Practice Guidelines

LOW BACK PAIN: AMERICAN COLLEGE OF PHYSICIANS PRACTICE GUIDELINE ON NONINVASIVE TREATMENTS

Low back pain occurs in most persons living in the United States and has been shown to have high costs, health care–related and indirect (e.g., missed work days, reduced efficiency at work and home), totaling about $100 billion in 2006. Often, management is based on how long symptoms have persisted, possible etiologies, occurrence of radicular symptoms, and abnormalities found on physical examination or radiography. The American College of Physicians has released a guideline, which partially updates its 2007 guideline, to provide recommendations for noninvasive treatment of acute (duration less than four weeks), subacute (duration of four to 12 weeks), and chronic (duration longer than 12 weeks) low back pain. It does not address topical or epidural therapies.

Recommendations

It should be noted that any improvements in pain or function with medication or other nonpharmacologic options have been found to be minimal based on the literature, and did not show well-defined differences vs. control treatments; therefore, treatment decisions should be based on patient preference, availability, possible harms, and cost. Persons with any type of low back pain should be encouraged to remain as active as pain allows.

Acute and Subacute Pain

Because acute and subacute low back pain often resolve spontaneously with time, superficial heat, massage, acupuncture, and spinal manipulation are all appropriate treatment options to try initially. Harms that have been reported with these treatments are sparse and not severe. Based on evidence of moderate quality, heat wraps result in moderate improvement of pain and disability compared with placebo. Based on evidence of low quality, massage results in moderate improvement in pain and function in the short term compared with sham therapy in persons with subacute pain, and acupuncture results in minimal improvement in pain compared with sham acupuncture but does not appear to improve function. Also based on evidence of low quality, spinal manipulation results in minimal improvement in function compared with sham manipulation; data were insufficient to make conclusions about how it affects pain.

If the patient or physician chooses medication, a nonsteroidal anti-inflammatory drug (NSAID) or skeletal muscle relaxant can be considered; the decision between the two medication classes should be based on patient preference and the risks associated with each. Compared with placebo, NSAIDs result in a minor improvement in pain and function based on evidence of moderate and low quality, respectively. Based on evidence of moderate quality, muscle relaxants improve pain in the short term compared with placebo.

Physicians should discuss with patients the typically encouraging prognosis associated with acute low back pain, such as the high probability of the pain improving considerably within one month, so that they do not have to undergo tests or treatments that can be expensive and possibly harmful.

Chronic Pain

For chronic low back pain, exercise, multidisciplinary rehabilitation, acupuncture, mindfulness-based stress reduction, tai chi, yoga, motor control exercises, progressive relaxation, electromyography biofeedback training, low-level laser therapy, operant therapy, cognitive behavior therapy, and spinal manipulation are first-line options and have fewer harms compared with medication; therefore, they should be tried initially. Evidence of moderate quality indicates that exercise results in minimal improvement in pain and function compared with no exercise, and that mindfulness-based stress reduction successfully treats pain, with one trial indicating a minimal improvement in pain and function compared with standard treatment.

The evidence for the following interventions is of low quality. Multidisciplinary rehabilitation results in moderate improvement in pain in the short term and minimal improvement in disability compared with no rehabilitation, and Iyengar yoga results in moderate improvement in pain scores and improvement in function compared with standard treatment. Motor control exercises result in moderate improvement in

Source: Adapted from Am Fam Physician. 2017;96(6):407-408.

pain scores and minimal improvement in function compared with nominal treatment. Compared with sham therapies, acupuncture results in moderate improvement in pain for up to three months after it is performed, but it does not appear to improve function; low-level laser therapy results in minimal improvement in pain; and spinal manipulation does not result in a difference in pain. Compared with a wait-list control group, tai chi resulted in moderate improvement in pain; progressive relaxation therapy resulted in moderate improvement in pain and function; and operant therapy, cognitive behavior therapy, and electromyography biofeedback training resulted in minimal improvement in pain, but not a difference in function.

If these nonpharmacologic treatments are ineffective, an NSAID would be considered a first-line treatment option, with tramadol and duloxetine being second-line options. NSAIDs result in minimal to moderate improvement in pain compared with placebo and no to minimal improvement in function based on moderate- and low-quality evidence, respectively. Based on evidence of moderate quality and compared with placebo, tramadol results in moderate improvement in pain in the short term and a minimal improvement in function, and duloxetine results in a minimal improvement in pain and function. Traditional opioids should be considered for treatment only if these other treatments do not help and the benefits of their use outweigh the risks, which are discussed with the patient.

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