

# Effects of Hypnosis on the Labor Processes

## And Birth Outcomes of Pregnant Adolescents

*Journal of Family Practice*, May, 2001,

by Alice A. Martin, Paul G. Schauble, Surekha H. Rai, R. Whit Jr. Curry

### Key Points

#### **Hypnotic preparation for labor and delivery can be an effective intervention in:**

- reducing the number of complications.
- reducing surgical interventions.
- reducing length of postpartum hospital stay.

Hypnosis has been used in obstetrics for more than a century with little empiric evaluation of the effects of this type of intervention on labor and delivery. We evaluated how childbirth preparation incorporating hypnotic techniques affected the labor processes and birth outcomes of pregnant adolescents. The study included 42 teenaged patients receiving prenatal treatment at a county public health, department before their 24th week of pregnancy.

They were randomly assigned to either a treatment group receiving a childbirth preparation protocol under hypnosis or a control group receiving supportive counseling. When labor and delivery outcome measures were compared in the 2 groups, significant differences favoring the hypnosis intervention group were found in the number of complicated deliveries, surgical procedures, and length of hospital stay. Larger studies in different populations are needed.

Hypnosis has been used to control pain during labor and delivery for more than a century, but the introduction of chemo-anesthesia and inhalation anesthesia during the late, 19th century led to the decline of its use.(1,2) Recently there has been a resurgence of this technique in obstetrics.(3-7) Hypnotherapy has been found to be effective in providing pain relief,(8,9) reducing the need for chemical anesthesia,(8) and reducing anxiety, fear, and pain related to childbirth.(1,2,7,10,11)

Hypnosis has also been helpful in both managing various complications of pregnancy (such as premature labors,(5,12-14)) and reducing the likelihood of premature labor and birth in high-risk patients.(12) It has also has been effective in the treatment of hyperemesis gravidarum,(15-16) acute hypertension associated with pregnancy(17) and conversion of breech to vertex presentation.(18)

One promising application of hypnosis is in the area of labor and delivery.(1,5,6,19) The use of hypnosis in preparing the patient for labor and delivery is based on the premise that such preparation reduces anxiety, improves pain tolerance (lowering the need for medication), reduces birth complications, and promotes a rapid recovery process.(1,2,5) The key aspect of this treatment is involvement of the patient before labor begins, to promote her active participation and sense of control in the labor and delivery process.

This is accomplished through educating the patient about this process and teaching her alternate ways to produce hypno-analgesia and anesthesia(1,2) Hypnotic preparation thus provides the expectant mother with a sense of control for managing her anxiety and physical discomfort.

Although there have been numerous reports suggesting the value of hypnosis in obstetrics, our study is one of the first to report a randomized controlled evaluation of childbirth preparation incorporating hypnotic techniques on labor processes and birth outcomes.

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## Methods

Our subjects were teenage patients (18 years or younger at the time of conception) who entered prenatal treatment with normal pregnancies at a Florida county public health department before the end of their 24th week. The clinic nursing director performed a chart review and identified 47 patients meeting the criteria. These patients were randomly assigned to either the treatment group or the control group.

The treatment group received childbirth preparation in self-hypnosis that incorporated information on labor and delivery (the detailed protocol is described in a previous publication(1)). The control group received supportive counseling designed to control for interpersonal contact and social support and to provide an opportunity for discussion about pregnancy issues of concern to the patient. Patients in the treatment and control groups had the same number of visits.

We obtained institutional review board approval and informed consent from individual patients. The subjects were told that the study was an attempt to provide support for pregnant adolescents in addition to the routine prenatal care provided by the public health department and that they would be randomly assigned to 1 of the 2 groups, their intervention session would coincide with scheduled clinic appointments and would not interrupt their medical treatment in any way, and their participation was voluntary.

Both groups of patients received the standard prenatal treatment protocol from the medical staff, nurse practitioners, and hospital staff, all of whom were blind to group assignments. All patients were delivered at the local teaching hospital by obstetrics department staff who were blind to the study. The study interventions were begun with individual meetings with patients during regular clinic visits between 20 and 24 weeks' gestation.

