Editorial

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Welcome to a special issue of *Journal of Science in Sport and Exercise (SSEJ)* focussing on the topic of training young athletes. Fostering a well-rounded development pathway for young athletes remains a “hot topic” within the fields of pediatric exercise science, sport science and medicine, and strength and conditioning. Leading position statements on long-term athletic development acknowledge that all youth, irrespective of their ages, abilities or aspirations, should engage in appropriately designed training programs that promote physical fitness and psychosocial wellbeing [2, 7]. Those working within pediatrics have a unique ability to positively influence the athletic development of talented young athletes, children engaged in recreational physical activity, or those youth that are physically inactive.

Merging science and practice is important to help build sporting pathways and to design appropriate training programs that can develop young athletes in a holistic manner. To that extent, we have brought together an outstanding collection of academics that have helped us compile a two-part special issue on the development and training of young athletes. Across both parts, we have endeavoured to include a blend of review articles and original, empirical studies that touch upon a broad range of topics related to the young athlete. It is hoped that the collection of manuscripts will provide scientific insights and practical strategies that readers can apply immediately within their programs of research and applied practice.

In part I, this issue, Professors Armstrong and Welsman provide an excellent review that challenges current conventions surrounding the development of aerobic and anaerobic fitness in youth athletes [1]. This is followed by a systematic review from Pedley et al. that reviews the utility of various kinetic and kinematic jumping and landing variable for predicting at heightened risk of injury [10]. Next is a narrative review from Diekfuss et al. that examines whether central nervous system plasticity can be targeted to reduce lower limb injury risk in young athletes [4]. Following these reviews, a series of empirical studies are presented that address different aspects of developing young athletes. Moeskops et al. provide novel data that examine the influence

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of maturity status on kinetics and vaulting performance in young female gymnasts [9]. Uthoff and Cronin explore the load-velocity relationships during backward and forward sled pulling in school-aged boys [11], while Gillen et al. identify the relationships between leg extension strength, explosive strength, muscle activation and growth and their ability to predict vertical jump performance [5]. McNarry et al. investigate the modulatory role of both age and maturity status on predictors of performance in young swimmers [8]. Notwithstanding the obvious focus directly on the young athletes themselves, it is also important to consider the role and potential influence of significant others to the development process for young athletes. To this extent, Hill et al. provide original insights into coaches' evaluations of match performance in academy soccer players before, during and after the adolescent growth spurt [6], while De Ste Croix et al. report on the differences in knowledge and understanding, attitude and confidence of coaches to deliver injury prevention training in a sample of three European countries [3].

It goes without saying that the strength of this two-part special issue is salient upon the quality of the authored manuscripts. The reviews and empirical studies take considerable time and effort to plan, execute and compose, and we would personally like to thank all lead authors and their authorship teams for their outstanding contributions. We would also like to express our sincere thanks to Deputy Editor-in-Chief, Dr. Steven Fleck for first entrusting, and then encouraging us throughout the editorial process of this two-part series. We would also like to thank all reviewers and the SSEJ editorial staff for working the special issue to press. Finally, we would like to thank all of the readers who work tirelessly to inspire and prepare our young athletes for the future!

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