

# Chapter 10

## Hypnosis and Biofeedback for Orofacial Pain Management

Janet Crain

### Introduction

Today, more medical professionals are becoming interested in the mind/body connection, particularly as it relates to healing. Concerns with side effects and immunities to the effectiveness of pain medications make it difficult to treat patients with pharmaceuticals, hypnosis and biofeedback are making a resurgence in medical protocol.

In 1986, Dr. Earl Bakken defined cyberphysiology as the study of how neurally mediated autonomic responses can be modified by a learning process. Both hypnosis and biofeedback are cyberphysiologic strategies that enable the patient to develop voluntary control of certain physiologic processes [1]. Several studies have examined the effectiveness of hypnosis and biofeedback in both acute and chronic pain management.

### My Introduction to Hypnosis

My own first experience with hypnosis was both dramatic and very personal, and it quickly showed me how effective hypnosis can be for managing pain and discomfort. In 2003, I was diagnosed with a recurrence of non-Hodgkin's lymphoma, cancer of the lymphatic system. I had already endured a round of radiation treatments during my first bout with lymphoma. The chemotherapy treatments to treat the recurrence caused me to lose my hair as well as 16 lb as a result of extreme nausea. My mouth became as dry as a desert, and I could hardly swallow. So, before I faced another round of chemotherapy, my husband suggested I try hypnosis to control the side effects.

---

J. Crain, D.M.D. (✉)  
The Center for Headaches, Facial Pain, and Sleep Apnea,  
2045 Route 35 South, South Amboy, NJ 08879, USA  
e-mail: Drcdrk@aol.com

Most of the time, my nausea started a few hours after each chemotherapy treatment. Using hypnosis, I was able to focus my attention on replacing the nausea with hunger. After my first 45-min hypnosis session, I was amazed that it worked—the nausea disappeared, and I felt hungry instead. I also used hypnotic focus to imagine a lemon in my mouth, which increased my saliva flow, preventing the severe dry mouth I had previously experienced.

During the next 6 months of treatment, I had two to three hypnosis sessions per week to strengthen the positive empowering thoughts that helped me to counteract the side effects. The nurses and physicians who administered the chemotherapy treatment remarked repeatedly that they had never seen anyone require so little anti-nausea medication during this particular chemotherapy regimen.

Obviously, hypnosis changed my life on a deeply personal level, and since then, it has significantly changed my dental practice, which is devoted to the treatment of headaches, facial pain, and temporomandibular joint (TMJ) disorder. I was so impressed with the control that hypnosis offered me that I trained to become a certified hypnotist, which allows me to use hypnotic focus with my patients. I have modified the techniques I learned to make them chairside friendly and have incorporated them into my treatment protocol, helping my patients not only manage pain but also overcome fears and achieve relaxation.

## What Hypnosis Is

In 1855, Scottish physician and surgeon James Braid coined the term “hypnotism” and essentially founded hypnotherapy as we know it today. Hypnosis can be defined as a state of heightened concentration or focused attention that allows you to tap into the extraordinary power of the mind. Contrary to popular belief, there is nothing strange or magical about hypnosis; it occurs naturally. Television and movies have misrepresented hypnosis and given it a poor reputation that is absolutely unfounded.

In fact, most of us are in a hypnotic state at various times on a daily basis. For example, you have no doubt driven home on autopilot, so deep in thought that you had no recollection of the drive before arriving in your parking spot. While reading, you may sometimes lose track of time and fail to notice someone walking into the room because you are so engrossed in your book. These are all examples of a hypnotic trance state. In this state, you become more relaxed, focused, and suggestible. What we usually call “daydreaming” is also a state of hypnosis.

You can easily come back to a full wakeful state from a hypnotic state. If you are driving, for example, a beeping horn or a car moving in your direction will jolt you back into full awareness of where you are and what is happening.

Hypnosis works because the mind is divided into two parts called the subconscious and the conscious. The subconscious mind is viewed as the survival, instinctual level of the mind. Everything and every memory are stored in the subconscious mind. The conscious mind, on the other hand, acts as the receiver and processor of information from the outside world. It is the thinking, analyzing, and language processing portion of the mind.

In a hypnotic state, the goal is to slow down the conscious brain waves, allowing the subconscious mind to become open to suggestions. Hypnosis itself, however, is not the same thing as suggestion. Hypnosis is simply the state that promotes the acceptance of suggestions and allows a person to change their thinking, and this change in thinking has been shown to alter the emotional state and affect the sensation of pain.

## What Hypnosis Is Not

There are many misconceptions about hypnosis. For example, hypnosis is not:

- A state of sleep.
- A surrender of will to the hypnotist (the person in the hypnotic state maintains control).
- A means by which someone can obtain secrets from the hypnotized person.
- A loss of consciousness.
- A state of mind in which someone can become “stuck” or remain permanently.
- A trance which can only be achieved with unintelligent or gullible people.
- Dangerous.
- A state that can be forced on a person.

