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Relaxation Techniques

What's the Bottom Line?

How much do we know about relaxation techniques?

A substantial amount of research has been done on relaxation techniques. However, for many health conditions, the number or size of the studies has been small, and some studies have been of poor quality.

What do we know about the effectiveness of relaxation techniques?

Relaxation techniques may be helpful in managing a variety of health conditions, including **anxiety associated with illnesses or medical procedures, insomnia, labor pain, chemotherapy-induced nausea, and temporomandibular joint dysfunction**. Psychological therapies, which may include relaxation techniques, can help manage **chronic headaches and other types of chronic pain in children and adolescents**. Relaxation techniques have also been studied for other conditions, but either they haven't been shown to be useful, research results have been inconsistent, or the evidence is limited.

What do we know about the safety of relaxation techniques?

Relaxation techniques are generally considered safe for healthy people, although there have been a few reports of negative experiences, such as increased anxiety. People with serious physical or mental health problems should discuss relaxation techniques with their health care providers.

What Are Relaxation Techniques?

Relaxation techniques include a number of practices such as progressive relaxation, guided imagery, biofeedback, self-hypnosis, and deep breathing exercises. The goal is similar in all: to produce the body's natural relaxation response, characterized by slower breathing, lower blood pressure, and a feeling of increased well-being.

[Meditation](#) and practices that include meditation with movement, such as [yoga](#) and [tai chi](#), can also promote relaxation. You can find information about these practices elsewhere on the NCCIH Web site.

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Stress management programs commonly include relaxation techniques. Relaxation techniques have also been studied to see whether they might be of value in managing various health problems.

The Importance of Practice

Relaxation techniques are skills, and like other skills, they need practice. People who use relaxation techniques frequently are more likely to benefit from them. Regular, frequent practice is particularly important if you're using relaxation techniques to help manage a chronic health problem. Continuing use of relaxation techniques is more effective than short-term use.

Relaxation techniques include the following:

- **Autogenic Training.** In autogenic training, you learn to concentrate on the physical sensations of warmth, heaviness, and relaxation in different parts of your body.
- **Biofeedback-Assisted Relaxation.** Biofeedback techniques measure body functions and give you information about them so that you can learn to control them. Biofeedback-assisted relaxation uses electronic devices to teach you to produce changes in your body that are associated with relaxation, such as reduced muscle tension.
- **Deep Breathing or Breathing Exercises.** This technique involves focusing on taking slow, deep, even breaths.
- **Guided Imagery.** For this technique, people are taught to focus on pleasant images to replace negative or stressful feelings. Guided imagery may be self-directed or led by a practitioner or a recording.
- **Progressive Relaxation.** This technique, also called Jacobson relaxation or progressive muscle relaxation, involves tightening and relaxing various muscle groups. Progressive relaxation is often combined with guided imagery and breathing exercises.
- **Self-Hypnosis.** In self-hypnosis programs, people are taught to produce the relaxation response when prompted by a phrase or nonverbal cue (called a "suggestion").

What the Science Says About the Effectiveness of Relaxation Techniques

Researchers have evaluated relaxation techniques to see whether they could play a role in managing a variety of health conditions, including the following:

Anxiety

Studies have shown relaxation techniques may reduce anxiety in people with ongoing health problems such as heart disease or inflammatory bowel disease, and in those who are having medical procedures such as breast biopsies or dental treatment. Relaxation techniques have also been shown to be useful for older adults with anxiety.

On the other hand, relaxation techniques may not be the best way to help people with generalized anxiety disorder. Generalized anxiety disorder is a mental health condition, lasting for months or longer, in which a person is often worried or anxious about many things and finds it hard to control the anxiety. Studies indicate that long-term results are better in people with generalized anxiety disorder who receive

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a type of psychotherapy called cognitive-behavioral therapy than in those who are taught relaxation techniques.

Asthma

There hasn't been enough research to show whether relaxation techniques can relieve asthma symptoms in either adults or children.

Childbirth

Relaxation techniques such as guided imagery, progressive muscle relaxation, and breathing techniques may be useful in managing labor pain. Studies have shown that women who were taught self-hypnosis have a decreased need for pain medicine during labor. Biofeedback hasn't been shown to relieve labor pain.

