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## **Respiratory function in adolescents with idiopathic disorders of the spinal column.**

Paediatric lung diseases

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**Introduction and Background.** Idiopathic spinal disorders occur mainly in adolescence, and little is known about their effect on lung development.

**Aims and Objectives.** The aim of this study was to evaluate the lung function in these cases in comparison with the volumes of normal age-sex matched children.

**Method.** 87 children with idiopathic scoliosis (72 girls, 84%, mean age 13y ± 1.6y) and 27 children with idiopathic kyphosis (11 girls, 40.7%, mean age 13.4y ± 1.6y) were reviewed. Thoracic cage enlargement, oxygen saturation and respiratory volumes were recorded prior to any therapeutic intervention and compared to normal children.

**Results.** Seventeen (19.3%) cases had thoracic, 47 (27.6%) cases thoracic and lumbar and 24 (54%) cases lumbar scoliosis. Forty children (46%) suffered from mild, 39 (44.8%) moderate and 8 (9.2%) severe scoliosis. Fourteen (51.8%) children had moderate and 13 (48.2%) severe kyphosis. A significant difference of FVC and FEV1 was found among children with thoracic scoliosis and kyphosis as well as among children with mild / moderate and severe scoliosis. In addition, there was a significant difference between lung volumes in the general population compared to the children with scoliosis, which was not found in children with kyphosis.

**Conclusions.** Thoracic scoliosis appears to significantly affect children's respiratory function according to the severity, such an effect is not encountered in children with kyphosis.