Relaxation Techniques for Health: An Introduction

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 consciously produce the body’s natural relaxation response, characterized by slower breathing, lower blood pressure, and a feeling of calm and well-being.

Relaxation techniques (also called relaxation response techniques) may be used by some to release tension and to counteract the ill effects of stress. Relaxation techniques are also used to induce sleep, reduce pain, and calm emotions. This fact sheet provides basic information about relaxation techniques, summarizes scientific research on effectiveness and safety, and suggests sources for additional information.

Key Points

- Relaxation techniques may be an effective part of an overall treatment plan for anxiety, depression, and some types of pain. Some research also suggests that these techniques may help with other conditions, such as ringing in the ears and overactive bladder. However, their ability to improve conditions such as high blood pressure and asthma is unclear.

- Relaxation techniques are generally safe.

- Do not use relaxation techniques to replace scientifically proven treatments or to postpone seeing a health care provider about a medical problem.

- Tell all your health care providers about any complementary 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.
About Relaxation Techniques

Relaxation is more than a state of mind; it physically changes the way your body functions. When your body is relaxed breathing slows, blood pressure and oxygen consumption decrease, and some people report an increased sense of well-being. This is called the “relaxation response.” Being able to produce the relaxation response using relaxation techniques may counteract the effects of long-term stress, which may contribute to or worsen a range of health problems including depression, digestive disorders, headaches, high blood pressure, and insomnia.

Relaxation techniques often combine breathing and focused attention to calm the mind and the body. Most methods require only brief instruction from a book or experienced practitioner before they can be done without assistance. These techniques may be most effective when practiced regularly and combined with good nutrition, regular exercise, and a strong social support system.

The relaxation response techniques covered in this fact sheet include:

- **Autogenic training.** When using this method, you focus on the physical sensation of your own breathing or heartbeat and picture your body as warm, heavy, and/or relaxed.

- **Biofeedback.** Biofeedback-assisted relaxation uses electronic devices to teach you how to consciously produce the relaxation response.

- **Deep breathing or breathing exercises.** To relax using this method, you consciously slow your breathing and focus on taking regular and deep breaths.

- **Guided imagery.** For this technique, you focus on pleasant images to replace negative or stressful feelings and relax. Guided imagery may be directed by you or a practitioner through storytelling or descriptions designed to suggest mental images (also called visualization).

- **Progressive relaxation** (also called Jacobson’s progressive relaxation or progressive muscle relaxation). For this relaxation method, you focus on tightening and relaxing each muscle group. Progressive relaxation is often combined with guided imagery and breathing exercises.

- **Self-Hypnosis.** In self-hypnosis you produce the relaxation response with a phrase or nonverbal cue (called a “suggestion”).

Mind and body practices, such as meditation and yoga are also sometimes considered relaxation techniques. You can read more about these practices on the National Center for Complementary and Alternative Medicine’s (NCCAM) Web site at nccam.nih.gov/health/meditation and nccam.nih.gov/health/yoga.

Use of Relaxation Techniques for Health in the United States

People may use relaxation techniques as part of a comprehensive plan to treat, prevent, or reduce symptoms of a variety of conditions including stress, high blood pressure, chronic pain, insomnia, depression, labor pain, headache, cardiovascular disease, anxiety, chemotherapy side effects, and others.
According to the 2007 National Health Interview Survey, which included a comprehensive survey on the use of complementary health approaches by Americans, 12.7 percent of adults used deep-breathing exercises, 2.9 percent used progressive relaxation, and 2.2 percent used guided imagery for health purposes. Most of those people reported using a book to learn the techniques rather than seeing a practitioner.

**How Relaxation Techniques May Work**

To understand how consciously producing the relaxation response may affect your health, it is helpful to understand how your body responds to the opposite of relaxation—stress.

When you’re under stress, your body releases hormones that produce the “fight-or-flight response.” Heart rate and breathing rate go up and blood vessels narrow (restricting the flow of blood). This response allows energy to flow to parts of your body that need to take action, for example the muscles and the heart. However useful this response may be in the short term, there is evidence that when your body remains in a stress state for a long time, emotional or physical damage can occur. Long-term or chronic stress (lasting months or years) may reduce your body’s ability to fight off illness and lead to or worsen certain health conditions. Chronic stress may play a role in developing high blood pressure, headaches, and stomach ache. Stress may worsen certain conditions, such as asthma. Stress also has been linked to depression, anxiety, and other mental illnesses.

In contrast to the stress response, the relaxation response slows the heart rate, lowers blood pressure, and decreases oxygen consumption and levels of stress hormones. Because relaxation is the opposite of stress, the theory is that voluntarily creating the relaxation response through regular use of relaxation techniques could counteract the negative effects of stress.

**Status of Research on Relaxation Techniques**

In the past 30 years, there has been considerable interest in the relaxation response and how inducing this state may benefit health. Research has focused primarily on illness and conditions in which stress may play a role either as the cause of the condition or as a factor that can make the condition worse.

Currently, research has examined relaxation techniques for:

- **Anxiety.** Studies have suggested that relaxation may assist in the conventional treatment of phobias or panic disorder. Relaxation techniques have also been used to relieve anxiety for people in stressful situations, such as when undergoing a medical procedure.

