

# Nitrous Oxide - not just for laughs!

Nitrous oxide is a medical drug approach to pain management during labour and birth. It's a mixture of nitrous oxide, N<sub>2</sub>O, and oxygen. It's sometimes called laughing gas, and it's used commonly in dental procedures. Nitrous oxide is a systemic drug, meaning it reaches your whole body. It's also an inhalant, so it's something you inhale through a mask or mouthpiece. It may help manage pain without causing a total loss of feeling or any loss of muscle movement - a big benefit during labour. N<sub>2</sub>O is a nonflammable, tasteless, odorless gas. It was first synthesized by the English scientist and theologian Joseph Priestly in 1772, and was first used as a labour analgesic by Stanislav Kplikovich in Poland in 1881.

## How is nitrous oxide used during labor?

When you're in labour, you hold a mouthpiece or a mask when you want some gas. This is connected by a tube to a gas supply, either in a cylinder or attached to the wall. Nitrous oxide can be used during all stages of labour, even after birth, for example, if you're having a perineal tear repaired, you may nitrous oxide during that time. Nitrous oxide is very versatile. It can be stopped at any time, started at any time, or switched to something else at any time. It can be used to supplement an epidural that isn't working very well or it could be used to help you if you're having to wait for an epidural- if the epidural isn't immediately available.

The pain relief with nitrous oxide starts working in under a minute, which is less time than you would have to wait with an epidural (it's also less invasive). One of the things that people like about nitrous oxide during labour is that they can use the mask or mouthpiece to control their own pain relief.

Therefore increasing your sense of participation and consent which may reduce pain perception.

Also, nitrous oxide lets you keep your strength and freedom of movement. It might create a sense of pleasure and relaxation. Also, it can ease anxiety (Yay!!).

When you're using nitrous oxide you're really focusing on your breathing, which may help to explain some of its beneficial effects. It's simple and has not been shown to increase bad health outcomes for mothers or newborns.

## There are many advantages of gas during labour

- It can be used at any stage of labour
- It doesn't have effects on your baby
- You can control the amount of gas you use - self-administered
- You can move and change position between contractions
- It can help you breathe rhythmically
- You can use it in the pool and bath
- It can be an effective form of pain relief
- Works quickly, gone out of your body quickly
- Non-invasive
- Reduces anxiety and helps you relax

## **There are some disadvantages to using nitrous oxide during labour**

- It's only partly effective for some women — it might only dull the pain without decreasing it enough
- People with some medical conditions shouldn't use it
- Some people feel dizzy, drowsy or light-headed - although this feeling leaves quickly
- Some people will experience nausea or vomiting
- Might give you a reduced sense of awareness
- Some people will feel claustrophobic with the mask
- You will need to be monitored
- Someone will need to be with you while you are using it
- Less effective than an epidural
- Self-administered - if your tired or exhausted this may become bothersome
- May give you a dry mouth

## **Conclusion**

Experts generally agree that, for most people, nitrous oxide in the concentration recommended for labour is relatively safe. The side effects are similar to those from narcotics, though they're shorter-lasting.

Although research is still ongoing, past studies have found that the amount of nitrous oxide currently used during labour usually given during labour has no effects on the health of a baby at birth or a newborn's alertness or ability to breastfeed. That said, there are some questions about long-term effects and whether it carries risks from crossing the placenta. This lack of research has made some clinicians hesitant to use the gas, especially since other well-studied options for pain relief already exist. One of the interesting things is that people who use nitrous oxide report really high satisfaction with their births even though the effect on their pain isn't really that good. It's possible that pain relief might not be the best measure of success with nitrous oxide. It's not really intended to relieve pain so much as to help people cope with the pain.