

# stDental Times

September 05, 2011



## *Our Sincere Greetings*

Peace, hope, and joy are sentiments that can never been expressed often enough. Another is our heartfelt gratitude to you, our patients, who have made the growth of our practice possible through your loyalty and friendship.

Thank you again for voting Santa Teresa Dental Best Dentist - two years in a row.

Reflecting back, 2011 was a busy year for us. We expanded and added an additional operatory designated just for children. We incorporated nitrous oxide aka laughing gas. Dr. Andrew Huang finished the comprehensive esthetic residency program hosted by Dr. Crispin of Esthetic Professional in Tarzana, CA. He is also going through the accreditation process with the Academy of General Dentistry as well as the American Academy of Cosmetic Dentistry. We are now providers of Advanced Cardio Life Support (ACLS) and entire staff are providers of Basic Life Support (BLS).

We promise that we will continue to improve our skills to uphold the best quality of care to our dear patients.

Sincerely,  
Dr. Andrew Huang &  
Dr. Ann Lien

Produced in-house by Santa Teresa Dental to improve your dental health and awareness

## Inhalation Sedation aka Laughing Gas

**What is it? And what does it do?**

Inhalation sedation is a type of light sedation administered via a nasal hood with a controlled dosage of Ni-

trous oxide ( $N_2O$ ) and Oxygen ( $O_2$ ) mix.

Sounds like fun!! It pretty much summarizes the effects of nitrous oxide. It helps to alleviate pain – and it induces a pleasurable feeling. After 5 minutes or so of breathing in the gas, patients should feel a euphoric feeling spread throughout the body. Patients will feel a bit light headed and often people get “the giggles.” Hence the commonly known name of “laughing gas.”

**How does nitrous oxide work?**

Today, we know that nitrous oxide ( $N_2O$ ) on its own can only safely be used for short periods of time and that it is safe to use for longer periods of time if one mixes it with oxygen ( $O_2$ ).

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**off the mark** by Mark Parisi  
www.offthemark.com



## Different Level of Sedation

In this age of anxiety, pain control and sedation have become important aspects of dental care. It is now becoming more common for Dr. Andrew Huang to provide in-office sedation for routine dental procedures.

Dental sedation is a technique that can be used when a patient suffers from dental anxiety or dental phobia. Depending on the extent of the anxiety or phobia, varying degrees of dental sedation can be utilized, including inhalation nitrous oxide sedation, light sedation as well as conscious sedation with oral sedatives, and dental general anesthesia.

**Levels of Sedation - there are four levels of sedation**

**Anxiolysis** – it is also known as light sedation. It helps slightly anxious patients who state that they need the “edge taken off” in order to receive treatment. Many patients presently benefit either from inhaling nitrous oxide or from a medication given pre-operatively.

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## Inhalation Sedation

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Therefore, the “laughing gas” used now is called  $N_2O-O_2$ , and contains at least 30% oxygen. In medicine, a mix of 50% Oxygen to 50% Nitrous Oxide is commonly used.

Depending on the concentration and length of administration of laughing gas, three levels of sedation can be experienced after an initial feeling of light-headedness.

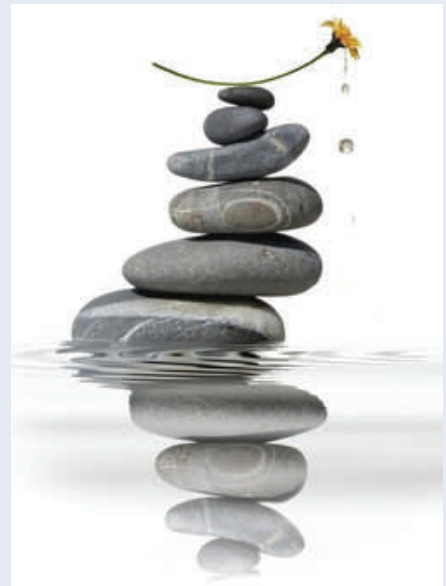
- a tingling sensation, especially in the arms and legs, or a feeling of vibration, quickly followed by warm sensations, and
- a feeling of well-being, euphoria and/or floating. During heavier sedation, hearing may dissolve into a constant, electronic-like throbbing.
- At a deeper level of sedation, sleepiness, difficulty to keep one’s eyes open or speak (“dream”) can occur.

Interestingly, the actual mechanism of action of  $N_2O$  is still unknown. However, it’s been observed that  $N_2O$  depresses almost all forms of sensation – especially hearing, touch and pain, and that it seems to dis-inhibit some emotional centers in the brain. The ability to concentrate or perform intelligent acts is only minimally affected, as is memory.

### How is nitrous oxide administered?

The equipment used for delivering “laughing gas” is quite simple. It consists of a supply of compressed gases and an apparatus which delivers the gases to the client. By turning some knobs and flipping on/off switches, Dr. Huang and Dr. Ann can produce the desired mix of  $N_2O-O_2$ . Flowmeters and pressure gauges allow them to keep an eye on the flow of gases.

The desired  $N_2O-O_2$  mix is fed through a tube to which a nasal hood is attached. This hood is put over patients’ nose. All patients have to do now is breathe normally through the nose.



### What are the advantages of nitrous oxide?

- Nitrous oxide works very rapidly – it reaches the brain within 20 seconds. The relaxation and pain-killing properties develop after 2 or 3 minutes.
- The depth of sedation can be altered from moment to moment, allowing the doctors to increase or decrease the depth of sedation.
- Nitrous oxide can be given for the exact time span it is needed for and no more. It can be switched off when not needed and then switched on again.
- There’s no “hangover” effect – the gas is eliminated from the body within 3 to 5 minutes after the gas supply is stopped. Patients can safely drive home and don’t need an escort.
- With nitrous oxide, it’s easy to give incremental doses until the desired action is obtained. So the doctors have virtually absolute control over the action of the drug, preventing the possibility of accidental overdoses.
- For certain procedures – those involving gums rather than teeth (e. g. deep cleaning) – it may be possible to use nitrous instead of local anesthesia.  $N_2O$  acts as a painkiller on soft tissues such as gums. However, its pain-relieving effects vary a lot from person to person and can’t be relied upon.

