

Nitrous Oxide and Oxygen Analgesia

Pain Management for Short And Minimally Invasive Procedures

Ask your healthcare provider if nitrous oxide can be used during your procedure!

What is nitrous oxide?

Nitrous oxide is a safe and effective anxiolytic and analgesic agent that is mixed with oxygen. Nitrous oxide is used during procedures and treatments to help make you feel more comfortable.

How does the nitrous and oxygen analgesia system work?

The nitrous oxide and oxygen analgesia system delivers a safe mixture of nitrous oxide and oxygen which is inhaled through a mouthpiece or mask, providing you control over self-administration. Your doctor will ask you to breathe normally through your mouth, and within a few short minutes you should start to feel the effects of the gas mixture. The effects of nitrous oxide wear off within 5-10 minutes after the last inhalation of the N₂O/O₂ mixture.

Will this put you to sleep?

No. The provided nitrous oxide and oxygen ratio is not strong enough to provide anesthesia and put you to sleep. You will be able to hear and respond to any requests or directions the doctors may have.

How will I feel while using nitrous oxide?

Most patients will say it makes them feel relaxed, and their arms and legs feel light. Some patients feel tingling in their extremities and report feeling like they are floating, and/or sinking. As nitrous oxide is often called "laughing gas", some patients will feel giggly when the gas mixture takes effect. Moreover, your voice may temporarily change during the administration of nitrous oxide since vocal cords are affected by nitrous oxide.

How fast does nitrous oxide take effect and last?

For most patients, the calming, relaxing effects of nitrous oxide will be felt within a minute or two or after a couple of deep inhalation/exhalation cycles. Effects may vary from patient to patient. Once you stop inhaling the gas mixture, you will start feeling back to normal within 5-10 minutes.

Can I drive home after using nitrous oxide?

This is dependent upon the procedure performed, other medications administered, etc. For example, if you were also administered Valium for anxiety during bone marrow aspiration, the effects of Valium will not allow you to operate machinery safely. The effects of nitrous oxide and oxygen on their own are completely out of your system within a few minutes. It is reasonable that you can safely go home about 10 minutes after ceasing use of nitrous oxide and oxygen assuming all other discharge criteria have been met.

Does nitrous oxide eliminate pain?

Nitrous oxide does not eliminate pain. This is important to understand and to set your expectations. This will also not replace an anesthetic which is often used to numb locally (if required). Nitrous oxide is intended to take the edge off, help you relax, make you feel more comfortable, and reduce anxiety. This is not something you would use for extremely painful procedures.

Is nitrous oxide safe?

Nitrous oxide has been used for over 100 years [1] and has a long-standing safety record. When the Nitronox device is used, you are awake (conscious), responsive, and breathing normally on your own.

What are the typical side effects that one might feel?

Side effects are usually minimal. With a self administered protocol, you are in total control minimizing side effects. Side effects that can occur in some patients are dizziness and nausea. If you do not like how you are feeling, stop inhaling the N2O/O2 mixture and breathe room air. This should quickly reverse any negative effects.

For which urologic procedures is the nitrous oxide device ideal?

- Injections and Subchondral Injections
- Bone Marrow Harvesting
- Vein Procedures
- Childbirth
- IV Starts/Blood Draws
- CT Scans
- Incision and Drainage
- Cosmetic Procedures
- Fracture Reductions
- Urogenital Procedures
- Liposuction
- Lumbar Punctures
- Sutures
- Hair Injections
- Hair Grafting
- Vein Procedures
- Casting/Cast Removal

Benefits and Advantages

- Provides comfort and reduces anxiety
- Self-administered
- Fast acting
- Quick recovery
- Alternative for oral medications and opioids

Will my insurance cover this procedure?

While nitrous oxide has been used during medical procedures for decades, the use of nitrous oxide and oxygen analgesia systems is not currently covered by insurance. It is considered an add-on service for treatments and procedures, which you will discuss with your provider.

How much does it cost?

The cost of using a nitrous oxide and oxygen analgesia system varies by clinic and specialty. Your healthcare team can assist you with any questions that you may have in regard to adding the use of nitrous to your procedure/treatment and provide you with pricing.

References

[1] [Nitrous Oxide for the Management of Labor Analgesia. AANA Journal, February 2018, Vol. 86, No. 1](#)