with control) with stretching or strengthening exercises, mechanical traction, or TENS. The panel found insufficient evidence to support the use of mechanical traction for patient global improvement and return to work. Therapeutic exercise—including stretching, strengthening, and mobility exercises—significantly reduces pain and improves function for chronic low back pain (longer than 12 weeks); but there was no clinical benefit in facilitating return to work. No specific comments on yoga appeared in their recommendations.

The US Preventive Services Task Force reports that evidence is insufficient to recommend for or against counseling patients to exercise to prevent low back pain; it makes no mention about yoga.[9]

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CLINICAL COMMENTARY: Information suggests yoga—and all exercise—effective for low back pain

Good evidence supports the concept that activity is more effective than bed rest for acute low back pain. Recent studies in the rehabilitation and physical therapy literature have emphasized core stability exercises for acute and chronic back pain. As balance, strength, and flexibility improve, the episodes and intensity of acute low back pain diminish.

It stands to reason that activities such as hatha yoga that improve muscular strength, flexibility, and balance would similarly improve function and decrease low back pain. The available information would lead me to recommend yoga for my patients with low back pain. Yoga may well be effective, and no reports in the literature show harm.

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TYPE II CLINICAL INQUIRIES

Do inhaled beta-agonists control cough in URIs or acute bronchitis?

EVIDENCE-BASED ANSWER

Patients who receive inhaled beta-agonists for cough due to acute upper respiratory infections (URI) are just as likely to report a productive cough at 7 days compared with patients treated with placebo (strength of recommendation [SOR]: **A**, based on a systematic review).

One trial, however, showed a reduction in overall cough at 7 days (number needed to treat [NNT]=3, SOR: **B**, a small randomized controlled trial), and another trial found a reduction in overall symptom score in smokers and those with wheezing on initial exam (SOR: **B**, based on a small randomized controlled trial).

EVIDENCE SUMMARY

No studies of inhaled beta-agonists have been conducted with patients who have an explicit diagnosis of acute cough due to URI. While some clinicians feel a distinction between URI and acute bronchitis should be made, there is significant overlap between these diagnoses in clinical practice, as well as in the available studies.

A systematic review looking at beta-agonists for acute bronchitis included the clinical diagnoses of both acute bronchitis and acute cough because a standard definition of bronchitis is lacking.[1] Only two trials in this review examined inhaled beta-agonists. When results from these trials were combined for the outcome of productive cough at 7 days, inhaled beta-agonists showed no benefit. However, the authors note that details of the individual trials may help to clarify the effect of inhaled beta-agonists.

One trial, a randomized controlled trial of adult patients with acute bronchitis in 2 community-based family practices, compared 23 patients receiving albuterolin a multidose inhaler (MDI) with 23 patients receiving placebo inhaler.[2] Patients were also randomized to receive erythromycin or placebo tablets. Patients with pneumonia or a history of asthma or chronic obstructive pulmonary disease (COPD) were excluded. At 7 days, 61% of patients in the albuterol group reported cough compared with 91% in the control group (P=.02, NNT=3). No statistically significant difference was seen in productive cough or night cough. Smokers responded to inhaled albuterol similarly to nonsmokers. Erythromycin had no effect on cough and side effects were similar among all groups.

The other trial was a randomized controlled trial of 80 adults with cough due to acute respiratory infection; it compared fenoterol aerosol 4 times daily with placebo.[3] Inhaled fenoterol is not available in the US but is similar to albuterol. This study showed no difference in cough at 7 days (relative risk [RR]=0.83; 95% confidence interval [CI], 0.52–1.30). In a subgroup analysis, however, smokers and those wheezing on initial exam had lower overall symptom scores when treated with fenoterol.

With beta-agonists, outcomes such as need for OTC medications and return to work do not improve

RECOMMENDATIONS FROM OTHERS

We were unable to find any guidelines on the use of albuterol via MDI for cough from bronchitis or URIs.

CLINICAL COMMENTARY:

Inhaled beta-agonists may aid symptoms; other outcomes may not be improved

Even without a history of lung disease, patients presenting with cough due to acute respiratory illness and with evidence of airflow obstruction (wheezing) appear to receive symptom relief from inhaled beta-agonists. Smokers may be another subgroup who benefit from treatment. However, important patient-oriented outcomes (such as reduced need for over-the-counter medicines, general well being, and return to work) do not improve. If using inhaled albuterol to treat acute cough in practice, one must also consider the financial costs and adverse effects associated with treatment.

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