THE USE OF HYPNOSIS IN SURGERY AND ANESTHESIOLOGY

THE USE OF HYPNOSIS IN SURGERY AND ANESTHESIOLOGY

Psychological Preparation of the Surgical Patient

By

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Erika Fromm and Karen Olness urged me to document, in the form of a book, my use of hypnosis as an anesthesiologist preparing patients for anesthesia and surgery. I am very proud of their trust in me. Erika always encouraged me when I was overwhelmed with the enormity of the task and she listened patiently to my reading all the chapters to her. Her criticism and her suggestions were very valuable to me. I am eternally grateful to her and I dedicate this volume to her.

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FOREWORD

At the turn of the last century, the anesthetic death rate from ether and chloroform was one in four hundred at university hospitals. Then Alice Magaw (1906) reported over 14,000 consecutive anesthetics without a death, and it became clear why you should go to the Mayo clinic for elective surgery–you didn't die under anesthesia!* Her article tells why. Her father, who used hypnosis, had taught her the art of suggestion, and once the abdomen was open and surgery begun, she shut off the ether and suggested nice things to the patient until she had to give ether again to allow closure of the wound. The patients received very little ether during a major procedure.

Lillian Fredericks has brought together in this book the things we have learned in a century of progress. Her fellow anesthetists have made it their goal to alleviate, prevent, and control both pain and suffering. She uses hypnosis as an integral part of this effort, and describes how it enhances all aspects of pain control. There are chapters on hypnosis as the sole anesthetic, as an adjunct to chemical anesthesia, and in conjunction with regional anesthesia. She takes us to the intensive care ward and the emergency room where pain and suffering are rampant, and tells us how to assuage fear and suffering with soothing suggestions. She has enlisted the collaboration of outstanding experts on hypnosis and human misery – Fred Evans, Dan Kohen, Pat McCarthy, and Karen Olness.

My own experience as a surgeon trained in hypnosis has made me wonder if the trance state in the human may not be analogous to the protective states we see throughout nature. The tetanus spore is almost indestructible, able to withstand heat, cold, and chemicals, but in its vegetative state, it is susceptible to antibiotics and oxygen. The amebic cyst is untouchable by medicines, but in its active trophozoite state,

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Magaw, A. (1906). A review of over fourteen thousand surgical anaesthesias. *Surgery, Gynecology & Obstetrics, 3*:795–797.

there are many antibiotics that are effective against it. Plants and trees that are dormant in winter can be transplanted, pruned, and grafted, but in summer when the sap is rising, they are likely to die if this is done. Bears and squirrels hibernate, and experience marked diminution in their metabolic needs. I wonder if hypnosis in humans is similar to the protective states we see in lower forms of life, and if so, then shouldn't it be an adjunct for every patient undergoing general anesthesia and the trauma of surgery?

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PREFACE

The definition of Hypnosis by the American Psychological Association is: Hypnosis is a procedure, in which a therapist or researcher suggests that a client or subject experience changes in sensations, perceptions, thoughts, or behaviors (Kirsch 1994). This only describes the procedure (possibly the induction) but not the subtle complexities of feeling, perceiving, thinking and/or behavior, which is the essence of hypnosis. Hypnosis is not a one-way street; it is an interactive experience. Linden (1997) describes it so well: "It is not what one does to another, but a process that takes place through the relationship of healer to healee." Hilgard (1973b) postulated the domain of hypnosis comprehensively and Bowers (1983) states: ". . . hypnosis involves absorptive and dissociative experiences that are less visible than hypnotic suggestibility per se, but they are perhaps even more important in determining the domain of hypnosis." This book will not concentrate on the procedure of hypnosis (the induction process) but on the experience and the intrinsic value of this medical modality. In some of the following chapters, it will be shown that a hypnotic induction is often not necessary for patients to slip into this state of altered consciousness, during which suggestibility increases to a great extent. It is awe inspiring to observe what the human mind can accomplish when guided by appropriate hypnotic suggestions and to observe psychological and physiological changes which follow.

