Non-Pharmacologic Therapies for Acute and Chronic Low-Back Pain

Spinal manipulation is one of the non-invasive therapies found effective for treating acute and chronic low-back pain.

Chou R, Huffman LH. Nonpharmacologic therapies for acute and chronic low-back pain: A review of the evidence for an American Pain Society/American College of Physicians clinical practice guideline. Ann Intern Med *2007;147:492-504.*

THE OBJECTIVE of this clinical practice guideline is to evaluate benefits and adverse effects of acupuncture, back schools, psychological therapies, exercise therapy, functional restoration, interdisciplinary therapy, massage, physical therapies (interferential therapy, low-level laser therapy, lumbar supports, shortwave diathermy, superficial heat, traction, transcutaneous electrical nerve stimulation and ultrasonography), spinal manipulation and yoga for acute or chronic low-back pain (with or without leg pain).

THIS STUDY conducted a search of English-language studies through MEDLINE and the Cochrane Database of Systematic Reviews, in addition to hand-searching reference lists and additional citations recommended by experts. Systematic reviews and randomized trials of one or more of the above therapies that reported pain outcomes, back-specific function, general health status, work disability or patient satisfaction were selected for detailed analysis.

RESULTS

- For acute low-back pain (less than 4 weeks' duration), only the use of superficial heat and spinal manipulation was supported by evidence. There is good evidence for moderate benefits of heat, and there is fair evidence for small to moderate benefits of spinal manipulation.
- There is good evidence that spinal manipulation, cognitive-behavioral therapy and interdisciplinary rehabilitation are all moderately effective for chronic or sub-acute (more than 4 weeks' duration) low-back pain. Benefits over placebo, sham therapy or no treatment averaged 10 to 20 points on a 100-point visual analog pain scale, 2 to 4 points on the Roland–Morris Disability Questionnaire, or a standardized mean difference of 0.5 to 0.8.
- There is good evidence that exercise has small to moderate effects on chronic or sub-acute low-back pain (10 points on a 100-point visual analog scale).
- The use of acupuncture, massage, yoga (Viniyoga) and functional restoration for treating chronic low-back pain is supported by fair evidence.
- Back schools, interferential therapy, low-level laser therapy, lumbar supports, TENS, traction and ultrasonography have not been shown to be effective for chronic, sub-acute or acute low-back pain.

RECOMMENDATIONS

When choosing non-invasive therapies for treating low-back pain, clinicians should consider patient preferences, cost, convenience and availability of skilled providers. They should avoid interventions that have not been proven effective.

CAVEATS

Although serious adverse effects seemed to be rare, adverse effects were poorly reported. Research is needed on optimal sequencing of therapies, and methods for tailoring therapy to individual patients should be developed further.

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The research described in this column comes from credible, peer-reviewed journals. It is intended to serve as a resource for practitioners and patients to assist them in consideration of various health care options and does not replace clinical judgment.