

**Centralization and directional preference: an updated systematic review with synthesis of previous evidence**

MAY, Stephen, RUNGE, Nils and AINA, Alessandro

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**Background:** Centralization and directional preference are common management and prognostic factors in spinal symptoms.

**Objective:** To update the previous systematic review.

**Design:** Systematic review to synthesis multiple aspects of centralization and directional preference.

**Method:** Contemporary search was made of multiple databases using relevant search terms. Abstracts and titles were filtered by two authors; relevant articles were independently reviewed by two authors for content, data extraction, and quality.

**Results:** Forty-three additional relevant articles were found. The quality of the studies, using PEDro for randomized controlled trials, was moderate or high in six out of ten RCTs; moderate or high in six out of 12 cohort studies. Prevalence of centralization was 40%, the same as the previous review. Directional preference prevalence was only 26%, much lower than the previous review; but neither clinical response was recorded in about a third of patients. Centralization and directional preference were confirmed as key positive prognostic factors, certainly in patients with low back pain, but limited evidence for patients with neck pain. There was no evidence that these might be important treatment effect modifiers. One study evaluated reliability, and found generally poor levels, despite training.

**Conclusions:** Centralization and directional preference are worthwhile indicators of prognosis, and should be routinely examined for even in patients with chronic low back pain. But they do not occur in all patients with spinal problems, and there was no evidence that they were treatment effect modifiers.