Even stage hypnotists do not actually control their hypnotized subjects. These hypnotists perform tests that help them find the most suggestible subjects in the audience. While these people may not remember what happened to them (just as you may fail to consciously remember driving from your office to your home), they would not perform the requests made by the hypnotist unless they wanted to do so on a deep level.

## Hypnosis in the Medical/Dental Practice

Every culture since ancient times has used hypnosis to aid in healing. Through the latter part of the 1800s, hypnosis was readily accepted as an adjunct to other medical treatments. When chemical anesthesia became more sophisticated and prominent, however, the use of hypnosis waned. As a result, medical practitioners are often misinformed and needlessly skeptical about what hypnosis is and what it can accomplish.

A certified hypnotist is trained to use the natural state of hypnosis to promote a change in behavior through the use of suggestions in a very specific way. Extensive training is required to learn therapeutic hypnosis for use as a treatment or a therapy. The hypnotist learns how to invoke a hypnotic state of mind so that the subject accepts new ideas (i.e., suggestions) without resistance. Again, however, the subject or the patient must consent to accepting these suggestions and make the decision to let go of resistance.

Pain management is only one way that hypnosis is useful in a medical/dental practice. Historically, hypnosis has been used to successfully treat a wide range of conditions, including anxiety, eating disorders, phobias, fears, and addictive behaviors.

In a January 2000 article in *Jacksonville Medicine* entitled “Homeopathy, Herbs and Hypnosis: Common Practices in Complementary and Alternative Medicine,” the authors stated: “Controlled experiments and clinical interventions document the ability of hypnotized individuals to control pain, reduce physiologic arousal in preparation for and during surgery, replace or supplement chemical anesthesia and analgesia and reduce bleeding, swelling, infection, post-operative complications and pain and reduce length of hospital stay. In dentistry, hypnosis is used for psychogenic oral pain, overcoming fear, gagging, tongue thrusting, thumb sucking, flow of saliva and capillary bleeding, bruxism, cooperation with procedures and as an anesthetic in place of chemical anesthesia due to allergies [2].”

Additionally, self-hypnosis techniques can easily be taught to patients so that they can manage pain or deal with other issues, such as habitual behaviors and fears that interfere with treatment protocols.

## How Hypnosis Works

The “induction” is the first step in the hypnosis process. There are many types of inductions. In his book, *Essentials of Hypnosis*, Dr. Michael Yapko states, however: “Anything that focuses the person’s attention and facilitates feelings of comfort and well-being can be used as an induction [3].” The goal of this vital step in trance initiation is to relax the mind and body, increase mental focus and concentration, and prepare for the acceptance of suggestions.

There is no perfect induction for everyone. The goal is to increase inner sensory awareness while reducing awareness of the outside world, and the way to reach that goal depends upon the individual.

A common induction utilizes a pendulum or a point of focus. A pendulum is simply an object that hangs from something so that it swings freely. You can use a necklace for this, or you can choose some other object as the point of focus.

I generally use five steps when hypnotizing my patients. What follows is a sample:

### ***Step One: Pendulum or Point of Focus and Relaxation Breathing***

*Remove any mints or candy from your mouth. Sit comfortably, and begin by holding your pendulum or point of focus in your dominant hand in a vertical position between your thumb and forefinger. Center the tip of the pendulum or point of focus one-half inch above the outstretched palm of your non-dominant hand. With your eyes open,*

*place your attention on the tip of the pendulum or the point of focus, and take a breath. Then, count backward out loud as follows: 15, 14, 13, 12, 11, 10, 9, 8, 7, 6, 5, 4, 3, 2, 1. Place the pendulum down and close your eyes, and take a second deep breath.*

*Imagine golden sun rays of relaxation flowing into your fingertips. As you take a deep breath, feel the tingling sensation of relaxation traveling up your arms to your elbows and all the way up to your shoulders. Then, let it flow into your neck and continue up to the top of your head. Picture the golden sun rays of relaxation spreading from the top of your head ...down your neck ... filling your chest and your heart with healing. Now, down your spinal column, into your stomach and your hips ... down your legs ... all the way to your feet. When you have imagined that the relaxation has reached your toes, wiggle them, and allow yourself to release all of your tension and stress.*

Since it is easier to quiet the body than to quiet the mind, deepening of the hypnotic state gives the mind a chance to follow the body into relaxation. The goal of this next step is to bring the patient to a deeper level of trance.

