

## **Hypnosis and its Application in Medicine**

### **A Survey of Some of the Research**

Compiled 2005

More attention is being placed on research looking at the effectiveness of alternative and mind-body therapies. This list provides an introduction to the various areas in which hypnosis is currently being applied and studied. It is by no means a comprehensive review of all the literature available.

#### **BONE FRACTURES**

Ginandes, CS, Rosenthal, DI. "Using hypnosis to accelerate the healing of bone fractures: a randomized controlled pilot study," *Alternative Therapy Health Medicine*, (1999), March, 5(2), pp.67-75.

At Harvard Medical School, twelve people with a recent bone fracture were divided into two groups. One group received hypnosis and the other group served as control. Both groups received standard orthopedic treatment. The hypnosis group had individual hypnotic sessions and listened to audio tapes designed to increase bone healing. X-ray and orthopedic evaluations were made during the 12 weeks of the experiment. The hypnosis group showed faster healing, had better mobility and used less pain killers.

#### **BURNS**

Wright BR, Drummond PD. "Rapid induction analgesia for the alleviation of procedural pain during burn care." *Burns*. (2000) 26:275-282.

30 hospitalized burn patients received either standard wound care (including pain medications) or standard wound care plus hypnosis with a technique called rapid induction analgesia (RIA). RIA sessions were administered prior to wound care over four burn care sessions during a 48-hour period. Patients who received RIA treatment had less anxiety and pain as well as reduced consumption of pain medication over the course of the burn care sessions. Relaxation ratings also increased in the RIA group during this time.

#### **CANCER**

Marchioro G, Azzarello G, Viviani F, Barbato F, Pavanetto M, Rosetti F, Pappagallo GL, Vinante O., "Hypnosis in the treatment of anticipatory nausea and vomiting in patients receiving cancer chemotherapy." *Oncology*. (2000) Aug; 59(2):100-4.

16 adult cancer patients affected by chemotherapy-induced anticipatory nausea and vomiting who had received at least four treatment cycles. All of them were submitted to induction of relaxation followed by hypnosis. In all subjects anticipatory nausea and vomiting disappeared, and major responses to chemotherapy-induced emesis control were recorded in almost all patients.

Spiegel, D., Bloom, J.R., Kraemer, H.C., & Gottheil, E. "Effect of psychosocial treatment on survival of patients with metastatic breast cancer." *Lancet*, (1989) 2(8668), 888-891.

In this 10-year follow-up of 86 cancer patients, those who received self-hypnosis training along with group therapy had 50 percent less pain and survived a year and a half longer than did those who had routine medical care. While not everyone in the therapy group received hypnosis, those who did got the most pain relief.

Syrjala KL, Donaldson GW, Davis MW, Kippes ME, Carr JE. "Relaxation and imagery and cognitive-behavioral training reduce pain during cancer treatment: a controlled clinical trial." *Pain* (1995) Nov; 63 (2): 189-98

This study compared pain levels in 4 groups of cancer patients receiving bone marrow transplants. The groups were divided as follows: (1) treatment as usual control, (2) therapist support, (3) relaxation and imagery training, and (4) training in a package of cognitive-behavioral coping skills which included relaxation and imagery. A total of 94 patients completed the study which involved two training sessions prior to treatment and twice a week 'booster' sessions during the first 5 weeks of treatment. Patients who received either relaxation and imagery alone or patients who received the package of cognitive-behavioral coping skills reported less pain than patients in the other 2 groups.

Walker LG, Walker MB, Ogston K, Heys SD, Ah-See AK, Miller ID, Hutcheon AW, Sarkar TK, Eremin O. "Psychological, clinical and pathological effects of relaxation training and guided imagery during primary chemotherapy." *Br J Cancer* (1999) Apr; 80 (1-2): 262-8

Ninety-six women with newly diagnosed large or locally advanced breast cancer took part in a prospective, randomized controlled trial. Patients were randomized following diagnosis to a control condition (standard care) or to the experimental condition (standard care plus relaxation training and imagery). Patients who received the relaxation techniques reported better coping skill, being more relaxed and a better quality of life.

