CHAPTER 3: MATURATION AND STRENGTH OF ADOLESCENT SOCCER PLAYERS

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INTRODUCTION

Sport training during growth depends on the morphological characteristics and stage of maturation. In boys the association between biological maturation and various anthropometric characteristics is most striking up to about 16 years of age. Motor skill and physical fitness tend to be optimized during adolescence, especially strength and power, which depend in part on fat-free mass (FFM). The onset and termination of adolescence, however, vary considerably among boys, and this may confound the relationship between maturity status and motor performance.

Biologically more mature boys often achieve better performance results and are commonly included among young athletes in baseball, football, soccer, swimming, tennis, and ice hockey (Beunen et al., 1997). However, performance differences among boys of contrasting maturity status within specific age groups are somewhat reduced. This may be related to three factors: the nature of the biological maturation variables and errors of assessment; the specificity of tests used to evaluate motor performance, which may be related to sport modality and may be influenced by training and learning; and the use of mean comparisons which limits appreciation of variability among individuals.

This study evaluates different methods of maturity assessment in young soccer players in an attempt to identify the best combination of indicators that can differentiate among individuals of contrasting maturity status during adolescence. It also considers the association between morphological and maturational characteristics, and muscular strength to estimate variation associated with maturity status.