

## Spinal deformity and malocclusion association is not supported by high-quality studies: results from a systematic review of the literature.

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### Erratum in

Correction to: **Spinal deformity and malocclusion association is not supported by high-quality studies: results from a systematic review of the literature.** [Eur Spine J. 2019]

### Abstract

**BACKGROUND:** Several reports in the **literature** have suggested a causative **association** between oral occlusion and **spinal deformity** such as scoliosis and Scheuermann's disease or kyphosis. Based on these findings, a growing number of adolescents with **spinal deformity** receive orthodontic treatment, supposing a beneficial effect on the spine.

**OBJECTIVE:** The aim of this study was to verify the **association** between **spinal deformity** and **malocclusion** in the orthopedic population and potential effect of orthodontic treatment on the **spinal deformity**.

**METHOD:** The databases: MEDLINE, CINAHL, EMBASE, Cochrane Register, OTseeker and ScienceDirect were searched up to August 2017 for **studies** reporting on associations between **spinal** and occlusal conditions. Case series, cohort, case-control **studies** and randomized clinical trials were considered for analysis. Two reviewers independently selected **studies**, conducted quality assessment and extracted **results**. Methodological quality was assessed using MINORS score.

**RESULTS:** Nine publications reporting on 1424 patients were included. **Studies** were two case series, five case-control **studies**, one cohort study and one randomized clinical trial. The methodological quality was poor in 8/9 **studies**.

**CONCLUSION:** Evidence from three low-quality **studies** suggests an increased prevalence of occlusal dysfunction in patients with known **spinal deformity**, but the conclusions have a high risk of bias. No evidence of beneficial effects of orthodontic treatment on **spinal deformity** was found. These slides can be retrieved under Electronic Supplementary Material.

**KEYWORDS:** Dental occlusion; Kyphosis; Mandibular **malocclusion**; Scheuermann's disease; Scoliosis; Spine **deformity**; **Systematic review**; Temporomandibular joint

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