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## Sedation Level

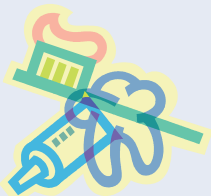
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- **Conscious Sedation** - this is a minimally depressed level of sedation. This level of sedation provides a heightened state of relaxation. It often includes medication the night before an appointment, morning of the appointment, and during the appointment. Dr. Huang is licensed by the State of California to administer Adult Oral Conscious Sedation.
- **Deep Sedation** - it refers to a state between unconscious and conscious dental sedation. We avoid this level of sedation since it is not controlled.
- **General Anesthesia** - this level of sedation renders a patient unconscious. It is generally known as sleep dentistry. Santa Teresa Dental has partnered with Dr. Alex Targ, a highly experienced Board Certified General Anesthesiologist to provide Sleep Dentistry to both adults and children. Dr. Alex Targ uses the highest quality equipment in a precise, safe manner and state-of-the-art monitoring to ensure sedated patient is asleep, comfortable, and safe during the entire procedure and after. By partnering with Dr. Targ, patients and parents often avoid expensive hospital facility fee.

Dental sedation provided by Dr. Andrew Huang has already helped many anxious patients get the dental care they need while in a heightened state of comfort and relaxation. Besides additional training and certification which includes ACLS (Advanced Cardiovascular Life Support), the entire staff at Santa Teresa Dental is highly sensitive to the need of fearful patients. Ask about it at your next visit with us.

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## Introducing Becky Wallingford, RDH



**Associate of Science in Dental Hygiene**

-Foothill College 1996

**Bachelor of Arts in Environmental Studies**

-San Jose State University 1992

**Associate of Science in Laser Technology**

-San Jose City College 1986

We are so excited to welcome Becky as Santa Teresa Dental's first dental hygienist.

Becky has 15 years of experience as a Registered Dental Hygienist. She is licensed to administer anesthesia and nitrous oxide. With her AS degree in Laser Technology, she hopes to incorporate a soft tissue management program with Laser gum therapy in the very near future.

At her spare time, she enjoys reading, gardening and playing video games with her 13 year old son.

**Share a Smile**  
**New Patients Are**  
**Always**  
**Welcome!**

*The finest compliment we can ever receive is a referral from our friends and patients.*

**Santa Teresa**  
**DENTAL**

Family • Cosmetic • Sedation • Invisalign

**Office Information**

**Andrew Huang, DMD**

**Ann Lien, DDS**

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 Morgan Hill, CA 95037

**Office Hours**

Mon, Tue, Thu, Fri 9am - 5:30pm  
 Sat By Appt

**Contact Information**

Phone: (408) 782-6568

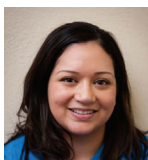
Email: info@stDental.com

Website: www.stDental.com

**Office Staff**



**Becky Wallingford**  
 Registered Dental Hygienist



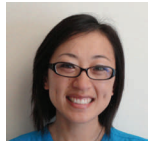
**Sarah H.**  
 Treatment Coordinator



**Vanessa N.**  
 Patient Coordinator



**Luis M.**  
 Dental Assistant



**Pang V.**  
 Dental Assistant

## Inhalation Sedation

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- No injection is required. In case of slight needle phobia, nitrous oxide may help overcome that fear temporarily.
- Inhalation sedation is very safe. It has very few side effects and the drugs used have no ill effects on the heart, lungs, liver, kidneys, or brain.
- Inhalation sedation has been found to be very effective in eliminating or at least minimizing severe gagging.

### Are there any disadvantages?

Some people are not comfortable with the effects of laughing gas. Some are afraid that they might lose control or that it makes them feel nauseous. If you're prone to nausea, it's a good idea to have a light meal about 4 hours before your appointment. If that's not possible (e.g. an early morning appointment), make sure your stomach isn't completely empty – but don't stuff yourself straight beforehand. Some people will not achieve adequate sedation with permissible levels of oxygen. If you can't breathe through your nose either because you're a pure mouth breather or your nose is blocked, or you feel too claustrophobic when something is put over your nose, it can't be used.

### What about bad experiences with laughing gas?

On rare occasions, people have reported a bad experience with nitrous oxide. Usually this is due to over-sedation. This is easily reversible by reducing the amount of N<sub>2</sub>O. For example, a few people have reported auditory and "physical" hallucinations, dizziness, or vertigo.

Don't panic if you should experience this. Let Dr. Huang and Dr. Ann know about any unpleasant sensations or symptoms so that they can adjust the percentage of N<sub>2</sub>O. Laughing, becoming giddy, crying, or uncoordinated movements are other signs that the N<sub>2</sub>O concentration is too high.

There aren't any major contraindications to inhalation sedation, except for M.S., emphysema and some exotic chest problems. It hasn't been proven to be safe during the first trimester of pregnancy, so the doctors do not recommend the usage.

Because a patient has to breathe it in through the nose, it's not suitable for people who have a cold or some other condition which prevents them from breathing through the nose.

A person can't be allergic to N<sub>2</sub>O. It's also safe to use if a patient suffers from epilepsy, liver disease, heart disease, diabetes, or cerebral-vascular disease. It is also used quite successfully in many people with respiratory disease – but it depends on the exact nature of the disease, so check with the doctors.