As will be discussed many times throughout this book, the Female Athlete Triad defines the interrelationship between menstrual dysfunction, low energy availability, and decreased bone mineral density. As is captured in several of the chapters, while some female athletes meet the psychiatric criteria for an eating disorder, others exhibit a milder energy deficit. However, all are at risk for premature bone loss and/or compromised attainment of peak bone mass. As co-editors, given our training and expertise in bone health across the age spectrum, we represent both providers of children, adolescents, and adults. It is important to recall that some skeletal health experts consider osteoporosis to be a “pediatric disease with geriatric consequences” given that the underpinnings of this disease occur during early to late adolescence [1]. This statement requires careful reflection when considering female athletes and the potential long-term health consequences. Physicians and health care professionals who see children and adolescents may have the opportunity to introduce strategies that augment peak bone mass, while providers of adults need to be cognizant of factors that occurred during childhood and adolescence that may compromise skeletal health during adulthood.

The organization of this book is geared towards clinicians who care for female athletes and researchers whose discoveries impact this important field, as well as translate back to clinical care. The book begins with insights on the epidemiology of the Triad and comments on the incidence of eating disorders among female athletes. Patients with these diagnoses represent the far end of the spectrum in terms of an energy deficit, which thus places them at high risk for health complications. While several of the chapters discuss bone health given our keen interest in this area as both clinicians and clinical investigators, we also try to provide an overview of other health complications. A chapter is devoted solely to stress fractures given how frequent this injury is among female athletes. Another complementary chapter discusses the musculoskeletal approach to the female athlete written from the vantage point of an orthopedic surgeon. Our authors come from a wide variety of disciplines which will hopefully broaden the applicability of the discussions captured herein. They include pediatric and adult endocrinologists, specialists in adolescent health and sports medicine, athletic trainers, gynecologists, orthopedic surgeons,
kinesiologists, dietitians, psychologists, and epidemiologists. Each of their perspectives is unique and important to consider as we think carefully about the complex issues that a female athlete faces.

We end the book outlining a research agenda and speculating on advances that will move this field forward and advance care for our patients. Challenges arise in understanding the most accurate way to evaluate bone health, both for the growing adolescent athlete, as well as for the active adult woman. New technologies are enabling us, for the first time, to catch a glimpse of bone structure and microarchitecture and assess skeletal strength as is discussed within this book. These new examinations are affording enhanced insight into fracture risk, the ultimate outcome of interest for athletes, for it is fractures that leave athletes sidelined and away from the activities they enjoy.

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Reference

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