

### 30.3 Hypnosis

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“Imagination is consciousness trying to gain sovereignty over its experience.”

A.W. Frank

Hypnosis, once dismissed as "nothing but heated imagination," is in fact a powerful means of directing imagination, imagery, and attention. Known for hundreds of years to be effective in helping patients to control pain and anxiety, it remains an effective and popular tool in the management of stress during medical procedures and after trauma, chronic pain, habit problems, dissociative symptoms, and psychosomatic conditions. Hypnosis, the oldest psychotherapeutic technique, is also at the frontier of our understanding of mind/brain/body interactions.

Hypnosis constitutes a specialized ability to enhance focal attention and imagination while simultaneously minimizing peripheral awareness. Hypnotic phenomena occur spontaneously, even without formal induction. Furthermore, the capacity to experience hypnosis varies considerably among individuals, and is a stable trait. Hypnotic capacity can be identified and mobilized as a valuable adjunct to a variety of psychotherapeutic strategies.

The word “hypnosis” comes from the Greek root *hypnos* which means sleep. This is misleading because hypnosis as a phenomenon is not a form of sleep; rather, it is a complex process of attentive, receptive concentration. Although peripheral awareness is reduced in both sleep and hypnosis, focal attention, which is diffuse in sleep, is heightened during the hypnotic trance. Since the days of Mesmer, techniques of trance induction and the use of trance

phenomena for psychotherapeutic change have been confused. This has led to a lack of understanding of the differences between aspects of the hypnotic experience that are influenced by the therapist and the those which are due to the individual's degree of hypnotizability, personality style and motivation. The hypnotist does not project hypnosis onto the subject. The role of the hypnotist is rather to assess an individual's inherent biological capacity for trance and teach the patient how to use it in a given psychotherapeutic program.

## **HISTORY**

Eastern and Western philosophy, literature, and religion are replete with descriptions of various trance states, ecstatic states, and spontaneous dissociation among both healers and those being healed. These phenomena were first formally described as therapeutic instruments in the eighteenth century with Franz Anton Mesmer's controversial theory that magnetic energy or an invisible fluid could be channeled from a therapist or an object to correct imbalances and restore health to an individual with illness. His unorthodox methods and theories involving magnetic forces attracted negative attention from the scientists of the day and the French government. In 1784 a panel of experts that included Benjamin Franklin, the famous chemist Anton Laurent Lavoisier, and the infamous Joseph Ignace Guillotin met in Paris at the behest of the King. They concluded that the phenomenon was nothing but "heated imagination.

James Braid, a physician and surgeon in England during the 1840s, observed phenomena similar to those Mesmer had reported. He found he could produce trance states using eye fixation and eye closure. In 1847, Braid departed from the discredited magnetic influence theory and created

a psychological concept he called "monoideism," by which he meant mental concentration on a single dominant idea. In this state subjects were highly suggestible and could focus their attention on specific ideas that would influence behavior.

The great French neurologist Jean Martin Charcot considered the hypnotic state a neurophysiological phenomenon (*sommeil nerveux*, nervous sleep) and a sign of mental illness, "*un etat nerveux artificiel ou experimental*" (an artificial or experimental nervous state). Pierre Janet supported this position about hypnosis, but Hippolyte Bernheim, who believed that hypnosis was a function of the normal brain, opposed both. Sigmund Freud studied hypnosis with Charcot, and it was central to his classical work on hysteria with Joseph Breuer. Freud documented in his autobiography the moment that he gave up the formal use of hypnosis. A patient threw her arms around his neck during a hypnotic trance: "I was modest enough not to attribute the event to my own irresistible personal attractions, and I felt that I had now grasped the nature of the mysterious element that was at work behind hypnotism. In order to exclude it or at all events to isolate it, it was necessary to abandon hypnotism." Freud had discovered transference, and to control or eliminate it, he decided to stop formally using hypnotic inductions, but he retained the couch and turned his attention to the process of free association rather than hypnotic trance as a therapeutic technique. However, this formal change did not eliminate the occurrence of spontaneous trance in the course of psychotherapy.

Because of the high incidence of shellshock during World War I, Ernst Simmel, a German psychoanalyst, became interested in hypnosis for the treatment of war neurosis. He developed a technique for accessing repressed material, which he called *hypnoanalysis*. During World War II, hypnosis played a prominent part in the treatment of pain, combat fatigue, and neurosis. Some of

the first research on memory recall and control of physiological activity with hypnosis was carried out at the U.S. Army School of Military Psychiatry.

In 1955 the British Medical Society formally recognized hypnosis and recommended that it be taught in medical schools. In 1958, the American Medical Association and the American Psychiatric Association officially recognized it as a safe and effective treatment.

### **DEFINITION AND THEORY**

Hypnosis can be understood as attentive, receptive focal concentration with diminished peripheral awareness. It is also typified by a feeling of involuntariness; movements seem automatic, and suggested perceptions can alter or replace ordinary ones. The hypnotic state can be entered and exited in a matter of seconds. All hypnosis is, in essence, selfhypnosis, but when a person allows this form of concentration to be structured by another, the hypnotic experience is also characterized by an intense and sensitive interpersonal relatedness between the two, with a relative suspension of critical judgment and peripheral awareness. This intense concentration can be actively initiated and structured to achieve agreedupon goals.

Hypnosis is currently understood in a manner consistent with the conceptualization of Bernheim of the Nancy School, as a normal activity of a normal mind. The trancelike experience perhaps most familiar in everyday life is absorption in a good novel, play, or movie to the extent that distracting stimuli are ignored and involvement in the activity is intense. Hypnosis resembles the ‘suspension of disbelief’ that typifies a good theater experience. Research has demonstrated that persons who report having such intense absorbing experiences can be shown by formal measurement to be relatively highly hypnotizable. In a therapeutic relationship, this facilitates change by teaching an individual to become so focused on a specific theme or goal that they ignore old associations and

can more easily accept new thoughts and feelings. Thus the use of the hypnotic state can accelerate therapeutic change.

### **THE TRAIT OF HYPNOTIZABILITY**

Laboratory and clinical researchers have demonstrated that hypnotizability is a stable and measurable trait. While it does vary somewhat throughout the life cycle, peaking during the late childhood years and declining for some during adolescence, it remains relatively stable throughout maturity, and then declines further during senescence. A longitudinal study demonstrated a remarkable .7 test-retest correlation for scores on the Stanford Hypnotic Susceptibility Scale over a 25-year interval.

Hypnotizability has implications beyond the choice of hypnosis to facilitate treatment. Hypnotizability reflects a convergence of biopsychosocial phenomena. The hypnotic experience is a process that transforms a trait into a state. The measurement of hypnotizability can be effectively used in the clinical setting to initiate and assess hypnotic experience while making clinical decisions about the type and direction of treatment. The patient's degree of hypnotizability provides useful information about the way in which an individual relates to the self and the social environment.

**Components of Hypnotizability** The range of ability to experience an attentive, receptive state of concentration with a relative decrease in peripheral awareness and cognitive evaluation is based on sensitivity to inner cues as well as cues from the hypnotist, the external environment, or both. Experiencing hypnotic concentration requires a convergence of three essential components, all of which are necessary to some degree: absorption, dissociation, and suggestibility (Fig. 30.31).

1. *Absorption*: an ability to reduce peripheral awareness to facilitate greater focal attention, analogous to looking through a telephoto lens. The object of attention is seen with great detail, but relatively devoid of context. The shift into the hypnotic state is something like a psychological zoom lens that can shift toward highly focused attention. As attention becomes more intense and focused, awareness of orientation in time and space decreases.
2. *Dissociation*: a functional separation of elements of identity, memory, perception, consciousness, or motor response from the mainstream of conscious awareness. The more absorbed one is in focal attention, the more likely information at the periphery of awareness is to slip out of consciousness. Thus components of self-awareness, temporal orientation, perception, and physical activity may occur without consciousness, or seem involuntary.
3. *Suggestibility*: a tendency to perceive and accept signals and information with a relative suspension of customary critical judgment. The intensity of focus in hypnosis tends to suspend (but not eliminate) the evaluative component that allows us to judge our responses. Motivation, secondary gain or loss, and the degree to which one can suspend cognitive process affect suggestibility. For the highly hypnotizable person, response to input can seem almost compulsive. Less hypnotizable individuals may still respond with a sense of automaticity.

## **NEUROPHYSIOLOGIC CORRELATES OF HYPNOSIS**

**Power Spectral Analysis of Electroencephalograms** Since the beginnings of hypnosis scientists have been trying to learn more about its neurological basis. Electroencephalographic (EEG) studies and power spectral analyses of brain electrical activity have provided relatively little help in

understanding the physiology of the hypnotic state. Even though initially described as a form of nervous sleep, today hypnosis and sleep are known to share no psychological or neurological characteristics. Actually the brain electrical pattern of a hypnotized subject is more similar to that of a fully awake and attentive individual than to the pattern of a sleeping person. Ernest Hilgard and colleagues reported increased alpha activity among highly hypnotizable individuals, which was present whether or not the subjects were in trance. More recent studies suggest that theta power, especially in the left frontal region, best differentiates high from low hypnotizable individuals. However, no clear signature of the hypnotic state *per se* has been found.

**Event-Related Potentials** Event-related potential (ERP) studies of the effects of hypnosis on perceptual processing have been more productive, indicating that hypnotic instructions to alter perception result in changes in the brain's response to stimuli in that modality. ERP studies indicate that alteration of perception under hypnosis changes portions of the waveform affected by inattention and meaning. In particular, a hypnotic hallucination designed to obstruct perception of visual and somatosensory stimuli results in reduction of amplitude of early (P<sub>100</sub>) and late (P<sub>300</sub>) components of the waveform. Thus the subjectively reduced perception typical of, for example, hypnotic analgesia, is accompanied by reduced ERP amplitude to perception in that modality. In the visual system this finding has been localized to the left occipital cortex, consistent with work indicating imagery generation in that region. More recent investigation has identified both common reductions in components such as P<sub>100</sub>, which are attention-related, and others that are not (P<sub>200</sub> and P<sub>300</sub>; Fig. 30.32). This finding means that hypnotic alteration of perception differs from simple inattention to the stimulus.

Similarly, hypnotic amnesia affects attentional components of the ERP and a late negative component (N<sub>400</sub>) but not late positive components, consistent with intact implicit (but not explicit) memory processing. Recent positron emission tomography (PET) studies show that response to true and false recollections can be distinguished through activation of parietal auditory association cortex. Thus modulation of perceptual response to stimuli in the primary sensory association cortices could affect storage and retrieval of memories of these events, potentially linking dissociative responses during trauma that might modulate perceptual encoding, thereby producing dissociative amnesia afterward.

**Positron Emission Tomography** Several PET studies have demonstrated that hypnotic perceptual alteration affects activity in the primary sensory association cortex. In a study of hypnotic alteration of color vision, Kosslyn and colleagues showed that adding or deleting color to a perceived visual image with hypnotic instructions was associated with significant changes in regional cerebral blood flow in the lingual and fusiform gyri, which is where color vision is processed. Blood flow increased when color was hypnotically added to a black and white image, and it decreased when color was drained from an image. Rainville and colleagues demonstrated that hypnotic instructions to reduce pain perception resulted in analgesia and reduced blood flow in the S1 region where somatosensory perception is processed. They also observed that hypnotic instructions to reduce the intensity of pain decreased activity in the anterior cingulate cortex (ACC), which is part of the anterior attentional system. Interestingly, they found that a hypnotic instruction to reduce the unpleasantness of a painful stimulus but not its intensity produced similar reduction in blood flow in the ACC but not somatosensory cortex. Thus they were able to distinguish the brain correlates of



noxiousness from intensity, and show that hypnosis can modulate both, depending on the nature of the hypnotic instructions. They also found that hypnotic relaxation was associated with decreases in activity within primary and secondary somatosensory cortices and the posterior insular cortex, mainly in the right hemisphere). Therefore, these imaging techniques are proving useful in further identifying subsystems within the brain devoted to specific types of perceptual and cognitive processing involving hypnosis.

