Nitrous Oxide in Dental Practice

Nitrous oxide, an inhalation analgesic with unique properties, cannot control all types of pain, but is a cornerstone in dental practice. This agent possesses a number of useful characteristics: it is a sedative that can be dose-adjusted in response to the patient's reaction; it is easily administered; it has few contraindications and a good safety profile when administered correctly; and it has anti-anxiety properties.

Essentially, nitrous oxide is a suitable drug for the anxious patient undergoing painful dental treatment, and is an important adjunct to pain control together with local analgesia. Further, nitrous oxide-oxygen analgesia provides reduced pain perception and sedation without loss of consciousness, leaving vital reflexes intact.

Braces for Adults

Braces aren't just for teenagers. No matter your age, it's never too late to improve your dental health and beautify your smile. About 1 million Americans and Canadians over the age of 18 are getting braces. As a result, general practitioners today are more familiar with potential concerns and special needs of their adult patients. Some general dentists have the training to diagnose and treat orthodontic problems.

Why do adults need braces?
Some adults never received orthodontic treatment as children to correct problems such as crooked or crowded teeth, overbites, underbites, incorrect jaw position, or jaw joint disorders. If left untreated, these problems can result in tooth decay, gum disease, headaches, earaches, as well as speaking, biting or chewing problems.

Is orthodontic treatment different for adults?
Like children, adults can receive the same benefit of an improved smile and oral health from wearing braces. However, since adults are no longer growing, treatment may take longer than it does for teenagers. The average adult wears braces for 18 months to three years. After braces are removed, you may need to wear a retainer to maintain the result of your treatment.

What types of braces are available?
Braces are custom-made appliances that use gentle pressure to straighten your teeth and correct your bite. While some practitioners still favor metal braces as the most reliable, new material and other advances offer smaller, less noticeable braces than were available a generation ago, and these materials are equally effective. Instead of metal, you can opt for clear or neutral-colored ceramic braces, or removal invisible aligners. Ask your dentist for a recommendation on which type of braces would provide the best result for you.

How much do braces cost?
Cost depends on the type of braces recommended by your dentist and can range anywhere from $3000 to $5000. Check with your major medical or dental insurance provider to determine if your plan covers orthodontic work.

**How do I adjust to life with braces?**
You probably will experience some discomfort or difficulty speaking or eating at first. While wearing braces, keep your teeth and brackets clean. If you wear cemented, non-removable braces, food and plaque can get trapped between teeth and gums. To reduce your risk of cavities, follow a regimen of brushing, flossing and rinsing, and reduce your consumption of sweets and carbohydrates. Plaque and sugar combine to make acid, which can cause decalcification (white spots) on teeth and tooth decay if left behind.

**Which foods should I avoid?**
It’s a good idea not to eat foods that can damage or dislodge braces. Hard foods such as candy, raw carrots, corn on the cob, pretzels, nuts, popcorn and crushed ice are off limits. Sticky foods to avoid include caramel, taffy and gum. These foods can get stuck between teeth and gums or bend wires knocking bands or brackets loose. If this results in damage to braces, treatment may be extended.

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**Smokeless Tobacco and Oral Cancer**

Tobacco use is among the most important risk factors for a range of oral pathologies, including oral cancer, oral mucosal lesions, gingival recession, periodontal disease, and dental caries. All of the major forms of tobacco used—cigarettes, cigars, pipe tobacco, and smokeless tobacco—have oral care consequences and have been shown to increase the risk for oral cancers. Evidence suggests that higher risks are associated with greater amounts of tobacco used and longer duration of use. These findings have been consistent across numerous cultures and countries. Although tobacco smoking and alcohol consumption are the two primary risk factors for oral cancer, smokeless tobacco is also a contributing factor.

Two types of smokeless tobacco—snuff and chewing tobacco—are in common use. Snuff tobacco is cured and may be a dry powder, a moist powder, or fine-cut strips of tobacco leaf; a small amount is usually placed between the lip or cheek and gum. Chewing tobacco, either loose leaf or a flat compressed cake, is placed in the mouth and chewed, or held in place between the cheek and gum. Among the carcinogens in smokeless tobacco, the major contributors are the tobacco-specific N-Nitrosamines (TSNA), formed during fermenting and curing. In the US, the primary users of smokeless tobacco are white adolescent and young adult males, Native Americans, and Alaskan Natives; approximately 19% of male high school students had already used smokeless tobaccos by 1993.

Although there has been a consistent decline in cigarette smoking of approximately 50% in US adults during the past few decades, there has been increased use of smokeless tobacco, believed to be a less harmful habit, with less risk of lung cancer or emphysema than cigarette use. Nevertheless, prolonged use of smokeless tobacco is an important risk factor for oral squamous cell carcinoma. Oral mucosal lesions are common in smokeless users and may even develop with relatively limited use.

Fortunately, the oral mucosa must undergo prolonged exposure to the carcinomatous agents in smokeless tobacco before cancer develops. Supporting evidence from one study showed that 78% of 128 smokeless tobacco users with oral carcinoma had used snuff or chewing tobacco for longer than 40 years, while only 1.6% had been users for less than 20 years. Professional baseball players, who are frequent users of snuff and chewing tobacco, were
studied to determine the risk or oral lesions; 46.3% were found to have leukoplakia, a white mucosal lesion. The risk of leukoplakia increased with increased duration of use, increased amount of use, and recent use of smokeless tobacco.