## DERMATOLOGY

Shenefelt PD. "Hypnosis in dermatology." *Arch Dermatol.* (2000);136:393-399.

Literature review of uses of hypnosis in dermatology. Found that a wide spectrum of dermatologic disorders may be improved or cured using hypnosis as an alternative or complementary therapy.

## EMERGENCY MEDICINE

Peebles-Kleiger MJ. "The use of hypnosis in emergency medicine." *Emerg Med Clin North Am.* (2000) May;18:327-328.

Hypnosis can be a useful adjunct in the emergency department setting. Its efficacy in various clinical applications has been replicated in controlled studies. Application to burns, pain, pediatric procedures, surgery, psychiatric presentations (e.g., anxiety, and posttraumatic stress), and obstetric situations (e.g., hyperemesis, labor, and delivery) are described.

## FIBROMYALGIA

B Haanen, H.C. et al., "Controlled trial of hypnotherapy in the treatment of refractory fibromyalgia," *Journal of Rheumatology*, (1991) 18(1):72-75

40 Patients with refractory fibromyalgia were given treatment either with hypnotherapy or physical therapy for 12 weeks and then followed up 12 weeks later. The study showed that the patients who underwent hypnotherapy showed, "a significantly better outcome with respect to their pain experiences, fatigue on awakening, sleep patterns" and their overall assessments of their own conditions. The researchers concluded that "[h]ypnotherapy may be useful in relieving symptoms in patients with refractory fibromyalgia."

## IBS

Whorwell, P.J., Prior, A., & Faragher, E.B., "Controlled trial of hypnotherapy in the treatment of severe refractory irritable bowel syndrome." *Lancet*, (1984) 2, 1232-1234.

Reported that hypnosis treatment dramatically improved the symptoms of IBS patients who had failed to benefit from other treatment.

Galovski TE; Blanchard EB. *Appl Psychophysiol Biofeedback*, (1998) Dec, 23:4, 219-32..  
Patients who completed hypnotherapy reported improvement reported for all central IBS symptoms, as well as improvement in anxiety. The patients in a control group who were waiting for treatment did not show such improvement.

Palsson, OS, Turner, MJ, & Johnson, DA. "Hypnotherapy for irritable bowel syndrome: Symptom improvement and autonomic nervous system effects." *Gastroenterology* (2000), 118,(4): A174.)

Twenty-one of 24 patients with severe IBS treated with a standardized seven-session hypnosis protocol improved in all central IBS symptoms after treatment. Improvement was well-maintained at 10-12 month follow up.

## IMMUNITY

Ruzyla-Smith, Patricia; Barabasz, Arreed; Barabasz, Marianne; Warner, Dennis. "Effects of hypnosis on the immune response: B-cells, T-cells, helper and suppressor cells." *American Journal of Clinical Hypnosis*, (1995) 38, 71-79.

This study tested the effects of hypnosis on the immune response. High and low hypnotizable subjects were exposed to hypnosis, relaxation or control conditions. Blood samples obtained before treatment and twice thereafter were subjected to flow cytometry analysis. Significant alteration of the immune response as measured by B-cells and helper T-cells was shown for highly hypnotizable subjects.

Gruzelier JH. "A review of the impact of hypnosis, relaxation, guided imagery and individual differences on aspects of immunity and health." *Stress*. (2002) Jun;5(2):147-63.

The review provides evidence of immune control accompanied by reports of enhanced mood and well-being. Three recent investigations of the author and his colleagues with self-hypnosis training incorporating imagery of the immune system are outlined. In two studies, hypnosis buffered the effects of stress on immune functions in medical students at exam time, and the comparison of self-hypnosis with and without immune imagery confirmed advantages to targeted imagery for both immune function and mood, and importantly, fewer winter viral infections.

## PAIN

"NIH Technology Assessment Panel on Integration of Behavioral and Relaxation Approaches into the Treatment of Chronic Pain and Insomnia", *JAMA*, (1996) 276(4):313-318.