The role of anterior regions such as the frontal lobes, is further reinforced by the finding that, hypnotizability is correlated with homovanillic acid concentrations in the cerebrospinal fluid (CSF), suggesting a specific role in hypnosis of the dopamine system (homovanillic acid is a dopamine metabolite), which is heavily represented in the frontal cortex. Homovanillic acid concentration in the CSF primarily reflects activity in the frontal cortex and basal ganglia, which are rich in dopaminergic synapses. The automaticity observed in hypnotic motor behavior could represent an activation of the basal ganglia, which is involved in both implicit memory and routine motor activity. To the extent that pharmacologic agents have any effect on hypnotizability, it is through administration of dopaminergic agents such as amphetamine. These enhance hypnotic response, while inhibitory agents such as the benzodiazepine GABA agonists reduce hypnotizability, except among highly anxious subjects. Thus current neuroimaging and neurotransmitter research indicates that hypnosis mobilizes anterior attentional systems and directly affects specific sensory cortices, altering what is perceived as well as how it is perceived.

## **MISCONCEPTIONS ABOUT HYPNOSIS**

Despite the aphorism that myths are beliefs that never were true and always will be, there have been so many misconceptions and misunderstandings about hypnosis that it is worth examining and clarifying some of the most prominent ones.

**Myth 1: Hypnosis Is Sleep** On the contrary, hypnosis is aroused, attentive concentration. EEG studies demonstrate that the hypnotic trance state is consistent with a state of resting alertness and inconsistent with sleep by EEG criteria.

**Myth 2: Hypnosis Is Projected Onto the Patient** Hypnosis is best understood as the activation of an inner capacity to experience a focused hypnotic state. The use of a hypnotizability test early in treatment can reinforce the concept that the therapist's job is to evaluate the patient's responsiveness, rather than project or force a particular mental state onto the patient. The role of the therapist is to provide an occasion during which persons may identify, mobilize, and explore, their own trance capacity. This understanding helps both clinician and patient maintain a proper perspective on the role of hypnosis as an adjunct to a primary psychotherapeutic strategy, whether or not the patient can experience many hypnotic phenomena.

**Myth 3: Only Weak or Sick People Are Hypnotizable** This tried and untrue proposition has been held at least since the time of Charcot and Janet. It is true that the hysteric patients studied by these men often had symptoms such as conversion paralysis, fugue states, and abreactions, that could be understood as spontaneous, undisciplined trance states. However, the vast majority of highly hypnotizable persons do not have mental disorders.

The capacity to experience hypnosis has, in general, been associated in recent research with relative mental health. Research has shown the absence of highly hypnotizable persons among populations of schizophrenic patients. The authors have found significantly lower hypnotizability

among patients with thought, character, and affective disorders. The clinician must bear in mind, however, that about 5 percent of mentally healthy persons are not hypnotizable. On the other hand, some disorders have been found to be associated with high hypnotizability, including posttraumatic stress disorder and dissociative disorders. This data means we have a clinical measurement of the capacity for focused attention and treatment responsiveness, as well as one that helps the clinician make an appropriate differential diagnosis. For example, finding that a patient is highly hypnotizable makes a diagnosis of schizophrenia unlikely and dissociative identity disorder or brief reactive psychosis more likely. There are no gender differences in relation to hypnotizability.

**Myth 4: Hypnosis Is Therapy** The trance state is like an intensely focused beam of light that can illuminate something and allow the subject to absorb it. However, while it may be a pleasant and relaxing state, it is not in and of itself therapy. Indeed, there is no hypnotherapy. Rather, hypnosis is best used to facilitate a primary treatment strategy.

**Myth 5: Hypnosis Is Dangerous** Nothing in the trance state itself is inherently dangerous, but exploitation by the operator and abuse of the patient using hypnosis can be harmful. This issue is not unique to hypnosis. No one has ever been lost in a trance state or been psychologically damaged merely from entering a trance state under the guidance of a competent therapist. Compared with other psychiatric interventions, which include medication side effects and potential for misuse, hypnosis is a benign and safe facilitator of treatment. Furthermore, hypnosis does not occur only when a doctor decides to use it. When concentrating intently in certain private reveries or interpersonal situations and in various responses to stress, approximately 75 percent of the population can spontaneously enter trance states to varying degrees. If the therapist does not recognize spontaneous trance, the therapist-patient interaction can be impaired.

**Myth 6: Symptom Removal Is Dangerous** Because hypnosis is often used in a brief, symptom-oriented treatment strategy, the theoretical issue of symptom substitution needs to be addressed. Some segments of the psychiatric community still believe that the removal of a psychologically determined symptom before the development of insight regarding the meaning of the symptom by working it through in transference leaves the original conflict unresolved and predisposes the patient to development of a new and possibly more serious symptom. Symptom-oriented treatment is also seen from this classical closed-energy psychoanalytic perspective as undermining the process of psychological growth by making the therapist an ally with the forces of repression of unconscious conflict.

There are two major problems with this position: one theoretical, the other empirical. First, it is difficult to be certain that what is called insight regarding the cause of the symptom is not really a rationalization constructed by the therapist and the patient to explain the conflict. An explanation or narrative truth is not necessarily an insight or the truth. Psychotherapists of various theoretical persuasions may come up with different but equally plausible explanations for the same symptom. Furthermore, the conflict that may have given rise to the symptom may well have long since receded in importance when the patient presents for treatment. The factors that perpetuate a symptom, including secondary gain and loss, habit, and humiliation, may take precedence over the original conflict in importance. Human beings do not fit the paradigm of a closed hydraulic energy system. The therapeutic problem becomes one of breaking the habit and providing a socially facesaving way for patients to change their behavior. The few existing reports of harmful symptom substitution in the literature are less than compelling and do not provide data about patient, doctor

expectancies, or use of coercion. In general, people feel better when they get better, however they do it.

## **CONTRAINDICATIONS**

In general, formal hypnosis is remarkably safe when used with sound clinical judgment in a goal-directed setting. However, problems related to the use of hypnosis are more likely when the therapist is not aware of the patient's hypnotic proneness and unwittingly influences patient response in the way questions are asked or statements are made. Spontaneous trance, without formal induction, can readily occur in patients with midrange to high hypnotic capacity when they are under stress or simply focusing attention. Thus, with trance proneness and formal inductions, some precautions need to be observed.

The clinician should explain briefly and directly the nature of hypnosis, emphasize the importance of hypnotizability as a trait to reduce anxiety about performance or coercion, state that the patient may discontinue the trance experience at any time, and clarify the goals of the hypnotic intervention. From a clinical perspective, hypnosis should not be used in an atmosphere that is threatening or coercive. Patients still may perceive the therapist as exerting considerable power over them, and awareness of and willingness to discuss and diffuse such concerns can be helpful.

Certain types of patients should be approached with caution. Suspicious or paranoid patients usually avoid or resist efforts at hypnosis. Such patients, in whom unconscious fears and suspicions are evoked, may reduce their anxiety by refusing to cooperate with a hypnotic induction. An occasional patient may respond to a trance induction with a spontaneous abreaction. If this occurs, it is important to explore and restructure the patient's experience calmly, using it to enhance the patient's access to and control over upsetting memories, fears, and fantasies. Certain fragile patients

who have already suffered many painful failures may be vulnerable if their expectations regarding the hypnotic experience are unrealistic. Discovering that they are not hypnotizable or that they do not achieve symptomatic relief by using hypnosis may constitute an additional failure. Due to impaired ability to concentrate, depressed patients usually fail to respond to their full capacity until the depression is treated with more traditional psychotherapy, medication, or both.

Because perceptions can be temporarily altered by hypnotic signals and attentional focus is narrowed, hypnotized persons may to some extent suspend their usual critical judgment within the trance and depart substantially from their usual conduct in compliance with the hypnotist's signal, despite some resistance and discomfort about it. The more hypnotizable the person is, the greater the likelihood that this can happen, especially if pressed.

In the clinical situation the therapist must accept responsibility for helping to structure the setting appropriately. This means being clear and structured, indicating the beginning, assessment, hypnotic work, and end of the hypnotic experience precisely. More important, highly hypnotizable persons must be taught about their own vulnerability to exploitation, so that they may take steps to protect themselves from it. The authors have seen more than a few patients who have been manipulated by persons who wittingly or unwittingly used hypnotic techniques to get the patient to comply with their wishes, be they sexual or financial, during a relative suspension of the patient's otherwise intact critical judgment.

One successful businessman found himself signing over an interest in his business to a contractor who, it was later discovered, used hypnosis to get the businessman to abandon his usual business judgment. The examination of hypnotizability helped him to learn a rather expensive lesson regarding his own vulnerabilities.

## ASSESSMENT OF HYPNOTIC CAPACITY

A clinical scale to measure hypnotizability must meet many criteria. On one hand, it must be reliable and valid and, on the other hand, it needs to be brief and aesthetically acceptable in the clinical setting. The Hypnotic Induction Profile,(HIP)a 5minute clinical assessment procedure, was standardized on a clinical population in a treatment context and meets these criteria (Table 30.31). This clinical scale has a moderate positive correlation with the longer laboratorybased Stanford Hypnotic Susceptibility Scale. A derivative of the Stanford Hypnotic Susceptibility Scale developed for clinical use requires about 20 minutes for administration. It was standardized on a nonclinical student population and is highly correlated with the parent scale. The Stanford scales primarily measure behavioral compliance and suggestibility. The Hypnotic Induction Profile, with the Eye-Roll sign as a biological indicator of dissociative capacity, measures cognitive flow. A break in cognitive flow distinguishes those who have no hypnotic capacity due to pathology from the mentally healthy who have no hypnotic capacity. The total score represents the convergence of suggestibility with absorption and dissociation, as well as assessing the degree of involuntariness experienced by subjects. Both tests, developed from different perspectives, represent an attempt to make measurement of hypnotizability clinically relevant.

In addition to the information provided by the HIP, the subject has experienced entering and exiting a hypnotic state, reducing performance anxiety for both the subject and the tester. The goal is not specifically to evoke a trance state, but rather to examine the capacity to experience hypnosis. In this way there are no failures or wrong answers, just an assessment of responsiveness, more typical of other aspects of the psychiatric examination. It is thus quite useful to turn the hypnotic induction into a deduction as well.

**Hypnotic Induction Profile** Administration of the Hypnotic Induction Profile can be a routine part of the initial visit and evaluation. The test begins with the Eye-Roll sign, a presumptive measure of biological ability to experience dissociation. In the test procedure for Eye-Roll sign measurement, the patient is told "Hold your head looking straight forward; while holding your head in that position, look upward, toward your eyebrows, now toward the top of your head [upgaze]. While continuing to look upward, close your eyelids slowly [roll].

The upgaze and roll are scored on a 0 to 4 scale (Fig. 30.33) by observing the amount of sclera visible between the lower eyelid and the lower edge of the cornea. If an internal squint occurs, the degree is scored on a 1 to 3 scale (Fig. 30.33). The squint score is added to the roll score. This procedure takes about 5 seconds. The Eye-Roll is a part of the hypnotic induction, which is also scored as an initial indicator of the potential for hypnotic experience. Also, in many patients, the Eye-Roll alone can become a spontaneous rapid hypnotic induction in addition to providing initial information which is compared to the more traditional perceptual and motor items that follow.

Subjects are then instructed to keep their eyes closed but let them relax and concentrate on a subjective experience of floating. As they do that, they are told that their left arm will feel light and buoyant and will float into the air, even after the formal hypnotic experience is ended until a cutoff signal (touching the left elbow) is given.

