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Physical exercise and adolescent idiopathic scoliosis: results of a comprehensive systematic review of the literature

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Background

A previously published systematic review (2003) documented evidence on the efficacy of specific physical exercises to reduce progression of adolescent idiopathic scoliosis.

Aim

To verify, if the indications for treatment with specific exercises for AIS, has changed in these years.

Study design

Systematic review.

Methods

A bibliographic search with strict inclusion criteria has been performed on the main electronic databases and through extensive hand search. We retrieved 19 studies: 1 randomised (RCT) and 8 controlled studies. A methodological and clinical evaluation has been performed.

Results

The 19 papers included 1654 treated patients and 688 controls. The highest quality study (RCT) compared 2 groups of 40 patients, showing an improvement of the curve in all treated patients after 6 months. We found 3 papers on Scoliosis Intensive Rehabilitation (Schroth), 5 on passive autocorrection-based methods (Schroth, sideshift), 4 on active autocorrection-based approaches (Lyon and SEAS) and 5 with no autocorrection. Apart from one, all studies confirmed the efficacy of exercise in reducing the progression rate and/or improving the Cobb angles.

Conclusion

Exercise efficacy is proven by an RCT and several controlled studies. In 5 years, 8 more papers have been published in indexed literature coming from all over the world and proving that interest on exercise does not come only from Western Europe.

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