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## Clinical Reviews

### AN HYPNOTIC SUGGESTION: REVIEW OF HYPNOSIS FOR CLINICAL EMERGENCY CARE

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**Abstract—Background:** Hypnosis has been used in medicine for nearly 250 years. Yet, emergency clinicians rarely use it in emergency departments or prehospital settings. **Objective:** This review describes hypnosis, its historical use in medicine, several neurophysiologic studies of the procedure, its uses and potential uses in emergency care, and a simple technique for inducing hypnosis. It also discusses reasons why the technique has not been widely adopted, and suggests methods of increasing its use in emergency care, including some potential research areas. **Discussion:** A limited number of clinical studies and case reports suggest that hypnosis may be effective in a wide variety of conditions applicable to emergency medical care. These include providing analgesia for existing pain (e.g., fractures, burns, and lacerations), providing analgesia and sedation for painful procedures (e.g., needle sticks, laceration repair, and fracture and joint reductions), reducing acute anxiety, increasing children's cooperation for procedures, facilitating the diagnosis and treatment of acute psychiatric conditions, and providing analgesia and anxiolysis for obstetric/gynecologic problems. **Conclusions:** Although it is safe, fast, and cost-effective, emergency clinicians rarely use hypnosis. This is due, in part, to the myths surrounding hypnosis and its association with alternative-complementary medicine. Genuine barriers to its increased clinical use include a lack of assured effectiveness and a lack of training and training requirements. Based on the results of further research, hypnosis could become a powerful and safe non-pharmacologic addition to the emergency clinician's arma-

mentarium, with the potential to enhance patient care in emergency medicine, prehospital care, and remote medical settings. © 2014 Elsevier Inc.

**Keywords—hypnosis; emergency medicine; prehospital care; pain relief; nonpharmacological therapy**

#### INTRODUCTION

Although hypnosis has been used in medicine for nearly 250 years, emergency clinicians rarely use it in emergency departments (EDs) or prehospital settings. This review describes hypnosis, its historical use in medicine, several neurophysiologic studies of the procedure, its uses and potential uses in emergency care, and a simple technique for inducing hypnosis. It also discusses some reasons why the technique has not been widely adopted and suggests some methods to increase the use of hypnosis in emergency care, including potential areas for emergency medicine–related research.

#### WHAT IS HYPNOSIS?

Although its etymology derives from the Greek *hypnos*, meaning sleep, hypnosis is actually a state of highly focused awareness. Hypnosis, familiar to most people as a staple of stage shows, film noir, and psychiatric practice, often appears under other guises, such as meditation,

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religious ecstasy, guided imagery, therapeutic imagery, suggestive therapeutics, guided meditation, and biofeedback. Hypnotic trance states can also occur naturally, as when reading an absorbing book, watching an engrossing movie, performing a monotonous activity (e.g., “highway hypnosis”), daydreaming, or meditating (1).

Medical hypnosis enhances patients’ acceptance of clinicians’ positive suggestions to change their perceptions, sensations, thought, and behavior (Table 1) (2–4). Defined best by what it does, clinician-induced hypnosis helps patients focus their awareness to lessen pain, anxiety, and troublesome symptoms. Hypnosis works as well as premedication before surgery, even for patients that use a hypnosis recording. Preoperative effects, which would benefit emergency patients, include decreased anxiety, decreased blood pressure, reduced blood loss, enhanced postoperative well-being, improved intestinal motility, shorter hospital stays, reduced postoperative nausea and vomiting, and a reduced need for analgesics (5,6).

Research on hypnosis shows that it has demonstrable effects on both the brain and the so-called “involuntary” internal physiologic processes (7–9). It alters cerebral blood flow and incoming stimuli at the cortical level (10,11). While complex hypotheses have been proposed to explain these physiological effects, and functional brain imaging is increasing our knowledge of hypnotic effects on the brain, it remains unclear exactly how hypnotic effects occur (12,13).

### BRIEF HISTORY OF HYPNOSIS

Medical and religious practitioners have used hypnosis for millennia under various names. Calling it “sacred sleep,” Egyptian priests used hypnosis for religious and medical purposes at least 4000 years ago; the ancient Greeks were treated with hypnosis in “sleep temples of the sick.”

