

The Relaxation Response (Nov. 2002)

Imagine a medical treatment that can lower blood pressure, reduce blood sugar and cholesterol, prevent heart attacks, prolong survival in cancer and AIDS, cure insomnia, reduce the incidence of panic attacks, and lessen chronic pain. A treatment with no adverse side effects, that is self-administered by the patient and at no cost. This treatment is more than an HMO director's wildest dream; it is a reality - the Relaxation Response.

The Relaxation Response is a unique set of physiologic events that occur when the body is in a deep state of waking relaxation. The heart rate drops, blood pressure falls, the "stress hormones" adrenaline and cortisol are shut off, mental clarity improves and a perceived state of well-being prevails. When practiced for 20 minutes a day for at least 6 weeks, medical research has suggested that these effects persist and have the positive benefits listed above.

The effects of stress

When confronted with a sudden stressful event, the adrenal glands are activated and produce the opposite of relaxation, the "fight or flight" syndrome, including rapid pulse and elevated blood pressure. In a truly life threatening situation these can be lifesaving, allowing us a more powerful response to danger. Elevated blood sugar and lipids (such as cholesterol) provide fuel, and blood clots more rapidly, in case of a wound. When the danger passes, the body returns to its former condition. Too often, however, we live in a chronic state of stress, with too many demands, job conflicts, relationship stresses, and the adrenals remain activated. Not only does this strain the cardiovascular system, but it may lead to insomnia and anxiety. Higher cortisol levels suppress the immune system, and make us more prone to viruses such as colds and flu in the short term, and possibly cancers in the long term. The persistently elevated blood pressures increase the risk of heart attacks and strokes.

Relaxation takes many forms

Hundreds of medical research studies testify to the healing properties of relaxation. What do I mean by relaxation? It is far more than the lazy feeling we get when we vegetate in front of the television. The first research that defined this state in the 1960's monitored practitioners of Transcendental Meditation, who consciously lowered their blood pressures and metabolic rates while meditating in the lab. Later research determined that many other methods of relaxation prove equally effective. A few examples are repetitive prayer, guided imagery, chanting, yoga and tai chi.

There is no "best" way to achieve the Relaxation Response. The method should suit the individual's inclinations. They all share certain characteristics: a relaxed physical posture, slow rhythmic breathing, and a simple mental focus that allows thought to pass by unheeded. A deep sense of calm and well-being prevails. The body secretes natural painkillers called endorphins, and the brain manufactures a neurotransmitter that is a natural tranquilizer, GABA. Recent cutting edge research on the effect of relaxation on tissues suggests that a molecule called nitric oxide is the chemical messenger that modulates the cardiovascular changes.

A simple practice impacts health

The clinical implications are staggering. Besides promoting sustained modest decreases in blood pressure, relaxation prevents irregular heartbeats and reduces events of angina, the pain that occurs when blood flow to the heart is blocked. Painful episodes of migraine headache, irritable bowel syndrome and fibromyalgia reduce in frequency and severity. Panic attacks and episodes of insomnia are likewise decreased. Patients with AIDS increase their T cell counts, and cancer patients not only have less nausea and pain associated with their treatments, but their survival may be improved. Skin disorders such as psoriasis respond favorably when relaxation therapy is combined with their usual phototherapy.

Another interesting characteristic of the Relaxation Response is the unique brain wave activity documented - alpha-theta. The alpha waves alone are associated with a waking relaxed state, such as the pleasantly drowsy feeling preceding sleep. Theta waves occur with deep mental concentration,

such as solving a complex mathematical problem. Learning to attain this state of consciousness with biofeedback has assisted alcoholics and drug addicts with beating their addictions.

If you are wondering why this cheap and effective treatment isn't used more often in the medical system you are not alone. Two pioneering clinics operating at Harvard University and the University of Massachusetts for over 20 years have treated thousands of patients with these techniques with favorable outcome data. Patients make fewer visits to their doctors and medical costs decrease. Ongoing research will hopefully better define the benefit and make these principles more useful in the mainstream.

Simple meditation from *The Relaxation Response* by Dr. Benson

- 1) Assume a comfortable position and close your eyes
- 2) Gradually relax all muscle groups beginning with the feet and moving upward toward the head
- 3) Breathe slowly, saying the word "one" on each out breath
- 4) Maintain a passive attitude, and if thoughts intrude just ignore them and keep concentrating on "one"
- 5) Continue for 15-20 minutes

Resources:

- *The Relaxation Response*, Herbert Benson, Avon Books, 1975
- *The Relaxation and Stress Reduction Workbook*; Davis, Eshelman and McKay; New Harbinger Publications, 1997
- The Mind/Body Medical Institute at Bon Secours, 288-5415

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