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Nota di contenuto	1. Human Evolution and Physical Exercise: The Concept of Being "Born to Run" -- 2. Cell Morphology and Function: The Specificities of Muscle Cells -- 3. The Cell Membrane of the Contractile Unit -- 4. Gene Polymorphisms and Athletic Performance -- 5. Mitochondrial and Non-mitochondrial Studies of ATP Synthesis -- 6. Excessive Nutrients and Regional Energy Metabolism -- 7. Muscle Biopsy To Investigate Mitochondrial Turnover -- 8. Introduction to the Tracer-Based Study of Metabolism In Vivo -- 9. Physical Activity and Inflammation -- 10. The HPA Axis and the Regulation of Energy Balance -- 11. Physical Exercise in Obesity and Anorexia Nervosa -- 12. Physical Exercise and Transplantation -- 13. The Baboon as a Primate Model To Study the Physiology and Metabolic Effects of Exercise -- 14. Specific physical exercises adapt to immune-modulate the non-diabetic and the diabetic individual and reduce the likelihood of contagion by respiratory viruses like SARS-2 coronavirus -- 15. Physical Exercise and Sexual Dysfunction -- 16. Specific physical exercises adapt to patients with

obesity or with diabetes mellitus (type 1 and type2) -- 17. Hypnosis and Sport -- 18. Physical activity and diabetic retinopathy.

Sommario/riassunto

This new edition discusses classical aspects of cellular physiology and the metabolism of physical exercise, as well as novel topics like exercise in transplantation and exercise in beta-cell failure, which mark the frontiers of research in sport-related sciences and research. The team of authors together with the editor are world-renowned experts in the field of physiology and metabolism applied to sport sciences. In order to make the book answering also to current pandemic clinical issue, this second edition includes new chapters, specifically dealing with COVID-related issues. Exercise physiologists, biologists and physicians will benefit from this book. However, the comprehensive nature of the content makes this publication suitable also for university classes of graduate and undergraduate student.
