

Biobehavioral Treatment of Headache (2003)

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More than 100 empirical studies have examined the efficacy of biobehavioral therapies in headache. The American Academy of Neurology-U.S. Consortium recently published evidence-based guidelines for migraine headache treatment and concluded that relaxation training, thermal biofeedback combined with relaxation training, EMG biofeedback, and cognitive-behavior therapy were effective treatment options for migraine. Recent meta-analytic reviews have shown that such nonpharmacological treatments have been effective for both migraine and tension-type headaches. Psychophysiological treatment protocols as well as cognitive and behavioral approaches to pain and stress management are often combined very successfully with pharmacological interventions. A comprehensive biobehavioral program includes Education, Skills Acquisition, and Self-Regulation.

Education

Explanations of the pathophysiology of headache improve patient understanding of the rationale for pharmacological and nonpharmacological treatment. Discussions may include the role of genetic predispositions; hormonal factors; diet; the human stress response; effects of changes in biological rhythms; and relevant cognitive, emotional, and behavioral issues.

After learning how to monitor intensity, duration, and disability related to migraine, the patient is taught to keep a headache calendar and advised to bring it to each session. This diary also records the type and amount of medication taken as well as relief efficacy. Menstrual days and other potential dietary and environmental triggers are noted.

Skills Acquisition

The factors that act as headache triggers (e.g. - dietary factors, fasting and skipping meals, changes in sleep patterns, the experience of acute and chronic stress, effects of overexertion, the impact of hormonal changes, susceptibility to weather changes, reaction to sensory stimuli) vary from person to person. Patients are encouraged to modify behavioral factors in an effort to decrease migraine frequency and severity. They are encouraged to keep to normal sleep/wake patterns (even on weekends). Naps and "oversleeping" are to be avoided. Patients are also advised to eat nutritious meals at regular intervals.

Patients also learn behavioral strategies to help with migraine control and begin setting behavioral goals such as improving time management, increasing aerobic exercise, and participating in more pleasurable activities. Patients who exhibit aspects of the Type A behavior pattern are taught how to modify such behavior.

Clinicians teach patients ways to self-manage medications. Patients are taught to identify migraine onset accurately by self-monitoring prodromal cues, to keep medication readily accessible, and to follow instructions regarding usage and repeated administration. Specific limits are set to prevent rebound from overuse of medications. Patients are also taught strategies for managing side effects from both preventive and abortive medications.

Self-Regulation

A major component of this type of intervention is to teach the patient coping skills designed to alleviate both the sensory and reactive components of the total pain experience. The sensory component involves the perception of physical sensations (including pain) that can be altered through relaxation therapies and biofeedback. The reactive component consists of thoughts and feelings that accompany headache and may lower the pain threshold, lead to "problematic behaviors" (e.g., overuse of abortive medications), heighten levels of sympathetic arousal, and possibly, increase neuronal hyperexcitability.

Initial treatment sessions are directed toward the sensory component by using relaxation training and biofeedback to teach physiological self-regulation. Relaxation therapies include several techniques that target the entire body and enable patients to develop greater body awareness, achieve an overall relaxed state, and gain confidence regarding physiological control. Biofeedback, on the other hand, targets specific physical responses believed to contribute to increased headache susceptibility and maintenance of pain. Instrumentation "feeds back" immediate objective

information about biological processes that is normally beyond patients' awareness and control. Patients learn to bring biological processes under voluntary control, and thereby, lower arousal (i.e., muscle tension decreased in pericranial muscles and finger temperatures increased).

The second part of the program consists of cognitive/behavioral pain and stress management strategies that focus on the reactive component of the pain experience. Patients learn to identify and modify distress-related thoughts and maladaptive styles of thinking that can contribute to headache susceptibility. This type of therapy emphasizes the role of thoughts, perceptions, belief systems, self-evaluations and appraisals that influence emotional states, physiology, and behavior. Techniques are aimed at providing patients with a set of problem-solving and coping skills they can use in a wide range of situations that trigger and maintain headache.

Many patients magnify the negative aspects of their situations and become fatalistic and helpless. They often have low tolerance for pain and believe they are unable to control their migraines. They develop an external locus of control and start to look for a "magic pill." To develop alternative cognitive responses to the experience of recurrent and severe head pain, these patients are taught positive self-statements that redefine their headaches as manageable events that can be resolved. Some patients require cognitive therapy for depression, anxiety, and other affective issues that have been found to be comorbid with migraine.

Conclusion

Effective biobehavioral treatment for migraine begins with a thorough headache interview and the use of a headache diary as a tool for self-monitoring. This approach emphasizes educating patients about headache mechanisms and providing skills and knowledge to enable patients to take an active role in managing their headache disorder. Behavioral strategies include lifestyle and nutritional changes, medication self-management, relaxation skills, biofeedback training, and cognitive therapy. Treatment must also address depression and anxiety that are frequently comorbid with migraine headache.