50 YEARS OF HYPNOSIS IN MEDICINE AND CLINICAL HEALTH PSYCHOLOGY: A SYNTHESIS OF CULTURAL CROSSCURRENTS

Mark B. Weisberg
Minnesota Head and Neck Pain Clinic

Abstract
In 2008, the 50th anniversary of ASCH, hypnosis is used increasingly for healthcare applications in hospitals, clinics, and psychotherapy practice. A substantial body of research demonstrates the efficacy of hypnosis as part of the integrative treatment of many conditions that traditional medicine has found difficult to treat (e.g., Pinnell & Covino, 2000; Elkins, Jensen, & Patterson, 2007). The practice of hypnosis in healthcare has been altered and centrally influenced by the rapid growth of technological medicine in the 1950’s, the AIDS epidemic and development of psychoneuroimmunology, revolutionary developments in Genetics and neuroimaging technology, and the progression from alternative to integrative medicine. We have come to develop more detailed expectations about the beneficial effects of hypnotic interventions for health problems. We have also come to know that in these populations hypnosis can lead not only to reduced anxiety but also specifically altered physiological parameters.

Keywords: Hypnosis, medicine, clinical health psychology, psychoneuroimmunology, integrative medicine.

Address correspondences and reprint requests to:
Mark B. Weisberg, PhD, ABPP
Minnesota Head and Neck Pain Clinic
2550 University Avenue West, Ste. 189 South
St. Paul, MN  55114
Email: mbw@drmarkweisberg.com

The author wishes to express special appreciation to Alfred Clavel, MD and Sheryll Daniel, PhD for their editorial assistance.
In 1957, the year that ASCH was founded, it might have been hard to predict that 50 years later we would have robust data supporting the efficacy of hypnosis for the treatment of challenges that traditional medicine finds most difficult to treat. These include both acute and chronic health conditions (Pinnell & Covino, 2000), chronic pain management (Elkins, Jensen, & Patterson, 2007), sleep disorders (Graci & Hardie, 2007) and distress management during surgery and other invasive procedures (Flory, Martinez-Salazar, & Lang, 2007). Today in 2008, we see hypnosis used increasingly for healthcare applications in hospitals, clinics, and psychotherapy practice. Salient developments over the last 50 years in the healthcare environment have influenced how hypnosis is utilized today. As we commemorate this milestone of the American Society of Clinical Hypnosis, it is revealing to consider some of the professional and cultural crosscurrents of the past half century that inform how we practice today.

The mid-1950’s was an auspicious time for medicine and healthcare. As family practitioner and journalist James Le Fanu noted in his book The Rise and Fall of Modern Medicine (1999), several medical breakthroughs occurred within a very short period of time. Some of the first antibiotic medications were discovered, including streptomycin (used to treat tuberculosis). The first reports linking tobacco and lung cancer were published. Concurrently, there was a historic new medicine to manage symptoms of schizophrenia (e.g. chlorpromazine). The discovery of cortisone led to the development of many other anti-inflammatory drugs. Besides pharmaceuticals, new technologies were developed during this period that led to remarkable strides in patient care. These included open-heart surgery, hip replacements, kidney transplants and the advent of the intensive care unit in hospitals. These developments both saved and improved the quality of millions of lives.

April 1953 marked another momentous achievement affecting medicine and healthcare with James Watson and Francis Crick’s Nobel Prize winning description of the double helix structure of DNA. This crucial development would accelerate the search for genetic roots of disease, and with it, the hope for genetically based cures.

This explosion in technological treatments seemed to prove that many previous attempts at healing were nothing more than quackery. The field of medicine seemed to shun “low-tech” treatments. Modalities such as physical manipulation, massage, dietary advice and taking time to reassure patients about their conditions were viewed by many as anachronistic, unscientific, and extraneous. It is not surprising, then, that these “unscientific” treatments were embraced by alternative practitioners. A dramatic expansion in the growth of what was previously called “alternative therapies” started in the late 1950’s. In its early stages, this field developed as an entirely separate discipline, disconnected from the developments and achievements of mainstream medicine. During this time, alternative medicine was being dismissed by mainstream practitioners as being anything from ineffective to unethical and fraudulent. Meanwhile, healthcare consumers were learning that if they wanted to avail themselves of both traditional and alternative treatments they had to do so secretly to avoid confusion and criticism from allopathic practitioners.

