

Selection Criteria

Indications

- Dental anxiety
- Needle phobia
- Gag reflex
- ASA II patients where condition exacerbated by stress (e.g. fainting attacks/hypertension/stable angina/well controlled asthma/epilepsy)
- ASA II patients where condition affects ability to cooperate (e.g. parkinson's)

Considerations

- Patients must be happy to wear a mask, breathe through their nose, and sit still on the dental chair.
- Children of a preschool age will not usually have adequate understanding for sedation to be effective.
- If patients are claustrophobic they may find inhalation sedation is not suitable for them.
- Sedation can cause nausea, sweating, dizziness, headaches and/or drowsiness in some cases but usually the percentage of nitrous oxide being given is set to avoid this.
- For some patients their anxiety may be too severe for nitrous oxide to help manage - in these cases it may be appropriate to consider other forms of behavioural management such as intravenous sedation with midazolam, general anaesthesia, or cognitive behavioural therapy.
- Complex treatment on upper anterior teeth is generally not appropriate to carry out with inhalation sedation as the position of the mask can make access difficult; simple extractions here are fine however.

Medical Contraindications

- Intraocular injection of gas (within 3 months)
- History of middle ear surgery or obstruction
- Nasal/upper respiratory tract obstruction
- Enlarged tonsils/adenoids
- Chronic obstructive pulmonary disease
- Emphysema
- Bronchiectasis
- Presence of alveolar bullae
- Pulmonary hypertension
- Pneumothorax
- Cystic fibrosis
- Congestive Heart Failure
- Bowel obstruction
- Malnourishment/ low levels of B12 & folate
- History of substance abuse
- Alcoholism
- Severe emotional/psychiatric disorders
- Multiple Sclerosis
- Myasthenia gravis
- Pregnancy

Contraindicated Medications

- Methotrexate
 - Immunosuppressant drug used in the treatment of rheumatoid arthritis, psoriasis, Crohn's disease
- History of bleomycin sulphate injection
 - Chemotherapy drug used in the treatment of lymphoma, squamous cell carcinoma (penis, cervix, head and neck, vulva), testicular cancer, ovarian cancer
- <https://bnf.nice.org.uk/interaction/nitrous-oxide-2.html>

Patient Information

Nitrous Oxide, sometimes called 'laughing gas' or 'happy air', is a colourless, slightly sweet gas. In dentistry, it is given alongside oxygen through a nosepiece to help relieve anxiety and allow dental treatment to take place.

Preparing for your appointment

It is important that you let the dentist know about any medicines that you are taking and your full medical history, including whether you could be pregnant or are breastfeeding.

Before your appointment you should practise breathing in and out through your nose in a slow, calming and mindful way. There are lots of websites and apps that can help with developing 'mindfulness'. An excellent resource for children and young people with dental anxiety can be found at: <https://dental.lltff.com/>

On the day of treatment, you can continue to eat and drink as normal. A light meal a couple hours before arriving is ideal. Take any regular medications as normal unless specifically told otherwise. Any medications/inhalers that you may need should be brought with you. Avoid alcohol and caffeine. Wear loose, comfortable clothing.

If you have a cold or blocked nose, you should call in to rearrange your appointment.

Children under 16 must be accompanied by a legal guardian but you should otherwise avoid bringing people with you to the appointment where possible - distractions from friends or family (even if well meaning) can make the sedation less effective.

During the sedation

The nosepiece will be placed over your nose and the gas gradually introduced. You may get a feeling of warmth throughout your body as well as some tingling and light-headedness. You may feel drowsy but you will still be awake and be able to swallow, talk and cough as needed. Once you are feeling relaxed, the dentist may also use local analgesia (pain relief that numbs the site of the dental treatment) and then start the treatment.

If you are uncomfortable at any time you should let the dentist know by raising your hand.

Side effects of inhalation sedation are uncommon but can include: nausea, being sick, sweating, dizziness, headache and drowsiness. If you feel this way please tell the dentist and the amount of nitrous oxide can be adjusted to help you feel more comfortable. At the end of the procedure, the dentist will give you some extra oxygen to make you feel more alert, reduce the risk of any side effects, and aid your recovery.

After your appointment

Nitrous oxide and its effects are breathed out of your system very quickly once the treatment has finished. You may feel a little dizzy at first and so it is important to let the dentist sit you up gradually rather than jumping out of the chair. The dentist will check you are well before you leave the surgery. You can carry out normal activities following inhalation sedation, though it is advisable not to do anything too strenuous such as contact sports.

Alternatives to inhalation sedation

- Not undergoing treatment at all
- Having treatment without any sedation
- Alternative form of conscious sedation (e.g. intravenous/intranasal/oral)
- General anaesthesia

Please let your dentist know if you have any questions about inhalation sedation or any alternative options.