There are seven scoreable items in the Induction Score, a measure of hypnotic performance:

1. Amount of reinforcement needed for the subject to learn to produce lightness and buoyancy in his left hand and arm
2. Degree of dissociation experienced after the first arm levitation



3. Amount of verbal reinforcement needed to get the arm to rise after its been pulled down by the examiner
4. Absence or presence of involuntariness
5. Amount of reinforcement needed for response to the cutoff signal
6. Presence or absence of spontaneous amnesia
7. Alteration of somatosensory awareness during the hypnotic experience

The degree of hypnotizability provides an initial prediction of the utility of techniques involving hypnosis and likely responses to different treatment approaches. The degree of hypnotizability is reflected on an Induction Scale of 0 to 16 scale. A score of 5 or lower represents no usable hypnotizability.

In conducting research on hypnotizability with the Hypnotic Induction Profile, a population of 6522 consecutive patients in one sample and 2274 consecutive in a second sample (a total of 8796 consecutive patients) were assessed with the Hypnotic Induction Profile by one of two different therapists. The analysis of data showed the same distribution within each patient population in each therapist's sample. There was confirmation and agreement between the samples that about 75 percent of the subjects were hypnotizable (20 percent low, 48 percent midrange and 7 percent high) and about 25 percent were not. Most of this latter group showed evidence of cognitive impairment because of various psychiatric disorders. These findings are remarkably similar to a study of the prevalence of psychiatric disorders in Manhattan , which found that 23.5 percent of the city's population revealed marked to severe psychiatric problems.

The total sample of 8796 outpatients in the study is large enough to suggest that the findings provide stable values for generalization: the results support the hypothesis that hypnotizability can

be measured on a continuum, and that it indicates a probable presence or absence of psychopathology. Instructions for the Hypnotic Induction Profile are presented in Table 30.32.

**Clinical Correlates of Hypnotic Capacity** From a clinical point of view, there are two broad types of response to the test: intact and nonintact. When the sensorimotor responses are approximately consistent with the biological indicator eye roll, the response is intact, which indicates usable hypnotic capacity. When the sensorimotor responses are considerably below the biological prediction, the response is classified as nonintact (soft or decrement). The biological potential for hypnosis as measured by the eye roll can be interfered with by some psychological, neurological, or pharmacological problem and, therefore, is not behaviorally expressed. The more disturbed populations, e.g. those with thought, character, affective, and some neurological disorders, prove to be considerably less hypnotizable or nonhypnotizable. Approximately one quarter of the adult population has little or no usable hypnotic capacity. In some cases, this is a product of normal development while in others; it is associated with some disorder that impairs concentration. An absence of usable hypnotic capacity indicates that other forms of treatment, either psychotherapeutic or psychopharmacological, are likely to be more effective.

Within the range of intact hypnotic capacity, as measured by the Hypnotic Induction Profile, it is clinically useful to distinguish three broad types of personality style. Those with low hypnotizability, in the 6 to 9 range of the 0-16 induction score, seem to have “Apollonian” features. These persons are cerebral and not affect oriented, tend to be inflexible, organized, and somewhat controlling in relationships, have a heightened sense of responsibility, are relatively untrusting, tend to live more in the past that is usually divided among different issues or points in space at the same

time. They excel at contrasting and comparing. They often prefer the written to the spoken word. Should they decompensate, they tend toward obsessional or schizoid symptoms.

Those with high hypnotizability have “Dionysian” features and score in the 14 to 16 range on the HIP. They are relatively heart-oriented and are prone to such intense absorption when they concentrate that they become momentarily disoriented when the task, play, or movie is over. They tend to relinquish control in interpersonal relationships, to be trusting and to value the spoken over the written word, and to learn by affiliating with experience, rather than by critically examining it. They often have exceptionally good memories, and if they decompensate, it is usually in the direction of dissociation, hysteria or depression. Their trance proneness becomes a vehicle for them to experience and express intrapsychic and interpersonal stress.

Those in the midrange group, scoring 10 to 13 on the HIP, have characteristics that represent a compromise between the two extremes, reminiscent of the compromise made by Homer's wandering hero, Odysseus. The “Odyssean's” time orientation is more a balance of the past, present, and future. They do not have the immersion in the present that characterizes the Dionysians nor the avoidance of the present characteristic of the Apollonians. They tend to have balanced relationships in terms of control and trust, and they learn by accommodating to the new material, rather than by either assimilating it or affiliating with it. If these persons decompensate, they are prone to periods of depression, a syndrome of alternating action and despair, or borderline disorder.

There is some evidence that these personality styles correlate with vertical mobility of the eyes, i.e., looking up while lowering the eyelids, as scored by the Eye-Roll sign. This is a biological feature. The clinician can use the Apollonian – Odyssean – Dionysian questionnaire (see Table 30.3-3), to pick up additional patterns of processing cognitive and interpersonal information, both

biological and learned (see appendix). The ten questions address space awareness (absorption), time perception, emotional vs cognitive preferences, need for interpersonal control, critical leaning and appraisal style, responsibility, preferred mode of contact, and processing ideas. Patients are then asked to make their own assessment, as they know themselves, to rank order a first and second descriptor: organizer, director, balancer, explorer, or compiler. The patient's self-description becomes another useful piece of information in working out treatment strategies

**Psychopathology** When a patient presents with a psychiatric problem, the provocation may be related to internal factors (e.g., genetics, drugs, biological deficits) or external factors (e.g., stress, deprivation, trauma), which result in an impairment of psychological function. The authors hypothesize that these factors interact in identifiable patterns consistent with the correlation of hypnotizability and personality style and manifest as predictable Axis I clinical syndromes or Axis II personality disorders (Figs. 30.34 and 30.35).

For example, the "cerebral" Apollonian type may develop cognitive impairments, with avoidant interpersonal styles and proneness to despair, for example, obsessivecompulsive disorder, anorexia nervosa, generalized anxiety disorder, and schizophrenia (Axis I) and schizoid, paranoid, and avoidant personality disorders (Axis II). The "oscillating" Odyssean type may develop problems of intimacy, fluctuating assumptions, and beliefs with resultant confusion and is subject to mood swings, for example bipolar disorders, major depressive disorder, bulimia nervosa (Axis I), and borderline, passiveaggressive and antisocial personality disorders (Axis II). The socially sensitive Dionysian is prone to experience disruptions of selfintegration and dependency to the point of helplessness and is vulnerable to major depression, acute stress disorder, dissociative identity disorder, dissociative fugue, dissociative amnesia, somatization disorder, conversion disorder,

depersonalization disorder, posttraumatic stress disorder (Axis I), and histrionic and dependent personality disorders (Axis II). There is an accumulating body of evidence that characteristic coping skills and psychopathology correspond with the different degrees of hypnotizability (Table 30.34).

### **CHOICE OF PSYCHOTHERAPY**

Information gleaned from the testing of hypnotizability can be useful in helping the therapist to select the most appropriate problemsolving approach or choice of therapy. Apollonians, in general, respond more readily to intellectual, introspective, insightoriented therapy, including that of the psychoanalytic type. Apollonians, who seem resistant to change, may become more cooperative with a collegial approach to treatment. In contrast to this whyoriented therapeutic approach, Dionysians with psychological problems require a more structured psychotherapy that focuses on *what* they should do with their lives rather than *why* they should do it. Their tendency to comply with signals from others is presented to them as a problem in an interpersonal sense and is also used by the therapist to help them structure their approaches to problems. Those in the midrange seem prone to make good use of interpersonally and existentially oriented therapies as they fluctuate between periods of intense immersion in the world and times of withdrawal and questioning. A psychotherapy that helps them work through various disappointments and problems frees them to resume moreactive involvement in life.

Highly hypnotizable persons are particularly vulnerable to inappropriate therapy, especially because they tend to affiliate with new premises while suspending their own critical judgment. These patients will readily accept any diagnosis or interpretation. An introspective, analytic approach can lead to confusion for such patients because they need help and direction to control dissociative behavior rather than intellectual exploration which tends to reinforce dissociation and

encourage a metaphorical acting out of the problem. Mainly, these patients need help learning to focus their attention with guidance for what to do.

Mrs. K was a 52 year old married woman living with her husband and three children. She had been diagnosed with and was being treated for daily seizures. Since repeated laboratory and EEG findings were negative over a one-year period and since she was not responding to various antiseizure medications, she was referred for a psychiatric evaluation. She was so highly hypnotizable (a grade 5 with an induction score of 16 on the HIP) that under hypnosis she was able to start and then stop seizure activity in response to the therapist's instructions. A diagnosis of conversion disorder with pseudo-seizures was made and she was taken off all medication and taught to control her seizures with a self-induced hypnotic strategy. Each time she sensed a feeling of a seizure coming on, she learned to quickly count to three and roll up her eyes while closing her eyelids. She would focus upon floating until she felt relaxed. She then came out of the self-induced trance by counting backwards from 3 to 1 and open her eyes. After 6 months of daily practice she had become totally independent and seizure free. Her husband and children no longer had to supervise her. Once she was successful in regaining control over her life, she expressed no interest in having any insight as to *why* the "seizures" had occurred in the first place. She was completely satisfied with knowing *what to do to maintain control.* At 5-year follow-up, she continued to be seizure free. Another patient with a similar pseudo-seizure history proved to be slightly less hypnotizable – 12 of 16 on the HIP. She also learned to induce and diminish seizure activity using self-hypnosis, but she was more curious about reasons for her symptom. In discussion of stressors in her life, it turned out that she was the focal point for conflict between two branches of her extended family. They did not get along with one another, and because she desired to bring them

together, she often absorbed the brunt of their dislike for one another. In psychotherapy she was advised to reduce her role as family mediator, using the seizure symptoms as an acknowledgement that she had exceeded her limits in absorbing conflict. In particular, she was advised to hang up the phone if her father became verbally abusive, since she had been in the practice of calling him daily and listening to long tirades from him. As she did so and practiced her self-hypnotic strategy, her father became more respectful, her external stress was reduced, and the spontaneous pseudo-seizures stopped over a six month period.

**Role of the Therapist** Hypnotizability assessment can help the therapist to understand and respond to a patient's particular intrapsychic and interpersonal style. A given individual presents with a "cluster of both conscious and unconscious awareness of self, beliefs, assumptions, values, judgments, fantasies, myths, philosophies, spiritual and social striving, and goals." This includes "the concepts of ego, self, and identity" and can be considered the individual's 'mythbelief constellation,' the private filter system through which persons view themselves, the world, and the flow between the self and the world. This perspective emphasizes understanding the process and form more than the content of the particular person's belief system at the time of the treatment intervention. The HIP can be used as a diagnostic tool that enables clinicians to learn more about the person's interpersonal and intrapersonal processes to formulate the problem at hand, respect the aesthetics of the individual, and establish realistic and meaningful therapeutic goals.

Individuals at the low end of the hypnotizability spectrum tend to be relatively rigid and controlling, and react with an internally driven compulsivity. A person in the midrange of hypnotizability is less rigid and more moderate and most likely to respond with a combination of

internal and external processing. Persons at the high end of hypnotizability are so extremely flexible that their processes could be considered an externally driven compulsivity with excessive sensitivity to social cues.

At both ends of the spectrum, there appears to be a narrowing of individual choice. However, at the fixed end of the spectrum (low hypnotizability), the person's attachment to content and lack of flexibility in process makes it most difficult to intervene. It is at the most flexible end of the spectrum (midrange to high hypnotizability) that the most promise for change is found.

The task is to identify which aspects of the person are relatively fixed (socially insensitive) and which aspects are relatively malleable (socially sensitive). With the Hypnotic Induction Profile, these different features are identified and the clinician can observe where the person places on a “fixflex” continuum. By assaying the components of hypnotizability and identifying personality style and a person's mythbelief constellation, therapists can sharpen their judgment in deciding on the most effective treatment strategy for the person in the given clinical context. This is a nonlinear, multilevel process, with each aspect of information interacting with each other and the whole.

## **RESTRUCTURING THERAPY: LIFESTYLE CHANGES AND SYMPTOM MANAGEMENT**

Since the days of Hippocrates, medicine's main accomplishment has been symptom relief and containment more often than cure. Not only may the goals be more practical, but also symptom-oriented work helps build a therapeutic alliance. The starting point of therapy is easily identified by both therapist and patient.

