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Swimming and Spinal Deformities: A Cross-Sectional Study.

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Author information

Abstract

OBJECTIVE: To compare the prevalence of **spinal deformities** and low back pain (LBP) in adolescent competitive swimmers and normal controls.

STUDY DESIGN: This was a **cross-sectional study** with convenience sample of 112 adolescent competitive swimmers (62 females) compared with 217 students (106 females) of the same age (12.5 years). We designed a questionnaire to collect data on LBP and measured the angle of trunk rotation with a Bunnell scoliometer to screen for scoliosis, along with the plumbline distances for kyphosis and lordosis. Clinical cutoffs defined in the literature for detection of **spinal deformities** were applied. Analyses were performed using the t test and χ^2 test, and ORs and 95% CIs were calculated.

RESULTS: Swimming was found to increase the risk of trunk asymmetries (OR, 1.86; 95% CI, 1.08-3.20). **Swimming** also increased the risk of hyperkyphosis (OR, 2.26; 95% CI, 1.35-3.77) and hyperlordosis (OR, 2.24; 95% CI, 1.06-4.73), and increased LBP in females by 2.1-fold (95% CI, 1.08-4.06).

CONCLUSION: Swimming is associated with an increased risk of trunk asymmetries and hyperkyphosis. Although **swimming** has been considered a complete sport and a treatment option for scoliosis, our data contradict that approach, and also show a higher prevalence of LBP in females.

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