### ***Step Two: Quiet the Mind***

*Imagine a magical staircase in front of you leading to a private retreat. Authorize yourself to take the first step. You feel excited as you treat yourself with the respect you deserve and start the process of change. On the second step, you feel deeply relaxed. See yourself firmly on the third step. Allow the process of hypnosis to aid you as you continue to move to step 4. On step 5, you feel support from the universe. As you reach step 6 on this magical staircase, you feel yourself moving smoothly and effortlessly into deep hypnosis. Take a moment to breathe in this feeling of well-being as you step onto 7. You feel tranquil and relaxed ... very relaxed. Now, moving onto step 8 ... and as you approach the ninth step, you feel safe and calm, open to helpful suggestions. Step 10 completes your journey as you achieve a receptive state of mind. This is your special time for making a positive change in your life. You are ready.*

The next step is to create imagery. This can be achieved with sensory-oriented suggestions for designing a safe place in the mind. This guided visualization is especially effective for patients who have fears or phobias related to treatment. A sample induction of developing a safe place is as follows:

### ***Step Three: Create Imagery***

*Picture yourself standing at the door of a very safe place. As you open the door, see yourself in this unique, special, wonderful place. Imagine a chair right in front of you. Sit down, and feel the chair supporting you. There is a delicious drink especially for you next to the chair. Pick up the glass, and feel it in your hand. Now, taste*

*the drink, and savor its flavors. Smell the freshness in the air, and listen to the sounds in the background. Take a moment to enjoy the beautiful scenery. This is a special time for transformation. You are allowing yourself to create a healthier body and mind. You are ready to modify your thoughts.*

### ***Step Four: Developing Suggestions***

Suggestions can be compared to a navigational compass as they direct thoughts that lead the person to achieve their goal. There are many roads to that goal, so it is critical to understand which type of suggestion best suits the individual. For example, if you want the patient to produce more saliva in the mouth, a negative suggestion such as “Do not think of your favorite food” may cause the patient to think of the food and produce the additional saliva.

A positive suggestion, on the other hand, is supportive and encouraging and helps the individual create a visualization of the desired behavior. For example, you might say, “Remember a time when you were very proud of yourself.”

The step of developing suggestions needs to be done with a clear vision of the patient and the desired goals. It is critical that the suggestions are acceptable, motivating, and believable to the person receiving them. All suggestions must fit into the individual’s belief system and be emotionally acceptable in order to produce a behavioral change.

### ***Step Five: Ending the Session***

The final step is to present post-hypnotic suggestions while the patient is in a hypnotic state of mind, which will carry the suggestions into the desired context in the awakened state of mind and facilitate inductions in future hypnotic sessions. These suggestions are designed to reinforce and summarize the newly acquired thinking, integrating the new behaviors so that they become a reality in the future [3].

A sample suggestion might be:

Day by day, as you move forward, you enjoy each moment. You now feel able to manage your life. You are becoming more and more relaxed and healthy. When you return for the next hypnotic session, you will be able to go into deep hypnosis quickly and easily. You feel ready for the change.

After the post-hypnotic suggestions are completed, the script I generally use to close the hypnosis session is as follows:

We have now finished our session. You will carry with you all of the new behavior patterns you have learned, as well as a sense of well-being. I will count from 5 to 1, allowing you to slowly return to full alertness, leaving your safe place with the confidence that you will be able to return to it anytime you want. Let’s begin: 5 ...beginning to drift back to complete

alertness; 4 ...closer now to complete awareness; 3 ...becoming aware of your surroundings; 2 ... feeling refreshed and rejuvenated; and 1.

When you feel ready to return to your day, open your eyes, and look forward to positive results from this hypnosis session. You feel refreshed, rejuvenated, and ready.

It is very beneficial to hydrate after a hypnosis session, so I offer a glass of water to help the patient become more alert.

### ***Hypnosis for Eliminating Emotional Roadblocks to Treatment***

Fear is a natural instinct that helps us survive in the face of danger. When the body responds, it does not know if the danger is real or imagined. Therefore, the mind can be tricked to react even when a danger does not actually exist, such as when you see a shadow at night and become frightened enough that your heart starts to beat rapidly, you feel faint, and/or you start to sweat. Even when you realize that the danger is not real, it is difficult to turn off the body's reaction.

Medical anxiety is a fear reaction to the unknowns of what might happen during a medical procedure as well as loss of control during the procedure. Anxiety is extremely common, especially in people who are to have a procedure they have never experienced before. Medical anxiety can often be reduced if the patient is given information and knowledge in advance, thus eliminating as many unknowns as possible. It is important to assess the patient's level of anxiety through body language and conversation before beginning the procedure in order to prevent an escalation of anxiety that might have been handled easily if addressed earlier. It is essential to address all questions and concerns and ensure that the patient is ready to begin.