Traditional therapeutic approaches that analyze why a problem exists or explore developmental dynamic interactions may be unnecessary to treat habitual Axis I problems such as smoking or



overeating, phobias, anxiety, conversion symptoms, and chronic pain. These problems can respond quickly, many times in a single session, when patients are taught selfhypnosis with a strategy designed to help them take charge of their lives and develop a new perspective on the problem. Regardless of the problem and the basic therapeutic approach, it is useful to teach the patient selfhypnosis to use outside of the therapeutic dyad. The authors use a method derived from the Hypnotic Induction Profile. The patient is taught:

*One, look up toward your eyebrows, all the way up; two, close your eyelids slowly and take a deep breath; three, exhale, let your eyes relax and let your body float.*

*As you feel yourself floating, you permit one hand or the other to feel like a buoyant balloon and allow it to float upward. As it does, your elbow bends and your forearm floats into an upright position. When your hand reaches this upright position, it becomes a signal for you to enter a state of meditation and increase your receptivity to new thoughts and feelings.*

*In this state of meditation, you concentrate on this feeling of imaginary floating and at the same time concentrate on (see 3 critical points to stop smoking below).*

*Reflect on the implications of these critical points and then bring yourself out of this state of concentration called selfhypnosis by counting backward in this manner: Three, get ready; two, with your eyelids closed, roll up your eyes (do it now); and, one, let your eyelids open slowly. Then when your eyes are back in focus, slowly make a fist with the hand that is up; and, as you open your fist slowly, your usual sensation and control returns. Let your hand float down. That is the end of the exercise, but you can retain a general overall feeling of floating.*

*By doing this exercise 10 different times each day, you can float into this state of buoyant repose. Give yourself this island of time, 20 seconds, 10 times a day, in which to use this extra receptivity to reimprint these critical points. Reflect upon them, then float back to your usual state of awareness, and then continue with what you ordinarily do.*

To make the technique more useful, the patient is taught a camouflaged method to enter the selfhypnotic state with the eyelids closed and bringing one hand up to the forehead. To an outsider, it looks like the person is in deep thought.

The impact of a variety of strategies is intensified with hypnotic concentration to internalize new perspectives on old problems. The principle of restructuring is to help a person master something new rather than fight against an old problem or pattern. The therapist and patient form a collaborative relationship, with the therapist as a teacher, encouraging patients to develop their own executive control. This sets the stage for the next phase of treatment, if necessary, to deal with comorbid psychiatric disorders.

Keeping in mind that human beings use their imaginations to create explanations and meaningful narratives, formal hypnosis helps the person discover relevant control of unconscious process and cognitive selfawareness to develop mastery over anxiety, confusion, panic, and unhealthy life choices. Critical points and suggestions are reinvoked by patients with a method of selfhypnosis that they have learned in the session.

## **INDICATIONS**

**Smoking Cessation** Hypnosis has proved surprisingly effective in helping people stop smoking. There are several mechanisms by which it may contribute to smoking cessation. The ritual of the hypnotic exercise may provide a substitute for the "breathing exercise" that accompanies the act of

smoking; the positive affirmations often used in selfhypnosis provide positive reinforcement for behavior change and promote positive selfimage; its use enhances selfobservation and selfmonitoring; and it can facilitate cognitive restructuring of the smoking habit.

It is not most effective to tell the patient who wants to stop smoking "don't smoke." This can have the paradoxical effect of directing more attention toward the smoking habit. Rather, the patient is presented with a paradigm shift from "smoke/don't smoke" to "respect my body." Many points are made to emphasize the power of taking a stand *for* one's own body rather than *against* smoking.

Emphasis is placed on the significance of learning to use one's mind to protect one's body from the damage inflicted by smoking. The hypnotic state is used to illustrate the importance of focusing on a mental theme that has more power than a physical urge. The patient is taught a method of selfhypnosis (see above) and these three critical points:

1. For my body, smoking is a poison.
2. I need my body to live.
3. I owe my body this respect and protection.

Patients reflect on the personal meaning of this for themselves and then exit the trance state. The selfhypnosis exercise takes 20 seconds and is prescribed to be practiced 10 times a day (until it becomes an integral part of the person's mindbody pattern) as a private meditation to reinforce independence and mastery with an ability to transform an urge to smoke into an act to protect the body. The success of this singlesession intervention compares favorably with other techniques, including pharmaceutical treatments.

A number of studies demonstrate the efficacy of hypnosis as a tool to facilitate control of smoking habits. These studies show success rates in cigarette abstinence after treatment with

hypnosis ranging from 13 to 64 percent. In these studies abstinence is defined as no smoking during a followup time of at least 6 months. The first author of this section developed a single-session approach for smoking cessation that is widely used. His results have been replicated and shown to produce outcomes of 20 to 35 percent long-term complete abstinence. Others have reported abstinence rates as high as 40 percent at 6 months. These numbers are better than the rates of unassisted quitting. Studies have also shown that higher hypnotizability predicts better outcome. While there is no evidence that treatments using hypnosis are more effective than other interventions for smoking cessation, they may be more efficient because patients can use a self-administered treatment strategy (self-hypnosis) to reinforce the cognitive restructuring involved in the approach. At the same time, the hypnosis provides them with an exercise that induces physical relaxation, and thus provides immediate positive reinforcement.

**Weight Control** Typical of the generally modest results seen in weight-control regimens, rarely is hypnosis alone considered the treatment of choice for weight problems. It is usually employed as an adjunct to a comprehensive dietary and exercise control program for weight reduction and management. Also, the concept of 'going on a diet' leads to long-term failure despite short-term success, since few people are able to live indefinitely on a diet, and failure to stay on a prescribed plan becomes self-defeating. The cycle of losing, gaining, and losing weight can lead to medical complications, and periodic starvation actually further dysregulates response to hunger signals and therefore control of eating behavior.

Like the use of self-hypnosis in the control of smoking described above, the purpose is to restructure the patient's relationship to food. In trance, patients are taught to (1) develop a personal plan and focus on eating behavior, (2) clarify and differentiate eating from overeating for their

particular body type and goals, and (3) learn to eat on the basis of respect and protection for their bodies.

The hypnotic modality is used to develop a new perspective, provide a way to initiate feelings of affirmation and control, and simultaneously avoid the traps of deprivation, failure, and selfdeprecation. Patients are instructed to learn to eat with respect for their bodies, to focus on what they are *for* rather than what they are *against*. An important component of this approach consists of teaching the patient to use selfhypnosis training to control the urge to overeat. This is better accomplished by preparing a list of foods that constitutes eating with respect and then comparing an urge with the list. If the desired food is on the list, patients are encouraged to eat it as a gourmet would, focusing intently on all aspects of the eating experience and enjoying it. If the food is not on the list, patients are asked to recognize the desire, rather than fight the urge. Then patients are encouraged to use selfhypnosis to compare this urge with their overall commitment to protect and treat their body with respect and therefore to eat with respect. By using this method patients can see their desire to eat not as an occasion to feel deprived, but rather as one in which they are enhancing their mastery of the urge by choosing to protect their body.

This technique was examined in a randomized trial with 45 subjects. The addition of hypnosis to a behavioral intervention resulted in significantly greater weight loss at 3month followup (6.4 kg vs. 1.3 kg,  $H_c = 4.7$ ,  $P < .05$ ). Furthermore, hypnotizability as measured by the Stanford Hypnotic Susceptibility Scale, form C, and weight loss were significantly correlated ( $r = .56$ ,  $df = 13$ ,  $P < .03$ ). A metaanalysis performed by Kirsch on 18 studies in which adjunctive use of hypnosis was compared with other psychotherapeutic treatments demonstrated that hypnosis substantially improved treatment outcome. This hypnotic supplementation effect was strongest for the treatment

of obesity. However, the magnitude of this effect was questioned by Allison and Faith because of computational inaccuracies and methodological problems in one study. Clinical experience suggests that those within 20 percent of their ideal body weight may obtain some benefit from such restructuring techniques with selfhypnosis, when combined with a regimen of a balanced diet and exercise.

**Enhancing Medical Care** In medicine, hypnosis is becoming a more accepted modality to help patients with symptom control (pain, nausea and vomiting, itching, edema), anxiety secondary to illness and procedures, altering the course of physiological responses, and reversing the helpless and hopeless feelings that frequently occur during and after hospitalization. Issues of transference that frequently need to be worked through in longterm psychotherapy can create a powerful sense of support for the patient in brief medical psychotherapy, which adds to the patient's feelings of selfworth and, in turn, can support independent action. The use of the hypnotic modality and the relationship that ensues between the therapist and the patient can be used to identify individual capacity for increased selfcare and control over responses to illness and symptoms. The hypnotic procedure can become a bridge to transmit caring, comfort, and respect; maximize patient participation, and enhance feelings of independence and mastery over somatic responses to anxiety, fear, and anger. Such interventions may facilitate medical recovery, since patients who have the most stable blood pressure and respiratory function along with minimal bleeding and a perception of pain control recover more quickly and at less risk than those who are unstable in these areas.

Psychological interventions involving hypnosis have been successful in alleviating physical symptoms due to asthma, allergies, dermatological problems, blood pressure instability, bleeding, burns, wound debridement, warts, gastrointestinal disturbances, impotence, contractures of the

hand, migraine and tension headaches, enuresis, and obstetrics in both adult and pediatric populations. Hypnosis is useful in rehabilitation after accidents and stroke as well as with psychogenic symptoms. In diabetes, cancer, heart disease, renal failure, orthopaedics, and somatoform disorders, the use of hypnotic interventions has been associated with better symptom management, decreased depression, less pain, and improved psychophysiological function.

Approaches vary according to the presenting symptoms, problem formulation, degree of hypnotizability, motivation, an individual's belief system, mutually acceptable therapeutic goals, and the type and stage of medical problem. Research on burn patients found that those who are more highly hypnotizable experience a greater frequency of trauma symptoms after burn injury. This suggests that while highly hypnotizable patients are most responsive to psychological treatment interventions with hypnosis, they are also more vulnerable without treatment guidance. Thus, hypnotic capacity is a two-edged sword. It can exacerbate symptoms or be used to ameliorate them.

The various techniques of selfhypnosis become an adjunct to other, more primary psychotherapeutic interventions. In support group settings, where the primary emphasis is on supportive/expressive group psychotherapy, selfhypnosis has been helpful in decreasing pain that amplified depression. Approaches for habit control, pain management, phobias, and some manifestations of anxiety tend to be rapid and direct, with strategies taught to be under the control of the patients who initiate their own entry into trance states and review the therapeutic strategies on their own, outside the therapeutic dyad.

Relevant strategies are as crucial in dealing with the psychological sequelae of medical illness as they are in psychotherapy. The phase of illness, the nature of the problem, and the patient's individual resources are important factors in selecting the treatment strategy.

If patients have the mental and physical capacity to initiate and use their own mental, imaginative processes, hypnotic ceremonies involving long induction procedures and techniques that emphasize the direction of the therapist can have a counterproductive effect by creating yet another situation of dependent and passive behavior.

Mr.M. was hospitalized for lymphoma. Treatment with chemotherapy had activated severe itching all over his body. His score on the HIP was an 8 , placing him at the low end of the spectrum of hypnotizability. He was intrigued by hypnosis just as he was with problem solving and puzzles. As a low with an Apollonian personality style, he used his intellect to filter out his feelings. It made sense to use a paradigm he was already familiar with as part of the hypnotic strategy.

We began with a basic hypnotic induction: "Mr. M., look up toward your eyebrows, then an imaginary spot at the top of your head. While looking up, close your eyelids and take a deep breath. Exhale, let your eyes relax, and let your body float. Focus on an imaginary feeling of floating...floating right down into the bed. And as you focus on this imaginary sensation of floating, notice how the bed comes up underneath you as a partner in your care. Allow the bed to hold and support you as you continue to let your body float."