Medical hypnotism’s modern era began in 1778, when the Austrian physician Franz Anton Mesmer introduced it in France under the unfortunate name “animal magnetism.” In the 19<sup>th</sup> century, surgeons John Elliotson and James Esdaile performed hundreds of procedures using

**Table 1. Characteristics of Clinical Hypnosis (5,6)**

Hypnosis is a state of mind characterized by:
Compliance with acceptable instructions
Attention focused on hypnotist or suggested images/ideas
Heightened receptivity for suggestions
Absence of normal critical thinking
A hypnosis session consists of
Explaining the process and obtaining consent
Inducing the trance-like state
Deepening the hypnotic state
Delivering acceptable suggestions
Emerging from the hypnotic state

hypnosis as the sole anesthetic, with a relatively low mortality for the time, resulting in the 1831 publication, *Numerous Cases of Surgical Operations Without Pain in the Mesmeric State* (14,15). In the early 20<sup>th</sup> century, and of particular relevance to emergency medicine (EM), the physician and psychotherapist P. P. Podiapolsky found that nearly all wounded soldiers responded “with exceptional facility” to hypnosis, although he did not use it for major operations (16).

Other physicians began using the technique, but the concurrent success of ether and chloroform quickly displaced the use of hypnosis for surgical anesthesia. Medical hypnosis then faded into the background (14,17).

Although 20<sup>th</sup> century medical hypnosis became primarily identified with psychiatry, United States and British medical groups endorsed it for general medical use. In 1958, the American Medical Association reported that there can be “definite and proper uses of hypnosis in medical and dental practice” and recommended the establishment of “necessary training facilities” (18). The British Medical Association had already published a similar statement (1,18). The American Psychiatric Association wrote in 1961 that “hypnosis has definite application in the various fields of medicine,” and in 1996 a National Institutes of Health panel published a statement saying that there was “strong evidence for the use of hypnosis in alleviating pain associated with cancer” (19,20).

### DISCUSSION

#### IS HYPNOSIS REAL?

Neurophysiologic studies demonstrate that hypnosis differs from simple imagination, placebos, and sleep (21). Research using positron emission tomography (PET) shows that hypnosis involves the anterior cingulate cortex and that actual changes occur in the brain’s perception that do not occur when a suggestible person simply follows instructions (22,23). PET also shows that hypnosis, through the midcingulate cortex modulating a large cortical network, actively decreases a person’s subjective and objective perception of and emotional response to pain (24–26). Scans show that pain under hypnosis is not perceived, rather than simply being experienced with greater tolerance (27). Further illuminating how powerful hypnosis can be, PET shows that the right anterior cingulate cortex activates both when individuals hear sounds and when hearing sounds is suggested under hypnosis—but not when they simply imagine that they hear sounds (8,28).

Functional magnetic resonance imaging studies show significant activity and connectivity involving the brain’s default mode network (DMN), as well as other areas, in hypnotized subjects (29–31). The DMN, thought to generate spontaneous thoughts and to be essential for

creativity, includes the medial temporal lobe, part of the medial prefrontal cortex, the posterior cingulate cortex, and the adjacent ventral precuneus and inferior parietal cortex.

Similarly, electroencephalography (EEG) demonstrates waveforms under hypnosis that cannot be evoked by waking imagination (32). When hypnosis is used for anesthesia, EEGs show that the pain relief differs from a simple placebo effect (33,34). Finally, as Braid recognized, hypnosis is not a form of sleep (35). Although relaxation often accompanies hypnotic induction, alert induction methods can also be used with similar effects (36).

### USES IN EM AND EMERGENCY MEDICAL SYSTEMS

Hypnosis has been sporadically discussed in the emergency medical literature, and is even rarer in the emergency medical systems (EMS)/wilderness medicine literature (15,37–44). Hypnosis fulfills nearly all requisites of the ideal EM intervention; it is safe, fast, readily available, cost effective, uses minimal personnel and equipment, and has no risks. In addition, it can be used in any age group, including the elderly, with children aged 7 to 14 years old being particularly susceptible (45–47). Men and women are equally hypnotizable. It also may decrease the cost of patient care (48).

Limited studies and case reports in ED, prehospital and resource-poor settings suggest many potential uses for hypnosis in EM (6,49). These mostly relate to analgesia, sedation, and anxiolysis during painful procedures.

