

# Preface

Physical activity exerts an important influence on the endocrine system, modulating synthesis and secretion of several hormones. Almost every organ and system in the body is affected by physical activity and exercise, mainly through the endocrine and neuroendocrine system. Mode, intensity, and duration of the exercise bout, age, gender, and fitness level of the individual as well as environmental and psychological factors may affect the endocrine response to physical activity.

On the other hand, several hormones are able to influence physical performance and body composition. Thus, a biunivocal interrelationship between exercise and hormones exists.

In this book, new developments on metabolic and endocrine response to exercise are revised and the “hot topic” of hormonal doping in sports is introduced. In the past decades, hormone abuse has become a widespread habit among professional and – most of all and more frequently – recreational athletes. A substantial part of this volume is devoted to the effects of exogenous hormones on performance. Anabolic steroids, growth hormone and erythropoietin properties, use and misuse in sports are widely described. Specific methods to detect hormone abuse are presented and discussed.

The contributors to this volume are well-known experts and dedicated researchers in the fields of sports medicine and endocrinology, endocrine physiology, pharmacology, and doping detection.

The purpose of this volume is to provide all professionals involved in sports medicine and endocrinology a state-of-the-art overview of the complex interactions between physical activity and the endocrine system and to focus on hormone abuse in sports at competitive and recreational level highlighting its negative consequences for long-term health.



Hormone Use and Abuse by Athletes

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