The second phase of treatment was the therapeutic strategy to control his itching: "You can see yourself as an astronaut floating in space or imagine that you're floating in cool water. Either way, you choose." Mr. M., with his eyes still closed, announced: "I'm floating in space."



Quickly, we put this image together with what he had told me about his family and his penchant for problem solving. "As you continue to float in space, you can use your mind like a psychological zoom lens. Your body continues to float and your mind can pay attention to other things. This can be a time when your mind lets you zoom down to earth and review the wonderful relationship you have with your daughter and perhaps begin to work on some of the problems you'd like to handle with your son. As you begin your review, your mind becomes active as a filter system for your thoughts and feelings. You're in charge. Let in and focus on what you want so all else automatically fades away. By focusing on what you're for, you avoid the mistake of fighting against the itching."

It was important to watch his breathing and the movement of his eyes under his closed lids. Contrary to what many people believe, there can be a slowing down or a *speeding up* in respiratory rate as people go into trance. When people are actively engaged in their imagination, this may be reflected in eye movements, which are visible even with the person's eyes closed. After a few minutes, the patient was instructed to: "Review what you've been seeing and thinking in your mind's eye in a way which has meaning for you. Place anything you want safely in your memory to be easily retrieved when you want it or need it. Let me know when you're finished by nodding your head 'yes'." When you're ready, count to three, open your eyes and allow your body to continue to float." Mr. M. opened his eyes. "On a scale of 1 to 10, I started at 9 and now I'm at 2. How can I continue to feel this good?"

Because Mr. M. was a "low" hypnotizable, we discussed the need for him to practice going into trance to use his therapeutic strategy. He was forewarned that sometimes he would feel less engaged and other times deeper into the experience; that practice would help him shift

gears more easily; and that "shallow" or "deeper" as long as he shifted gears, used his mind as a psychological zoom lens and became selective with his attention, he would relieve tension which is a natural reaction to discomfort. As he relieved tension, his muscles would become more relaxed. The more relaxed the less discomfort. Because this process was a product of his mind, he had the freedom and the power to use it whenever and wherever he wished.

Hypnosis has proved helpful in the consultation setting for problems including needle phobias, appetite loss, treatment refusal, respiratory problems, acute and chronic pain, preparation for surgery and invasive diagnostic procedures, and nausea and vomiting related to chemotherapy. In other specialties, interventions with hypnosis helped resolve phantom limb pain, fear of anesthesia, elevated heart rate and blood pressure, and somatoform disorders. In one well-described case by Joseph Dane, with 8-year followup, a patient with multiple sclerosis was treated using hypnosis and experienced return to ambulatory status within 2 weeks after beginning the use of hypnosis. She had reduced pain, balance problems, and diplopia, and her improvement persisted.

**Surgical Preparation** Three approaches selected on the basis of the patient's hypnotizability are useful in using hypnosis to help patients prepare for surgery. Those who test low in hypnotizability prefer to focus predominantly on the specific physiological benefits of less bodily tension and concrete outcome, those who test in the midrange of hypnotizability require more attention to the emotional component of their response to the upcoming procedure, and those who test at the high end of hypnotizability do best with minimal details and firm, clear, simple directions on how to conduct themselves. Research has demonstrated that highly hypnotizable patients are more

vulnerable to external cues in the disturbing atmosphere of an ICU and may benefit from suggestions to create psychologically protective boundaries.

Most patients accept that learning to minimize fear, anxiety, and anger reduces their state of physiological arousal. The general principles are to teach patients to enter their own trance state and focus on (1) allowing and welcoming the skilled medical team to do what they know best; (2) choosing images, metaphors, and body language (floating, muscles soft, thoughts of being someplace safe and secure); (3) suggestions on how they want their body to react before, during, and after surgery; and (4) the benefits of the treatment for psychophysiological functioning. In some cases, it is desirable to decrease or eliminate anesthesia. Suggestions are then geared to images and instructions to produce imagined numbness.

**Side Effects of Chemotherapy** The use of hypnosis to alleviate nausea and vomiting associated with chemotherapy has been reported in the literature for more than 20 years. There are three major facets to target:

1. The anxiety component: patients are taught to enter a hypnotic state and use their imagination to produce generalized relaxation
2. Conditioned responses to hospital cues: patients are to enter hypnosis and entertain suggestions to create comfortable responses to specific environmental cues
3. Physiological responses to the chemotherapy agent: patients are taught to enter hypnosis and focus on suggestions to reverse the usual peristaltic activity that leads to vomiting; it is useful to reframe the chemotherapeutic substance as the person's agent of care and to create a therapeutic relationship that emphasizes selfmastery

The therapist's manner should encourage patients to define themselves as collaborative participants in treatment with a focus on a commitment to living rather than on sickness and death.

The highly hypnotizable patient can frequently control nausea and vomiting by hallucinating the taste of orange or mint and dissociating from negative environmental cues; the midrange patient will benefit from guidance to contain emotions (e.g., the screen technique described below); and the low hypnotizable patient will benefit from distraction, frequently needing help selecting memories or imaginative projections with sufficient interest to encourage absorption. Patients in each of the three categories need additional help to manage negative cues from friends, family, and hospital staff as well as guidance in creating a secure support system at home, at work, and in their place of treatment. A growing body of data supports the clinical observations of the authors that hypnotic interventions reduce nausea and vomiting.

**Pain** Although one of the bestestablished therapeutic effects of hypnosis is analgesia, this technique is underused for pain control. Since the midnineteenth century hypnosis has been known to be effective in controlling even severe surgical pain. Hypnosis seems to work through three primary mechanisms: muscle relaxation, perceptual alteration, and cognitive distraction. Pain is often accompanied by reactive muscle tension. Patients frequently splint the part of their body that hurts. Yet because muscle tension can by itself cause pain in normal tissue and because traction on a painful part of the body can generate more pain, techniques that induce greater physical relaxation can reduce pain in the body. Thus, the first step after patients enter a state of hypnosis is to have them concentrate on an image that connotes physical relaxation such as floating or lightness. This often produces physical relaxation and reduces pain.

The second major component of hypnotic analgesia is perceptual alteration. Patients can be taught to imagine that the affected body part is numb. This is especially useful for extremely hypnotizable individuals who can, for example, relive an experience of dental anesthesia and reproduce the drug-induced sensations of numbness in their cheek, which they can then transfer to the painful part of their body. Some can also simply switch off perception of the pain with surprising effectiveness. More commonly, subjects can substitute a different sensation for the painful one. Temperature metaphors are often especially useful, which is not surprising given the fact that pain and temperature sensations are part of the same sensory system, the lateral spinothalamic tract. Thus imagining that an affected body part is cooler or warmer using an image of dipping it in ice water or heating it in the sun often helps patients transform pain signals. Some patients prefer to imagine that the pain is a substance with dimensions that can be moved or can

flow out of the body as if it were a viscous liquid. Others like to imagine that they can step outside their body, for example, to visit another room in the house. The use of hypnosis to enhance involvement in imagery that reduces the pain and related anxiety provides direct and indirect benefits to many pain patients and those with other medically related difficulties.

Lesshypnotizable individuals often do better with distraction techniques that help them focus on competing sensations in another part of the body. Painful stimuli tend to attract, indeed coerce, attention to them. It is possible to use hypnosis to help even low hypnotizable subjects to acknowledge the pain but maintain focus on sensations in other parts of their bodies, often coupled with various anxiety-control techniques. A recent meta-analysis of hypnotically induced analgesia

revealed moderate to large effects, suggesting a broader application of hypnosis in pain management.

A 34-year-old patient with Hodgkin's disease had been put on meperidine (Demerol) to control abdominal pain. The patient was referred for self-hypnosis to manage the pain to maintain a clear sensorium. The patient's score on the HIP was 14. After the hypnotic induction, the patient was given the following hypnotic suggestions: "As you imagine yourself floating, make it more vivid by imagining you are floating in an icy stream or lake. Make it so icy, that as you imagine the water getting colder and colder, you feel an imaginary tingling numbness coming from the cold water into your body. This tingling numbness serves as a protective coating around your abdomen, so you learn to filter the hurt out of the pain. Practice this exercise every 1 to 2 hours, and each time give yourself a posthypnotic signal to retain this feeling of numbness, even when you are out of the formal trance state. As you retain this imaginary numbness, you can begin to extend it so it stays with you around the clock. By constantly making this commitment to impose numbness, even though you know the pain is there, you feel the numbness more than the pain." This patient developed an ability to function without Demerol.

One of the primary goals is to teach the patient to stop fighting the pain, decreasing psychophysiological tension and discomfort while simultaneously increasing mastery and control with imagined tingling numbness. Thus patients learn to modulate the pain perception and the attention they pay to it by filtering the hurt out of the pain. The heightened awareness of the trance state provides the patient with a powerful tool to respond to signals that have been coming from the body upward to the brain and, through training, practice, and personal choice, influence signals

from the brain downward to the body. In trance, imagined activity is heightened, maximizing selective mindbody effects.

Before introducing an induction technique and therapeutic strategy, the clinician first makes the distinction between acute and chronic pain. In the acute situation of trauma, injury, or physical insult, the person may have already entered a spontaneous trance state that maximizes hypnotic responsiveness. Motivation to receive help and comfort creates a powerful transference. In the acute situation, direct suggestions tend to produce immediate results, even with low hypnotizable persons who in other circumstances prefer explanations and collegial discussions. In an acute medical emergency, the most immediate need of the patient may be to turn control over to an expert in caring for the problem at hand. Many times this can lead to a ripple effect when the patient is able to internalize what he has learned and continue to use it on his own behalf.

A 48 yearold man was treated with hypnosis when he had acute chest pain and his heart rate went to 166. Initial contact was a direct suggestion to focus on his comfort and well being. With no time for a full assessment of his hypnotizability with the HIP, he was asked to look up as high as he could and keep looking up while he lowered his eyelids. His Eye Roll Sign, a 2, placed him on the low side of hypnotizability. Because of the emergency nature of the situation, no further assessment was done. Calmly but quickly, he was asked to take in a deep breath and let it out like a sigh, focusing on letting his body float. He was directed to go someplace in his imagination – any place he chose - where he could float, feeling safe and securely held from underneath. After a few minutes, the monitor registered his heart rate at 66 and he reported that his pain had floated away. The medical team, who had been standing by the monitors, took over. Both the staff and the patient were surprised by the

rapid reversal. At follow-up the next day, the patient had a sense of mastery at how he had been able to turn the situation around. I found him teaching the patient in the next bed how to use the technique. Three months later, he had a similar episode of paroxysmal atrial tachycardia and was proud to report that he controlled it on his own.

For chronic pain, assessment includes the impact on lifestyle, relationships, ability to maintain previous levels of activity, issues of secondary gainloss, and prognosis. The success of the hypnotic intervention correlates with the degree of patient motivation, the ability of the therapist to formulate an acceptable rationale, and how well the therapeutic strategy matches the personality style and hypnotic capacity.

As with any pain treatment technique, including analgesic medications, hypnosis is more effective when used early in the pain cycle, before the central pain response component has developed and the pain has become so overwhelming it impairs concentration. Patients should be encouraged to use this technique early and often because it is simple and effective and has no adverse effects. A randomized trial comparing group therapy plus hypnosis with routine medical care demonstrated that metastatic breast cancer patients taught hypnosis had half the pain experienced by the control group at 1 year followup. In a randomized trial in interventional radiology, hypnosis was shown by Elvira Lang and colleagues to produce better analgesia than patient-controlled analgesia with midazolam (Versed) and fentanyl (Duragesic), producing less anxiety, fewer adverse effects, less cardiovascular instability, and fewer procedural interruptions.

Hypnosis is especially effective in comforting children who are in pain. Several good studies have shown greater efficacy than placebo attention control in randomized trials. This is likely because children as a group are more hypnotizable than adults. Their imaginative capacities are so



intense that separate relaxation exercises are usually unnecessary. Children naturally relax when they mobilize their imagination during the sensory alteration component of hypnotic analgesia.