Medical phobia differs from medical anxiety in that it is a fear that develops in people who have never had a bad experience with a procedure. Instead, it is based on indirect experiences such as hearing the negative stories of others or seeing a film with a scene in a doctor's office. "Phobia" is traditionally defined as "an irrational severe fear that leads to avoidance of the feared situation, object, or activity." In most cases, a phobia develops in a person who already suffers from anxiety, and such people avoid care at all costs until the pain becomes overwhelming.

Negative emotions, fears, and stress lead to a feeling of dread and loss of control that cause the body to react with chemical and electrical responses within the nervous system, activating the hypothalamic-pituitary-adrenal axis. Since the brain is the most important part of the nervous system and is made up of tens of billions of nerve cells, every nerve cell produces chemical communicators to correspond with nearby cells.

Cortisol is the hormone that is secreted by the adrenal glands in response to stress, and too much cortisol leads to an increase in blood pressure and blood sugar levels as well as suppression of the immune system. This chemical reaction called the "fight or flight" response is triggered by a feeling of danger created by anxiety. Any contact with the feared stimulus provokes an immediate chemical response, which may take the form of a panic attack.

## Benefits of Hypnosis in the Dental Practice

Patients with dental fears, anxieties, or phobias may have a severe physiological fight or flight response while in the dental office. If a patient begins to have a panic attack while in the chair, the medical procedure cannot continue. Certainly, the physical reaction does not calm down immediately and will delay treatment and increase the patient's sensitivity as well as perception of pain and discomfort. Therefore, it is very important to remember that these fears are very real to the patient, and they simply must be addressed before beginning any procedures.

These patients require more time and special considerations and create stress for dental professionals. Often, people who are fearful of dentistry come into the office only when their pain has grown to an emergency state. What happens as a result? They are squeezed in between regular appointments when there is little time for them. Of course, this is the worst possible scenario for treating such a patient. Chances are these patients have neglected their dental health, creating complex dental needs that may be both extensive and expensive.

A 2006 article published in *Contemporary Hypnosis* by the British Society of Experimental and Clinical Hypnosis discusses the use of hypnosis to assist a patient in dealing with her dental phobia. The patient was able to allow the dental procedure to take place, and she learned self-hypnosis techniques that helped her to "feel more confident about accepting future dental treatment without need for pharmacological intervention [4]."

## Case Study: Hypnosis for Fear of Treatment

Amanda was a 23-year-old female who complained of head and facial pain which had begun approximately 3 years before. She had been under the care of physicians of various specialties, including acupuncture and manipulative care, and she had also taken prescribed medications. When it became apparent that her pain and dysfunction were not resolving, she was referred to my office by her acupuncturist for further evaluation and treatment. When asked to rate her head pain subjectively using a visual analog scale (VAS), she chose up to a 10 on a scale of 0–10, with 10 designated as the worst pain that she could possibly imagine. She reported that her pain frequently awakened her from sleep and that there were days when it was so severe that she was confined to bed.

Recommended treatment included an intraoral orthopedic appliance, trigger point injections, electrogalvanic stimulation, ultrasound, nutritional recommendations, and neuromuscular reeducation. Amanda needed injections to assist her muscles, ligaments, and tendons to heal, but her fear of injections prevented her past physicians from completing the necessary treatment. Amanda refused injections, saying, "I hate needles, and I faint." She agreed to hypnosis, however, to overcome her needle anxiety.



The goal of hypnosis was to overcome her fear of needles to allow treatment to continue. The hypnosis session started with relaxation breathing and securing an imaginary safe place, followed by the finger focus technique (described later in this chapter) and a post-hypnotic suggestion for continued healing and an easy return to a hypnotic state of mind. Amanda agreed to practice the technique at home through self-hypnosis every day until her next visit.

Amanda did quite well entering a light state of hypnosis on her own. During her next office visit, we reviewed the hypnosis technique and completed the recommended injection treatment. She admits that “hypnosis helped me keep my mind off the needle.” Amanda also reports that her pain has reduced and that she is happy with her progress.

## Hypnosis for Bruxism

Bruxism involves involuntary or unconscious grinding of the teeth, usually during sleep. This grinding can lead to orofacial pain and residual problems with the teeth and gums. Hypnosis has been found to often be effective in controlling bruxism.

In a study published in the *American Journal of Clinical Hypnosis* in April 1994, a 63-year-old woman, who had suffered from nocturnal bruxism since the age of 3, was treated with hypnosis. Her bruxism had caused facial pain, headaches, and an ulceration on the inside of one of her cheeks.

One suggestion given to the patient during hypnosis included awakening whenever she felt her jaw tighten or her teeth come together, followed by a suggestion that she would easily fall back to sleep. The authors reported, “Three days later the patient reported that she ‘had not ground my teeth at all.’” Additionally, the patient reported that her sleep had improved, and the ulceration in her cheek had begun to heal. Even after a 60-month follow-up, the patient reported that she was “cured.” Furthermore, the patient’s dentist confirmed that the damage to her teeth had ceased [5].

