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Reference: Qaseem et al. Noninvasive Treatments for Acute, Subacute, and Chronic Low Back Pain: A Clinical Practice Guideline from the American College of Physicians. *Ann Intern Med.* 2017; 166:514-530

Question: What are the best treatment options for low back pain?

Introduction: Low back pain is a frequent cause for a visit to a physician in America. The total cost attributed to low back pain in 2006 was estimated at \$100 billion. Acute back pain is classified as less than 4 weeks, subacute is 4-12 weeks and chronic is lasting more than 12 weeks. The purpose of this guideline was to provide treatment guidance for back pain based on efficacy and safety of pharmacologic and non-pharmacologic treatments available.

Methods: A systematic review of literature was conducted on studies published from January 2008- November 2016. Data was combined when possible using meta analysis. The study population included adults (18 and older) with acute, subacute, or chronic nonradicular low back pain, radicular low back pain or symptomatic spinal stenosis. They evaluated pharmacologic and non-pharmacologic treatments. Outcomes evaluated included reduction of back pain, improvement in function, quality of life, ability to return to work, number of back pain episodes, patient satisfaction and adverse effects.

Results: Recommendations for acute or subacute back pain: most patients will improve over time so ideally non-pharmacologic treatment will be chosen. The recommendation is for superficial heat (moderate evidence), massage, acupuncture or spinal manipulation (low evidence). If pharmacologic treatment is desired NSAIDs and skeletal muscle relaxants should be chosen (moderate evidence). They recommend against using steroids to treat acute low back pain.

Recommendations for chronic low back pain: Initially select non-pharmacologic treatment with exercise, multidisciplinary rehab, acupuncture, mindfulness-based stress reduction (moderate evidence), tai chi, yoga, motor control exercise, progressive relaxation, electromyography biofeedback, low level laser therapy, operant therapy, cognitive behavioral therapy or spinal manipulation (low evidence)

Recommendation for chronic low back pain for people with inadequate response to non-pharmacologic therapy, consider NSAIDs as first line therapy, tramadol or duloxetine as second line therapy. Only consider opioids in people who failed the other treatments and only if potential benefits outweigh the risks (moderate evidence)

Evidence is insufficient to determine treatments for radicular low back pain. Limitations: Evidence was largely unavailable on patient important outcomes such as disability or return to work.