Depression

An evaluation of 15 studies concluded that relaxation techniques are better than no treatment in reducing symptoms of depression but are not as beneficial as psychological therapies such as cognitive-behavioral therapy.

Epilepsy

There's no reliable evidence that relaxation techniques are useful in managing epilepsy.

Fibromyalgia

- Studies of guided imagery for fibromyalgia have had inconsistent results.
- A 2013 evaluation of the research concluded that electromyographic (EMG) biofeedback, in which people are taught to control and reduce muscle tension, helped to reduce fibromyalgia pain, at least for short periods of time. However, EMG biofeedback didn't affect sleep problems, depression, fatigue, or health-related quality of life in people with fibromyalgia, and its long-term effects haven't been established.

Headache

- **Biofeedback.** Biofeedback has been studied for both tension headaches and migraines.
 - An evaluation of high-quality studies concluded that there's conflicting evidence about whether biofeedback can relieve tension headaches.
 - Studies have shown decreases in the frequency of migraines in people who were using biofeedback. However, it's unclear whether biofeedback is better than a placebo.
- **Other Relaxation Techniques.** Relaxation techniques other than biofeedback have been studied for tension headaches. An evaluation of high-quality studies found conflicting evidence on whether relaxation techniques are better than no treatment or a placebo. Some studies suggest that other relaxation techniques are less effective than biofeedback.

Heart Disease

In people with heart disease, studies have shown relaxation techniques can reduce stress and anxiety and may also have beneficial effects on physical measures such as heart rate.

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High Blood Pressure

Stress can lead to a short-term increase in blood pressure, and the relaxation response has been shown to reduce blood pressure on a short-term basis, allowing people to reduce their need for blood pressure medication. However, it's uncertain whether relaxation techniques can have long-term effects on high blood pressure.

Insomnia

There's evidence that relaxation techniques can be helpful in managing chronic insomnia. Relaxation techniques can be combined with other strategies for getting a good night's sleep, such as maintaining a consistent sleep schedule; avoiding caffeine, alcohol, heavy meals, and strenuous exercise too close to bedtime; and sleeping in a quiet, cool, dark room.

Irritable Bowel Syndrome

An evaluation of research results by the American College of Gastroenterology concluded that relaxation techniques haven't been shown to help irritable bowel syndrome. However, other psychological therapies, including cognitive-behavioral therapy and hypnotherapy, are associated with overall symptom improvement in people with irritable bowel syndrome.

Menopause Symptoms

Relaxation techniques have been studied for hot flashes and other symptoms associated with menopause, but the quality of the research isn't high enough to allow definite conclusions to be reached.

Menstrual Cramps

Some research suggests that relaxation techniques may be beneficial for menstrual cramps, but definite conclusions can't be reached because of the small number of participants in the studies and the poor quality of some of the research.

Nausea

An evaluation of the research evidence concluded that some relaxation techniques, including guided imagery and progressive muscle relaxation, are likely to be effective in relieving nausea caused by cancer chemotherapy when used in combination with anti-nausea drugs.

Nightmares

Some studies have indicated that relaxation exercises may be an effective approach for nightmares of unknown cause and those associated with posttraumatic stress disorder. However, an assessment of many studies concluded that relaxation is less helpful than more extensive forms of treatment (psychotherapy or medication).

Pain

Evaluations of the research evidence have found promising but not conclusive evidence that guided imagery may help relieve some musculoskeletal pain (pain involving the bones or muscles) and other types of pain.

An analysis of data on hospitalized cancer patients showed that those who received integrative medicine therapies, such as guided imagery and relaxation response training, during their hospitalization had reductions in both pain and anxiety.

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Pain in Children and Adolescents

A 2014 evaluation of the scientific evidence found that psychological therapies, which may include relaxation techniques as well as other approaches such as cognitive-behavioral therapy, can reduce pain in children and adolescents with chronic headaches or other types of chronic pain. The evidence is particularly promising for headaches: the effect on pain may last for several months after treatment, and the therapies also help to reduce anxiety.

Posttraumatic Stress Disorder

Studies of biofeedback and other relaxation techniques for posttraumatic stress disorder have had inconsistent results.