## Hypnosis to Relax a Strong Gag Reflex

Another issue that plagues medical professionals, particularly dentists, is the gag reflex, which can interfere with examinations, cleanings, dental X-rays, and treatment. Hypnosis is an effective technique for easing and relaxing strong gag reflexes, and I find that the following suggestion, given after a hypnotic induction, works well.

Place a pen or a pencil in the patient’s hand, and say, with confidence:

“I am going to place this pencil in your hand, and I want you to focus on keeping a steady but gentle pressure on the pencil. Continue to do so, and you will no longer have the desire to gag.”

During the treatment, reinforce the suggestion periodically by saying:

“As you continue to hold the pencil, I want you to visualize, picture, or imagine that as I’m treating you, you will feel calm and relaxed at all times while you focus on the pencil.”

### ***Case Study: Hypnosis for Tinnitus***

Molly presented in my office, complaining of tinnitus after the completion of dental work on a maxillary tooth which required her mouth to be open for an extended period of time. She described the noise as a “constant smoke alarm going off.” When she was asked to rate the noise subjectively using a VAS, she characterized the ringing as up to a 10 on a scale of 0–10, with 10 as the worst noise she could possibly imagine. She said that she could not sleep without the television playing as background noise.

After the first hypnosis session, Molly said that “the sound changed. It wasn’t at a 10 anymore. It was reduced to a 7.” After four sessions of hypnosis devoted to reducing the ringing in her ears, Molly claims that the tinnitus is only intermittent, and when it occurs, it is only a 3 on the scale. She now maintains that she can sleep without the television.

### ***Hypnosis and Orofacial Pain Management***

A continuing study at the Orofacial Pain Clinic in Melbourne, Australia, which is part of The Royal Dental Hospital of Melbourne, was published in the *Australian Dental Journal* in December 1978. The study investigated a total of 200 patients, of which 52 (20 %) received hypnosis treatment involving induction, relaxation, suggestion, and visualization techniques [6].

The author physicians concluded: “It is clear from the types of pain successfully treated that hypnosis is able to reduce or eliminate both ‘sensory’ and ‘suffering’ pain. Pain problems, ranging from those of predominately psychogenic origin to those of predominately organic origin, can be managed. Complex interactions of both physical and functional problems are often seen in many instances of chronic orofacial pain. Hypnosis does not merely produce relaxation and relief from anxiety and thus make pain more tolerable; it is capable of reducing pain itself, sometimes completely, sometimes reducing it to acceptable levels.”

### ***Case Studies: Hypnosis for Pain Reduction***

Anna was a 29-year-old single mother who presented in my office after a car accident that left her with headaches, dizziness, and pain on the right side of her face.

She said, “Medication helps me, but I am afraid to get into a car. And it makes my thinking fuzzy.” We scheduled four hypnosis sessions as an adjunct to treatment of the muscles, ligaments, and tendons of the head and neck. The goals of the hypnosis sessions were to reduce fear and anxiety, control pain, reduce medication use, and give her some feeling of control. After the fourth session, she said, “Hypnosis is most definitely a benefit. I had the power to make the pain stop.”

A patient named Sally presented in my office for pain in her face resulting from bruxism. Even though this pain had overtaken her life, she was skeptical that her mind was capable of taking her attention away from the grinding that caused her pain. We began the hypnosis session, and as her body began to relax, she also began to cry. Her tears were from relief because she had suddenly and quite easily gained control of her pain. By the next session, Sally’s demeanor was very different because she had come to realize that she no longer had to suffer and could exert some control over her painful sensations.

### ***Cautions in Using Hypnosis for Orofacial Pain Management***

While hypnosis is a useful addition to treatment of orofacial pain to address the emotional component of the condition, hypnosis can also mask pain. Therefore, when you incorporate hypnosis into a treatment protocol, a clear set of objectives must be identified, and the source of the pain must be accurately diagnosed. Delays in treating the cause could be serious or life threatening, so a prognosis must be achieved before any hypnosis program begins.

All health practitioners should also remain mindful of their limitations when utilizing and teaching hypnosis techniques. A patient might request assistance with a psychological problem, but a medical professional without the proper psychological credentials should never treat such problems. Patients should be referred to specialists for issues that are outside the scope of the treating physician.

Additionally, all medical personnel should obtain a written consent from patients before using any hypnosis techniques. A sample is as follows:

I am willing to be guided through relaxation, visual imagery, creative visualization, self-hypnosis, and stress reduction processes and techniques for the purpose of self-improvement. I understand that this self-help is not a substitute for medical care. I have been advised to discuss any concerns and undiagnosed pains with any doctor who is taking care of me now or in the future. I understand that despite best efforts, success cannot be guaranteed.

