:
* permitting reflex eye movements related to posture
* vestibulo-spinal which supply:
* anti-gravity muscles in the lower limbs
* reflex arcs which control gait