Neuromechanics of Human Movement-5th Edition

Roger Enoka
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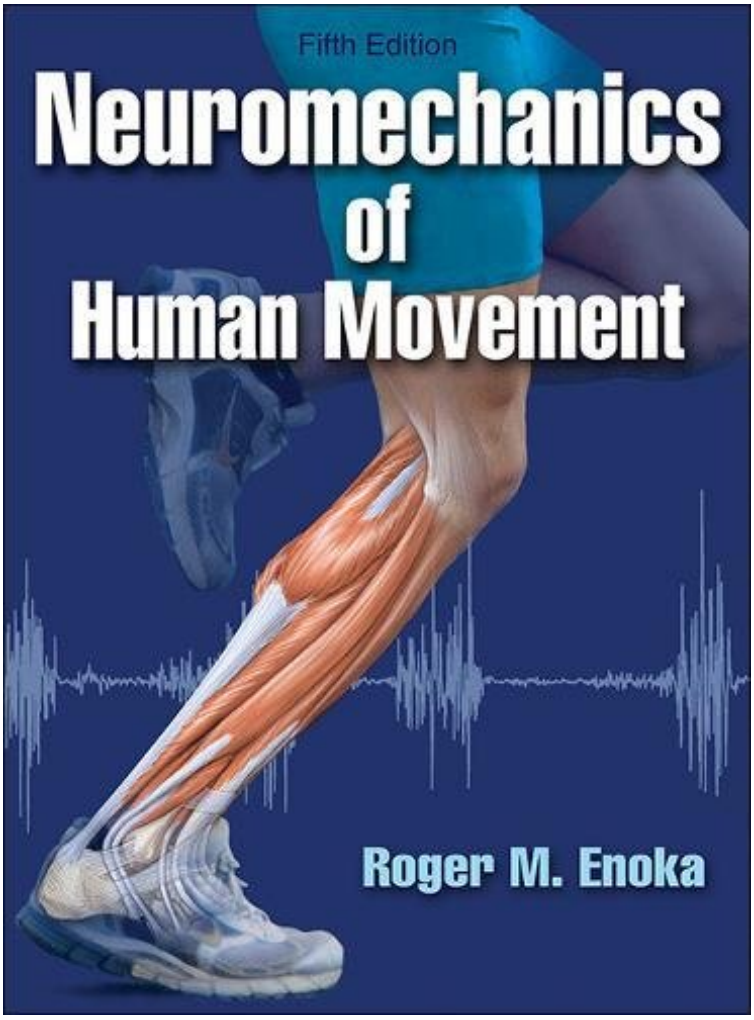

#410116 in Books imusti 2015-03-25Original language:EnglishPDF # 1 11.00 x 1.10 x 8.50l, 3.10 #File Name: 1450458807504 pagesHuman Kinetics Publishers | File size: 19.Mb

Roger Enoka : Neuromechanics of Human Movement-5th Edition before purchasing it in order to gage whether or not it would be worth my time, and all praised Neuromechanics of Human Movement-5th Edition:

0 of 0 people found the following review helpful. Five StarsBy Damien SmithThorough and challenging!

Neuromechanics of Human Movement, Fifth Edition, draws on the disciplines of neurophysiology and physics to explore how the nervous system controls the actions of muscles to produce human motion. This contemporary approach is much different from the traditional approach, which focuses solely on mechanics and does not consider the role of the sensorimotor system in the control of human movement. Authored by Roger Enoka, a widely recognized and esteemed scholar in neuromechanics, this influential text is an essential resource in biomechanics, motor learning, and applied physiology, making complex information accessible to students. With material based on updated research

in the field, this fifth edition provides a scientific foundation to the study of human movement, and as such it uses precise terms and definitions when discussing ideas. An appendix showcases both the base and derived units of the metric system as well as other learning tools, including a glossary of terms and a comprehensive list of the equations presented throughout the text. The text includes 70 practical learning examples, giving students the opportunity to work through a variety of problems and explore current research and applications. Content is visually reinforced with 341 figures, including specific illustrations of the neuromechanics involved in sport and rehabilitation movements. References have been streamlined and moved to the end of each chapter to improve readability. And instructors will benefit from an image bank that includes most of the figures and tables from the text to use in course materials. Significant content updates in the fifth edition present information relevant for both research and clinical environments, including more contemporary examples throughout the text and a new chapter on movement analysis. The following are additional key changes: New figures that highlight and clarify key points New information on energy costs Debunking the concept of motor unit types Detailed information on the center of mass trajectory Explanation of neuromodulation Additional content on PET imaging to help examine activity intensity To encourage a comprehensive learning experience, this updated edition follows a logical progression where each part builds on the material from the previous section. It begins with an introduction to the biomechanical terms and concepts commonly used to describe movement, focusing on the relation between force and motion. Part II deals with the motor system and introduces essential concepts from neurophysiology required for understanding how movement is produced by the nervous system. Part III focuses on adaptability of the motor system, including the acute and chronic changes that can occur in response to deviations in an individuals level of physical activity. The fifth edition of Neuromechanics of Human Movement provides a scientific basis for the study of human movement while continuing to expand current knowledge in the fields of biomechanics and neurophysiology. By integrating these fields in a unique framework, this text offers professionals and students both valuable clinical information and inspiration to deepen their study of human movement.

This remains a leading book for the study of integrated neurophysiology and biomechanics at the upper-collegiate level. Readers who have prior knowledge in this field will find the content challenging, while highly educational. -- Doodys Book (5-star review) About the Author Roger M. Enoka is professor in the department of integrative physiology at the University of Colorado Boulder and a professor in the departments of medicine (geriatrics) and neurology at the University of Colorado Denver. He is also the director of the Neurophysiology of Movement Lab. Previously he was a biomechanist in the department of biomedical engineering at the Cleveland Clinic Foundation and a professor in the department of physiology at the University of Arizona. For more than 30 years, Enoka has focused his research and teaching on the combination of biomechanics and neurophysiology of movement. Internationally known for his achievements as a teacher and researcher, Enoka is the author of approximately 350 journal articles, books, chapters, reviews, and abstracts, including the frequently cited article Neurobiology of Muscle Fatigue published in the Journal of Applied Physiology. He is a member of the American College of Sports Medicine, American Physiological Society, International Society of Biomechanics, and Society for Neuroscience. He is also a past president and current member of the American Society of Biomechanics.