It was amidst this cultural and professional backdrop that we witnessed the reemergence of clinical hypnosis as a valid medical treatment.
Some writers (e.g. Hilgard, 1965; Upshaw 2006) suggest that the successful applications of hypnosis in the treatment of war casualties in World War II led to renewed attention in the postwar years of the 1950’s. The Society for Clinical and Experimental Hypnosis was formed in 1949. ASCH was founded in 1958. That same year, the American Medical Association and Canadian Medical Association endorsed hypnosis as a valid medical therapy. Also in the late 1950’s, the British Medical Association and American Psychological Association offered similar backing.

Despite these developments, hypnosis would not yet enjoy wider utilization by health professionals. Medical, dental and psychology graduate training programs still largely ignored the subject. As the health field in general struggled with the question of traditional versus non-traditional treatments and who should deliver them, the field of hypnosis struggled with similar competing sectors. With so few physicians, psychologists and dentists available to train others in hypnosis, the private lay hypnotherapy movement developed to fill the gap. National schools of lay hypnosis cropped up by the early 1960’s, and the resulting tension between lay hypnotists and health professionals trained in hypnosis has remained.

Interestingly, the hesitation of medicine, psychology, dentistry and other professional fields to more fully integrate hypnotic treatments into practice has had little to do with its efficacy. As Upshaw (2006) points out, the therapeutic effects of hypnosis have rarely been disputed. Rather, when health professionals have rejected hypnosis it has usually been due to supernatural or religious characterizations, unscientific explanations, the availability of alternative viable treatments, negative media coverage, or concerns about hypnosis and the fallibility of memory.

Through the 1960’s and 1970’s, healthcare costs increased steadily every year with the development of new medical technologies. The field of interventional radiology was developed during this time, using image guidance methods to gain access to vessels and organs, and facilitating the use of balloons, catheters, and stents. This development allowed clinicians to perform therapeutic procedures percutaneously that previously required surgery. Neuroscience began to emerge as a distinct discipline during this time as well, with far reaching implications for the fields of biology, psychology and psychiatry (Snyder, 1985). Meanwhile, a number of books describing the use of hypnosis in healthcare were written, such as those by Kroger (1977), Crasilneck & Hall (1975) and LeCron & Cheek (1968).

From the mid-1970’s through the 1980’s, another series of professional and cultural undercurrents shifted the tectonic plates of the field of hypnosis.

New controversies about hypnosis and memory emerged that once again brought the scientific validity and clinical utility of hypnosis into question. The American Medical Association convened a panel to study the validity of refreshing a person’s recollection with hypnosis. In 1985, the AMA Council on Scientific Affairs released their conclusions:

The Council finds that recollections obtained during hypnosis can involve confabulations and pseudomemories and not only fail to be more accurate, but actually appear to be less reliable than nonhypnotic recall. The use of hypnosis with witnesses and victims may have serious consequences for the legal process when testimony is based on material that is elicited from a witness who has been hypnotized for the purposes of refreshing recollection (American Medical Association, 1985, p. 1918).
Although the 1985 AMA report was never intended to support a per se exclusion rule by the courts or to question the validity of all memories based on hypnotically refreshed recollection, there was no doubt that perception of the medical/therapeutic value of hypnosis had been tarnished since its initial publication over 20 years ago. This had the effect of slowing down the growth of hypnotic applications in healthcare settings (Upshaw, 2006). However, it also provided impetus for those in the field of hypnosis to clarify their understanding of hypnosis and memory, and to refine their recommendations for utilizing hypnosis responsibly (Bro, Scheflin, & Hammond, 1998).

On another front, the U.S. Genome Project, coordinated by the National Institutes of Health and the Department of Energy, was established as a multi-year effort to find all the genes on every chromosome in the human body to determine their biochemical nature. The project began in 1990 initially headed by James D. Watson. A working draft of the genome was released in 2000 and a complete one in 2003, with further analysis still being published. Ultimately, the goal of the Human Genome Project was to determine the sequence of chemical base pairs that make up DNA, and to identify the more than 20,000 genes of the human genome (International Human Genome Sequencing Consortium, 2001). With this inevitably came a slew of questions. Would we now view an individual as merely a product of interacting genes? How will we define normalcy, abnormalcy, and disability? Writers such as Moore (2001) warned that genes could not be understood outside of the context of environmental factors that encourage or inhibit the expression of a particular gene. Could hypnosis modulate how genes are expressed? Later, writers such as Rossi (2002) would explore this topic in more detail.

