



FACT SHEET: SEDATION

Sedation allows dentists to create a state of relaxation and thus manage the fear and pain patients may experience during dental procedures. There are several different types of sedation in dentistry.

- **Local anesthesia** is administered by injecting medication into tissue or by applying a medication topically to an area to eliminate sensation (freezing).

- **Minimal sedation** is used most frequently in dentistry and usually involves taking medications orally. All bodily functions remain normal and the person is able to breathe on his or her own. The patient may respond normally to verbal commands and may experience some degree of amnesia about what happened during their dental appointment. Nitrous oxide or "laughing gas" may be used to achieve minimal sedation and in combination with a recommended dosage of oral medication.

- **Moderate sedation** is achieved by using medications that can be taken orally or intravenously (IV). Patients who undergo moderate sedation are awake and respond to touch and/or verbal commands. All bodily functions remain normal, and the patient does not need assistance breathing.

- **Deep sedation** can be achieved by injecting medication, giving oral medications, and in combination with gases. Patients who are deeply sedated are not easily awakened but may respond to some stimulation. Patients may need some breathing assistance at deeper levels.

How does it work?

Patients who are minimally sedated inhale nitrous oxide through a mask during their dental appointment and/or may take a recommended dosage of a single oral sedative medication. Moderately sedated patients generally have taken a medication or a combination of medications while in the dental office. The medication causes the patient to become sleepy and feel relaxed. The dentist will give the patient specific instructions and you will be asked to avoid driving while you are on the medications.

What kinds of medications are involved?

To reach a level of minimal sedation, a mixture of nitrous oxide and oxygen (30-50 percent) may be used, possibly in combination with a minimal dose of an anti-anxiety (benzodiazepine) pill. In

combination with nitrous gas, it is important that patients take only one type of drug under minimal sedation. Moderately sedated patients also generally take benzodiazepines. The most common benzodiazepines prescribed by dentists include Valium®, Halcion, Xanax, and Ativan. Patients who are deeply sedated may receive benzodiazepines combined with opioids.

What are the advantages and disadvantages of sedation in dentistry?

Minimal and moderate sedation reduce anxiety that is typically associated with dentistry and allow the patient to relax. The amnesia usually associated with these methods also is a plus for many patients.

However, sedation in dentistry does have disadvantages. Minimal sedation usually cannot be administered to patients with respiratory problems like emphysema or asthma or those who are sensitive to the class of drugs used for minimal sedation.

With moderate sedation, the level of sedation cannot be adjusted without administering additional medications and sensitivity to certain medications can be a factor. Also, the patient should be prepared for supervision after the dental visit until the effects of the medications have passed. This applies to sedation administered both orally and intravenously.

With intravenous deep sedation, a needle has to be put in the arm or hand, so it may not be the most relaxing method if you are afraid of needles. It is possible to experience complications, such as hematoma (a localized swelling filled with blood) at the site where the needle entered. In addition, recovery from IV-administered or oral medications may not be complete at the end of dental treatment, so the patient should be prepared to be escorted home by a responsible adult.

Is it safe?

Sedation is safe although you should talk to your dentist and/or the specialist and gain a thorough understanding of how it works and what is expected of you before the procedure. Your medical history will be examined comprehensively to ensure safe sedation and your vital signs will be monitored throughout the entire procedure to confirm that your blood pressure, pulse rate, and blood oxygen levels are normal.