Recent research described above indicates cortical effects of hypnotic analgesia exercises, which include reduced ERP amplitude in response to somatosensory stimuli and reduced activity in the anterior cingulate gyrus. Thus hypnotic alteration of nociception seems to involve cortical modulation of pain perception. In other words, the strain in pain lies mainly in the brain.

**Anxiety Disorders** Anxiety disorders are among the most widely prevalent psychiatric disturbances, affecting approximately 15 percent of the population. Anxiety can be understood as a state of hyperarousal experienced as both emotional and psychosomatic discomfort. Patients often describe their anxiety in physical terms, such as palpitations, GI discomfort, chest pain, sweating, and motor restlessness. Hypnosis can be a helpful adjunctive tool for treating anxiety disorders because of its ability to help patients control their physical reaction to anxietyprovoking stimuli, thereby dissociating somatic response from psychological distress. This enables them to attend to the stimuli long enough to restructure their point of view and achieve a sense of mastery.

Most strategies for the treatment of anxiety disorders that use hypnosis combine instructed physical relaxation with a restructuring of cognition, using imagery coupled with physical relaxation. As in the treatment of anxiety disorders by systematic desensitization or progressive muscle relaxation, patients are instructed to maintain a physical sense of relaxation (e.g., using an image of floating) while at the same time picturing the anxietyproducing stimulus. The relaxation instruction must use an image that connotes reduced somatic tension, such as "floating" or "lightness," rather than a direct instruction to "relax." This latter, morecognitive term may actually induce more anxiety, arousing concerns about adequate performance, while by contrast, affiliation

with a somatic metaphor usually produces some reduction in tension. Unlike systematic desensitization, hypnosis can be used to produce a physically relaxed state quite rapidly without going through a series of graded muscle relaxation and imagery steps. Also unlike systematic desensitization, the coupling of relaxation to a fearful stimulus does not require the development or working through of a hierarchy.

A typical selfhypnosis induction can be quite rapid. For example, a patient can be told: Now just get as comfortable as you can. There are many ways to enter a state of selfhypnosis. One simple but useful method is to count to yourself from one to three. On one, do one thing: look up. On two, do two things: slowly close your eyes while looking upward and take a deep breath. On three, do three things: let your eyes relax but keep them closed, let your breath out, and let your body float. Then let one hand or the other float up into the air like a buoyant balloon. This is your signal to yourself and to me that you are ready to concentrate.

Initially, the use of hypnosis in the session can help demonstrate to patients that they have more control over somatic responsiveness than they had imagined. It is often useful to begin by teaching patients to create a place in their "mind's eye" where they feel safe and secure. On occasion, it helps subjects to learn how to project their image onto an imaginary screen. Later they can learn to manipulate the screen by either making it bigger or smaller, having the screen being nearer or farther away, as needed.

*Just allow your body to float, as if you were floating in a bath, a lake, or a hot tub. Enjoy this sense of floating lightness. Now, picture in your mind's eye an imaginary screen. It*

*might be a movie screen, a television screen, or a piece of clear blue sky. First picture a pleasant scene, somewhere you enjoy being.*

*Allow the patient to experience this state for a minute or two, then inquire about the experience:*

*With your eyes closed and remaining in this state of concentration, describe how your body is feeling right now. What image are you picturing?*

*After receiving the answers, add:*

*Notice how you can use your store of memories and fantasies to help yourself and your body feel better.*

### The Screen Technique

One method to help patients shift gears and restructure their relationship to thoughts and feelings is the screen technique. The patient is told: *"You can enter the trance state by permitting your body to float. By permitting your body to float, your mind is free to concentrate on an imaginary screen in front of you. While in trance you have the power to teach your body to maintain the physical sensation of floating and, at the same time, use the imaginary screen to become the director, script writer, actor, organizer, and balancer of your own thoughts and feelings. First, let the central part of the screen serve as a receiving screen for all your thoughts and feelings. Now imagine a split screen on the right for your creative thoughts and a split screen on the left (the 'sinister' side) for your worry thoughts. Place your thoughts and feelings of anxiety, fear, and worry on the left; place your creative thoughts, feelings, and visions of refuge on the right. After all, you are more than worries and fears. You are now learning to use your mind as a psychological zoom lens, with the right to revisit any worries and fears, if you wish. You don't have to fight them. By putting your thoughts*

*and feelings on an imaginary screen and learning to let your body float, your body is no longer a battleground for your emotions."*

### Insomnia

For insomnia, the initial concept is the screen technique (see above) with an additional emphasis on switching from sympathetic to parasympathetic function. The patient is told: *"Muscle tension is an enemy of sleep. The autonomic nervous system has a day and a night shift. Muscle tension is a barrier that impairs the transition. By feeling a sense of floating while projecting your thoughts onto the screen, tension dissolves, allowing the day shift to yield to the night shift to let sleep come like a welcome friend."*

### Problem-Solving and Active Coping

Patients may also use the trance state as a means of facing their concerns more directly. They can be taught to use the screen technique on their own. They can achieve this by placing an image of an upcoming performance or fearful situation on one side of the screen; on the other side, testing out various strategies for mastering the situation. The screen becomes a brainstorming and problemsolving technique that allows them to face anxietyprovoking situations more directly, but seeing them from a different perspective. This helps them move from a passive to an active coping mode, not merely avoiding but responding to the feared stimulus, by acknowledging and working out responses to it while managing somatic reaction to the anxiety.

### Hypnotic Dissociation from Stressors

Other approaches using hypnosis have included instructing patients in a trance to imagine that they are literally somewhere else, away from the fearful stimulus, thus separating themselves from the anxietyproducing experience. Positive reinforcement, or egostrengthening techniques, has also

been used; for example, giving hypnotic instructions to patients suggesting that their capacity to master the situation and their response to it will improve. There is little reason to use uncovering techniques seeking to link the complaint of anxiety to some early traumatic experience in cases of phobia or generalized anxiety disorders. This is different though in cases of posttraumatic stress disorder, where more work may be needed to confront the traumatic experience.

Treatment for performance anxiety, generalized anxiety, and insomnia follows the restructuring approach. Instead of fighting against fear, conflicts, stressful events, or problems, patients focus on physical sensations and learn to distance themselves from the issues, to develop a sense of freedom, clarity of thought, and relief.

**Phobias** The underlying challenge of a phobic response (irrational fear) is to clarify the confusion between a possibility and a probability. Distinctions are made between anticipatory anxiety for likely and unlikely events, with additional differentiation between useful, protective fear and unnecessary, maladaptive fear. With these clarifications, the therapeutic strategy is to teach the patient to focus on what one is for rather than the fear of what one is against. This provides the momentum for rapid change.

For flying phobia, a prevalent clinical condition, the patient is asked to consider the difference in safety probabilities between an amateur pilot and a professionally licensed pilot on a commercial plane. Anticipatory anxiety is described as a healthy response to mobilize one's resources for a new phase of action. Patients are taught that if they interpret anticipatory anxiety as panic they are perverting a natural resource. Patients are then taught to focus on the many instruments that have been developed to act as an extension of the body. "For example, a hammer is an extension of your hand; a bicycle is an extension of your legs; an airplane is an extension of your arms. When you

choose to fly on a scheduled airplane, in one direct move, by accepting the pilot as your agent you are rationally controlling the plane. By choosing to allocate the technology to someone with the proper skills and training, the control is still yours." Patients are taught a selfhypnosis exercise in which they concentrate on floating with the plane, using the pilot as their agent of control so that they experience the plane as an extension of their body. . One patient sent this report: "I made it! I even fell asleep on the runway waiting for take-off on the last leg of the flight. China is awe-inspiring. It was well worth the trip to your office."

**OUTCOME** A number of studies demonstrate the utility of hypnosis in the treatment of anxiety and phobias. A study by the first author and colleagues with 178 patients treated with a single session of selfhypnosis for flying phobia indicated that 52 percent were either improved or cured at 7year followup. There has been considerable interest in hypnosis as an adjunct to dental procedures and in the treatment of dental phobia. The success of hypnotic techniques has created a new interest in teaching the usefulness of hypnotically assisted dental work in dental schools across the country. Similarly, hypnotic techniques have been successfully used to assist phobic patients undergoing a number of medico/surgical and diagnostic procedures, thus diminishing the need for excessive anesthesia or antianxiety medication, improving compliance, and eliminating trauma to patients. Hypnosis may be especially helpful as an adjunctive tool for treating these anxiety disorders because of the ability of the hypnotized person to control somatic response.

**Posttraumatic Stress Disorder** The most distressing thing about a traumatic event is the sense of absolute helplessness that it engenders. This helplessness is reenacted in both acute and posttraumatic stress disorder through loss of control over the state of mind in the aftermath of

trauma, with spontaneous dissociative states, startle reactions, or intrusive recollections of the event. Having regained control of their bodies, many trauma victims feel they have lost control over their minds as they are subjected to nightmares, flashbacks, and intrusive memories. The therapist can be contaminated with association to the trauma. Such patients may tend to identify the therapist with the assailant and feel that the therapy amounts to reinflicting the trauma. The process of the therapy, especially when a technique such as hypnosis is used, must be structured so that it enhances patients' sense of control. This approach can allow patients to integrate the image of themselves as victims with the ongoing, more global image of themselves as persons coping effectively with severe stress, making the repressed material conscious and therefore less powerful, and enabling them to establish a new, more congruent selfimage, absorbing the loss into the ongoing flow of their lives. The psychotherapy of posttraumatic stress disorder contains elements of desensitization, in which reexposure to the traumatic stimulus may gradually deprive it of some of its emotional power. Indeed, the use of hypnosis in the psychotherapy of trauma was initially thought to be limited to abreaction, based on Freud's cathartic method. The idea was that some intense affect associated with the traumatic event needed to be released and that simple repetition of the memory of the event with its associated emotion in the trance state would discharge the energy producing the symptoms. However, it became clear to Freud that conscious, cognitive work must be done on the material for it to be successfully worked through. Indeed, it is now clear that cognitive restructuring of the meaning of the traumatic event coupled with a continued sense of being cared about by the therapist enhances the effect of hypnosis in psychotherapy.

Treatment using hypnosis involves not merely abreaction of trauma, but working through it by assisting with the management of uncomfortable affect, enhancing patients' control over it, and

enabling them to cognitively restructure its meaning. Catharsis is a beginning but not an end in itself, and it can lead to retraumatization if not accompanied by support in managing affective response, control over the accessing of traumatic memories, and help in working them through. Lindemann's grief work model is useful. Observations of normal grief after trauma have led to recognition that a certain amount of emotional discomfort and physical restlessness and hyperarousal is a natural and indeed necessary part of acknowledging, bearing, and putting traumatic memories into perspective. This is often facilitated by using a hypnotic imagery technique, the split screen, in which patients are asked to picture some aspect of the trauma on one side of the screen, bearing the associated uncomfortable affect, and then picture on the other side of the screen something they did for selfprotection or to aid others. In this way the traumatic memory is acknowledged but restructured to encompass efforts at mastery as well as the experience of helplessness. Patient motivation is important to overcome the potential emergence of secondary gain.

Hypnosis can be used to provide controlled access to the dissociated or repressed memories of the traumatic experience and then help patients restructure their memories of the events. The unusual characteristics of the hypnotic state provide reassurance that the distress associated with the traumatic memories can to some extent be put aside when the hypnotic state is ended. Also, the dissociation typical of hypnosis can be used to separate psychological from somatic distress. Patients can then find a condensation image that symbolizes some aspect of the trauma. It is often helpful to have them do this on an imaginary screen, giving them some sense of distance from the event. It is also useful to divide the screen in half, having the patient picture on one side some aspect of the event (e.g., a rape victim's image of the assailant) and on the other side of the screen, some



selfprotective action (e.g., struggling with the assailant, talking with him, running away). This lets the patients restructure their view of the assault, facing it, but not simply in the familiar terms of the humiliation, pain, and fear with which it was initially associated. Victims can better acknowledge their helplessness when they also recognize their efforts to protect themselves. Bereaved individuals can picture themselves at the graveside on one side of the screen and at an earlier moment of joy with the deceased on the other side. They can then be taught to practice a selfhypnosis exercise in which they grieve and work through traumatic memories while enhancing their sense of control over the process.

