

Nitrous Oxide (N₂O)

Nitrous oxide is a naturally occurring component of our atmosphere. Along with carbon dioxide, helium, hydrogen, oxygen and a few other gasses, nitrous oxide helps make up the air we breathe. In medicine and dentistry, nitrous oxide is used as a medicinal adjunct to treatment. Its properties include producing mild analgesia (discomfort relief) and anxiety reduction. In dentistry, we mix nitrous oxide with oxygen to ensure safety. Our patients breathe an average of 50-80% oxygen and the delivery equipment won't allow anything less than 30% oxygen to be administered. Normal room air contains less than 20% oxygen so the child is receiving more oxygen than they normally would.

In pediatric dentistry, successful dental treatment has three components. One is quality and durable dental restorations. Another is education to prevent dental disease. And the third is patient comfort and cooperation. One cannot be done efficiently without the other. Many children have significant anxiety in regard to dental treatment. Two characteristics of children make it difficult for them to overcome these anxious feelings. One is that children are wonderfully expressive with their feelings and so they act out their apprehensions rather than suppressing them. The other characteristic is that children do not have the experience upon which to base a feeling of trust and compliance. Nitrous oxide-oxygen allows children (and adults for that matter) to by-pass their fears and relaxes them while they remain awake and alert. Young (and old) dental patients who are relaxed during treatment experience less discomfort, receive higher quality dental treatment, and generally have a more positive experience. This experience of non-stressful dentistry helps the dentist to build a foundation of trust and compliance with your child. In the long run, this will enable the patient to ensure themselves less dental problems and greater dental health for a lifetime.