

DIGIT RATIO (2D:4D): AN INDICATOR OF SERUM TESTOSTERONE AND PRENATAL PROGRAMMING OF SPECIFIC SPORTS

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ABSTRACT

Researches has demonstrated that finger ratio (2D:4D) is negatively correlated with prenatal testosterone and traits beneficial to athletic skill, such as power, endurance and strength. The relationship between digit ratio and sports requiring calmness, concentration, accuracy and consistency like archery has not been defined. The purpose of this study was to explore the relationships of digit ratio and serum testosterone in players of handball and archery, which require different physiological, psychological and physical compositions. Digital finger ratio and serum testosterone (total and free testosterone) was measured in male handball (N -76 & age – 21.2±1.63) and archery (N – 62 & age – 20.2±1.14). A significant difference (p = 0.01) in the finger ratios were found between players of handball and archery. Serum concentrations of free and total testosterone were significantly higher in the handball players (M - 29.65 pg/ml & 636.65ng/dl) then archers ((M - 19.36 pg/ml & 529.25ng/dl). A significant negative relationship between serum testosterone and digit ratios were found in the players of both games. This research extends related evidence that the 2D:4D ratio may help indicate potential athleticism or competition-level achievement, but the external validity may be limited to only specific sports.