Chapter 3

PROPRIOCEPTION

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Introduction

The definition of proprioception was made by Sherrington in 1906. He defined the person's understanding of body space position perception and awareness of body movement (1). It originated from the properties root of Latin origin. Proprius means being self-specialized (2). Caption means detection. Proprioception is defined as the afferent input of the body's sense of static or dynamic joint position (3). Proprioception allows us to understand the position of our joints when the eyes are closed and to keep our feet in balance. Proprioception is the mechanism that enables us to perform an activity correctly and properly (4).

Proprioception allows the body space position to be sensed by the central nervous system and provides responses to the joint position during movement. Stimulation begins with deep senses sensed by mechanoreceptors and reaches the central nervous system with visual and vestibular senses (5). Deep senses that stimulate mechanoreceptors; heat, touch, pressure, vibration, movement and position sense. (6) Histological studies revealed that there are different mechanoreceptors (7-9). These; Golgi tendon organ, muscle spindle, Pacinian bodies, Ruffini endings, and free nerve endings. The Golgi tendon organ is located at the end of the skeletal muscle at the junction of the tendon and the muscle. It informs the motor cortex of stop motion in case of normal joint movement is forced and excessive tension occurs. The muscle spindle is composed of intrafusal muscle fibrils in the middle of the skeletal muscles at the midpoint of the muscle. It is a structure that is sensitive to the slightest changes in muscle neck. Pacinian bodies are found where the tendon adheres to the bone. It is less sensitive to mechanical loads, sensitive to detecting different speeds. Ruffini terminations are located where the tendon attaches to the bone. It is sensitive to mechanical loads.

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