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Nota di contenuto	Chapter 1. Historical Perspectives of Regenerative Rehabilitation: Recovering and Restoring Functional Capacity -- Chapter 2. Considerations for Small Animal Physical Rehabilitation -- Chapter 3. Regenerative Rehabilitation for Nonlethal Muscular Dystrophies -- Chapter 4. Regenerative Rehabilitation for Duchenne Muscular Dystrophy -- Chapter 5. Regenerative Rehabilitation in Sarcopenia, Dynapenia and Frailty -- Chapter 6. Pathophysiology of Volumetric Muscle Loss and Targets for Regenerative Rehabilitation -- Chapter 7. Novel Cell-Based Therapeutics for Diseases of the Heart and Skeletal

Muscle -- Chapter 8. Regenerative Rehabilitation Strategies for Complex Bone Injuries -- Chapter 9. Biomaterials in Connective Tissue Regeneration and Rehabilitation -- Chapter 10. Ultrasound Stimulation of Tendon Healing: Current Strategies and Opportunities for Novel Therapeutic Approaches -- Chapter 11. Mechanical Stimulation as Both the Cause and the Cure of Tendon and Ligament Injuries -- Chapter 12. Methods to Enhance the Beneficial Effects of Exercise in Individuals with Spinal Cord Injuries -- Chapter 13. Emerging Approaches for Regenerative Rehabilitation Following Traumatic Brain Injury.

Sommario/riassunto

This contributed volume presents the current state of research on regenerative rehabilitation across a broad range of neuro- and musculoskeletal tissues. At its core, the primary goal of regenerative rehabilitation is to restore function after damage to bones, skeletal muscles, cartilage, ligaments/tendons, or tissues of the central and peripheral nervous systems. The authors describe the physiology of these neuro- and musculoskeletal tissue types and their inherent plasticity. The latter quality is what enables these tissues to adapt to mechanical and/or chemical cues to improve functional capacity. As a result, readers will learn how regenerative rehabilitation exploits that quality, to trigger positive changes in tissue function. Combining basic, translational, and clinical aspects of the topic, the book offers a valuable resource for both scientists and clinicians in the regenerative rehabilitation field.
