

## Effects of Hypnosis on GI Problems

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Hypnosis is a treatment method which still carries an aura of mystery that, unfortunately, continues to be promoted by misrepresentations in movies and stage shows for entertainment. In reality, there is little mysterious about hypnosis anymore. It is a well-researched clinical technique which was formally accepted as a treatment method by the American Medical Association and the American Psychological Association over thirty years ago. Clinical hypnosis is currently used by thousands of clinicians in the U.S. to treat both psychological and medical problems.

Until recently, the possibility of using hypnosis to treat gastrointestinal problems had received little attention. In the last 15 years, however, research has shown that hypnosis can influence gastrointestinal functioning in powerful ways, and that it is particularly effective in helping patients with irritable bowel syndrome (IBS) and to control nausea and vomiting.

### How Hypnosis Works

Hypnosis is a special mental state in which a person's focus of attention becomes narrow and intense like the beam of a bright flashlight in a dark room. This state is usually created with the aid of a hypnotist who guides the person systematically to relax, focus only on one thing, and to allow things to happen by themselves.

Whatever the mind focuses on while in this special mental state of hypnosis holds the entire attention. Therefore, people tend to experience things they think of, imagine or remember, more vividly and clearly than under usual circumstances. This is why people can sometimes recall things from their distant past under hypnosis although they are unable to do so in the normal waking state (research has shown, however, that such hypnotically enhanced recall can be highly contaminated by the person's imagination). The narrow hyperfocus of this mental state is also why therapists using hypnosis are frequently able to help people make strong positive changes in their emotions and physical functioning. Hypnosis can work like a magnifying glass on the mind's effects on the body and emotion.

Clinical hypnosis relies on suggestion, imagery and relaxation to produce its therapeutic effects. Hypnotic suggestions are things that the hypnotist verbally suggests may happen while the person is under hypnosis. Due to the focused and receptive state of the hypnotized person, these suggestions happen almost automatically and without conscious decision or effort. For example, if you receive the suggestion under hypnosis that your arm may be getting heavy, you will very likely feel it becoming heavy, without trying to do anything to make it happen. This "automaticity" -- the



feeling of things happening by themselves -- is by some considered the hallmark of hypnosis and is often surprising to people experiencing hypnosis for the first time.

Hypnotic imagery consists of mentally picturing events or situations or places in a way that has a desired positive physical or mental effect. For example, patients undergoing surgical or dental procedures are sometimes taught to enter a hypnotic state and go to a pleasant place in their mind. When successfully applied, the person gets completely engrossed in the vivid enjoyable imagery and is therefore happily unaware of the unpleasantness of the procedure.

The hypnotic state is naturally accompanied by relaxation, and the physical relaxing effects are often deliberately strengthened further by clinicians through suggestions and relaxing imagery. Some of the benefits that come from hypnosis treatment are likely to result partly or entirely from the fact that hypnosis is a powerful relaxation method.

Over decades of research and clinical experience, hypnosis has proven to have many valuable therapeutic uses. In psychotherapy, hypnotic techniques can speed the therapy process in various ways -- for example, by facilitating a patient's selfunderstanding, extinguishing unfortunate habits, uncovering repressed or forgotten memories, reducing anxiety and phobias, and helping a person to assume a new and more adaptive outlook. In medicine and health psychology, hypnosis is used to reduce pain and discomfort associated with medical procedures such as childbirth, treatment of burns, and surgery where chemical anesthesia cannot be used effectively. It is also used to treat chronic pain and psychosomatic problems and to counter unhealthy habits that can contribute to illness. In dentistry, hypnotic analgesia is an effective needle-less alternative to topical anesthetic drugs, reduces bleeding and discomfort in oral surgery, and is used to treat teeth grinding and temporomandibular disorder.

## **The Effects of Hypnosis on Gastrointestinal Functioning**

In recent years, the effects of gastrointestinal functioning and GI symptoms have been studied extensively. The hypnotic state itself, without any particular suggestions, seems to slow down the gut. Clear-cut and specific changes in GI functioning can be induced in individuals by directing thinking or inducing specific emotional states under hypnosis.

For example, one study [1] found that when healthy volunteers were hypnotized and simply instructed to relax, the oro-caecal transit time (the time it takes material to pass through the GI tract from the mouth to the first part of the colon) was lengthened from 93 to 133 minutes. Another study [2] found that being in a hypnotic state decreases muscle movements in the stomach. The same study demonstrated that the emotional state of happiness, created under hypnosis, suppresses gastric muscle activity while anger and excitement increase muscle movement in the stomach. A pair of other studies [3] have shown that when volunteers were guided to use imagery of eating a



delicious meal while they were under hypnosis, gastric acid secretion was increased by 89%, and that acid production of the stomach could also be deliberately decreased during hypnosis using hypnotic instructions. Close to fifty published studies have reported on the therapeutic effects of hypnosis on nausea and vomiting problems related to chemotherapy, after surgery, and during pregnancy. Overall, this substantial body of literature indicates that hypnosis can be a powerful aid in controlling nausea and vomiting.

Hypnosis may also be helpful in preventing gastrointestinal problems from recurring after they have been treated with medication. One study [4] of thirty patients with relapsing duodenal ulcers who had been successfully treated with a course of medication, found that only 53% of the patients who received preventive hypnosis treatment had a relapse within one year. By contrast, everyone (100%) in a comparison group receiving no hypnosis relapsed in the same period of time.