AIDS and the Evolution of Immunology

Meanwhile, the late 1970's to early 1980's also heralded the beginnings of the AIDS crisis in the United States. It is important to remember that prior to this time, our scientific understanding of immunology was relatively more limited. The AIDS epidemic drew some of the finest scientific minds to the battle against this terrible disease. The rapid expansion in AIDS research enabled scientists to learn a great deal more about how the immune system functions.

A crucial, yet serendipitous, discovery occurred during this period. Dr. Robert Ader performed a study that led him to recognize that the brain, nervous system and immune system might be connected in ways not previously thought possible. In the study, Ader was studying taste aversion learning in rats. The rats drank a saccharin solution immediately before the injection of cyclophosphamide, an immunosuppressive drug that also has aversive gastrointestinal side effects. Following this pairing, rats avoided drinking the saccharin solution, demonstrating conditioned taste aversion. However, rats exposed to the saccharin solution also showed significant conditioned immunosuppression when exposed to antigens (Ader & Cohen, 1975). This study suggested that the immune system could be modified by classical conditioning. This experiment marked the beginning of the field of psychoneuroimmunology (PNI) (Ader, 2000). This spurred a new interdisciplinary science, capitalizing on the recent developments in neuroscience research and technology, to investigate the interconnectedness of the nervous system, endocrine system, and immune system (Kiecolt-Glaser & Glaser, 1989; Maier, Martin, Rai, Richardson, & Royall, 1994). Furthermore, evidence emerged suggesting that communication between these and other...
physiological systems was facilitated by means of neuropeptide messenger molecules (Pert, 1986).

The ramifications stemming from the emerging body of PNI research were profound. New molecular and pharmacological tools were making it possible for scientists and researchers to identify the components of the intricate network that exists between these various systems and the brain. Disruption of this communication network in any way, whether inherited or through drugs, toxic substances, surgery, or chronic emotional stresses, could exacerbate the diseases that these systems guard against.

Hypnosis and Psychoneuroimmunology

It was becoming increasingly recognized that stress not only causes people to “feel bad”, but also might lead to profound physiological shifts that affect disease progression and healing. Psychological experiences such as anxiety, depression and stress are shown to influence immune function (e.g., Kiecolt-Glaser, Marucha, Atkinson & Glaser, 2001). If it is possible to modify immune responses through environmental manipulation, then it follows logically that the potential exists to design interventions to activate the immune system to respond to a multitude of diseases. Against this backdrop, hypnosis was considered as having the capacity to facilitate such beneficial shifts.

Fueled by these developments, research investigating hypnosis and its role in altering PNI parameters expanded. Hypnosis was linked to significantly increased levels of CD4 cells (Ruzyla Smith, Barabasz, Barabasz, & Warner, 1995), a specialized type of T cell that recognizes virus-infected cells and helps destroy them. Taylor (1995) demonstrated that hypnosis combined with progressive muscle relaxation, meditation and biofeedback induced an increase in T-cells in HIV-positive subjects with low T-cell counts. Kiecolt-Glaser and her colleagues (2001) were able to show how hypnosis could be used to modulate the degree of cellular immune dysregulation during periods of acute stress. Researchers have been able to show direct correlations between relaxation, imagery and changes in immune function (Davidson et al., 2003). Wood and colleagues (2003) were able to demonstrate that hypnotic intervention altered T-cell activity in healthy subjects. These and other data were increasingly informing clinical practice. Integrating some of these findings, Rossi (1993) postulated the neurobiological pathways by which mind-body healing occurs. Later, interweaving newly discovered data from the Human Genome Project, Rossi discussed ways to creatively facilitate what he called the psychodynamics of gene expression, neurogenesis, and healing in therapeutic hypnosis (2002).

