

# A model for the application of hypnotic techniques in surgery

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■ *The results of 11 consecutive surgeries will be presented where hypnosis was the sole form of anesthesia.*

In the practice of medicine and psychology, patients consult a clinician because they want professional help with problems. A patient in need of surgery who is reluctant to or unable to use a chemical anesthesia might ask, "I'm having a surgical procedure and would like to use hypnosis for the anesthesia. Can you help me? If so, what is the process for doing it?" The purposes of this paper were to 1) develop a model to be used with patients who undergo surgical procedures without using any form of chemical anesthesia and 2) test the model in clinical practice. The paper will be presented and then a videotape of three procedures will be shown to show implementation of the model.

A review of the research on the use of hypnosis as the anesthesia for surgical procedures usually begins with Esdaille's 1846 book (Esdaille), which had several publications. Esdaille relied on mesmeric passes to produce the necessary state for surgery. The process often used trained assistants to produce the mesmeric state, had little verbal interaction, and sometimes took more than a day to achieve. In the approximately 13 cases he reported on, he did not discuss any patients who did not complete or attempt to have surgeries. Levitan (1988) showed the effectiveness of hypnosis as the sole anesthesia for 14 procedures on 11 patients and suggested that a much higher percentage of patients could use hypnosis than the often-reported figure of 10 percent. Rausch (1980) reported the use of self-hypnosis for his surgery and his discussion of the inner dialogue and the connection with a nurse during the procedure that took place is instructive.

## Research design

The research design consisted of two stages. The first stage was the development of a model that could be explicitly explained to patients and followed by clinicians. The development of the model will be described following a description of the second stage of the design.

The second stage was to use the model with eleven consecutive patients who wan-

ted hypnosis as the sole form of anesthesia for surgery. Only patients who requested hypnosis as the sole form of anesthesia were involved in this study. The patient's surgeon and nursing staff also had to agree to use hypnosis and be willing to discuss the model. Patients had the model explained to them, signed informed consent forms, agreed to be videotaped during the surgery, and agreed to post-surgical follow-up interviews and hypnotizability testing. The patients were either referred by their surgeon, a primary care physician, or were self-referred.

### Development of model

The model was developed by an intensive phenomenological analysis of ten surgical procedures in which patients used hypnosis for anesthesia from four different clinicians. These cases were analyzed by review of videotapes of the procedures, patient interviews and hypnotizability scores.

The first observation from these cases pertained to defining hypnosis for the patient. Defining hypnosis as a procedure wherein changes in sensations, perceptions, thoughts, feelings, or behavior are suggested, was found to be understandable to the patient and applicable by the clinician.

A key finding from this initial series of surgeries was that Ronald Shor's model of three dimensions of hypnotic depth was very useful in explaining the phenomena that patients were experiencing and guiding the clinicians' interventions and verbalizations.

Before proceeding any further, it is pertinent to review Shor's phenomenological paper on hypnotic depth is outlined and how it translates to my model.

### Relationship of Shor's dimensions to model

|         |  |              |
|---------|--|--------------|
| R. Shor |  | <u>Model</u> |
|---------|--|--------------|

|  |   |  |
|--|---|--|
| Trance (loss of generalized reality orientation) | > | Trance                                 |
| Hypnotic role playing                            | > | Acceptance of pain control suggestions |
| Archaic relationship                             | > | Inter- and intra-personal relationship |

A second observation was that successful patients had different profiles on the three dimensions of hypnotic depth configurations. A third observation was that the patients' profile on the three dimensions changed over the duration of the surgery. It was also observed that preparation of the patient was very important, as was processing the procedure with the patient after the surgery.

To illustrate how these dimensions are accessed by the clinician, types of comments or strategies for each of the three dimensions are shown.

*Trance:* Typical hypnotic inductions, eye fixation hand, levitation, progressive relaxation, counting down and guided imagery.

*Pain control:* Direct anesthesia suggestions, i.e., numbness, anesthesia, cooling, metaphor/analogy suggestions for anesthesia, i.e., glove technique, turning off switches, reframing pain sensations (perceiving them differently), i.e., contraction, affirmation of having a baby, distraction, time distortion and relaxation.

