

Laughing gas helpful for labor pain, but epidural still top choice

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Women report being very satisfied with nitrous oxide (laughing gas) to manage labor pain, experiencing no adverse side effects to the baby, although over half of the women ultimately opted for an epidural or other pain management technique, suggests a study being presented at the Anesthesiology 2019 annual meeting.

"Our research is one of the first large retrospective studies done in the U.S., in five large university hospitals, on the use of [nitrous oxide](#) in the labor and delivery unit," said Barbara Orlando, M.D, one of the lead authors of the study and assistant professor of anesthesiology, perioperative and [pain medicine](#) at the Icahn School of Medicine at Mount Sinai, New York. "Although nitrous [oxide](#) did not prevent [women](#) in labor from requesting other [pain](#) management options like an epidural, we received positive feedback from patients who said they like laughing gas as an option to manage their pain."

There are a variety of options available for women to manage labor pain, ranging from epidurals and medications delivered intravenously, to complementary methods including massage, deep breathing and nitrous oxide.

Nitrous oxide is more commonly used in Europe and Australia to manage labor pain, but has recently gained popularity in the U.S. It is an inhaled anesthetic gas that may help reduce anxiety and make patients less aware of pain, but does not eliminate it. Conversely, epidural anesthesia is the most common type of pain relief used during labor and blocks pain in the lower part of the body, allowing the laboring mother to be awake and alert throughout delivery.

Researchers reviewed the medical records of 1,958 women who used nitrous oxide during labor between March 2016 and March 2018. The average age of the patients was 28 years old. Researchers collected: patient demographics;

[patient satisfaction](#); conversion rate to alternate pain management options, including epidurals; and Apgar score, which ranges from 0 to 10 (7 to 10 is considered reassuring) and is used to assess a newborn's overall condition and health 1 minute and 5 minutes after birth. The authors note only 850 patients included in the study had patient satisfaction information available.

The mean patient satisfaction rate for nitrous oxide use was 7.4 (on a scale from 0 to 10, with 10 being high). Ultimately, 68.9% of women who used nitrous oxide switched to another pain management technique, with the majority (92%) opting for an epidural. Nitrous oxide was found to be safe for the newborns, whose Apgar scores averaged 8 and 9 at 1 and 5 minutes, respectively.

"Nitrous oxide is easy for patients to use, relatively inexpensive, and will attract more patients looking for a birthing center, or more homelike type of delivery experience," said Dr. Orlando. "The high patient satisfaction rate and safety profile that we found should motivate other institutions nationwide to offer nitrous oxide as a pain management option to women in [labor](#)."

Provided by American Society of Anesthesiologists

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