Goldie, for example, reported successfully used hypnosis in hundreds of pediatric ED cases over a 2-month period, including incision and drainage, foreign-body removals, suturing, and fracture/dislocation reductions. Although he did not describe their overall success rate, in part because they did not try to put any patients into a sleep state other than those requiring orthopedic manipulation, they cited a series of 28 sequential orthopedic cases in which they used hypnosis as anesthesia. Hypnosis successfully achieved anesthesia in 26 cases; the other 2 were not fractures. During the second month, the ED group was comfortable enough with hypnosis that they used it with more than half of all children presenting with these complaints, and in 92% of suture cases. He noted that “the greatest number of successful applications of hypnosis would seem to be in those patients who come to the hospital, often for the first time, with an injury for which they feel immediate treatment is imperative” (41).

Case reports of successfully using hypnosis to reduce forearm fractures in four ED patients, ages 3 to 12 years

old, and the reduction of major joint dislocations (shoulders and ankles) in six search-and-rescue patients in a wilderness setting, reinforce Goldie’s findings. The same hypnotic relaxation method, which takes only a few minutes, was used in both reports (15,37). This author subsequently used hypnosis for shoulder reductions for many years in the ED with great success.

Sampimon and Woodruff began using hypnosis near the end of World War II, due to a lack of sufficient anesthetics while in a hospital for prisoners of war. Beginning with relatively minor cases, they planned to use it in major surgery if they were successful. The war ended before they got very far. Nevertheless, they used hypnosis in 29 patients, producing “deep sleep” in 20; “superficial sleep” in 4; “suggestion only” in 2; and were unsuccessful in 3 patients. Of the unsuccessful cases, one, they later found, was too deaf to hear their instructions and the other two had eyesight insufficient for the “convergence method” of induction, which relies on vision. Using this method, the authors successfully extracted teeth, often more than one: “On being awakened, almost every patient expressed surprise at finding himself in the operating theatre and refused to believe that a tooth had been removed until he located the gap with his tongue.” Their other cases involved hand surgery, including a 40-year-old man with suppurative tenosynovitis who “tolerated a 20-minute finger dissection with a tourniquet in place. He remained in a deep sleep. Due to a hypnotic suggestion, he did not recall the operation and had no postoperative pain.” The shortcoming in these cases was that most, but not all, patients were hypnotized once the day before the procedure and then just before the procedure (50).

A number of case reports demonstrate the use of hypnosis for analgesia and anxiolysis in the ED. Bierman reported four mixed cases that benefitted from hypnosis. Three older children had diffuse abrasions, a scalp laceration, and chronic asthma and a fear of needles. With the children remaining comfortably unaware, the wounds were cleansed, the laceration was closed without analgesia other than hypnosis, and two injections were delivered to the asthma patient without any awareness that he had received them. A 36-year-old man with recurrent shoulder dislocations was reduced without analgesia using hypnotic suggestion rather than manipulation (38).

Kohen described using hypnosis on five older children, from 8½ to 17 years old, admitted to the ED for lacerations, anxiety about a pelvic examination, vomiting from probable appendicitis, and acute asthma exacerbations (2). This resulted in decreased anxiety, cooperation, no emesis, and no pain on lidocaine injection (39).

Similarly, Deltito reported hypnosis was used in the ED for a patient with a painful hematoma that limited ambulation, another with severe ureteric colic in a patient who had previously required significant narcotic

analgesia, and a woman with severe herpetic stomatitis that caused a lisp (43). All obtained significant relief: walking without pain, sleeping without narcotics, and no lisp. He was unable to hypnotize a 40-year-old inebriated patient with a corneal abrasion. Deltito also cites instances where he used hypnosis for acute pain management in cases “associated with orthopedic injuries, acute burns, corneal abrasions, abdominal distress, headaches, menstrual discomfort, renal calculi, herpetic lesions, muscle spasms, and dental syndromes” (43). Wain and Amen reported a child and an adult with exaggerated pain responses who became cooperative with diminished pain after hypnosis (42).

Ewin described a case of hypnotic analgesia for acute burns that were seen 3½ h after the 14-year-old boy accidentally immersed his arm in hot grease (370°F) used for deep frying. Interestingly, the hypnotic suggestions concentrated on the hand and forearm, which had good pain relief and complete healing within 17 days. A 4-inch area on the shoulder that was not mentioned in the hypnosis took a skin graft and 6½ months to heal (51).

Several case reports and this author’s experiences also suggest that hypnosis can be useful to diagnose and initially treat conversion reactions presenting in the ED. This includes differentiating between organic and functional disorders and “awakening” a traumatically unresponsive patient (52–54).