Intra- and inter-personal relationship include: metaphors or analogies to patient's previous accomplishments that have personal importance, directly supportive statements, direct recall of events in which patient overcame adversity, recall of images of important family friends or mentors, use of transitional object or places, i.e., pets, safe places like gardens, use of religious or spiritual themes that have personal importance and use of appropriate touch, i.e., holding hand or rubbing shoulder. The model is shown below:

### Model for application of hypnotic techniques in surgery

#### Phase I: Preparation and mental training

I. Presentation of hypnosis and model to patient and overview of hypnosis as a procedure.

*Model: as explained to the patient*

- 1). We will work together in an individualized manner on three dimensions of hypnosis: Trance, Suggestion and Relationship.
- 2) The dynamics of the hypnosis will change over the duration of the surgery and we will work together to deal with them.
- 3) We will utilize your hypnotic strengths and personal characteristics that we have practiced in our meetings prior to the surgery and that you will practice on at home using audiotapes of our meetings.

II. Assessment of patient.

- Reasons for hypnosis and expectations.
- Prior experience with surgery and hypnosis.
- Brief psychological assessment.

Permission to talk with patient's physician and surgeon.

III. Planning for the surgery with patient.

Develop personal strategies for three dimensions of hypnosis:

- 1) Trance
- 2) Suggestions-Pain control suggestions
- 3) Relationship-Intra and interpersonal relationship

Prepare audio tapes for practicing procedure. The language is Ericksonian in style and uses reframing, pacing and leading, utilization of patient characteristics and the phenomena that take place during a surgery.

#### Phase II. Day of surgery

IV. Pre-operative preparation in hospital .

Meet with nursing staff, surgeon and anesthesiologist.

Initiate hypnosis strategies with patient.

V. During surgical procedure.

View process as a dynamic process that varies over the duration of the surgery with three dimensions of hypnosis:

- Pain control suggestion.
- Intra- and inter-personal relationship.
- Implement strategies planned in Step III
- Monitor surgical process carefully to meet patient needs.
- VI Post operative Processing (either same day as surgery or soon after).
- Review patients experience
- Affirm patient and implement plan for post-operative recovery
- Deal with any situations that were problematic

## Results

Results of the eleven consecutive procedures:

| Surgical Procedures  | Age/<br>Sex | Time<br>(minutes) | SHSC:C |
|--|-------------|-------------------|--------|
| Removal of the radial head of the right elbow                              | 35/M        | 65                | 7      |
| Arthroscopic surgery of the left knee                                      | 38/F        | 50                | 5      |
| Pin and plate removal from the right hip                                   | 33/M        | 80                | 6      |
| Arthroscopic surgery of the right knee                                     | 57/F        | 20-1              | 8      |
| Arthroscopic surgery of the left shoulder                                  | 64/M        | 55                | 7      |
| ENT surgery of the middle ear  | 62/F        | 50                | NA-2   |
| Nodule of Endometrium through<br>Intra-abdominal Incision                  | 32/F        | 60                | 5      |
| Extraction of two wisdom teeth   | 37/M        | 55                | 7      |
| Extraction of four wisdom teeth  | 50/M        | 40                | 4      |
| Surgical breast biopsy   | 65/F        | 40                | 3Yes   |
| Arthroscopic surgery of left shoulder<br>using 150 degree Fahrenheit probe | 45/F        | 50                | 5      |

All 11 patients said they would use hypnosis for the next surgery

- 1 Patient elected to use general anesthesia after 20 minutes
- 2 Quadriplegic on respirator -- highly intelligent and creative

## Discussion

All patients experienced an active cognitive process during the surgery where they worked with the clinicians verbalizations to meet their needs. All said the use of touch was useful in maintaining the third dimension of intra and interpersonal relationship. Individual profiles for several of the above cases are shown to illustrate points of discussion.

*Case 1:* Removal of the radial head of the right elbow (35 yr old male). Involved an extensive pounding and chipping of the radial head with the patient feeling at obvious ease with the procedure. The beginning of the procedure shows the high levels on all three dimensions. As the case progressed, especially high levels of confidence and rapport with self and the surgical team took place, trance diminished, and levels of pain control remained high. This case also illustrates the cognitive involvement of the patient and ability to have verbal interaction while maintaining his levels of hypnotic depth.

*Case 2:* Middle ear surgery on a 62 year old quadriplegic woman on respirator. This case showed how hypnosis can be effective for a patient with severe physical handicaps. Her surgeon was reluctant to use chemical anesthesia because of allergies and her delicate physical respiratory condition. In this case, the patient's trance was low and continued to be low throughout the process. This patient stated that "I'm nervous about this, the only part of me that's still working is my brain and that's where the surgery is being done." It was very difficult for her to totally block things out. On the other hand, her inner strength and relationship with the author and the surgical team was quite strong and that continued over time. Her levels of pain control started high, and as the procedure moved more to the inner ear, they dropped off.

