

## **The effect of manipulative fascia-treatments in musculoskeletal pain (FTMP). Result of as systematic review.**

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### **Background:**

The fascia-network plays an important role in the physiology and pathophysiology of the musculoskeletal system. In the past years fascia as sensory organ became target of scientific investigation of musculoskeletal pain. It was hypothesised that manipulative techniques can be sufficient for an effective treatment of musculoskeletal pain in different conditions. This systematic review was aimed to evaluate the actual status in clinical relevant studies in this interesting field of orthopaedic treatments.

### **Method:**

This review was performed in strict accordance with the PRISMA criteria (Preferred Reporting Items for Systematic Reviews and Meta-Analyses).

We performed a systematic literature review (PubMed, Cochrane, and Web of Science). In the databases, the search strategy was [Fascia] OR [tractus] AND [pain].

Criteria for inclusion were clinical-outcome studies (RCT, Case-Control, case series). Only trials in English or German were included. Other systematic reviews and meta-analyses as well as narrative reviews, editorials, comments and congress reports were excluded from this study.

### **Results:**

A total of 1,739 publications were found at deadline 02.01.2015. A total of 1,622 papers were excluded after title/abstract review. A full text review was performed in the remaining 117 papers. A total of ... studies were excluded because these didn't address the clinical outcome: case reports only (n=3); anatomical or experimental studies (n=12); diagnostic or imaging studies (n=17); methodical studies without outcome evaluation (n=66). In a number of studies non-manipulative techniques were evaluated: ultrasound (n=2); injections (n=6); operative treatments (n=11).

General there were no prospective randomized studies with long-term follow-up. The large heterogeneity (patient-selection, clinical diagnosis, criteria for the measurement of the outcome) of the included studies make it impossible to perform a meta-analysis.

Most studies were performed in patients who were suffering from hindfoot problems (achillodynia (n=1); plantar-fasciitis (n=10)). These studies clearly proofed the positive clinical effect of fascia manipulative treatments in comparison to the control groups (injection, ultrasound, operative). In a total of 3 studies the effect of FTMP produced a positive effect regarding to the function but not clearly to shoulder pain. The same can be reported about the effect of FTMP in hip (Iliopsoas-pathologies) problems (n=4 studies). Other studies about neck pain (n=2), epicondylitis (n=1), general fibromyalgia (n=3), low-back-pain (n=2) reported about heterogeneous effects of FTMP in comparison to the control groups.

### **Conclusion:**

Currently there is a moderate-positive evidence for the positive clinical effect of manipulative fascia-techniques in the treatment of musculoskeletal pain. But the current evidence only demonstrates these effects in tendency. For better evidence prospective long-term studies with clear inclusion and outcome criteria urgently are needed.