**PRINCIPLES OF PSYCHOTHERAPY WITH HYPNOSIS** The principles of psychotherapy for acute and posttraumatic stress disorder using hypnosis can be summarized with the following eight Cs:

*Confrontation.* The patient should confront the traumatic events directly rather than attribute the symptoms to some longstanding family or personality problem.

*Confession.* The therapist should help trauma survivors discuss deeds or emotions that are embarrassing to them and at times repugnant to the therapist. It is important to help these patients distinguish between inappropriate guilt and real remorse. Such patients may well be telling the therapist about aspects of the traumatic event that they have discussed with no one else.

*Consolation.* The intensity of traumatic experiences requires an actively consoling approach from therapists, lest they be perceived as being judgmental or as inflicting rather than treating traumainduced emotional pain. Appropriate expressions of sympathy and concern can be helpful in acknowledging and diffusing this common traumatic transference reaction.

*Condensation.* An image that condenses a crucial aspect of the traumatic experience should be found. This representation can make the overwhelming aspects of the trauma more manageable by putting it in concrete, symbolic form. Furthermore, it can facilitate restructuring of the experience by joining previously disparate images; for example, linking the pain associated with the death of a friend in combat with the happiness experienced during some earlier shared time. This allows patients to alter the pain of the loss by attending to positive aspects of the lost relationship that remain in memory as well as negative ones.

*Consciousness.* Previously dissociated traumatic memories should be made conscious in a gradual manner that does not overwhelm the patient.

*Concentration.* The intense, focused concentration characteristic of the hypnotic state should be used to reinforce the boundaries of the traumatic experience and the painful affect associated with it. Directing sharply defined attention toward the loss also implies that when the hypnotic state is ended, attention can be shifted away from the traumatic experience. This counters the common fear of "opening Pandora's box," and unleashing feelings not easily contained.

*Control.* Because the most painful aspect of severe trauma is the absolute sense of helplessness, the loss of control over one's body and the course of events, the process by which the therapeutic intervention is conducted must enhance the patient's sense of control over the traumatic memories. Structure the experience so that patients are given the opportunity to stop working through when they feel they have had enough, can remember as

much from the hypnosis as they care to, and feel they are in charge of the selfhypnosis experience. They should learn to use it on their own as a selfhypnosis exercise as well as with the therapist. Such procedures help patients imbue traumatic memories with a greater sense of control and mastery.

*Congruence.* The goal is to help patients integrate dissociated or repressed traumatic material into conscious awareness in such a way that they can tolerate experiencing the memories as part of their continuous life history. In this way the traumatic past is not incompatible with their present experience. Patients should emerge from therapy having reviewed not only what was done to them but what they did to protect themselves, not only what they lost, but what they had valued and why.

There are numerous clinical reports of the effectiveness of hypnosis as an adjunct to treatment of posttraumatic stress disorder but few controlled studies of the efficacy of hypnosis in treating this disorder. However, one controlled study by D. Brom and colleagues of 112 subjects with posttraumatic stress disorder demonstrated that psychotherapy with hypnosis was superior to a control condition and was equivalent to both psychodynamic therapy and systematic desensitization. Hypnosis was particularly effective in reducing intrusion rather than avoidance symptoms.

**Dissociative Disorders** Dissociation is best understood as part of a continuum of phenomena involving ongoing fragmentation and coalescence of conscious and unconscious associations. The ongoing process of dissociation and reassociation leads to a variety of patterned integrations of emotional and cognitive material that previously existed as fragments of information.

Dissociation of identity (dissociative identity disorder), memory (dissociative amnesia and fugue), or consciousness (depersonalization disorder, dissociative trance disorder) result in an array of symptoms that affect intrapsychic and interpersonal functioning. A central feature of the dissociative disorders is a loss of conscious access to some parts of experience, even though the individual always maintains some connection to a main psychological orientation and an underlying intentionality.

An important development in the modern understanding of dissociative disorders is the establishment of a clear link between trauma and dissociation. While the role of traumatic stress in eliciting dissociative symptoms was a part of Janet's early thinking as well as Freud's, recent work has examined in more detail the proximate role of trauma in eliciting dissociative symptoms. However, not enough critical data has been studied to establish a causative relation among trauma, its timing, its intensity, and its meaning in the emergence of subsequent dissociative disorders. Secondary gain and malingering are critical factors that cannot be ignored in the genesis and maintenance of these syndromes. Axis II diagnoses may also provide significant elements of the clinical picture.

It is important to note the differential diagnosis between pathological dissociation, which is the primary result of an interaction between stressful events and high hypnotizability, and psychosis which is the result of an internal cognitive break, which is associated with low or no hypnotizability. Edward Frischholz and colleagues have found that patients with dissociative disorders have a mean eye roll sign of 3.38 (on a 0 to 4 scale) and have high scores on the Hypnotic Induction Profile, while patients with schizophrenia have a mean eye roll sign of 1.73 and have low scores on the Hypnotic Induction Profile. The difference in both hypnotic capacity and responsivity between these

two diagnoses makes the use of formal hypnosis (including testing) a primary aspect in the diagnosis and treatment of dissociative disorders but not in the treatment of schizophrenia. In dissociative disorders, whether the dissociations are spontaneous or conscious, they are always potentially reversible.

**Symptomatology and Treatment** Dissociative disorders involve a failure in the customary integration of identity, memory, or consciousness. Loss of access to parts of experience to consciousness can intensify many preexisting problems. Formal hypnotic inductions with appropriate treatment strategies are used to teach an individual to access dissociated feelings and memories and to control dissociative process. Conceptualizing dissociative identity disorder as a chronic posttraumatic stress disorder, the psychotherapeutic strategy also involves working through traumatic memories.

To the extent that psychosocial stress triggers dissociation, resolution of that stress can help resolve and reduce the likelihood of further symptoms. Highly hypnotizable individuals who have difficulty asserting their own point of view in difficult interpersonal relationships or who may be dealing with severe situational stressors are prone to extreme dissociative symptoms. Psychotherapy can assist such individuals to recognize and modify their tendency to uncritical compliance with others and their extreme sensitivity to rejection and disapproval.

**Memory Retrieval** Since memory loss in dissociative disorders is often complex, its retrieval is an integral part of the psychotherapeutic process. In general, recall of recent trauma is more feasible and more accurate than recall of remote trauma. The therapeutic strategy is designed to use memory recall to counter the dissociative fragmentation and to work toward integration.

Patients with dissociative disorders can be helped with a psychotherapeutic approach that facilitates conscious control of dissociated memories and behavior previously experienced as automatic and unwilling. Clinicians must stay alert to the extreme malleability and the uncritical acceptance of new information by the highly hypnotizable person. Sometimes, a careless question by a therapist may create rather than resolve a problem for the patient. Excessive exploration may further increase disintegration, leading to confusion or re-traumatization. The goal is to garner only the most relevant data that will enable the patient to establish more effective control for present and future living.

The work of Schachter, Squire, Edelman and others reminds us that memory is a reconstructive process. It consists of perception and imagination as well as recollection - all of which are affected by an individual's past history, emotional state, motivation and personal agenda as well as a variety of contextual variables. Much of what can be recalled occurs in fragments, which then must be connected by a premise or a theme. When correct recollection must be obtained, it is important to eliminate three possible sources of contamination: 1) unconscious self-deception, 2) suggestion-induced deception; and, 3) deliberate deception.

**Outcome** While there are no controlled trials of the efficacy of hypnosis in treating dissociative disorders, the clinical literature indicates that it is highly useful. A recent survey of 305 clinicians indicated that individual psychotherapy facilitated by hypnosis twice a week was the primary treatment for dissociative identity disorder patients, with anxiolytics and antidepressants being used as secondary adjunctive tools.

## **HYPNOSIS IN FORENSIC PSYCHIATRY**

Recent controversies surrounding the so-called false memory syndrome have aroused concern about the use of hypnosis in the clinical setting and have raised questions about the validity of the material recovered by the use of hypnosis. Hypnosis had been used not infrequently to refresh recollection of witnesses and victims of crimes. Despite concern that hypnosis inevitably contaminates memory, the research literature on hypnosis and memory indicates that hypnosis affects belief more than content. Any memory retrieval technique that increases the number of memories produced may lower the response criterion (i.e., the willingness of a subject to report a thought as a memory). Thus the mere act of trying harder to remember something about an event can always convert thoughts, fantasies, or leading questions into 'memories.' Any special effects of hypnosis may be more feared because they have been more thoroughly examined. Despite these concerns, there are examples of the use of hypnosis in the forensic setting which led to correct new recall. A well-known example is the case involving the driver of a hijacked school bus in Chowchilla, California. Under hypnosis, the bus driver was able to recall the license plate on the car driven by the kidnapers. This information, not available to consciousness prior to hypnotic intervention, led to the arrest and conviction of the criminals.

No memory, whether retrieved with or without the use of hypnosis, can be determined to be true without independent confirmation. However, the courts have become especially concerned about possible contamination of memory by hypnosis. As a result, judges are increasingly unwilling to admit the testimony of a person hypnotized while testifying and recently have also begun to exclude testimony of witnesses who have previously been hypnotized about the event in question. This dilemma is confounded by the fact that motivated or emotionally aroused persons, particularly those with midrange to high hypnotizability, can shift into a spontaneous trance state while trying to recall

an event without a formal hypnotic induction. These concerns are based on fears of confabulation and "concreting." In some circumstances, hypnotized individuals can make up information and believe their newly created story is real resulting in confabulation. More commonly, subjects may emerge from hypnosis with an enhanced conviction that unaltered memories are correct. This has been termed "concreting." This makes witnesses appear more convincing to a jury than they really are about the facts. Indeed several states (e.g., New Jersey and New York) restrict the testimony of victims or witnesses who have used hypnosis to refresh their recollection. The reason for the courts' objection to the use of hypnosis is a combination of real and exaggerated dangers of hypnosis. Some courts now allow witnesses to testify after the use of hypnosis provided certain guidelines are followed that relate primarily to the training and independence of the professional doing the hypnotic interrogation and the electronic recording of the entire process.

Therapists treating trauma or crime victims must be aware that the use of hypnosis may compromise a witness's ability to testify in court. If civil or criminal legal issues are pending, it is advisable to ask the patient to discuss the situation with their personal attorney or the district attorney and obtain written consent for the use of hypnosis from both the attorney and the patient. If hypnosis is to be used and there will be subsequent legal involvement of the patient, all contact with the patient should be electronically recorded, preferably on videotape. Because hypnosis involves a suspension of critical judgment and thus a state of heightened suggestibility or responsiveness to social cues, the interview must be conducted with a minimum of inserted information. To avoid the risk of contaminating the subject's memories the authors recommend using openended questions such as "what happens next?" rather than "how did he sexually abuse you?"



Hypnosis should never be used to replace standard investigative work. Hypnosis is most likely to be worth the risk when traumatic amnesia exists for the events of a crime or when all other avenues of exploration have been exhausted.

## CONCLUSION

Hypnosis is a window into the mind and brain, helping patients to better control stress, pain, habits, dissociative symptoms, and psychosomatic problems. It also provides psychotherapists with clinically useful information about the patient's cognitive and relationship style, providing a means for selecting treatment approaches based upon patient characteristics. Highly hypnotizable individuals emphasize compliance over cognition, looking for direction and structure rather than understanding. Low hypnotizable individuals, by contrast, may make some use of hypnotic techniques, but do so in partial and measured ways, enhanced by discussion, understanding, and modification. An appreciation of these differences can increase acceptability of and responsiveness to hypnotic techniques. Therapy works better when the patient is paying full attention to the therapist. Hypnosis focuses attention and mobilizes commitment in a way that can enhance a variety of psychotherapeutic strategies.