Hypnosis has been used for many centuries in many different ways and under many different names. In ancient times, there were sleep temples in Egypt, and in Greece; Aesculapian rituals were practiced and Delphic Oracles were consulted. There was Animal Magnetism practiced by Franz Anton Mesmer (1734-1815). The Marquis de Puysegur (1751-1825) described artificial somnambulism; James Braid (1795-1860) named the phenomenon "Hypnosis," although Gravitz and Gerton (1984) question this and believe that it was used by Baron d'Hnin de Cuvillers and Mialle in 1820. Gravitz (1997) also believes

that Charles Lafontaine, a French mesmerist "might be the link between Braid and the much earlier sources," and finally, James Esdaile (1808-1859), a British surgeon, used what might be called "Hypnoanaesthesia" for 300 major cases and 80 percent of his surgical patients felt no pain.

Since that time, hypnosis has been used by many professionals in all kinds of specialties with good results in all fields of medicine. A few unusual applications might be of interest: Abraham (1971) was able to help 13 out of 17 patients to conceive with the use of hypnosis, after they had tried for many years unsuccessfully. Cheek (1995) stopped preterm labor via the telephone, Levitan (1992) used hypnosis extensively with cancer patients, and Ewin (1986a) stopped burns from progressing and (1992a) removed warts without leaving a scar. Spiegel (1993) used hypnosis to treat posttraumatic stress disorders. Crasilneck (1997) discussed a patient terminally ill with metastatic cancer, undergoing hypnotherapy, resulting in complete remission for 11 years.

Research in laboratories and in clinics has flourished because in 1955 the British Medical Association and in 1958 the American Medical Association declared hypnosis a qualifying medical modality. In 1949, the American Society of Clinical and Experimental Hypnosis was founded by Jerome Schneck and Jack Watkins and in 1957 the American Society of Clinical Hypnosis followed. A lot of research has been done and published by their members. Hilgard, at the Stanford Laboratory of Hypnosis, has been in the forefront of research in hypnosis, Bowers (1983, p 30). The *Journal of the American Society of Clinical and Experimental Hypnosis* was first published in 1953 with Milton Kline as the founding editor. The *Journal of the American Society of Clinical Hypnosis* was started in 1959, and David Cheek was one of the first to publish observations and research in the field of hypnosis in surgery, launching a vast body of literature on this subject. Frankel (1987) summarized significant developments in hypnosis which have occurred since that time. Now, thirteen years later, the art and science of hypnosis has matured and progressed, and it is regrettable that medical schools and residency programs in universities still do not include the teaching of hypnosis in their curriculum. A national survey of training programs in hypnosis Walling, Baker & Dot (1998) found that only 36 percent of APA accredited programs offered such courses, many of them on an elective basis. Australia and the Netherlands have national training models (Dane & Kessler 1998), and there is a great need to

establish an integrated program of training in the United States. Oster (1998) describes such a formal, integrated curriculum in clinical hypnosis, which is given at the Adler School of Professional Psychology.

There have been many theories to explain the phenomena of hypnosis. Presently there are two prominent theories, mainly differing in paradigms: the neo-dissociation or special process theory, proposed by Hilgard (1973a,1991), notable proponents of which are Orne (1977), Fromm (1977), Shor (1979), and Bowers as quoted by Woody and Farvolden (1992); and the socio-psychological or cognitive-behavioral theory, proposed by Barber (1969), Coe (1989, 1992), Spanos (1991, 1992), and Lynn and Sivec (1992). The main difference between these researchers is that "special process researchers (altered state theory) tend to view hypnotic responses, at least in highly responsive Ss, as something that "happens" to them rather than something that they are "doing" (Coe, 1992), whereas socio-psychological researchers view hypnotic responsiveness "as Ss purposeful, goal-directed strivings to present themselves as hypnotized" (Coe, 1992, p 229). Proponents of the altered state theory believe, that following a hypnotic induction, good subjects will dissociate and become more suggestible and more responsive to suggestion (Lynn, Rhue, & Weekes, 1989). King and Council (1998) showed that one group of high dissociators was responding to amnesia suggestions in a nonintentional mode, whereas other good hypnotic subjects showed more intentional responding to amnesia suggestions. Kihlstrom (1997) summarizes it so beautifully, "Hypnosis is a complex phenomenon, simultaneously a social interaction, with hypnotist and subject interacting in a larger socio-cultural context, and a state of altered consciousness, involving basic cognitive mechanisms underlying perception, memory, and thought." Barabasz (1997) reports that, "Recent EEG research establishes hypnosis as a specialized attentional state which is highly sensitive to formulation of hypnotic instructions."