Signed \_\_\_\_\_

### ***Self-Hypnosis***

Self-hypnosis is a technique that patients can use to place themselves in a mentally receptive frame of mind in order to manage their thinking and create new thought patterns. Even though we are not aware of it, we constantly program ourselves using

suggestions. Self-hypnosis provides the opportunity to intentionally use the power of suggestion to produce specific benefits.

Using self-hypnosis, an individual can gain control of undesirable behaviors, pain, fears, and destructive emotions and thoughts. The ability to focus on a believable thought or idea that can encourage new behavior is the goal of self-hypnosis, and it is a skill that requires daily practice for maximum benefit.

Self-hypnosis is a perfect tool for use in a medical or a dental practice because it is convenient, easily learned, and of tremendous benefit to the patient with no negative side effects. Patients need to be aware, however, that any new pain that has not yet been diagnosed must be brought to the attention of the treating physician. Pain is a message from the body that requires medical attention and should not be managed solely with hypnotic suggestion.

In an article in the May 2009 issue of *Pain Medicine News*, Mark Jensen, Ph.D., a professor and vice chairman of the Department of Rehabilitation Medicine at the University of Washington, Seattle, reported that the patients who participated in a study of the long-term effects of hypnotic analgesia continued, during the year following their procedures, to use the self-hypnosis skills they had been taught [7].

## **Self-Hypnosis Induction Techniques**

### ***Relaxation Breathing***

Whenever we are tense, our breathing becomes shallow. By breathing slowly and with intention, our muscles relax, and we stop chemically triggering excessive amounts of cortisol and adrenaline. This exercise is the first step to prepare for self-hypnosis. It can be prerecorded by you or the patient, or a professionally produced hypnosis CD can be purchased for your patients:

Take a deep breath, and close your eyes. Imagine that you can breathe in relaxation through your fingertips. Feel the tingling sensation of the relaxation flowing into your fingertips. As you take another deep breath, imagine that this breath carries the relaxation from your fingertips up to your elbows and up your arms. Allow it to flow into your shoulders and up your neck. The relaxation now begins to flow into your head. This feeling of relaxation spreads from the top of your head back down into your neck and your chest, filling your heart with healing breath. The relaxation continues flowing down your spinal column into your stomach and into your hips. Now, it flows down your legs to your knees and all the way down to your feet. Wiggle your toes, and feel the tension leave your body.

### ***Finger Focus Technique***

Finger focus is a self-hypnosis technique that I teach many of my patients. This technique allows patients to enter a hypnotic state on their own in order to gain control over negative emotions such as fear.

When the patient places attention on an outstretched index finger, making the finger unbendable, it stops the stream of spiraling negative thoughts by distracting the mind. Concentrating only on the unyielding finger allows for measurable success in thought management, which gives the patient an immediate feeling of control. This technique has helped many of my patients achieve a hypnotic state despite their anxieties. Read the following instructions slowly to your patient:

Sit comfortably with your lips together, teeth slightly apart, and your shoulders back and down in a relaxed position. Rest your arm on a comfortable surface, if available, and make a fist with one hand, extending your pointer finger horizontally in front of you. Take a deep breath, exhale, and concentrate your full attention on your finger.

Now, tap the length of your finger gently from the knuckle to the tip as you continue to focus your attention on your finger. From the knuckle to the tip, your finger becomes as unbendable as steel. You are empowered by the strength of your thoughts as your finger becomes straighter and unbendable. Try to bend it. Take a deep breath, close your eyes, and let the power from your finger spread throughout your body for healing on all levels.

Now, picture a tube inside of your finger which extends from your knuckle to the fingertip. Allow this tube to collect all of the stress and tension in your body. Your imagination is powerful, and your finger becomes firmer and firmer as your body removes the tension and stress from all parts of your body and collects it in the tube. The relaxation spreads through your body as your finger becomes rock solid and unbendable. Now, imagine that the tube inside your finger is released as you count backward from five to one. Your finger can now bend, and you feel relaxed.

### ***Finger Focus Technique for Children***

If you work with children, you can use this same technique with just a few alterations that will help the child to give over to the relaxation of the hypnotic state.

Would you like to have the power to become a princess or superhero to help you get over your fears? You will learn how to use your mind and your thinking to get this magical power.

In a comfortable position, make a fist with your pointer finger extended. Place your full attention on your pointer finger. Straighten your finger, and imagine in your mind's eye that your finger is becoming unbendable. Tap the length of your finger gently from the knuckle to the tip as you concentrate all of your attention on your finger. From the knuckle to the tip, the finger becomes a magic wand that has special powers. Your finger becomes straighter and unbendable as you receive the magic. Picture yourself in control of this magic power as you focus only on your finger. Try to bend it.