Decade of the Brain

The momentum of converging developments in technology and neuroscience throughout the 1980’s led then-president George Bush to designate the decade beginning with 1990 as “The Decade of the Brain.” This was part of a larger effort involving the Library of Congress and the National Institute of Mental Health of the National Institutes of Health to enhance public awareness of the benefits to be derived from brain research. Many practitioners were excited by the possibility that previously misunderstood conditions could be broken down to their genetic and biochemical essence and treated effectively. Others, anticipating that the new conventional wisdom regarding all mental and physical disorders would be reduced to mere neurons and neurotransmitters, feared a devaluation of treatments such as hypnosis and psychotherapy that seemed to be less technological.
Concurrently, many new emerging technologies helped us to understand structure and function of the brain to a far greater degree than was previously possible. Not long before this, the feasibility of mapping the distinguishable regions of the human brain in relation to their functional roles seemed remote. During the period from the late 1970’s into the 1980’s, incredible advances occurred in radiologic technology. In 1976, Mallard & Hutchinson constructed the first Magnetic Resonance Imaging (MRI) scanner, and the first MRI images were available by 1980. The next year, the first MRI scanner was utilized in Hammersmith Hospital in London, England, and MRI technology rapidly became an important diagnostic tool for clinical and research applications. The development of the Positron Emission Tomography (PET) scan and Functional Magnetic Resonance Imaging (fMRI) followed in short order. Many of the intricate anatomical connections of the brain were now being defined in much greater detail. The activity of the human brain during mental activity could be measured and visualized. It became possible to monitor the activity of neurons within complex neural networks during discrete behaviors.

Ironically, this technological revolution provided empirical evidence for “low tech” treatments. Now it was possible, for example, to observe PET scans showing increased limbic blood flow after interpersonal psychotherapy, but not after administration of the antidepressant medication venlafaxine (Martin, Martin, Rai, Richardson, & Royall, 2001). This also allowed clinicians to benefit from neuroscience-informed interventions. Van der Kolk’s (1994) work on the neurobiology of posttraumatic stress reflected a growing body of research suggesting that traditional emotional abreactive approaches to treating trauma may actually be at least ineffective and at most harmful. Brain scans of traumatized patients revealed that while speech and language centers in the left frontal lobe were suppressed, other structures in the right frontal lobe and limbic system were more highly activated. Therefore, there was a growing interest in therapeutic approaches that emphasized a shift from verbal insight to non-verbal, experiential modulation (Levine, 1997). This revised information helped hypnosis practitioners update their understanding of how to treat PTSD effectively (e.g., Cardena, Moldonadov der Hart, & Spiegel, 2000).

Hypnosis research profited greatly from these new technologies, as we learned in much greater detail how the physiology of the brain responds and changes with different types of hypnotic suggestion. Armed with PET scan technology, Rainville and his colleagues (1997) were able to demonstrate significant changes in pain-evoked activity within the anterior cingulate cortex, consistent with the encoding of perceived unpleasantness, whereas primary somatosensory cortex activation was unaltered. These findings provided important empirical evidence linking frontal lobe and limbic activity in humans with pain affect. Raz and his colleagues (2005) utilized two convergent neuroimaging methodologies: fMRI and event-related potentials. They found that carefully crafted hypnotic suggestions could differentially affect the activity of the anterior cingulate cortex in highly hypnotizable subjects. Feldman (2004) reviewed the overlapping brain circuits affecting the processing of pain and emotions and their relationship to autonomic arousal. We now know about processes of neurogenic inflammation that exacerbate migraine headache, and that hypnosis can be used to effectively reduce these triggers (Weisberg & Clavel, 1999). This is crucial to the understanding of differences in reactivity to pain,
emotion, and stress, and how this affects the development and amelioration of chronic pain. The important ramification is that hypnosis can be used to help certain patients regulate their experience of pain and override certain autonomic processes in beneficial ways. Suggestions made for pain reduction likely affect different brain structures than, for example, suggestions for relieving the negative emotional states associated with pain.

In 1996, the National Institute of Health (NIH) established a Technology Assessment Conference that compiled an official statement entitled, “Integration of Behavioral & Relaxation Approaches into the Treatment of Chronic Pain & Insomnia.” This was an extensive report that included a statement on the existing research in relation to hypnosis for chronic pain. It concluded, “The evidence supporting the effectiveness of hypnosis in alleviating chronic pain associated with cancer seems strong.” In addition, the panel was presented with data suggesting the effectiveness of hypnosis in other chronic pain conditions, which include irritable bowel syndrome, oral mucositis, temporomandibular disorders, and tension headaches (NIH, 1996). This, along with other empirical findings, facilitated the acceptance of hypnosis as a covered therapeutic service by an increasing number of insurance payors.