*Case 3:* Removal of 2cm nodule of endometrium with intra abdominal incision. This 32 year old patient illustrates the importance of individualized preparation in stages 1-3. She had refused surgery to determine the etiology of a 2 cm mass for several years. She distrusted doctors and feared anesthesia. In the preparation phase helping her to be able to establish trust was crucial.

*Case 4:* Arthroscopic knee surgery of the right knee (57 yr old female). This case illustrates the point that the important goal is to have the surgery and not the use of hypnosis. It also illustrates problems with same day preparation, a two hour delay, and noisy preparation room. These contributed to the patient not being able to maintain a relaxed knee and this called for a switch to general anesthesia. Because she was heavily invested in only using hypnosis for anesthesia, several sessions were needed post-surgically to process the experience with her. She said she would choose hypnosis again as her form of anesthesia if additional surgery were needed. She thought that her experiences with the first surgery would help her to have a more realistic idea of the demands that are involved in using hypnosis.

*Case 5:* Arthroscopic left knee (38 yr old female). In this surgery, the point that is most relevant is that of being able to respond to the patients' needs during the surgery. During the initial stages of the procedure the patient was tolerating the surgery. When asked how she was doing, she expressed that she was "a little afraid because I haven't done this before." The author was able to address her fears in a way that met her needs and from that point on she became very comfortable with the procedure and was beaming at the end, exclaiming "I'm so proud of myself."

*Case 6:* Removal of pin and plate from right hip (33-yr. old male). This was a physically intensive and long (1 3/4 hour) procedure where the patient did extremely well dealing with extensive cutting, chipping and pounding on his right hip. The interesting observation was that he found twisting of his knee to be annoying and painful. Twisting of the knee was a part that he hadn't rehearsed and practiced. Being able to participate in the procedure by making physical adjustments of the leg may have contributed to his lack of secondary problems with his knee in his recovery.

*Case 11:* Arthroscopic surgery of left shoulder using 150 degree Fahrenheit probe. This patient made adjustments of her shoulder during the insertion of the scope to mini-

mize stress on the shoulder and she remarkably reported no sense of heat from the 150 degree F heat from the surgical tool.

## Conclusions

1. The model provides a way to prepare patients to have surgery using hypnotic procedures as a form of mental training that is individualized for each patient.
2. The use of hypnosis during surgery takes on dynamic characteristics that vary over the duration of the surgery.
3. Three phenomenological dimensions of hypnotic depth: 1) Depth of Trance, 2) Acceptance of Pain Control Suggestions and 3) Intra-and Inter-personal Relationship were useful in individualizing the interventions to the patients' needs and reactions to the surgery.
4. During a surgical procedure, the depth of trance dimension becomes less important and the intra- and inter-personal relationship increases in importance over the duration of the procedure and during portions of the surgery that are physically demanding.
5. High hypnotizability, as measured by the Stanford Hypnotic Susceptibility Scale, Form C was not necessary to complete a procedure using hypnotic techniques. Patients in the medium and even low range of Stanford scores also did well.
6. Being able to establish trust with the surgical team, having positive attitudes towards reframing pain sensations, and being highly motivated were also related to being able to complete the procedure.
7. Being actively involved in the surgery allowed the patients to deal with the physical demands placed on their body and make adjustment to minimize physical trauma that would not be known if they were in general anesthesia.

## References

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■ A population wide as well as a group-based suggestion of health promoting behaviors is discussed. Our suggestion technique centers around the collection of health-relevant individual experiences, the modification of health-hindering experiences and establishing health-promoting attributions. The collection as well as modification of health-relevant experiences is guided by attribution theory. Population wide and individual health-hindering attributions are changed into health-promoting attributions by suggesting new experiences as to consensus, distinctiveness, and consistency of one's health related behaviors. The population wide suggestion is evaluated with 100 chronically ill patients taking part who initially were not interested in any support to cope with their disease. The group-based suggestion is evaluated with 107 patients with diabetes mellitus participating in a health education measure.

It is argued to combine population as well as group-based suggestive measures to improve health promoting interventions.

## Introduction

Public Health offers a number of promising approaches to deal with the increase of chronic diseases as well as with allergic, psychosomatic, and environmental diseases. It also has valuable tools to offer in dealing with well-known and with new infectious diseases. The key issue of Public Health is to promote population based prevention of the diseases themselves and general health promotion. Public Health has little connections to psychology, as psychology is expected to work with individuals and groups, but not with populations (Schwartz, Badura, Leidl, Raspe & Siegrist 1998; Weitekum, Haisch & Kessler 1997).

## Suggestion of health related behavior

One of the main goals of Public Health is the promotion of health behavior and of behavior change to improve the general health of the population. In order to achieve