NAME: ODITA IFEANYICHUKWU JORDAN
MATRIC NUMBER:18/MHS02/125
DEPARTMENT:NURSING SCIENCE

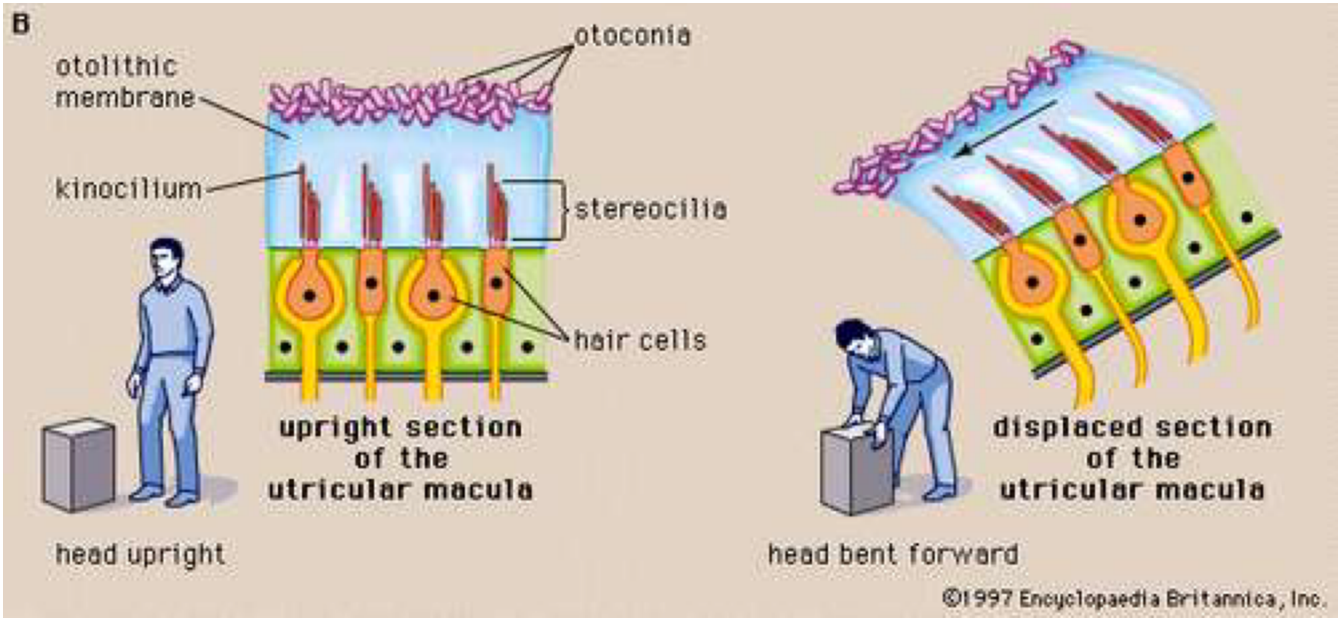
Assignment

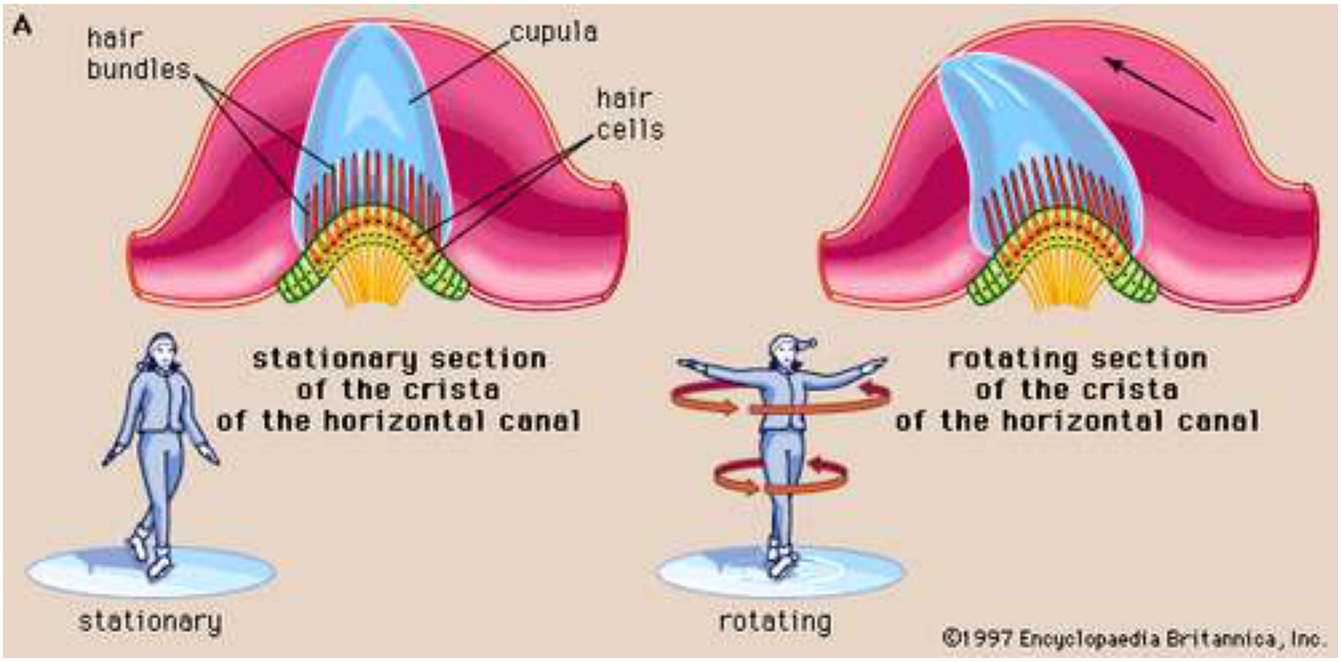
(1).Discuss the physiology of balance

Answers:

The semicircular canals and the vestibule (utricle and saccule) are concerned with balance, or equilibrium. The arrangement of the three semicircular canals, one in each plane, allows perception not only of position of the head in space but also of the direction and rate of any movement. Any change of position of head causes movement in the endolymph bathing hair cells, which distorts them and stimulates the sensory receptors in the auricle, saccule and ampullae. The resultant nerve impulses are transmitted by the vestibular nerve, which joins the cochlear nerve to form vestibulocochlear nerve. The vestibular branch passes first to the vestibular nucleus, then to the cerebellum.

The cerebellum also receives nerve impulses from the eye and proprioceptors (sensory receptors) in the skeletal muscles and joints. The cerebellum coordinates incoming impulses to form the vestibular nerve, the eyes and proprioceptors. Thereafter, impulses are transmitted to the cerebrum and skeletal muscles, enabling perception of body position and any adjustments needed to maintain posture and balance. This maintains upright posture and fixing eyes on the same point, independently of head movements.





References:

- Ross and Wilson Anatomy and physiology In health and illness textbook, Textbook by Allison Grant, Anne Waugh, and Kathleen J. W. Wilson ,13th Edition
- Britannica.com