Whenever you need this special power, all you have to do is make your finger unbendable. Take a deep breath, and let the magic power from your finger spread throughout your body. Use this magic power whenever you need it to help you feel better and stronger. When you feel ready to end this session, tap the tip of your finger, and slowly count from one to five, allowing your finger to become flexible again. If your eyes are closed, you will feel happy when you open them.

### ***Intentional Thinking***

Our intentions are very powerful. With the intention to relax, resolve fears or phobias, or promote good health, we can often reach goals we never thought possible.

For example, when I was in the throes of my cancer treatment, my mother called me daily to say, “Janet, you need to be positive. Just repeat to yourself, ‘I am healthy.’” I did not feel healthy, happy, or positive at all, and I was incapable of faking it. But I realized that I *could* be “intentional” with my thoughts. I no longer tried to control my thinking. Instead, I focused intentionally on one particular thought.

When I put my intention on good health, I ate well, exercised, and got more sleep. So, intentions lead to actions. Positive thinking is fine, but it requires no action. *Intentional* thinking, on the other hand, requires giving direction to thoughts in a meaningful way. Every action begins as a thought; positive intentional thoughts lead to positive actions.

When a patient has mastered the finger focus technique, this self-induced state of hypnosis can be used to plant an intentional thought in the mind.

### ***Ending a Self-Hypnosis Session***

In order to end a self-hypnosis session, it helps the patient to make a conscious effort to come back to full waking consciousness. Here are instructions for ending a session:

Count slowly backward from five to one, imagining yourself refreshed and transformed. When you reach the count of one, open your eyes. In order to get full benefit from this technique, you should drink an eight-ounce glass of water at the end of each session. The water will hydrate you and help you to feel more alert.

## **Biofeedback**

Biofeedback is a beneficial technique in pain management because it gives the patient a chance to control an automatic subconscious activity and bring it into conscious awareness through sensory feedback. Using instruments that measure physical responses, such as heart rate, pain perception, brain waves, breathing, skin temperature, muscle activity, and sweat gland activity, patients can alter individual responses through changes in thinking, breathing, or behavior. As the patient observes the changes as reported by the instrument, he or she can attempt subtle changes to control physiological responses, including pain. For TMJ, for example, biofeedback allows the patient to change activities in the orofacial muscles that are ineffective and which have caused pain or discomfort.

There are a number of different instruments that are used for biofeedback, the most common of which is the electromyograph or EMG. With the EMG, electrodes are placed over a large muscle to measure muscle contractions.

In a study published in *Behavior Therapy* in November 1980, biofeedback proved very effective in controlling the pain of migraine headaches. The authors noted that “temperature biofeedback alone, relaxation training alone, or

temperature biofeedback combined with autogenic training were equally effective and significantly superior to medication placebo. For tension headache, the results showed that frontal EMG biofeedback alone, or combined with relaxation training, or relaxation training alone were equally effective and significantly superior to medication placebo or psychological placebo [8].”

In a study published in 1984 in *Behavior Research and Therapy*, 24 patients received EMG biofeedback training for dental fear, and as a result, 21 of the 24 patients “were able to complete dental rehabilitation [9].”

In an article in *The Journal of the American Dental Association* in 2001, author Jeremy Shulman, D.D.S., M.S., discusses the successful use of biofeedback for stopping bruxism in his practice with 90 % of his patients becoming symptom-free after only three or four treatments. It should be noted that a biofeedback splint is utilized to assist patients in becoming aware of and eliminating the bruxing habit. Shulman states: “In my practice, it is highly unusual for a patient to experience no relief, and in such cases, other therapeutic modalities are added. It might be hard to believe that such a simple, quick and noninvasive treatment really works, but once the proper diagnosis is made and major bruxing habits are eliminated, then the dysfunction is controlled and the symptoms disappear [10].”

In a study of eight patients conducted by the Oregon Health Sciences University School of Dentistry published in the *American Journal of Clinical Hypnosis* in 1991, the authors concluded that hypnosis is effective in treating bruxism quickly and that the results last for at least many months. Besides patient reports, the study utilized EMG evaluations to measure masseter muscle activity. These readings confirmed that not only was discomfort and pain reduced, but also the bruxing activity itself was reduced [11].

In a 2008 article in the *Cleveland Clinic Journal of Medicine*, author Karen Olness, M.D., discusses that “hypnosis and biofeedback are cyberphysiologic strategies that enable subjects to develop voluntary control of certain physiologic processes for the purpose of improving health.” She also discusses the concurrent use of biofeedback and hypnosis, particularly in treating children, stating: “Adding biofeedback games to self-hypnosis training can make the experience much more interesting for children. Children see evidence on the screen that, by changing their thinking, they have control over a body response such as skin temperature, electrodermal activity, or pulse rate variability. Adults also benefit from the addition of biofeedback to self-hypnosis training. A patient cannot effect a change in a biofeedback response without a change in his or her mental imagery [1].”

