

# POEMs

## Patient-Oriented Evidence That Matters

### One-Third of Patients with Anxiety Disorder Will Relapse When Antidepressant Treatment Stops

#### Clinical Question

How common is relapse in patients with anxiety disorder following the discontinuation of treatment with an antidepressant?

#### Bottom Line

Discontinuing the antidepressant treatment in patients with anxiety disorders will cause a relapse in almost one-third of them. One in six patients previously treated successfully will also relapse despite continued treatment. (Level of Evidence = 1a-)

#### Synopsis

The authors searched three databases, including Cochrane Central, as well as clinical trial registries, to identify published and unpublished studies of patients with anxiety disorders (panic disorder, agoraphobia, social phobia, generalized anxiety disorder, obsessive-compulsive disorder, posttraumatic stress disorder, or a specific phobia) who responded to antidepressant treatment and were subsequently randomized to continue antidepressant treatment or be switched to placebo. Two researchers independently selected research for inclusion, abstracted data, and evaluated study quality. The 28 included studies enrolled a total of 5,233 patients and followed them for eight to 52 weeks. Relapse occurred in 36.4% of patients who were switched to placebo, but also in 16.4% of patients who continued treatment (odds ratio = 3.11; 95% confidence interval, 2.48 to 3.89). There was no significant difference in relapse rates based on type of anxiety. The rate

of relapse varied across the studies, likely because of the different durations of follow-up. All but two of the studies were sponsored by pharmaceutical companies, and six were previously unpublished; additional unpublished studies were identified, but data could not be obtained, increasing the risk of publication bias.

**Study design:** Meta-analysis (randomized controlled trials)

**Funding source:** Self-funded or unfunded

**Setting:** Various (meta-analysis)

**Reference:** Batelaan NM, Bosman RC, Muntingh A, Scholten WD, Huijbregts KM, van Balkom AJLM. Risk of relapse after antidepressant discontinuation in anxiety disorders, obsessive-compulsive disorder, and post-traumatic stress disorder: systematic review and meta-analysis of relapse prevention trials [published correction appears in *BMJ*. 2017;358:j4461]. *BMJ*. 2017;358:j3927.

**Allen F. Shaughnessy, PharmD, MMedEd**

Professor of Family Medicine  
Tufts University  
Boston, Mass.

### Lumbar Fusion of Variable Value Based on Treating Diagnosis, with Significant Complication Rates

#### Clinical Question

What are the benefits and harms of lumbar fusion for degenerative low back pain?

#### Bottom Line

Lumbar fusion for degenerative spinal disease appears to be most beneficial for patients undergoing the procedure for spondylolisthesis, but it is of little clear benefit for patients with other indications, such as spinal stenosis or chronic back pain. The risk of reoperation or complications

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is greater for patients with spinal stenosis who undergo fusion compared with those who have decompression alone. (Level of Evidence = 1a-)

### Synopsis

Spinal fusion is an expensive procedure of uncertain value that has high cost and regional variability in annual incidence. The authors performed a careful search of the literature to identify randomized trials (n = 19), cohort studies (n = 16 prospective and 15 retrospective), and registries (n = 15) that compared the outcomes of lumbar fusion, decompression, and/or nonoperative care for degenerative spine disease. They performed a comprehensive search to identify randomized trials and cohort studies with at least two arms, at least two participants per arm, and with at least 12 months of follow-up. Studies were generally at high risk of bias because of inadequate randomization, masking, and allocation concealment; this would tend to bias the studies in favor of active therapy. This synopsis focuses primarily on the results from the randomized trials.

Regarding the Oswestry Disability Index (a 100-point scale), there was a statistically, but not clinically, significant 5-point improvement with fusion compared with nonoperative care for patients with chronic back pain, and a statistically and clinically significant 17-point improvement for those with spondylolisthesis as the indication. Results were similar for a visual analog scale measuring leg pain, with the improvement having statistical and clinical significance for patients with spondylolisthesis (2.2 points on a 10-point scale). Leg pain was largely evaluated in registry studies, and was not more improved by fusion than by decompression in patients with any indication. Patient satisfaction was greater for fusion compared with nonoperative care among patients with spondylolisthesis, but much less so for those with low back pain. There were no significant differences in risk of death, although confidence intervals were quite broad. Based mainly on registry and cohort studies, the risk of reoperation was greater for patients undergoing fusion than decompression if the indication was spinal stenosis (relative risk [RR] = 1.17; 95% confidence interval [CI], 1.06 to 1.28), but the opposite was true if spondylolisthesis was the indication (RR = 0.75; 95% CI, 0.68 to 0.83). Finally, based on a mix of study designs, the risk of complications was greater for patients

undergoing fusion than decompression alone (RR = 1.70; 95% CI, 1.50 to 1.92).

**Study design:** Meta-analysis (other)

**Funding source:** Unknown/not stated

**Setting:** Outpatient (specialty)

**Reference:** Yavin D, Casha S, Wiebe S, et al. Lumbar fusion for degenerative disease: a systematic review and meta-analysis. *Neurosurgery*. 2017;80(5):701-715.