Other uses, in appropriate circumstances with receptive patients, will undoubtedly be found as the procedure becomes more widely used (49). These may include ameliorating needle phobia, alleviating nausea and emesis, and lessening discomfort accompanying obstetric and gynecological complaints (55–59).

## HYPNOTIC TECHNIQUES

Multiple techniques to induce hypnosis have been described, including the arm-drop, arm levitation, association, bionic arm (for children), confusion, two-finger, and direct gaze (60).

Basic hypnotic techniques are easy to learn. Most clinicians have or can learn the interpersonal communication skills and the methods to put people at ease that foster successful hypnosis; many physicians with a “good bedside manner” already use some of these elements, such as calm reassurance, a steady speech cadence, and a laying on of hands. The clinician’s training and experience, the setting, and the specific patient determine the most effective hypnotic technique.

Although practitioners may choose from several methods for inducing hypnosis, many physicians and prehospital personnel have found the following method extremely easy to learn and use. Usually, the process is described to the patients as a way to relax, so any miscon-

ceptions they have about hypnosis will not interfere with their cooperation (15,37). As Boulton described it, “In the particular context of ‘difficult circumstances,’ hypnosis is often best practiced without the patient being aware that it is being employed; all that is necessary is that the patient should not be actively hostile to the technique” (61).

During the “pre-induction” phase, the clinician establishes rapport with the patient. (If adults have had prior exposure to hypnosis, the practitioner discusses their experiences and the relationship between this technique and those experiences.) The clinician first explains the concept of patient and clinician cooperation, frequently described as permissive hypnosis. This helps allay the common adult fear of domination, control, or coercion by the clinician; children rarely experience this (6,15,37).

A key element in all cases, but especially in a noisy prehospital or ED environment, is to reinforce that the patient should listen only to the clinician and that the process will proceed at the patient’s pace without pressure. The clinician should speak in a firm, quiet manner, and not react to any of the noisy or distracting activities in the immediate vicinity (6,15,37).

Boulton’s very simple hypnotic method was to keep repeating, “Now I want you to relax completely; just listen to my voice; ignore other noises; you feel warm and comfortable and drowsy; just relax; you will feel quite sleepy just as if you were in bed at home; breathe slowly-and-deeply; and as-you-breathe-you-will-feel-sleepier-and-sleepier-and-sleepier, sleepier-and-sleepier. Just-let-your-eyes-close-and-go-off-to-sleep, relax, your-limbs-feel-heavy, your-arms-feel-heavy, just-relax-and-breathe-deeply, etc., etc.” (61).

A method that has been used successfully both in the wilderness and in EDs begins with instructing the patient to close his eyes and to relax. Unlike adults, children in stressful conditions are already considered in a light hypnotic state (often referred to as “stage 1”), and so are generally more susceptible to hypnotic suggestions. The patient is then asked to concentrate on his toes, imagining/producing sensations of heaviness and pleasant warmth in the limbs as “all of the muscles in your toes relax.” For most people, feelings of heaviness are easier to imagine than warmth, but this is not consistent. The clinician should continue to suggest both sensations. A significant amount of time (30–45 s) is spent helping the patient to concentrate on and relax the toes. If this can be accomplished, the remainder of the procedure is much easier (6,15,37).

The clinician then suggests that the patient feel the warmth or heaviness flow up into the feet, then the legs, thighs, and so forth. A significant indication that the technique has been successful is the regularization of the patient’s breathing.

Detailed scripts with which clinicians can practice, teach, and use various induction and deepening techniques can be found at [www.psywww.com/asc/hyp/art/ind00](http://www.psywww.com/asc/hyp/art/ind00) (60).

### *Analgesia: Specific Suggestions*

When using hypnosis for analgesia, many patients, especially those who might be resistant to clinician suggestions, respond best to distraction techniques. As when a person fails to notice a serious injury during a sporting event or a battle, distraction directs attention away from the pain or an unpleasant emotion (62). Have the patient concentrate intensely on sensations coming from areas of the body that do not feel pain. Alternatively, have them concentrate on performing a favorite activity or solving a puzzle. They can combine this with clenching their fists when inhaling and relaxing them when exhaling. When possible, listening to music, watching a television show, or playing a video game “against the house” also distracts individuals from noxious stimuli (63).

For more suggestible patients, tell them that the painful area is becoming numb. Alternatively, have them imagine that ice cold water, a block of ice, or cold creek water coming down a mountain is running over and cooling the painful area (particularly good in burned patients). Another metaphor is to have them imagine that the painful area is becoming warmer as it is heated by the sun, a warm bath, or an electric blanket (64).