In 1984, researchers in Manchester in England published a study [5] report in the journal *Lancet*, showing that hypnosis treatment dramatically improved the symptoms of IBS patients who had failed to benefit from other treatment. The researchers had randomly divided patients with severe IBS problems into two groups. Fifteen patients were treated with seven hypnosis sessions. Fifteen comparison patients were treated with seven sessions of psychotherapy, and those patients also received placebo pills (pills with no medically active ingredients) which they were told were a new research medication for IBS symptoms. Every patient in the hypnosis group improved, and that group showed substantial improvement in all central symptoms of IBS. The control group showed only very modest improvement in symptoms.

Partly due to these dramatic results with treatment-refractory patients, a dozen other studies have followed, including three U.S. studies. The general conclusions from most of these studies are that hypnosis seems to improve the symptoms of 80% or more of all treated patients who have well-defined "classic" IBS problems, especially if they do not have complicating factors such as psychiatric disorders. The improvement is, in many cases, maintained for at least a year after the end of treatment. What is particularly remarkable is that this high rate of positive treatment response is seen even in studies where all the participating patients had failed to improve from regular medical care.

The dramatic response of IBS patients to hypnosis treatment raises the question of exactly how this kind of treatment influences the symptoms in such a beneficial way.

Four studies to date, two in England and two in the U.S., have tried to discover how hypnosis treatment affects the body of IBS patients. Since it is well known that many people with IBS have unusual pain sensitivity in their intestines, which is thought to be related to the clinical pain they experience, much of the focus of these studies has been on assessing the impact of this kind of treatment on intestinal pain thresholds.

The two English studies both measured intestinal pain sensitivity with balloon inflation tests. The second study also measured muscle tone, to see if hypnosis relaxes the smooth muscles of the GI tract. No overall changes in pain sensitivity were detected, and gut muscle tension was also unchanged after treatment (except a subgroup of unusually pain-sensitive patients had lessened pain sensitivity in the second study) [7].

In 1995-1996, during my post-doctoral fellowship in the Division of Digestive Diseases and Nutrition at UNC-Chapel Hill, we conducted the first U.S. study [8] on hypnosis for IBS under the direction of Dr. William Whitehead. We evaluated the effects of a highly standardized treatment protocol, delivered verbatim following written scripts, on rectal pain thresholds and muscle tone. Seventeen out of the 18 patients treated with hypnosis showed significant improvement in their clinical symptoms. However, like the English researchers, we found that gut pain thresholds and muscle tension were unchanged after treatment. In a second study [9], which I conducted with co-investigators at the Eastern Virginia Medical School, we used the same treatment protocol but this time measured autonomic nervous system functioning and blood levels of a gut hormone called vasoactive intestinal peptide.

These are regulators of GI functioning in the human body, and the aim was to see if they would change due to treatment. Again, we found no changes in our physical measures after treatment (with the exception of reduction in sweat gland reactivity) even though 21 out of 24 treated patients were clinically improved. It should be noted, however, that in both of our studies, we found clear improvement in the psychological well-being of our patients after hypnosis treatment.

In summary, it is clear from our work and other research that hypnosis treatment substantially improves all the central symptoms of IBS in the majority of patients who receive such treatment (see the effects of our two studies on clinical symptoms in the Figure). What happens in the body of these patients to cause such improvement, however, remains a mystery.

### **Future Prospects**

In light of the many studies which have shown hypnosis treatment to be effective for such problems as IBS and nausea and vomiting, the question may be raised as to why this kind of treatment is not more widely available or generally offered to patients with such GI problems.

One limitation is the fact that not everybody is equally hypnotizable. Research has consistently shown that at least 15% of people are practically non-hypnotizable, and even those who are able to enter a hypnotic state vary greatly in how well they respond. Interestingly, the ability to be hypnotized is a stable mental trait. In other words, if you are highly hypnotizable now, you will most likely be so also in thirty years. Fortunately, the majority of people are sufficiently hypnotizable to have a potential for enjoying at least some of the medical and psychological benefits of clinical hypnosis.



Furthermore, the idea of being hypnotized does not agree with all people. Even individuals who are sufficiently hypnotizable, may not like the idea of "letting go", may have difficulty trusting a therapist to guide them in hypnosis, or may have other concerns about the hypnosis experience. Fortunately, other forms of psychological treatment for gastrointestinal problems -- in the case of IBS especially cognitivebehavioral therapy -- have also been found to be effective and are good alternatives.

Finally, an obstacle which has barred many patients from receiving help for gastrointestinal disorders with hypnosis is the fact that in the U.S. the technique is more commonly used by psychologists and other mental health professionals than by physicians. Many mental health professionals who use hypnosis are not accustomed to treating gastrointestinal disorders and are, therefore, reluctant to take on treatment of such problems.

As the beneficial effects of hypnosis on gastrointestinal functioning become better known both to health professionals and the general public, this benign and comfortable form of treatment will hopefully become a more popular treatment option for GI patients -- especially for those who have not received much relief from standard medical management. As far as IBS is concerned, we have been making an effort in the last two years to encourage clinicians across the country who have adequate training in hypnosis to provide such treatment for IBS. We have done this by providing them, free of charge, with the complete standardized treatment protocol which has proven effective in our research. To date, more than eighty licensed health professionals, practicing in almost all states, have started using our protocol, making it a little bit easier for patients in many geographical locations to receive help with hypnosis.

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