Considerable evidence in the literature demonstrates an association between smokeless tobacco use and oral cancer. A North Carolina Study of 255 women with oral and pharyngeal cancer, and 502 controls identified a relative risk of 4.2 associated with snuff taking. Further evidence for a causative association included the facts that cancer risks were greatest in the location of the mouth where snuff had been placed, and that risk increased with duration of use. One study reported that 80% of patients with oral cavity carcinoma developed their cancers in areas where the wad of tobacco was held. In comparison, among 882 patients who were not smokeless tobacco users, only 8% of oral cancers were in these areas. Another study demonstrated that former users of smokeless tobacco had a relative risk of 1.5 for developing soft tissue sarcoma compared to nonusers. Despite these findings, studies refuting this association also exist.

Regardless of its form, since tobacco use is the most clearly identified cause of oral cancers; cancer screening and tobacco cessation counselling by dental practitioners should be emphasized as an essential strategy in comprehensive tobacco control efforts.

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**Implants**

**Who does implant dentistry?**

All ICOI members do! Each office is involved with implant dentistry. Implants involve two phases of treatment, placement of the implant(s) and placement of the crown(s) or restoration(s). Some dentists feel they can offer better solutions for you by using the different expertise of other team members, e.g. performing the surgery or the restoration. Other practitioners feel that performing both the surgery and the restoration within one office is optimal for many patients.

**What exactly are dental implants and what can they do for me?**

Implants are substitutes for teeth and they are today's best alternative to your natural teeth. They offer you a permanent or secure solution for replacing one or more teeth. They are made of biocompatible materials, just the same as hip implants or similar orthopedic devices, and function as anchors or support for traditional forms of dentistry, such as crowns, bridges or dentures. Many of our patients will tell you that implants have changed not only their smiles, their overall appearance but also even their lives! There are numerous other reasons to choose dental implants:

- Esthetically, they support teeth that look like real teeth. Functionally, dental implants feel and act like real teeth.
- With implants, you can eat and chew again without pain or irritation. Foods that were forbidden are now back in the diet.
- Implants eliminate the need for distasteful adhesives. There is no longer a need to use "glue" when your prosthesis is anchored to implants.
- Implants can actually improve the taste of food. With less plastic covering the roof of your mouth, you can enjoy natural flavors and sensations again.
- Lastly, implants can help maintain your bone structure and support your facial tissues. They can reduce or eliminate bone atrophy, which causes "shrinkage" or facial cosmetic changes.

**Are implants successful?**

Implants, as we know them today, have been in existence for at least twenty-five years. For the
last ten years, however, success rates at may treatment centers are consistently over 95% with proper personal and professional care. Few forms of medical, orthopedic or dental treatment have such high success rates.

What is the procedure like?
There are actually two phases to implant dentistry:

Phase 1:
Using very accurate surgical techniques, an incision is made in the gum tissues and implants are placed into dimensionally controlled sites (depth and width) in the jawbone. The gum tissues are then closed and the healing phase begins. This may take anywhere from 3-6 months to ensure a strong base.

Phase 2:
Creating and fixing the new tooth or teeth to the implant structure constitutes the second and final phase. Implants can replace a single tooth, several teeth or your dentures.

Are they expensive?
Initially, you might feel dental implants are expensive. However, they represent a more permanent and natural solution than dentures and partials. Thus, there is a greater initial investment. They should last for years, particularly if you have an "ideal" case. Independent surveys of implant patients show that they felt the investment was worth every penny and would do it again!

How much do they cost?
Each case is different. Cost is a function of your particular needs. After a complete examination, your doctor will more specifically determine your dental needs and the best treatment alternative(s) for you. At that point, you can specifically address the question of cost and be helped with financial arrangements.

Does it hurt?
Usually, discomfort is not a problem. In fact, many have said that having a tooth pulled was more painful! For the placement of an implant(s), your doctor will use one of many anesthetic regimens so there won't be any discomfort. When you leave the office, you will be given appropriate medications. We urge you to ask other patients how they felt after implant therapy. Your doctor(s) and their office teams are available at anytime to make sure that you are comfortable.

What benefits can I really expect?

- Eat whatever you like! Implants improve your health with the ability to chew a wider variety of foods.
- Smile with confidence. Discolored or missing teeth ruin your appearance. Implant supported restorations help increase your self-esteem. People will approach you more readily.
- Express yourself clearly or simply be understood. Implants increase the retention and stability of your teeth.
- Improve your external facial structure and decrease the likelihood of continued bone loss. Your jaw and teeth will smile together.

How long will it take?
Recent advances by implant manufacturers are reducing the time for initial implant procedures. Treatment for the simple cases could take anywhere from 4-8 months, based on where the implants are placed and the type of restoration you desire. Do not compromise because your
implants and the new teeth that they support should last for years.

**Will I be without teeth?**
You will never be without teeth. Your doctor will make sure that in the interim period, you look and feel very natural.

**Am I too old?**
Implant patients can be in their early teens or be mature adults in their seventies and eighties. Good health and adequate bone are the most critical factors in evaluating implant candidates.

**Is one implant system better than the others?**
No. There are many FDA approved implant systems available to your doctor.

**What will it feel like when it is done?**
Once the entire procedure is complete and the final restorations placed, they will actually feel or function like your natural teeth!

**How do I take care of my implants?**
Normal routine home care and professional cleaning visits are required. It is important to know that every 3-4 months, you will need to have a routine cleaning and re-care treatment and evaluation. An individualized program will be designed for you to optimally care for your new teeth.

**Are there alternatives?**
Your doctor should describe all reasonable alternatives. Then you will make a decision together as to what is best for you.

**When can I get started?**
As soon as your doctor has all the necessary information and team members in place to give you excellent short term as well as life long care.