The history of hypnosis in general is fascinating, and Gauld (1992) has published a very complete compendium. Several authors have reviewed the literature dealing with the use of hypnosis to decrease the stress and anxiety connected with surgery. The most recent and complete reviews were published by Evans and Stanley (1990) and by Blankfield (1991).

Sobel and Ornstein (1996) reported, "In an analysis of over 190 studies of psychological preparation for surgery, 80 percent of the

patients showed significant benefits: quicker recovery, fewer complications, less postsurgical pain, less need for pain medication, less anxiety and depression, and an average of 1.5 days less in hospitals." The cost effectiveness of this alone might impress people who are involved in today's healthcare system, not to speak about all the advantages we can afford our patients.

The chapters written by me are a combination of my own experience of using hypnosis as an adjunct in my practice of anesthesiology, the practice of other anesthesiologists, as well as many bibliographic references, using hypnosis not only for the control of pain, anxiety, stress, and apprehension but for many other problems. The work of Esther Bartlett (1966, 1971) and many personal communications with her as well as the work of Bertha Rodger (1961) have influenced my thinking about and my practice of using hypnosis routinely. Because the use of hypnosis in surgery and anesthesiology is multifaceted, I searched for other physicians and psychologists to supplement my knowledge and practice. I was fortunate to find four contributors, all of whom are outstanding in their field, and I thank them for their contributions.

The purpose of the book is to stimulate physicians to explore the vast capabilities of the human mind, when it is working together with the body, and with the help of the unconscious, to accept hypnotic suggestions. I hope it will invite them to use this modality in their own practice.

Medical hypnosis is not fixed and rigid but dynamic and ever changing, as human beings and their needs change. How different is the art and science of using hypnosis now, compared to the time of Mesmer (1734-1815). Two centuries ago, Mesmer, believing in animal magnetism, helped and healed thousands of people, and Esdaile (1808-1859) was able to relieve the excruciating pain during major surgery. What will happen to the practice of hypnosis during the next century, as our knowledge of the workings of the human mind and the unconscious increases, with the help of the research being done all over the world, mainly by psychologists. Elkins and Wall (1996) found that 85 percent of practitioners in a group of 400 physicians, affiliated with a large university health science center, expressed an interest in hypnosis education. However, only a small percentage of physicians are actually using hypnosis in their practice. This is probably due to various misconceptions among lay people as well as professionals;

most commonly, the belief that it takes "so much extra time." The fact is that the use of hypnosis facilitates and actually shortens the length of time to achieve a desired goal (Fredericks, 1980).

Prior to using hypnosis, I interviewed, observed and listened very carefully to all my patients during the preoperative visit. I wanted to find out what they experience, what causes their anxiety, apprehension, and occasionally, near panic. I asked myself what I could do to help them to overcome their fears and thereby get their psychology and physiology into a more stable and more normal condition. During these years of searching, I came to the conclusion that with the use of hypnosis and hypnotic techniques, we can inform patients and make appropriate suggestions to reduce their anxiety and change their perception of the impending procedures, while they are in a very vulnerable and receptive state.

For the following 21 years, I have been using the techniques described in this book for all my patients requiring surgery, both minor and major. I also taught a course in hypnosis to residents and some staff members in the department of anesthesiology, at the Hospital of the University of Pennsylvania, in Philadelphia.