**Mark H. Ebell, MD, MS**

Professor  
University of Georgia  
Athens, Ga.

## Exercise Alone and Various Combinations of Interventions Reduce the Risk of Injurious Falls in Older Adults

### Clinical Question

Are there specific interventions that are effective in reducing the risk of injurious falls in older adults?

### Bottom Line

Exercise alone; exercise combined with vision assessment and treatment; exercise combined with vision assessment and treatment, and environmental assessment and modification; and clinic-level quality improvement strategies combined with multifactorial assessment and treatment, calcium supplementation, and vitamin D supplementation are all effective interventions for reducing the risk of injurious falls in older adults. (Level of Evidence = 1a)

### Synopsis

These investigators thoroughly searched multiple databases including Medline, Embase, the Cochrane Register, Ageline, and reference lists of relevant trials and reviews for randomized controlled trials that examined fall-prevention interventions for adults 65 years or older. Study authors were also contacted for unpublished studies or additional data. Two investigators independently reviewed all potential studies for inclusion criteria and methodologic quality using standard risk-of-bias scoring tools. Conflicts were resolved by consensus agreement with a third reviewer. The primary outcome of interest was the number of injurious falls and fall-related hospitalizations. A total of 283 randomized trials and 20 companion reports (N = 159,910 participants) met inclusion criteria. The overall risk of bias among the studies was moderate, with an

unclear risk of bias for allocation concealment, contamination, and selective outcome reporting. A funnel plot analysis found no evidence of publication bias.

Four interventions were significantly associated with a reduced risk of injurious falls compared with usual care: exercise alone; combined exercise and vision assessment and treatment; combined exercise, vision assessment and treatment, and environmental assessment and modification; and combined clinic-level quality improvement strategies, multifactorial assessment and treatment, calcium supplementation, and vitamin D supplementation. Combined exercise and vision assessment and treatment was the most effective intervention. In a subgroup analysis, the best intervention for reducing the risk of hip fracture was combined osteoporosis treatment, calcium supplementation, and vitamin D supplementation.

**Study design:** Meta-analysis (randomized controlled trials)

**Funding source:** Foundation

**Setting:** Various (meta-analysis)

**Reference:** *Tricco AC, Thomas SM, Veroniki AA, et al. Comparisons of interventions for preventing falls in older adults: a systematic review and meta-analysis. JAMA. 2017;318(17):1687-1699.*

**David Slawson, MD**

Director of Information Sciences  
University of Virginia Health System  
Charlottesville, Va.

## Single Question Is Useful for Identifying Acute Mountain Sickness in Travelers at High Altitude

### Clinical Question

How accurate are diagnostic tools in identifying high-altitude travelers at risk of acute mountain sickness (AMS)?

### Bottom Line

Three different diagnostic scoring tools have similar accuracy for identifying adults at risk of AMS. One tool, the clinical functional score, is the simplest to use and consists of asking a single question. (Level of Evidence = 2b)

### Synopsis

These investigators searched without language restrictions in multiple databases, including

Medline and Embase, and bibliographies of relevant articles for studies reporting epidemiologic data, evaluations, and comparisons of diagnostic procedures or instruments for AMS. Two investigators independently evaluated potential studies for inclusion criteria and methodologic quality using a standard risk-of-bias scoring tool. Disagreements were resolved by consensus agreement with a third reviewer. The Lake Louise scoring system is the accepted reference standard for diagnosing AMS, with a score of 5 or higher indicating severe AMS and a corresponding high risk of developing life-threatening high-altitude cerebral edema. The three instruments that could be compared with the Lake Louise scoring system were the AMS cerebral score, a visual analog scale score quantifying an overall severity of sickness at altitude, and a clinical functional score composed of a single question: "Overall if you had any symptoms, how did they affect your daily activity?" The clinical functional score is scored on an ordinal scale of 0 to 3, indicating none, mild, moderate, and severe (bed rest) reduction in function.

A total of 91 articles (N = 66,944 patients) evaluated the prevalence of AMS, reporting that above 2,500 m (8,200 ft), for every 1,000-m increase (3,300-ft increase) in altitude, the prevalence of AMS increases by 13% (95% confidence interval, 9.5% to 17%). Fourteen studies included head-to-head comparisons of at least two different AMS diagnostic tools. Using the Lake Louise scoring system score of 5 or greater as the reference standard, likelihood ratios were similar for the visual analog scale score, AMS cerebral score, and clinical functional score (positive likelihood ratio range = 3.2 to 8.2; negative likelihood ratio range = 0.30 to 0.36). A response of 2 or higher on the single-question clinical functional score (indicating moderate to severe reduction in function) had a pooled sensitivity of 82% and specificity of 67%.

**Study design:** Systematic review

**Funding source:** Foundation

**Setting:** Various (meta-analysis)

**Reference:** *Meier D, Collet TH, Locatelli I, et al. Does this patient have acute mountain sickness? The rational clinical examination systematic review. JAMA. 2017;318(18):1810-1819.*

**David Slawson, MD**

Director of Information Sciences  
University of Virginia Health System  
Charlottesville, Va. ■