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Kohen DP, Zajac R. (2007). Self-Hypnosis Training for Headaches in Children and Adolescents. *Journal of Pediatrics*, 150(6), 635-639.



# Self-Hypnosis Useful for Recurrent Headaches in Children

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June 22, 2007 — Self-hypnosis training is an effective treatment for chronic recurrent headaches in children and adolescents, new research suggests.

Advantages of self-hypnosis over pharmacotherapy in treating headaches include lower cost and the absence of side effects, according to the report in *The Journal of Pediatrics* for June. A number of studies have shown self-hypnosis to be a useful treatment for headaches in pediatric populations, but most have included small patient numbers.

In the present retrospective study, Dr. Daniel P. Kohen, from the University of Minnesota in Minneapolis, and Dr. Robert Zajac, from Glencoe Regional Health Services, also in Minnesota, assessed the outcomes of 178 consecutive youths who were taught self-hypnosis to manage their headaches. At baseline, the mean subject age was 11 years old. Data from 81 girls and 63 boys were available for analysis.

The subjects were trained in self-hypnosis within 3 to 4 visits. In addition to being taught how to induce and intensify the hypnotic state, the subjects were given a choice of therapeutic hypnotic suggestions, such as "when you have a headache, let yourself imagine you are somewhere where you never have a headache, and go there." The subjects were instructed to practice self-hypnosis at home 2 to 3 times per day.

Headache severity, frequency, and duration were assessed before, during, and after learning self-hypnosis, the report indicates.

Self-hypnosis training was associated with a drop in headache frequency from 4.5 to 1.4 per week, a fall in average intensity (12-point scale) from 10.3 to 4.7, and reduction in average duration from 23.6 to 3.0 hours ( $p < 0.01$  for all). No side effects were seen with the intervention.

"Many families today are increasingly interested in complementary or alternative therapies not only for adults but also for their children," the authors point out. "With appropriate scientific inquiry we are beginning to add validity to the mind-body connection in mainstream pediatric healthcare."

Still, the researchers acknowledge that "prospective study and long-term follow-up of patients learning self-hypnosis for headaches or other ailments is clearly needed."

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### **Clinical Context**

Treatment of headaches includes medications and behavioral measures. According to Eccleston and colleagues in a 2003 Cochrane Database of Systematic Reviews, children who used relaxation and behavioral treatments of chronic headaches had decreased intensity and frequency of headaches. In the April 1987 issue of *Pediatrics*, Olness and colleagues reported that self-regulation therapy was more effective than propranolol for juvenile classic migraine. In a review in the April 1999 issue of the *Journal of Pediatric Psychology*, Holden and colleagues noted that self-hypnosis and relaxation techniques were effective in pain reduction.

This retrospective, observational, uncontrolled study evaluates (1) the effect of self-hypnosis on the intensity, frequency, and duration of recurrent headaches in children and adolescents and (2) the features of self-hypnosis practices.

### **Study Highlights**

- Records for 13 years were reviewed for 178 children with chronic recurrent headaches referred to a behavioral pediatrics program because of ineffective treatment or parental refusal of medication.
- 144 patients met inclusion criteria: availability of pretraining and posttraining data on age, sex, medications, previous treatments, and headache intensity, frequency, and duration.
- All patients received self-hypnosis training generally within 4 visits (range, 1 - 20 visits).
- Hypnosis induction included focus on closing the eyes and imagining a favorite activity.
- Hypnosis intensification included multisensory imagery, progressive body relaxation, or both.
- Hypnotic suggestions included options of imagining a headache-free location, the lowering of a number representing pain intensity, colors and shapes associated with comfort and happiness, or patient's preference.
- Patients recorded headache intensity (0, no headache; 12, worst headache imaginable), frequency, and duration in a diary twice per day.
- Patients comfortable with home self-hypnosis were offered an audiotape of an office session to help them practice.

- Mean age at first visit was 11.5 years; girls were older than boys (146 vs 132.5 months;  $P < .05$ ).
- Average history of headache was 36.3 months.
- Average frequency of headaches was 4.5 per week but greater in girls vs boys (5.3 vs 3.4;  $P < .05$ ).
- Headache characteristics included aura (visual change in 10 patients), associated symptoms (decreased energy in 113, nausea in 96, dizziness in 86), triggers (sound in 123, light in 116), and location (frontal in 102, parietal in 90).
- Prior to first visit, patients saw an average of 2.1 professionals (usually neurologist or pediatrician), took an average of 2.2 medications (mostly nonsteroidal anti-inflammatory drugs and  $\beta$ -blockers), and used an average of 0.4 therapies (mostly relaxation, biofeedback, or mental imagery); 53% had at least 1 magnetic resonance image, computed tomography scan, or electroencephalogram.
- Primary outcome measures were intensity, frequency, and duration of headache before and after hypnosis training.
- Intensity of headache pain rating decreased from 10.3 to 4.7 ( $P < .01$ ); 87% reported decreased intensity, and 6% reported no change.
- Frequency of headache decreased from 4.5 to 1.4 per week ( $P < .01$ ); frequency decreased in 88%, increased in 7%, and did not change in 5%.
- Duration of headache decreased from 23.6 to 3 hours ( $P < .01$ ); 89% reported decreased duration.
- Follow-up data showed 123 (97.6%) of 126 patients had decreased intensity, frequency, or duration of headache.
- Patients who received audiotape reported "infrequent use" but had greater improvement in headache intensity vs those who did not request audiotape.
- 26% reported no headaches after hypnosis training.
- Study limitations included possible confounding factors and retrospective, uncontrolled design.

### Pearls for Practice

- In children and adolescents with headaches, self-hypnosis training leads to reduced intensity, frequency, and duration of headaches.
- Headache intensity is reduced more in children and adolescents who receive a self-hypnosis audiotape to facilitate training vs those who do not.

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