Adding to the growing evidence that hypnosis is a powerful agent in treating pain, Patterson and Jensen (2003) reviewed a number of well-controlled empirical studies analyzing the efficacy of hypnosis in pain treatment. They found that utilizing hypnosis in pain treatment led to significant reductions in pain intensity, need for analgesics or sedation, nausea and vomiting, and length of hospital stay. They concluded that hypnotic techniques or relief of acute pain may be superior to standard care, and are often better than other recognized treatments for pain.

The importance of pain control is ubiquitous throughout medicine. One area of medical care where pain control is of particular concern involves the management of clinical burn pain. Burned patients go through excruciating pain as part of their treatment, especially during debridement (the process of removing necrotic tissue or foreign material in order to facilitate eventual healing). Ewin (1986) examined the usefulness of hypnosis for tending to the patient with acute burn pain. Later, Patterson and colleagues established a strong argument for using hypnosis as an important adjunctive treatment for burn pain (1992) and subsequently refined the knowledge base in this area by elucidating factors predicting hypnotic analgesia in clinical burn pain (1997).

The Evolution of Integrative Medicine

Another development during this time period involved the evolution of what was originally known as “alternative medicine”. The increasing popularity of alternative modalities of diagnosis and treatment became further noticed in traditional medical settings. Eisenberg and colleagues (1993) catalogued the substantial rise in what they called “unconventional” medical practices, with over 13 billion dollars spent annually in the United States alone. Hospitals and clinics became more interested in how and why so many patients were seeking these services and paying largely out-of-pocket for them. The term “complimentary medicine” emerged to describe this growing group of diagnostic and therapeutic disciplines that were used together with conventional medicine. An example of a complimentary therapy would be the use of acupuncture or homeopathy to help lessen a patient’s discomfort after surgery.

Before long a new term was introduced: “integrative medicine”. The integrative model
proposed a more holistic, systemic combination of different paradigms. Instead of regarding unconventional modalities as an alternative to traditional practice, or adding them as a supplement to traditional treatment, this model emphasized an integration of traditional and previously unconventional modalities based on empirical evidence of their efficacy. What determines an integrative treatment is not solely the types of modalities used. Rather, this model addresses not only inclusion of modalities such as acupuncture and massage, but also advocates a different model of understanding health and illness. This new paradigm proposes that a synergistic combination of biological, psychological, social and spiritual factors lead to onset, maintenance, or exacerbation of illness. The roots of this conceptualization could be found in ancient schools of thought stemming back to China, India, and Japan (Bivins, 2007). George Engel’s biopsychosocial paradigm (Engel, 1977) was a descendent of this view as well. This new model also recognizes the innate human capacity for self-healing, the importance of the clinician-patient relationship, and the value of a collaborative approach to patient care among practitioners. Parenthetically, this led to some increased interest in the hypnosis community regarding the nature of the therapeutic relationship and its effect on efficacy of hypnotic interventions in medical settings.

The federal government took notice of this groundswell and started funding well-designed and controlled empirical studies. Originally, the National Institutes of Health established the Office of Alternative Medicine, with an allowance of $50 million annually. After six years, this office was retitled the National Center for Complementary and Alternative Medicine (NCCAM) and was given the ability to fund research.

What led to this booming interest in integrative medicine? Multiple factors contributed. One was the frustration and fear among patients who achieved poor results with standard therapies, especially in the case of illnesses such as chronic pain. Another determinant was the fact that conventional medicine is expensive and can cause serious side effects. Perhaps the plethora of advances in technological medicine in the 1950’s left out some essential ingredients for healing. Factors such as patient empowerment, participation in the healing process, investment of time, and personal attention are vital in all medicine, and patients were clamoring for inclusion of these important components. The need created by this vacuum contributed to the growth of integrative medicine.

Is hypnosis in healthcare used as an alternative treatment, a conventional treatment, or an integrative treatment? This question still generates great confusion among insurers, clinicians, and patients. The answer depends in part on how we conceptualize the development of illness and healing. If one ascribes to the “physiology as machine” metaphor and considers illness to be strictly the product of disordered biology, then hypnosis will be utilized in an ancillary, mechanistic, and less effective manner. However, if one is informed by PNI and conceptualizes health and illness as a cybernetic system affected by multiple interactive influences, then hypnosis becomes one of many ways to intervene in that system from an integrative vantage point.

