



Nitrous Oxide use in Labor and Immediately Postpartum

What is nitrous oxide?

Nitrous oxide use for labor pain is a mixture of 50% nitrous gas and 50% oxygen that is inhaled through a mask. It is commonly used in dental offices, where most people know of it as "laughing gas". It has been, and still is, widely used throughout the world for labor pain. We are proud to be one of the first hospitals in North Carolina to offer this option for pain relief.

How is it used?

Nitrous oxide can help to lessen both pain and anxiety when used during induction, natural labor, and childbirth. It is self-administered by the laboring patient by inhaling through a mask. The patient holds her own face mask and begins to inhale the gas mixture 30-60 seconds before she anticipates pain, or a contraction. Inhaling before a contraction begins helps the gas to reach its peak effect at about the same time as the contraction reaches its peak, providing the greatest relief. Nitrous is the only pain relief method used for labor that is cleared from the body through the lungs, so as soon as you pull the mask away, the nitrous effect is gone within a breath or two.

How can I get nitrous oxide during my labor and childbirth at UNC Health Care?

Once you decide you want to use it, your labor nurse will notify a member of the obstetric-anesthesia team who will determine if you are eligible to receive this medication for pain. You will also have an informed consultation and sign a form giving your consent for nitrous oxide use during labor. The anesthesia provider will bring the nitrous oxide equipment to your room, set it up, and instruct you on its use.

Does nitrous oxide have any side effects?

Nausea is a common side effect, but medication is available to help if needed. Nitrous oxide can also cause some dizziness and/or unsteadiness. We recommend that there should always be a family member or staff person in the room when you would like to get out of the chair or bed in case you need assistance.

Are there any reasons I could not use it?

Yes, you cannot use nitrous oxide for pain if you:

- cannot hold your own facemask
- have received a dose of narcotic in the past 2 hours
- have pernicious anemia or a B12 deficiency for which you take B12 supplements
- have one of a very few other rare medical conditions which a member of the anesthesia team will assess when they speak with you
- all the nitrous oxide machines are in use by other patients

Will nitrous oxide affect my labor or my baby?

There are no negative effects on labor or the baby. Research has found that nitrous oxide does not affect your contractions or your baby's health before or after birth. Some research suggests using nitrous oxide during labor may lessen the rate of Cesarean section and speed up labor.

Do I have to choose between using nitrous oxide or an epidural?

No. Some patients may desire to use nitrous oxide prior to having an epidural placed. Though they would not be used together (the epidural and nitrous), it is perfectly fine to use nitrous first, and then move on to a different type of pain relief if necessary.

What if I have more questions?

Please talk to your OB provider, Midwife, or the OB Anesthesia Team for more information

Approved by NC Women's Hospital Patient Education Steering Committee and OB Anesthesia,
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