

# [Intro to exercise science notes](https://assignbuster.com/intro-to-exercise-science-notes/)

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Movement of the body Adaptations to movement How has EXECS evolved? Role of Pays DEHarvardFatigue Laboratory Krause-Weber test results Professional associations American College of Sports Medicine (CACM) Developed as a " unique blend of physicaleducation, medicine, and physiology" Provides significant public outreach Works to shape public policy Disseminates scholarly research Broad-based coursework Anatomy and physiology Biological sciences Chemistry and biochemistry Human development andpsychologyMathematicsand statistics Physics

Nervous System Primary functions Control systems of the body Primary component - neuron Responds to acute challenges of the body Important consideration in: Disease conditions (e. G. Cerebral palsy) Sport performance (e. G. Controlling movement) Afferent Nerves: send signals to the brain Efferent Nerves: send signals from brain to the organ/muscle Muscular System Primary function: Provide movement Primary component Types of muscle: Skeletal Cardiac Smooth - muscle fiber Hypertrophy: increase in size of muscle Atrophy: decrease in size of muscle

Skeletal System Primary functions: Structural framework for the body Protects underlying organs and tissues Provides a lever system for movement Serves as a storage area for minerals Primary component - minerals and cells bone Osteoporosis is a serious disease condition: bones get brittle/weak Estonian: when bones get soft Cardiovascular System Transporting oxygen, nutrients, hormones, electrolytes, and drugs Removing waste products from the body Primary component - heart, blood vessels, and blood Urinary System Elimination of waste products

Regulation of fluid volume, electrolyte composition, and pH Primary component - kidney Hypertension can be influenced by increasing the amount of fluid removed by the kidneys Endocrine System Regulation of physiologic function and systems of the body Primary components - endocrine glands Development of insulin resistance leads to a disease condition known as metabolic syndrome Go over the clustering of metabolic syndrome risk factors Exercise Physiology: Study of the functional and physiologic responses and adaptations that occur during and following physical activity and exercise.