Rheumatoid Arthritis

There's limited evidence that biofeedback or other relaxation techniques might be valuable additions to treatment programs for rheumatoid arthritis.

ringing in the Ears (Tinnitus)

Only a few studies have evaluated relaxation techniques for ringing in the ears. The limited evidence from these studies suggests that relaxation techniques might be useful, especially in reducing the intrusiveness of the problem.

Smoking Cessation

- Limited evidence suggests that guided imagery may be a valuable tool for people who are working to quit smoking.
- In a study that compared the two techniques, autogenic training was found to be less effective than cognitive-behavioral therapy as a quit-smoking aid. However, this study involved patients in an alcohol detoxification program, so its results may not be applicable to other people.
- Preliminary research suggests that a guided relaxation routine might help reduce cigarette cravings.

Temporomandibular Joint Dysfunction

Problems with the temporomandibular joint (the joint that connects the jaw to the side of the head) can cause pain and difficulty moving the jaw. A few studies have shown that programs that include relaxation techniques may help relieve symptoms of temporomandibular joint dysfunction.

What the Science Says About the Safety and Side Effects of Relaxation Techniques

- Relaxation techniques are generally considered safe for healthy people. However, occasionally, people report negative experiences such as increased anxiety, intrusive thoughts, or fear of losing control.
- There have been rare reports that certain relaxation techniques might cause or worsen symptoms in people with epilepsy or certain psychiatric conditions, or with a history of abuse or trauma. People with heart disease should talk to their health care provider before doing progressive muscle relaxation.

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NCCIH-Funded Research

NCCIH is supporting a variety of studies on relaxation techniques. Examples of topics currently being studied include

- The use of relaxation techniques and other complementary approaches for back pain in real-world health care settings.
- Guided imagery and relaxation response training for pain management in hospitalized patients.

Who Teaches Relaxation Techniques?

A variety of professionals, including physicians, psychologists, social workers, nurses, and complementary health practitioners, may teach relaxation techniques. Also, people sometimes learn the simpler relaxation techniques on their own.

More to Consider

- If you have severe or long-lasting symptoms of any kind, see your health care provider. You might have a condition that needs to be treated promptly. For example, if depression or anxiety persists, it's important to seek help from a qualified health care professional.
- Tell all your health care providers about any complementary or integrative health approaches you use. Give them a full picture of what you do to manage your health. This will help ensure coordinated and safe care.

For More Information

NCCIH Clearinghouse

The NCCIH Clearinghouse provides information on NCCIH and complementary and integrative health approaches, including publications and searches of Federal databases of scientific and medical literature. The Clearinghouse does not provide medical advice, treatment recommendations, or referrals to practitioners.

Toll-free in the U.S.: 1-888-644-6226

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PubMed®

A service of the National Library of Medicine (NLM), PubMed contains publication information and (in most cases) brief summaries of articles from scientific and medical journals. For guidance from NCCIH on using PubMed, see [How To Find Information About Complementary Health Approaches on PubMed](#).

Web site: www.ncbi.nlm.nih.gov/pubmed

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Research Portfolio Online Reporting Tools Expenditures & Results (RePORTER)

RePORTER is a database of information on federally funded scientific and medical research projects being conducted at research institutions.

Web site: projectreporter.nih.gov/reporter.cfm

NIH Clinical Research Trials and You

The National Institutes of Health (NIH) has created a Web site, NIH Clinical Research Trials and You, to help people learn about clinical trials, why they matter, and how to participate. The site includes questions and answers about clinical trials, guidance on how to find clinical trials through ClinicalTrials.gov and other resources, and stories about the personal experiences of clinical trial participants. Clinical trials are necessary to find better ways to prevent, diagnose, and treat diseases.

Web site: www.nih.gov/health/clinicaltrials/

Cochrane Database of Systematic Reviews

The Cochrane Database of Systematic Reviews is a collection of evidence-based reviews produced by the Cochrane Library, an international nonprofit organization. The reviews summarize the results of clinical trials on health care interventions. Summaries are free; full-text reviews are by subscription only.

Web site: www.cochranelibrary.com

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