"The panel found strong evidence for the use of relaxation techniques in reducing chronic pain in a variety of medical conditions as well as strong evidence for the use of hypnosis in alleviating pain associated with cancer."

Crawford, HJ et al. "Hypnotic Analgesia: Somatosensory Event-Related Potential Changes to Noxious Stimuli, and Transfer Learning to Reduce Chronic Low Back Pain," *International Journal of Clinical and Experimental Hypnosis*, (January 1998) pp. 92-132.

Three experimental sessions of hypnotic analgesia led to a highly significant reduction in the pain and distress of 15 adults with chronic low back pain. Participants reported increased psychological well-being and better sleep as well.

## SURGICAL PREPARATION & RECOVERY

Disbrow, ED, Bennett, HL et al. "Effect of Preoperative Suggestion on Postoperative Gastrointestinal Motility," *Western Journal of Medicine*, (May 1993) pp. 488-492.

Hypnotic suggestion can speed recovery from surgery. Twenty patients were told before abdominal surgery, "Your stomach and intestines will begin to move and churn so that you can eat your favorite food soon after the operation." On average, they recovered gastrointestinal functioning in 37 percent less time than did a control group and were discharged from the hospital in 6.5 days, compared to 8.1 days for the controls. Savings averaged \$1,200 per patient.

Ashton C Jr. Whitworth GC. Seldomridge JA. Shapiro PA. Weinberg AD. Michler RE. Smith CR. Rose EA. Fisher S. Oz MC, "Self-hypnosis reduces anxiety following coronary artery bypass surgery. A prospective, randomized trial." *Journal of Cardiovascular Surgery*, (Feb.1997) 38(1):69-75,

A controlled study of 32 coronary bypass patients showed that those taught self-hypnosis pre-operatively were more relaxed after surgery and had less need for pain medication than patients in the control group.

Lang, E. V., Benotsch, E. G., Fick, L. J., Lutgendorf, S., Berbaum, M. L., Berbaum, K. S., Logan, H., & Spiegel, D. "Adjunctive non-pharmacological analgesia for invasive medical procedures: A randomised trial." *Lancet*, 355 (April 29, 2000), 1486-1500.

Study with 241 patients undergoing percutaneous vascular and renal procedures randomized to three groups, patients received standard patient-controlled sedation; one group got a standardized hypnosis treatment too, another a structured attention manipulation, and the rest were controls. All had access to patient-controlled intravenous analgesia. The hypnotic group asked for and were given, less medication than the controls. Hypnosis also greatly lessened anxiety. Procedure times were significantly shorter in the hypnosis group (61 min) than in the standard group (78 min,  $p=0.0016$ ) with procedure duration of the attention group in between (67 min).

Lang, EV, Joyce, J, Spiegel, D et al. "Self-Hypnotic Relaxation During Interventional Radiological Procedures: Effects on Pain Perception and Intravenous Drug Use," *International Journal of Clinical and Experimental Hypnosis*, (April 1996) pp. 106-119.

Self-hypnosis techniques were taught to half a group of patients who were undergoing invasive radiological procedures - dye injections, cut-downs to access the arteries, and other painful procedures where bad things can happen. All patients were given access to patient-controlled intravenous analgesia if they wanted it. Those who were taught self-hypnosis used one-ninth the medication, and yet they had significantly less pain, less anxiety, less instability of their heart rate and blood pressure, fewer procedural interruptions, and got out of the recovery room sooner than those who were not taught self-hypnosis.

## NOCEBO INFORMATION

Morse, Gardiner. 1999. "The Nocebo Effect - Scattered studies suggest that negative thinking can harm patients' health," *Hippocrates*, November, Vol. 13, No. 10.

Voelker, Rebecca. "Nocebos Contribute to a Host of Ills." *Journal of the American Medical Association* 275 no. 5 (1996): 345-47.

In the Framingham Heart Study, women who believed they are prone to heart disease were nearly four times as likely to die as women with similar risk factors who didn't believe.