Continuing clinic visits were scheduled for all patients on a biweekly basis, making the time span of the 4-session experimental conditions approximately 8 weeks. The study counselor (the primary author) provided hypnosis preparation training for the treatment group; a nurse midwife provided the supportive contact with the control group. Both interventions were completed before delivery; no prompting occurred during the labor and delivery process.

The 2 groups of patients were compared on medication use (Pitocin, anesthetic, and postpartum medication), complications and surgical intervention during delivery, and length of hospital stay for mothers and neonatal intensive care unit (NICU) admission for the infants. Complications fell into 36 categories of events (eg, multiple pregnancies, preeclampsia, vacuum-assisted delivery) that were entered in subjects' records by obstetric staff who were unaware of the study. Statistical analysis was based on a simple count of the presence or absence of complications in the medical record by researchers (the researchers were not blinded to the patient's study assignment).

## Results

Of the 47 patients, 3 moved out of the geographic area before delivery, and 2 patients (1 in each group) did not complete the research protocol and were not included in the research. Results were thus obtained for 22 patients in the hypnosis group and 20 in the control group, resulting in a total of 42 subjects. A two-tailed Fisher exact analysis at the .05 level was used to test for significance.

Only one patient in the hypnosis group had a hospital stay of more than 2 days compared with 8 patients in the control group ( $P=.008$ ). None of the 22 patients in the hypnosis group experienced surgical intervention compared with 12 of the 20 patients in the control group ( $P=.000$ ). Twelve patients in the hypnosis group experienced complications compared with 17 in the control group ( $P=.047$ ). Although consistently fewer patients in the hypnosis group used anesthesia (10 vs 14),

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Pitocin (2 vs 6), or postpartum medication (7 vs 11), and fewer had infants admitted to the NICU (1 vs 5), statistical analysis was non-significant.

## Discussion

We focused on the educational preparation of the patient while in hypnosis to create the expectation of a normal labor and delivery, develop a conditioned response of comfort and confidence, and facilitate an increased sense of control in achieving a healthy delivery.

The subjects in the treatment group received a 4-session sequence of standard hypnotic interventions incorporating childbirth preparation information (ie, the hypnorefiexogenous method(1,2,20)) in which they were instructed in the methods and benefits of focused relaxation and imagery to increase the likelihood of a safe and relatively, pain-free delivery.

The sessions provided an opportunity to experience and practice hypnotic induction and deep relaxation. The suggestions directed toward the expectant mothers during the hypnotic state focused on the conceptualization of pregnancy and childbirth as a healthy natural process. Suggestions were also given to help the patient respond to possible complications, in the event they might occur.(1) These suggestions were designed to increase the patient's sense of trust in her physician and her confidence in her own ability to manage anxiety and discomfort.

Hypnotic inductions also included ego-strengthening techniques and suggestions for a relatively discomfort-free delivery and suggestions for the application of the hypnotic techniques to other stressful periods in their lives. In each session the patients were given the opportunity to ask any questions of concern regarding the method or the pregnancy.

The main limitations of our study are the relatively small number of subjects and the fact that these patients were adolescent women, which affects the generalizability of results.

## Conclusions

Our study provides support for the use of hypnosis to aid in preparation of obstetric patients for labor and delivery. The reduction of complications, surgery, and hospital stay show direct medical benefit to mother and child and suggest the potential for a corresponding cost-saving benefit.

## Acknowledgments

We would like to acknowledge the pioneering work on the use of hypnosis in obstetrics by the late William Werner, MD, and express appreciation for his assistance in designing the intervention protocol. We would also like to thank Maury Nation, PhD, for his assistance with statistical analysis and Poorti Karve Riley, MD, for her comments on a previous version of this manuscript.

(\*) Submitted, revised, February 13, 2001. From the University of Florida. Reprint requests should be addressed to Paul G. Schauble, PhD, 301 Peabody Hall, University of Florida, Gainesville, FL 32611-4100. E-mail: [schauble@counsel.ufl.edu](mailto:schauble@counsel.ufl.edu).

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