## Schools and Organizations

Should you wish to become a certified hypnotist, the American Society of Clinical Hypnosis (ASCH) is one of the organizations offering training and credentials. While there are many organizations that provide certification, ASCH is the only one that ensures that its certified members are licensed health care professionals.

Called the ASCH Certification and Approved Consultant Program, it has become a standard for hypnosis practice in the United States. The program requires advanced training in your profession from an accredited institution and licensure in your area of practice and location. It also requires that you have received the minimum required training in clinical hypnosis and that the training has been reviewed by approved peers/consultants.

American Society of Clinical Hypnosis  
140 N. Bloomingdale Rd., Bloomingdale, IL 60108-1017  
(630/980-4740)

The American Board of Medical Hypnosis (ABMH) provides hypnotist certification for physicians. The American Society of Clinical Hypnosis and the Society of Clinical and Experimental Hypnosis (SCEH) accept certification from ABMH, which is considered to be the highest credential in medical hypnosis, but one of the requirements for certification is at least five years of clinical hypnosis experience in practice.

American Board of Medical Hypnosis  
[www.abmedhyp.net](http://www.abmedhyp.net)

Society for Clinical and Experimental Hypnosis  
P.O. Box 252, Southborough, MA 01172  
(508) 598-5553  
[www.sceh.us](http://www.sceh.us)

International Medical and Dental Hypnotherapy Association (IMDHA)  
Rural Route #2 Box 2468, Laceyville, PA 18623  
(570) 869-1021  
[www.imdha.com](http://www.imdha.com)

The Biofeedback Certification Institute of America (BCIA) also requires that those certified in biofeedback are health professionals with appropriate licensure. The organization offers a home study program as well as a list of other training programs that are accepted for certification.

BCIA  
10200 W. 44th Avenue, Suite 310 Wheat Ridge, CO 80033-2840  
(303) 420-2902  
[www.bcia.org](http://www.bcia.org)

## Conclusion

Hypnosis, self-hypnosis, and biofeedback are effective techniques to improve both physical and spiritual well-being and give the patient back some control. These techniques have been shown in studies to reduce pain, increase relaxation,



decrease or alleviate destructive habitual behaviors, and reduce or alleviate fears and phobias.

When performed by a competent professional, hypnosis and biofeedback are a useful part of a comprehensive treatment plan. Medical/dental practitioners can also teach simple self-hypnosis techniques to their patients which can be used at home for pain control or to manage fears in preparation for procedures. As patients become more adept with self-hypnosis techniques, they can significantly reduce chronic pain, including orofacial pain, and even release lifelong phobias that have prevented them from seeking necessary medical treatment.

A great deal of time and money are spent developing and strengthening our bodies, but training of the mind is often neglected as an integral part of attaining good health. The mind is very powerful. It can affect us not only mentally and emotionally but physically as well.

**Acknowledgement** None declared.

**Conflict of Interest** None declared.

## References

1. Olness K. Helping children and adults with hypnosis and biofeedback. *Cleve Clin J Med*. 2008;75(2):S39.
2. Bozzuto A, Bozzuto TM. Homeopathy, herbs and hypnosis: common practices in complementary and alternative medicine. *Jacksonville Medicine* 2000:17.
3. Yapko MD. *Essentials of hypnosis*. New York: Brunner-Routledge; 1995.
4. Gow MA. Hypnosis with a 31-year-old female with dental phobia requiring an emergency extraction. *Contemp Hypn*. 2006;23(2):83–91.
5. LaCrosse MB. Understanding change: five-year follow-up of brief hypnotic treatment of chronic bruxism. *Am J Clin Hypn*. 1994;36(4):277–9.
6. Gerschman J, Graham Burrows G, Reade P. Hypnotherapy in the treatment of oro-facial pain. *Aust Dent J*. 1978;43(6):492–6.
7. Kean C. Hypnosis: neglected weapon against chronic pain? Overlooked, inexpensive and safe modality deserves renewed attention, according to experts. *Pain Med News*. 2009;7:05.
8. Blanchard EB, Andrasik F, Ahles TA, Teders SJ, O'Keefe D. Migraine and tension headache: a meta-analytic review. *Behav Ther*. 1980;11(5):613–31.
9. Berggren U, Carlsson SG. A psychophysiological therapy for dental fear. *Behav Res Ther*. 1984;22(5):487–92.
10. Shulman J. Teaching patients how to stop bruxing habits. *J Am Dent Assoc*. 2001;132:1275–7.
11. Clarke JH, Reynolds PJ. Suggestive hypnotherapy for nocturnal bruxism: a pilot study. *Am J Clin Hypn*. 1991;33(4):251–3.