### *Hypnotic Deepening Techniques*

A suggestion to the patient at this time should be to slow their rate of breathing and further allow the entire body to relax. Suggest that with each exhalation, the patient will become more and more relaxed. The patient is then told that he will feel relaxed, sleepy, and will “travel in your mind to a very pleasant place, perhaps a beach or mountain.” In children, a fantasy of Disneyland or some other favorite place can be elaborated.

An excellent technique that can be used with relaxation is often called the “staircase method.” Tell patients to imagine that they are standing at the top of a staircase. Instruct them that, as the clinician counts backward from 10, they will descend one step and feel increasingly more relaxed. Say the numbers every 5 to 8 s, coinciding with the beginning of their exhalations.

Several other common methods, including “relaxation” and “stiff arm,” can then be used to deepen the hypnotic state (60). When it appears that patients are sufficiently deep, make the required clinical suggestion, such as that they will not remember the process of, and pain during, an upcoming procedure.

### *Hypnotic Emergence*

The techniques related to getting patients to emerge from a hypnotic state may not be needed. If hypnosis is being used alone for the manipulation associated with reducing forearm fractures (or joint dislocations), the patient normally arouses immediately after the procedure. However, if a posthypnotic suggestion for pain relief or selective amnesia has been given, this might still be in effect. It can be reversed before the end of hypnosis, if desired.

For those patients in very deep hypnosis (approximately 15% of patients), it might be necessary to deliberately awaken them at the end of the procedure. The simplest method is to say: “I am going to count to ten and your eyes will open and you will feel perfectly normal. 1, 2, beginning to wake, 3, 4, lighter and lighter, 5, 6, eyes beginning to open, 7, 8, nearly awake, 9, 10, quite awake” (61).

## **HYPNOTIZABILITY**

The common myth is that only gullible people or those with deficient intellects can be hypnotized. In reality, only those with the power to concentrate can be hypnotized. Hypnotic suggestibility is a sign of psychological health. Those with very low intelligence, schizophrenics, patients inebriated with drugs and alcohol, and those with organic brain syndrome cannot usually be hypnotized, although that varies with the individual subject (47). Boulton and Cole, writing about anesthesia in “difficult situations,” concluded: “While most people can be hypnotized to some extent, only about 90% of a given sample will be hypnotized by a given hypnotist” (61).

Although many tests have been devised to assess the depth of hypnosis or to measure patients’ hypnotic susceptibility, these tests have little clinical relevance (65,66). In a clinical setting, results are what matter, and they do not always correspond to abstract measures of hypnotic success. The key is whether the patient cooperates with the procedure, relaxes enough (e.g., joint reductions), or has diminished pain. It is, therefore, unnecessary for clinicians to administer any of these tests (6).

Is a person hypnotized? No one can determine whether a patient is adequately hypnotized until after the fact. If there is a drawback to using hypnosis in the ED, it is the fact that studies have shown that even experienced hypnotists cannot determine which patients are actually hypnotized and which are pretending to be in a hypnotic state. However, as with the use of anesthetics, if it does not work, the physician can either try it again or use another technique (15). Realistically, no one can definitively tell whether a patient is hypnotized until a clinical outcome (e.g., anxiety reduction, decreased pain, or

increased mobility) is realized. If the clinical goal is achieved, however, the emergency clinician need not be concerned about whether the patient was actually “hypnotized.”

### WHY DON'T EMERGENCY CLINICIANS USE HYPNOSIS?

Discussing hypnosis in 1989, Bierman wrote, “Direct clinical application of such phenomena to medical emergencies has received only sporadic attention” (39). Although medical hypnosis has been used for millennia, most emergency clinicians hesitate to use this nonpharmacological intervention for a variety of reasons, including its association with alternative-complementary medicine. As Boulton wrote, “It is a pity that hypnosis, admittedly through the fault of some of its practitioners, often bears the stigma of charlatanism” (67). Of course, if a modality has been proven effective, it can no longer be considered a form of alternative practice.

Many myths surround the use of hypnosis, not the least of which is patients' fear that once they are under hypnosis, they will not be able to resist the hypnotist's suggestions. In truth, subjects follow post-hypnotic suggestions only if they wish to do so, and they can come out of a trance at any time. Among clinicians, there is the mistaken belief that hypnosis requires considerable time, a quiet place, and an operator free from distraction. This has been repeatedly disproved by its use in ED and prehospital settings (15,38). Genuine barriers to its increased clinical use fall into two categories: assured effectiveness and training.