From the beginning of my practice of using hypnosis in conjunction with treating various problems, I have taught self-hypnosis to all my patients, usually in the first or second visit. The importance of active participation of the patient to develop "psychological conditions for therapeutic effects" (Price, 1996) is now recognized by most practitioners and researchers. I have used this concept intuitively throughout the years I have been using hypnosis as an adjunct to various therapeutic interventions. The list is vast.

We now have good documentation that human beings are capable of regulating many autonomic functions, such as blood pressure, heart rate and rhythm, peripheral temperature, etc., which we thought were not under voluntary control. With appropriate suggestions under hypnosis, we can facilitate and augment these responses. As one observes the good results patients are able to achieve with the use of self-hypnosis, one becomes more and more confident and impressed by the power of suggestions made while patients are in hypnosis. Because of the excellent research, which has been done during the past 30 years or more, we now have scientific proof that hypnosis truly facilitates the unconscious acceptance of suggestions, and patients are able to influence not only psychological, but also physiological parameters on

their own, using this modality. Among others, Barber (1996) states that the hypnotic state facilitates the analgesia induced by suggestion. One can assume that the same holds true for other suggestions made during hypnosis.

We now have excellent, well-controlled studies to show the effect of suggestions made to patients, in a hypnotic state, such as the control of heart rate and rhythm (Bleeker, 1973a and b), the reduction of blood lost during surgery (Bennett, Benson & Kuicken, 1986), to stop the bleeding by hemophiliacs (Frederichs, 1967), the rapidity of healing and lack of complications, and the enhancement of the immune system (Hall, 1983 & Dillon, Minchoff & Baker, 1985) to name just a few. It is very rewarding to get confirmation from clinicians and experimentalists alike. Researchers in the laboratory and clinicians must work together, observing and experimenting with hypnosis, in order to detect all potentials of the mind-body connection. Covino (1997) published an excellent article on this subject, making several suggestions for integration and collaboration among researchers and clinicians. It is in this spirit that this volume is written and hopefully it will stimulate clinicians to do well-controlled clinical studies, using their vast experience, accumulated during treating their patients.

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INTRODUCTION

The use of hypnosis in surgery and anesthesia does not seem to have any influence on operative mortality. However, hypnosis and hypnotic techniques teach patients a way to alter their body's reaction to the insult of surgery and all the poisons we use to create unconsciousness. The use of hypnosis alters the psychological state of the patient which, in turn, influences the psychological and physiological reaction to the insult. This book describes in detail how to teach patients, in just a few minutes, what they can do to accomplish this. It also lists the vast amount of research which has been done to document these physiological changes, that seem to be the result of the use of hypnosis.

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CONTENTS

THE USE OF HYPNOSIS IN SURGERY AND ANESTHESIOLOGY

Chapter 1

HYPNOSIS: AN INTRODUCTION

FREDERICK J. EVANS

It is generally agreed that the modern history of hypnosis dates back to the late 18th century with Mesmer. However, it was the Scottish physician, James Esdaile (1850), who first documented the use of hypnosis in the control of pain. Just prior to the development of chemical anesthesia, Esdaile was using hypnosis widely in India as the only form of anesthesia for amputations, tumor removals, and other complex surgical procedures. Overlooked in Esdaile's reports was the finding that most of the patients survived surgery! This finding was especially compelling because at that time most surgical patients died because of hemorrhage, shock, and infection.

As well as controlling surgical pain, hypnosis may have led to autonomic and immunologic effects that minimized the complications of the surgical techniques of the time. Esdaile's surprising result is only now beginning to attract research interest. Clinical reports document that hypnosis has been used as an effective technique to control chronic pains (Sacerdote, 1970; Hilgard & Hilgard, 1975). Only a few studies demonstrate the value of hypnosis in hemophiliac (Dubin & Shapiro, 1974) and cancer patients (Domangue & Margolis, 1983), and when used preoperatively or during surgery to reduce bleeding volume and time (Bennet, Benson & Kuiken, 1986) or to facilitate postoperative recovery measures (Enquist, Konow & Bysted, 1996), as well as reducing pain and postoperative medication (Turner & Chapman, 1982).

