

Cardiac Dimensions in Trained Adolescent Boys are not Different from Controls.

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The purpose of this study was to present findings of echocardiographic measurements made on adolescent male swimmers (SWM, N=18) soccer players (SOC, N=18) and skeletally-age-matched controls (CON, N=16). The SWM and SOC have been training for 1-4 yrs, 7-8 hours/week. Cardiac dimensions were measured by M-mode echocardiography at end-diastole. Values (mean (SD)) of skeletal age, body mass, height, fat content and VO₂ max were 12.5 (1.9), 12.8 (1.1) & 12.6 (1.6) yrs; 42.9 (13.5), 41.4 (8.4) & 46.8 (8.9) kg; 151.7 (13.7), 153.9 (9.8) & 152.1 (9.5) cm; 14.5 (8.2), 11.7 (6.4) & 20.2 (7.2) %; and 48.6 (6.6), 55.5 (5.8) & 48.1 (5.6) ml/kg. min, for SWM, SOC & CON, respectively. The results of this study showed no significant differences in cardiac dimensions normalized to body surface area (mm/m²) between the SWM, SOC & CON. Such dimensions included LVPW: 5.78 (0.86), 5.37 (0.91) & 5.31 (0.70); IVS: 5.78 (0.43), 5.78 (0.86) & 5.44 (0.84); LVIDd: 32.8 (4.3), 33.8 (3.0) & 32.1 (3.0); RVD: 13.9 (2.8), 13.7 (3.4) & 14.7 (2.7); and Ao: 17.4 (2.8), 17.7 (2.4) & 16.5 (2.2), for SWM, SOC & CON, respectively. It can be concluded that moderate sport training during early and mid-adolescent years did not lead to significant changes in cardiac dimensions of adolescent boys.