Of course this underlying belief shapes how hypnosis is introduced to the patient. Is it presented as something to be done when the regular treatments have failed? Or, is it offered from the beginning as one part of a comprehensive, multifactored strategy for treating a complex health condition? For example, if hypnosis were used as the sole
treatment for smoking cessation, (as is often the case in the numerous hypnosis “shops” that one finds in the Yellow Pages) its utilization would be considered alternative. If, however, hypnosis is judiciously combined with consideration of the patient’s capacity to tolerate negative emotions, attention to stress management, dietary changes, and management of comorbid conditions, then it will be considered integrative treatment, and will be more effective than if it was used in isolation (e.g., Jeffrey, Jeffrey, Greuling, & Gentry, 1985).

**Hypnosis in 2008: One Clinician’s Example**

How have these developments shaped the use of clinical hypnosis in health settings in 2008? Hypnosis is used much more broadly today than it was 50 years ago, crossing conceptual boundaries, professional disciplines, and types of conditions treated. Like all clinicians who utilize hypnosis in their practices today, I am the beneficiary of the last half-century of discovery and innovation. What follows here is a discussion of how I apply hypnosis as a vital tool in clinical practice, as a reflection of one variation on this theme.

As a clinical health psychologist, I practice in multiple settings. I consult in a multidisciplinary chronic pain clinic and also practice intermittently in a consultation-liaison capacity in some local hospitals. I consult with some hospital-based integrative medicine programs. Additionally, I maintain an outpatient psychotherapy practice, engaging in approaches that range from brief, symptom-focused care to longer, object-relations – informed treatment addressing characterological problems and psychodynamic-developmental concerns in depression, anxiety, and personality disorders. I consider hypnosis an essential adjunct to other treatments that I employ in all these settings.

My work with patients in all settings is centrally informed by research findings from the field of PNI. Many patients have learned in the traditional health system that all symptoms should be viewed as either “real biologic disease” or else “psychosomatic”. Most patients with chronic illness fall between the cracks of this outdated dichotomy. This orientation leads most to be defensive and resistant to recognizing the rich synergistic interaction of genetics and physiology, emotion, behavior, cognition, and imagery that is central in the development of both disease and healing. Patients find it useful and enlightening to learn about the role of neuropeptides as messenger molecules communicating between all aspects of brain and body. Pain sufferers find it compelling to realize, for example, that a structure in the limbic system that serves as a relay station for all incoming sensory information (the thalamus) is located in direct proximity to another structure that assigns emotional significance to the same sensory information (the amygdala), and can activate powerful autonomic reactions for better or worse. When patients are educated about the scientific foundations of mind-body interactions, I find that they feel empowered, better understood, and more motivated to take an active role in their own healing.

In the pain clinic, I use hypnosis for reducing pain nociception and reframing the meaning and intrusiveness of pain sensations (Brown & Fromm, 1987; Elkins, Jensen, & Patterson, 2007), utilizing techniques that work by means of dissociation, time distortion and the activation of other coping resources. Alternatively, I may direct a particular type of focused attention directly on the pain symptom, reducing secondary reactivity in a manner that likely activates internal healing resources (Weisberg, 2000). Hypnosis can be essential for relaxation training and reducing autonomic
hyperarousal or other dysregulation, as well as identifying and reducing affective triggers to pain symptoms. Other fundamental treatment objectives are helped through the use of hypnosis, including reduction of parafunctional behavioral, postural, and muscular habits such as slumping, muscle clenching, and bruxism. This is useful in multiple conditions including temporomandibular disorder (Clavel & Weisberg, 1996; Simon & Lewis, 2000), headache (Hammond, 2007) and tinnitus (Ross., Lange, Unterrainer, & Laszig., 2007). Hypnosis can be used to potentiate the effectiveness of pain medications. With certain patients, I have utilized hypnosis to classically condition the beneficial response to a medication. For example, with one patient with severe recurrent migraine headache, hypnotic suggestions for future pain relief were delivered immediately after the patient self-injected sumatriptan (Imitrex). The patient could later evoke the analgesic benefits of the medication by re-entering the trance state. Additionally, motivation for self-care is a crucial component of successful chronic pain treatment, and hypnosis can be indispensable for identifying and reducing ambivalence (Rossi 1993).