#### *Assured Effectiveness*

Emergency clinicians without experience who use clinical hypnosis may rightfully be skeptical about its use. While some studies and case reports suggest that hypnosis may be effective in emergency medicine, most clinical and laboratory studies only tangentially address the issues of whether most clinicians can learn and use the technique in emergency care situations. Also, even those experienced in clinical hypnosis have no effective method of determining if an hypnotic state has been achieved until they observe the desired clinical results. If they use hypnosis to relieve existing pain or diminish anxiety, they can immediately observe its effect. If they use hypnosis to diminish the acute pain, muscle spasm, or anxiety relating to a procedure, its efficacy can only be determined once the procedure begins. However, a parallel situation exists when using local anesthetics or sedatives, which may not have the desired effect until the dose is increased. As with anesthetics and sedatives,

clinicians can repeat the hypnotic process or switch to a different modality.

#### *Training*

Clinicians use the techniques that they have learned. Because hypnosis is not included in the educational requirements for emergency physicians, emergency nurses, and prehospital providers, it is rarely taught in residency programs, prehospital care courses, or continuing education programs. If trainees do not see it used or, at the least, hear about its effectiveness, they are unlikely to use it.

### POTENTIAL HYPNOSIS STUDIES IN EM

Investigational studies will be needed to identify how hypnosis can best be used in EM. Hypnosis offers ED and prehospital practitioners numerous investigational opportunities. Study areas can be most easily divided into patients, methods, and outcomes.

Patient-related studies might usefully address what factors make EM patients more hypnotizable, such as age, presenting complaint, chronic or acutely administered medications, level of alcohol/illicit drug use, prior hypnotic experiences, and their attitude toward hypnosis.

Methodological studies could encompass assessing the best methods for instructing practitioners in hypnotic techniques and uses, pre-existing EM personnel's attitudes and beliefs about hypnosis, and their willingness to use the technique. Ultimately, studies might test whether the combination of hypnosis and low-dose pharmaceuticals may increase the number of practitioners who can successfully use the technique. A clinical method for determining which patients are hypnotized would potentially be very useful, although more than a century of study has failed to demonstrate any method other than complex neurophysiological tests.

Outcome studies will need to assess the success of and time required to use various hypnotic methods within different EM milieus and with different presenting complaints. Part of this assessment will be to determine how often and what types and doses of “rescue” medications are necessary when hypnosis alone is unsuccessful.

### CONCLUSIONS

Hypnosis holds enormous potential as a safe nonpharmacologic tool for patient care in emergency medicine, prehospital care, and remote medical settings. Advancing its use in EM and prehospital care will require research into the most effective techniques, delineating in which acute care situations, where it is most effective, providing education and training in hypnotic techniques, and,

eventually, its endorsement by major professional organizations and inclusion in required curriculums.

Every scientific theory goes through a classic progression: First, it is attacked as absurd. Then it is admitted to be true, but obvious and insignificant. Finally, it is deemed to be so important that its adversaries claim they were the ones who discovered it (68). Where does hypnosis currently lie in this continuum within emergency care? Not far enough.

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## ARTICLE SUMMARY

### **1. Why is this topic important?**

This article introduces emergency clinicians to clinically applicable information about hypnosis, which could develop into a powerful addition to emergency clinicians' armamentarium. Studies and case reports suggest that hypnosis can be an effective and invaluable nonpharmacologic diagnostic/therapeutic technique for use in emergency medicine (EM) and emergency medicine systems (EMS).

### **2. What does this review attempt to show?**

Despite popular misconceptions about hypnosis, laboratory studies and many clinicians' experiences have demonstrated its clinical efficacy. Modern imaging studies provide evidence that hypnosis induces neurophysiologic changes to produce its effects.

### **3. What are the key findings?**

Hypnosis is a rapid and safe technique that most emergency clinicians can easily learn. Hypnosis can be useful in emergency departments, the prehospital setting, and remote/resource poor medical situations. So far, the potential of hypnosis in EM and EMS has barely been explored.

### **4. How is patient care affected?**

When hypnosis is used, few personnel are needed (often only one) for both the hypnosis and procedure. Safe and cost effective, hypnosis might prove to be a rapid method to produce analgesia, sedation, and anxiolysis in many EM and EMS patients.