

Hypnosis for Surgical Pain

PATRICIA ADAM, MD, MSPH, and ANDREA LARSON, DO, *University of Minnesota Department of Family Medicine, Minneapolis, Minnesota*

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Clinical Question

How effective is hypnosis for surgical pain?

Evidence-Based Answer

Hypnosis provides small to moderate improvements in surgical pain and burn debridement pain in adults. (Strength of Recommendation [SOR]: B, based on a meta-analysis of randomized controlled trials [RCTs].) In children, the effects of hypnosis are mixed, but hypnosis decreases the pain of invasive procedures. (SOR: B, based on a systematic review of RCTs and a controlled trial with mixed results, and a meta-analysis of RCTs.)

Evidence Summary

A 2013 meta-analysis of 34 RCTs (N = 2,597) compared hypnosis with standard care for pain, emotional distress, medication use, and other outcomes in patients undergoing surgery.¹ Trials with attention controls (i.e., patients in the control group received attention for the same length of time as the hypnosis group) were included, whereas studies with overlap interventions (e.g., behavioral therapy, guided imagery) were excluded. The median age of patients was 40 years, and 60% of participants were women. Surgeries included elective procedures (with general or local anesthesia) and burn debridement (no anesthesia). Hypnosis was performed by script, but the technique varied (face-to-face or recorded), as did the time hypnosis was performed within the surgical period (before, during, or after). Outcomes were rated by patients or observers using different scales, so effect size was calculated using Hedges' *g*. Hypnosis resulted in a small to medium positive effect on pain (effect size = 0.44; 95% confidence interval

[CI], 0.26 to 0.61) and emotional distress (effect size = 0.53; 95% CI, 0.37 to 0.69). The numbers of trials and patients pooled for each outcome were not reported. Sensitivity analysis showed decreased effect size in the more methodologically rigorous studies.

A 2009 systematic review of 12 small RCTs and one controlled trial (N = 528) compared the effect of hypnosis or a hypnosis-like intervention with a control or alternative intervention in patients three to 19 years of age with procedure-related pain.² The type of hypnosis varied (hypnosis, self-hypnosis, indirect suggestion, direct suggestion, imagery). Time dedicated to hypnotherapy ranged from minutes to hours, and sometimes hypnotherapy occurred days before the procedure in addition to at the time of the procedure. Comparison interventions included standard of care, distraction, cognitive behavior therapy, and topical anesthetic. Several procedures were studied, including bone marrow aspiration, lumbar puncture, voiding cystourethrography, and the Nuss procedure for pectus excavatum. Outcomes were often assessed by observers. Studies were not pooled for meta-analysis. One study found hypnosis and hypnosis-like imagery more effective in reducing pain than standard medical care. Three of the four studies contrasting hypnosis with distraction found hypnosis to be more effective at reducing pain. Limitations include lack of pooled data, lack of individual study details and data, and absence of treatment manuals to assure treatment consistency.

A 2008 meta-analysis of 28 RCTs (N = 1,039) compared 14 psychological interventions, including hypnosis, with standard or attention care in patients two to 19 years of age who had pain or distress

from needle-related procedures.³ Five studies (N = 163) of hypnosis for bone marrow aspiration and lumbar punctures found significant improvements in self-reported pain (four trials; N = 146; standard mean difference [SMD] = -1.5; 95% CI, -2.7 to -0.27) and distress (four trials; N = 146; SMD = -2.2; 95% CI, -3.7 to -0.71), and behavioral measures of distress (five trials; N = 163; SMD = -1.1; 95% CI, -1.8 to -0.35).

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Address correspondence to Patricia Adam, MD, MSPH, at adamx005@umn.edu. Reprints are not available from the authors.

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