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The aim of this chapter is to provide an introduction to the understanding of hypnosis within the context of pain management, especially focusing on clinical techniques relevant to the control of pain.

THE NATURE OF HYPNOSIS: AN OVERVIEW

The popular notion that hypnosis is a form of suggestibility is certainly an oversimplification (Hammer, Evans & Bartlett, 1963; Hilgard, 1965), even though this definition has dominated the otherwise impressive research on hypnotic phenomena from the 1930s (Hull, 1933), through the 1950s, (Weitzenhoffer, 1953) until now. Although it is agreed that response to suggestion is an important aspect of what happens during hypnosis, it is also generally agreed that hypnosis is a more complex phenomenon (Lynn & Rhue, 1991).

Some authors emphasize the social-psychological or social-cognitive interaction between the hypnotist and the subject as central to hypnotic behavior (Barber, 1969; Chaves & Brown, 1978; Diamond, 1977; Sarbin & Coe, 1972; Spanos, 1986; Wagstaff, 1981). For these authors, pain reduction involves interpersonal processes or self-generated cognitive and motivational strategies such as anxiety reduction, attribution, conditioning, distraction, focusing attention, forgetting, imagery, reallocation of attention away from the symptom, reframing, role playing, social contagion and compliance, and verbal relabeling. All of these strategies may be useful in controlling pain, especially when the pain is acute. In the social-psychological model, these strategies are facilitated by the hypnotic relationship, although it is often not clear how this is achieved. The hypnotic induction procedure itself and individual differences in hypnotic ability are usually considered incidental and unimportant.

Another view of hypnosis is that it reflects a stable capacity of the individual. It is viewed, often controversially, as a special state of consciousness, or, in psychodynamic theory, as a manifestation of the unconscious mind (Brown & Fromm, 1986). Some clinicians view hypnosis as the preferred way to access unconscious processes. Hypnosis may facilitate wishes or emotions, memories of trauma, and loosen defenses, mostly through the use of metaphor and guided imagery (Erickson, 1980; Rossi, 1993; Cheek, 1994). Such concepts are very difficult to test empirically, even though they may lead to

compelling and clever clinical applications.

In a formulation that leads to more direct empirical investigation, hypnosis is considered in terms of dissociation theory. The hypnotic experience may involve an ability to readily change states of awareness or levels of consciousness. These changes in consciousness may be either interpersonally- or self-induced (Bowers, 1976; Evans, 1987; Hilgard, 1965, 1977). Hypnosis may be considered in terms of neodissociation theory or multiple cognitive pathways. For example, the pain patient simultaneously knows and does not know the severity of the pain. The awareness of pain and the analgesic experience are co-conscious (Hilgard, 1977). A similar process occurs during dental analgesia: during drilling, the patient reports feeling no pain, but retains the ability to know when the dentist is drilling at a site which should be painful, and even to know how much the drilling would hurt without the injection. In hypnosis, as in this example from dental analgesia, cognitive and somatic mechanisms are available to block or transform pain messages and sensations through controls in levels of consciousness. Pain awareness and hypnotic analgesia are co-conscious (Hilgard, 1977). Hypnosis may involve a more general cognitive flexibility, or switching mechanism, that allows one to change and control psychological, cognitive, or physiological processes, or readily access different levels of consciousness (Evans, 1987; 1991).

FOUR DIMENSIONS OF HYPNOTIC BEHAVIOR

It is useful to consider the domain of hypnosis as consisting of at least four conceptually independent constructs or dimensions. Noting which dimension an author is discussing will help the reader understand why hypnosis is a controversial field. Each dimension will have direct implications for the different ways hypnosis is practiced in the area of pain. Although these conceptual dimensions comprise the domain of hypnosis (Hilgard, 1973), most accounts of hypnosis usually focus on only one or two of them, leading to incomplete and even misleading conclusions.

1. Expectations and Beliefs about Hypnosis

The first of the four dimensions of hypnosis is an *expectation,* faith, or belief variable. It is probably common to any therapeutic modali-