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Tennis is not dangerous for the spine during growth: results of a cross-sectional study.

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Abstract

PURPOSE: Tennis is widely practiced by adolescents in many countries. Many spinal deformity experts consider this activity, together with other asymmetrical sports, as risk factors for scoliosis development even though scientific data are missing. The aim of the present study was to verify the prevalence of spinal deformities and LBP in adolescent competitive **tennis** players compared to healthy controls.

METHODS: We designed a cross-sectional study. A convenience sample of 102 adolescent **tennis** players (52 girls) was compared to 203 scholars (102 girls) of the same age (12 years). We used a questionnaire to collect data on LBP and we measured the ATR to screen for spinal deformities and the plumb line distances for kyphosis (C7 and C7 + L3) and lordosis (L3).

RESULTS: We found similar spinal deformities in both groups: ATR female: $3.2^\circ \pm 1^\circ$ (**tennis**) versus $2.8^\circ \pm 1^\circ$ (school), NS; ATR males: $2.8^\circ \pm 1^\circ$ (**tennis**) versus $2.6^\circ \pm 1^\circ$ (school), $p < 0.05$. No differences were found for kyphosis and lordosis. Low back pain prevalence was similar for both groups, but a significant difference was found for limitation of usual activity, which was higher for **tennis** players than controls.

CONCLUSION: The correlation between **tennis**, an asymmetric sport, and spinal deformities that has been postulated by many experts was not confirmed by our data. There was no correlation between **tennis** and LBP, even if there were some differences among groups for limitations of the daily activities. Adolescent competitive **tennis** showed to be a safe sport without an increased risk of spinal deformities and LBP.

KEYWORDS: Iperkyphosis; Low back pain; Scoliosis; Sport; **Tennis**

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