- **Asthma.** Several reviews of the literature have suggested that relaxation techniques, including guided imagery, may temporarily help improve lung function and quality of life and relieve anxiety in people with asthma. A more recent randomized clinical trial of asthma found that relaxation techniques may help improve immune function.

- **Depression.** In 2008, a major review of the evidence that looked at relaxation for depression found that relaxation techniques were more effective than no treatment for depression, but not as effective as cognitive-behavioral therapy.
• **Fibromyalgia.** Some preliminary studies report that using relaxation or guided imagery techniques may sometimes improve pain and reduce fatigue from fibromyalgia.

• **Headache.** There is some evidence that biofeedback and other relaxation techniques may help relieve tension or migraine headaches. In some cases, these mind and body techniques were more effective than medications for reducing the frequency, intensity, and severity of headaches.

• **Heart disease and heart symptoms.** Researchers have looked at relaxation techniques for angina and for preventing heart disease. When a cardiac rehabilitation program was combined with relaxation response training in a clinic, participants experienced significant reductions in blood pressure, decreases in lipid levels, and increases in psychological functioning when compared to participants’ status before the program. Some studies have shown that relaxation techniques combined with other lifestyle changes and standard medical care may reduce the risk of recurrent heart attack.

• **High blood pressure.** A 2008 review of evidence for relaxation for high blood pressure found some evidence that progressive muscle relaxation lowered blood pressure a small amount. However, the review found no evidence that this effect was enough to reduce the risk of heart disease, stroke, or other health issues due to high blood pressure. In a recent randomized controlled trial, 8 weeks of relaxation response/stress management was shown to reduce systolic blood pressure in hypertensive older adults, and some patients were able to reduce hypertension medication without an increase in blood pressure.

• **Hot flashes.** Relaxation exercises involving slow, controlled deep breathing may help relieve hot flashes associated with menopause.

• **Insomnia.** There is some evidence that relaxation techniques can help chronic insomnia.

• **Irritable bowel syndrome.** Some studies have indicated that relaxation techniques may prevent or relieve symptoms of irritable bowel syndrome (IBS) in some participants. One review of the research found some evidence that self-hypnosis may be useful for IBS.

• **Nausea.** Relaxation techniques may help relieve nausea caused by chemotherapy.

• **Nightmares.** Relaxation exercises may be an effective approach for nightmares of unknown cause and those associated with posttraumatic stress disorder.

• **Overactive bladder.** Bladder re-training combined with relaxation and other exercises may help control urinary urgency.

• **Pain.** Some studies have shown that relaxation techniques may help reduce abdominal and surgery pain.

• **Ringing in the ears.** Use of relaxation exercises may help patients cope with the condition.

• **Smoking cessation.** Relaxation exercises may help reduce the desire to smoke.
- **Temporomandibular disorder** (pain and loss of motion in the jaw joints). A review of the literature found that relaxation techniques and biofeedback were more effective than placebo in decreasing pain and increasing jaw function.

Researchers have found no significant change in outcomes from relaxation techniques used during cardiac catheterization. However, patients experienced less distress prior to the procedure. Future research may investigate whether this has any long-term effect on outlook and recovery.

Many of the studies of relaxation therapy and health have followed a small number of patients for weeks or months. Longer studies involving more participants may reveal more about the cumulative effects of using relaxation techniques regularly.

**NCCAM-Funded Research**

NCCAM-supported studies have been investigating:

- Progressive relaxation and massage therapy for relieving low-back pain
- The effect of the relaxation response on blood pressure, stress hormones, and psychological well-being in older adults with hypertension
- Acupuncture and relaxation training for relieving stomach symptoms for people taking HIV medications.

**Side Effects and Risks**

- Relaxation techniques are generally considered safe for healthy people. 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.

- Relaxation techniques are often used as part of a treatment plan and not as the only approach for potentially serious health conditions.

**Training, Licensing, and Certification**

There is no formal credential or license required for practicing or teaching most relaxation techniques. However, the techniques may be used or taught by licensed professionals, including physicians, recreational therapists, and psychologists.
If You Are Thinking About Using Relaxation Techniques for Health

- Do not use relaxation techniques to replace conventional care or to postpone seeing a health care provider about a medical problem.

- Ask about the training and experience of the practitioner or instructor you are considering for any complementary health approach.

- Look for published research studies on relaxation for the health condition in which you are interested. Remember that some claims for using relaxation therapies may exceed the available scientific evidence.

- Tell all your health care providers about any complementary 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 tips about talking with your health care providers about complementary health approaches, see NCCAM’s Time to Talk campaign at nccam.nih.gov/timetotalk.

Selected References


For More Information

NCCAM Clearinghouse

The NCCAM Clearinghouse provides information on NCCAM and complementary 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
TTY (for deaf and hard-of-hearing callers): 1-866-464-3615
Web site: nccam.nih.gov
E-mail: info@nccam.nih.gov

PubMed®

A service of the National Library of Medicine, PubMed contains publication information and (in most cases) brief summaries of articles from scientific and medical journals.


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/

The 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.thecochranelibrary.com/view/0/index.html

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
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