

Postural Control and Neuromuscular Training



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Posture control (PC) is maintained by a complex central sensorimotor system which integrates information from the vestibular, visual, and somatosensory systems. These information will be projected to descending pathways to adjust balance and posture by the posture-stabilizing muscles of leg and trunk instantaneously, with the proper sensory and motor mechanisms that generate an appropriate corrective torque. In the first part of this lecture, we will briefly review the sensory-motor integration in PC, and explaining how proprioceptive somatosensory system works.; In the second part of this lecture, we will introduce the importance of well PC for athletes, factors affecting PC, implying the neuromuscular deficits in female, emphasizing the scientific rationale for neuromuscular training (NT) for sports.; In the last part of this lecture, we will finalizing the effects of NT on motor units, the neural adaptations to NT with related scientific reports, and the guidelines for NT in improving PC for athletes.