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**FIGURE 30.31** Model of the shift from normal to hypnotic attention. Hypnosis involves narrowing the focus of attention, with concomitant increases in dissociation of thoughts, perceptions, and feelings at the periphery and increased suggestibility. (See Color Plate 8.)

**FIGURE 30.32** Brain electrical activity mapping of visual event-related potentials comparing the effects of selective inattention to a visual stimulus (attending to the other visual hemifield) and hypnotically hallucinating an obstruction to that stimulus. Selective inattention involves increased amplitude anteriorly, while hypnotic hallucination produces decreased amplitude in the occipital cortex. (See Color Plate 8.)

**FIGURE 30.33** Scoring of Eye-Roll response to hypnotic induction (8 Spiegel 12/76).

**FIGURE 30.34** Relation between hypnotizability and Axis I psychiatric disorders.

**FIGURE 30.35** Relation between hypnotizability and Axis II disorders.

**Table 30.31****Hypnotic Induction Profile Evaluation Sheet**

Name \_\_\_\_\_ Date \_\_\_\_\_  
 Age \_\_\_\_\_ Sequence " Initial \_\_\_\_\_ Previous \_\_\_\_\_ W h e n

Position of Subject " Chair Stool \_\_\_\_\_ Supine \_\_\_\_\_ Chair \_\_\_\_\_  
 Standing \_\_\_\_\_

Item

*A* UpGaze 0 1 2 3 4

---

*B* Roll: 0 1 2 3 4

*C* Squint: 0 1 2 3

*D* Eye-Roll Sign (roll + squint) 0 1 2 3 4

---

*E* (P 1/2) L. Arm Levitation Instruction 0 1 2 3 4

*F* Comfortable \_\_\_\_\_ Tingle \_\_\_\_\_

*G* Dissociation 0 1 2

---

*H* Levitation

(postinduction)no reinforcement

[1st "2nd "3rd "4th "]

3 4

2 3

1 2

1

0



---



---

*I*      Control Differential    0      1 2

---

*J*              CutOff 0      1 2

*K*              *Amnesia to Cutoff*

*or NoTest*    0      1 2

*L*              Floating Sensation    0      1 2

Summary

Induction **Score**    Profile **Grade** 0 1 2 3 4 5

Soft	Zero	Intact	
Minutes	Decrement	Special Zero	Increment

Revised from Spiegel H, Spiegel D: *Trance and Treatment*. American Psychiatric Press, Washington, DC, 1987.

**Table 30.32****Instructions for the Hypnotic Induction Profile**

- A. Upgaze Without moving your head, look toward me. As you hold your head in that position, look up toward your eyebrows now, toward the top of your head.
- B. Eye-Roll As you continue to look upward, close your eyelids slowly. That's right . . . close. Close, close, close.
- C. Squint (01234)
- D. Eye-Roll sign (roll + squint) = (1234)

- E. Left arm levitation instruction Take a deep breath, hold . . . Now, exhale, let your eyes relax while keeping the lids closed, and let your body float. Imagine yourself floating, floating right down through the chair . . . There will be something pleasant and welcome about this sensation of floating. As you concentrate on this imaginary floating, I am going to concentrate on your left arm and hand (*touch subject's arm and hand*).

In a while I am going to stroke the middle finger of your left hand. After I do, you will develop movement sensations in that finger, then these movements will spread, causing your left hand to feel light and buoyant, and you will let it float upward. Ready? (*Stroke finger and arm.*)

First one finger, then another. As these restless movements develop, your left hand will lift upward, your elbow bends, your forearm floats into an upright position just like a balloon. (4) (3) (*You may need to gently encircle the subject's wrist for nonverbal encouragement for the forearm to lift.*) (2) (3) Let your hand feel like a balloon. Just let it go. (2) You have the power to let it float upward. That's right. (1) Help it along. Just put it up there. (0) (01234) ♪ 1/2

Now I am going to position your arm in this manner, so . . . (*Arm is positioned with the elbow comfortably supported on the armrest of the chair and the forearm is in an upright position.*) It will remain in this position even after I give you the signal for your eyes to open. In fact, even after your eyes open, when I put your hand down, it will float right back up to where it is now. You'll find something amusing about this sensation. Later, when I touch your left elbow, your usual sensation and control will return.

In the future, each time you give yourself the signal for selfhypnosis, at the count of one your eyes will roll upward and by three your eyelids will close and you'll be in a relaxed trance state. Each time you'll find the experience easier and easier.

Now, I am going to count backwards. At two, again your eyes will roll upward with your eyelids closed. At one let them open very slowly. Ready . . . three . . . two, with your eyelids closed, roll up your eyes and one, let them open slowly. All right, stay in this position and describe what physical sensations you're aware of now in your left hand and arm.

- F. Is it comfortable? Are you aware of any tingling sensations?
- G. DissociationCDoes your left hand feel *as if* it is not as much a part of your body as your right hand? (Yes = 2) *If patient says "no" ask:* Does your left hand feel as connected to the wrist as your right hand feels connected to the wrist? Is there a difference? (Yes = 1, No = 0)
- H. LevitationCpost inductionCNow note thisC(*gently pull hand down*). (If hand levitates right away = 4) *Continue with reinforcements as needed in 3 second intervals (First reinforcement)* Turn your head, look at your left hand, and watch what is going to happen. (3) (*Second reinforcement*) While concentrating on your left hand, imagine it to be a huge buoyant balloon. (2) (*Third reinforcement*) Now, while imagining it to be a balloon, permit it to act out if it were a balloon. That's right, be "big" about it. (1) (*Fourth reinforcement*) This is your chance to be a method actor or dancer. Pretend it's a balloon. If necessary, fake it. That's right, just put it up there. (0)
- I. Control differentialCWhile it remains in an upright position, by way of comparison, raise your right hand. Now put your right arm down. Are you aware of a difference in sensation in your right arm going up, compared to your left? For example, does one arm feel lighter or heavier than the other? Are you aware of a relative difference in your sense of control in one arm compared to the other as it goes up? In which arm did you feel more control? *Optional:* On a more or less basis, do you feel a difference in control? (Yes = 2) *If uncertain, ask:* Is it exactly the same, or is there a difference? (Yes = 1) (*If no or still uncertain, retest.*) (Yes = 1) (No = 0)
- J. CutoffCNow, note this (*touch elbow and lower arm, then tap back of hand while giving instruction:* Make a tight fist, real tight and now open your fist. Are you aware (*touch elbow 2<sup>nd</sup> time & stroke arm*) of any change in sensation *now (firm pressure on hand)* in your left hand and arm? Lift them both up together and put them both down. Before there was a difference in control. Is that difference still there or is the control becoming equal? (Yes = 2) (*In the event that the cutoff is not complete, continue*). Make a fist a few times. That's right. Open your fist and now put your hand down. Now, make fists with both hands at the same time. Lift your forearms up a few times and tell me when you feel that your control is equal. (Yes = 1) (*If still No, repeat a few times, score 0*)
- K. Amnesia to cutoffCYou see that the relative difference is control that was in your arms is gone. Do you have any idea why? Is there anything I said or did that might account for it? *No or Yes with wrong answer = 2* *If patient mentions "elbow," ask:* What about it? *If patient doesn't remember being touched, score 1. If patient specifies "elbow touch" and being touched, ask:* Are you inferring that I touched your elbow or do you remember whether or not I did? *If "infers," score 1. If remembers, ask:* How many times? *If remembers one elbow touch, score 1. If remembers two elbow touches, score 0.*

- L. Floating sensation—When your left arm went up before, did you feel a physical sensation that you can describe as a lightness, floating or "buoyancy" in your left arm or hand? Were you aware of similar sensations in any other part of your body such as your head, neck, chest, abdomen, thighs, legs, or all over or just in your left hand or arm? *If floating in other parts of body in addition to left hand and arm, score 2. If floating in left hand and/or arm only, score 1. If no floating, score 0.*

Score

Profile Grade Score (Eye Roll Sign Score)

Intact: ER = 1B4, Lev & CD 1 or more

Incremental Intact: Lev 2 pts higher than ER

Soft: ER greater than 0, Lev 0, CD 1 or 2

Decrement: ER greater than 0, CD = 0

Zero: ER = 0, Lev = 0, CD = 0

Special Zero: ER = 0, Lev and or CD 1 or more

**Table: 30-3.3**

QUESTIONS AND SCORING FOR  
Apolonnian-Odysean-Dionysian CLUSTER SURVEY

1. Space Awareness: "As you concentrate on watching a movie, or a play, do you get so absorbed in what is going on that you lose awareness of where you are?" If "no" circle "A". If "yes" (clarify further by asking) "do you ever get so absorbed that when the curtain comes down you are surprised to realize you are "sitting in a theater."
 

If "yes," circle D  
If "no," circle A  
If "not that much," circle O
  
2. Time Perception: "In general, as you perceive time do you focus more of your attention upon the past, present, or future, or all three equally? Roughly, off the top of your head, how would you put that in percentages?"
 

If spontaneous answer is "past-present" or "present-future", circle OD  
If past and/or future, circle A                      A = p+f = 70%  
If all three, circle O                                      O = p+f = 50/50%  
If present, circle D                                      D = p = 70%+
  
3. Myth-Belief Constellation (Head-Heart): "The French philosopher Pascal once said, "The heart has a mind which the brain does not understand." He said there are two kinds of

minds, the heart-mind and the brain-mind. As you know yourself, which of these two minds do you give priority to?"

If brain or mind, circle "A"

If both or variable, circle "O"

If heart, circle "D"

4. Interpersonal Control: "As you relate to another person do you prefer to control the interaction, or do you prefer to let the other person take over if they wish?"

If spontaneous answer is "control the interaction," circle "A"

If both or "it depends," circle "O"

If control is given to the other person, circle "D"

5. Trust Proneness: "In your proneness or tendency to trust other people, where could you place yourself on a scale of average, above or below average?"

If low or below average, circle "A"

If average or moderate, circle "O"

If high or above average, circle "D"

6. Critical Appraisal and Learning Style: "As you are learning something new, do you tend to critically judge it at the time you are learning it, or do you accept it and perhaps critically judge it at a later time?"

If judgment is immediate, circle "A"

If both or varied, circle "O"

If judgement is suspended or accepted, circle "D"

7. Responsibility: "As you sense your responsibility for what you do, where do you place yourself on a scale of average, above or below?"

If highly responsible or above average, circle "A"

If average or moderate, circle "O"

If low or below average, circle "D"

8. Preferred Mode of Contact: "If you are learning something new and you know in advance that it is of such a nature that you can learn it clearly, safely, and equally well by either seeing it or touching it, which would you prefer- to see it or to touch it?"

If response is see or visual, circle "A"

If both modes are used or valued equally, circle "O"

If touch, circle "D"

9. Processing: “When you come up with a new idea there are two parts to it - one is to dream it up, and the other is to figure out how to do it. Of these two parts which gives you a greater sense of fulfillment?”

If response is dream or think up idea, circle "D"

If both are satisfying or if it varies, circle "O"

If implementing or carrying it out, circle "A"

10. Writing value: “As you do it, (i.e. above answer) is it necessary to write notes or do you feel your way through without writing?”

If response is "must rely upon writing notes", circle "A"

If response indicates minimal or small amount of writing, circle "O"

If response is "without taking notes," circle "D"

**Table 30.34****Characteristic Psychopathology**

	<b>Apollonian</b>	<b>Odyssean</b>	<b>Dionysian</b>
Primary conflict area	Cognition (Intrusions)	Interpersonal Space (Intimacy)	
SelfConcept(Ego Integration)			
Interpersonal style	Avoidant	Oscillating	Dependent
Affect			
Anger	Diffuse	Otherdirected	Selfdirected
Depression	Despair	Bipolar disorder	Dysthymic disorder
		Major depressive disorder	Major depressive disorder