



# INFORMATION FOR HEALTH CARE PROFESSIONALS



## Behavioral Treatments for Headache

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Although medications represent the most common treatment approaches for patients with headache disorders, several evidence-based non-medication options for migraine and chronic tension-type headache (TTH) are available. These “behavioral therapies” are typically used in conjunction with acute or preventive pharmacotherapy, and randomized trials confirm that combining medication and behavioral treatment produces reductions in headache more than either modality alone (for both adults and children). [1,2] Behavioral treatments are indicated for patients with a contraindication for pharmacotherapy (e.g., pregnancy, nursing, some children), an explicit preference for a non-medication treatment, significant life stress or psychiatric comorbidity, or who have had an inadequate response to medication.

All behavioral treatments focus on teaching patients skills to change various behaviors that inadvertently maintain or worsen headache, particularly those targeting stress, headache triggers, and physiological arousal. Skills are usually taught in weekly clinic sessions for 2-3 months by a psychologist or behavioral health specialist, although “minimal-contact” approaches involving less frequent clinic sessions also are effective. Regardless of treatment format, it is important that patients practice the skills they learn on a daily basis to gain proficiency with the techniques and for skills to generalize to everyday life.

Although mindfulness and Acceptance and Commitment Therapy (ACT) have some empirical support based on small studies, [3] the treatments with the strongest evidence are relaxation training, biofeedback, and stress management. These interventions typically yield long-term reductions in headache frequency of 35-55%, which is on par with the established preventive medications. [4]

### **Relaxation Training**

Relaxation training focuses on teaching patients to lower sympathetic arousal that contributes to headache. The most common form of relaxation training is progressive muscle relaxation (PMR), in which the patient first tenses and then releases 16 different muscle groups in sequence. Once the patient develops proficiency with this approach, the tense-release cycles are condensed into fewer muscle groups until the patient is able to initiate a state of relaxation without requiring the tensing of muscles.

### **Biofeedback**

Biofeedback has been used for decades in behavioral health and involves teaching the patient to control autonomic physiological responses typically considered outside of conscious control. Biofeedback for migraine and TTH is typically thermal or electromyographic, focusing on teaching the patient to increase body temperature or reduce muscle tension in the scalp,

respectively. (Other forms of biofeedback are also effective but are not as frequently used because the equipment is more costly and thus less widely available.) In session, digital physiological monitoring equipment is used to provide the patient auditory or visual feedback indicating success in changing the targeted physiological response. With continued practice in session and using inexpensive home equipment, the patient learns to better control sympathetic arousal that contributes to headache. Other indirect benefits also accrue, such as improvements in depression and anxiety symptoms. [5] Children in particular are often excellent candidates for biofeedback, particularly those that use video game-style feedback interfaces.

## **Stress (and Trigger) Management**

Stress is intricately linked to headache: It is the most commonly reported trigger of headache attacks, further sensitizes nociceptors, and contributes to poor coping skills (e.g., overuse of headache medications and unwarranted avoidance of activities). For these reasons, many behavioral treatments add stress management (sometimes called “cognitive-behavioral therapy”) to relaxation or biofeedback protocols. In general, stress management involves teaching patients to recognize common stressors that precede headache and apply problem-solving techniques to manage these stressors. The patient is taught to avoid stressors that can be avoided, prepare for those that can be predicted, and to directly manage others using active coping skills. These techniques also can be adapted to address coping with other common triggers of headache, such as missing meals and poor sleep.

### **Resources for Locating Behavioral Providers:**

Association for Behavioral and Cognitive Therapies ([www.abct.org](http://www.abct.org))

“Find a Therapist” tab

Biofeedback Certification International Alliance ([www.bcia.org](http://www.bcia.org))

“Find a Practitioner” tab

Association for Applied Psychophysiology and Biofeedback ([www.aapb.org](http://www.aapb.org))

“Find a Provider” tab

### **References**

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4. Rains JC, Penzien DB, McCrory DC, Gray RN. Behavioral headache treatment: History, review of the empirical literature, and methodological critique. *Headache*. 2005;45[Suppl 2]:S92-S109.
5. Nestoriuc Y, Martin A, Rief W, Andrasik F. Biofeedback treatment for headache disorders: A comprehensive efficacy review. *Appl Psychophysiol Biofeedback* 2008;33:125-140.