One of my areas of specialty includes integrative treatment of digestive disorders such as irritable bowel syndrome (IBS). As an adjunct in the treatment of IBS, hypnosis has been empirically demonstrated to be so effective that it is arguably part of the treatment of choice for this disorder (Palsson, Whitehead, 2002; Whorwell, Prior, & Colgan, 1987; Tan, Hammond, & Gurralla, 2005). Both Palsson and Whorwell have published standardized hypnotic protocols for IBS. Some clinicians limit their use of hypnosis for IBS to these protocols, while others take a more individualized approach to treatment. I utilize some of both approaches. Many IBS patients have severe secondary reactivity in response to sensations of abdominal pain and pressure. Hypnosis can be additionally instrumental in teaching patients to reduce their reactivity to pain sensations, learning how to reframe IBS sensations as a useful barometer of important mind-body information.

In the hospital and psychotherapy settings, I use hypnosis to help reduce anxiety and depression about being ill, and to help patients prepare for surgery and other invasive procedures (Flory, Martinez-Salazar, & Lang, 2007; Kessler & Dane, 1996; Lang, Kirsch, & Rhue, 2000). Since the hospitalized patient is often in acute distress and therefore at a greater level of hypnotic suggestibility, hypnotic interventions can frequently be delivered quickly.

In the psychotherapy setting, hypnosis has been broadly documented as being very useful for multiple applications. I use it to help psychotherapy patients progress through necessary developmental growth stages (Baker, 1981). It is invaluable for improving the capacity for affect tolerance in patients whose depression is heightened by suppression of anger or grief. I see several patients with posttraumatic stress disorder (PTSD) from motor vehicle accidents, other severe physical injury, and/or childhood trauma. As part of integrative treatment, hypnosis can be instrumental in helping patients navigate through the stages of successful PTSD treatment (Herman, 1997; Speigel, 1993) and for optimizing neurophysiological discharge that is increasingly suggested as important in recovering from the classic symptoms of the disorder (Scaer, 2003; Levine, 1997). In general, I utilize hypnosis to help maximize treatment gains and to address areas of potential interference (Lynn, Kirsch, & Rhue, 1996).

A crucial and often overlooked topic across all health settings is somatization (e.g. Wickramasekera, 1995), defined as the
presence of physical symptoms in the absence of organic findings. In fact, it is better understood as physical symptoms that are heightened or amplified by unresolved emotional conflict. Hypnosis can be an essential part of treatment for somatization (Chaves, 1996) by improving patients' willingness and ability to identify and tolerate negative affect associated with their physical symptoms.

**Conclusion**

The developments of the last 50 years have profoundly influenced the practice of hypnosis today. In response to the progress in the field, our assumptions about what can be accomplished clinically have also changed, as have our understanding of the mechanisms responsible for the changes we seek on behalf of our patients. A substantial body of research demonstrates the efficacy of hypnosis as part of the integrative treatment of many conditions that traditional medicine has found difficult to treat. For some disorders (such as irritable bowel syndrome) the evidence for the efficacy of hypnosis is so robust that it could be argued that it is unethical not to inform patients about this treatment modality. Better evidence exists now supporting the use of hypnosis to relieve discomfort associated with many diagnostic and invasive procedures. The emergence of the PNI literature informs us that modalities such as hypnosis may not only enhance comfort, but may also alter physiological parameters in many conditions. The advent of increasingly sophisticated brain scanning technology has revealed new insights about how various types of hypnotic suggestion changes the activity of specific brain structures.

The progression from alternative to integrative medicine cautions us to be open to new therapeutic developments, but not without good empirical support. The debate over hypnosis and possible memory distortion reminds us to remember the fallibility of memory, but also not to throw out the baby with the bathwater.

What’s in store for the next 50 years? What will the retrospective on healthcare reveal in 2058? Most well publicized predictions focus on anticipated advances in technology. Improved genetic screening and treatments of everything from cancer to heart disease will be available. Pill cameras will become more commonplace, replacing x-rays and implants. Implanted monitors and drug dispensers are predicted to normalize the lives of diabetics. Physicians will increasingly use telemedicine to make house calls. Our pharmacopoeia will become increasingly customized, aided by new genetic discoveries.

I also predict that the next half century will bring a more comprehensive understanding of the neurobiological mechanisms that allow us to heal naturally. The newest, most advanced technology will increasingly confirm the efficacy of centuries-old health practices. These developments will enhance our capacity to catalyze patients’ untapped potential for self-healing. Hypnosis speaks profoundly to every level of our psychophysiological functioning. Applications of hypnosis in healthcare will continue to expand as the emerging science proves its efficacy in greater detail.

**REFERENCES**


23
*Journal of the American Medical Association*, 9, 186-189.


