

Your Mouth: A Window to Your Overall Health

By Dr. David M. Blende, Special Needs Dentist

If your son had an abscess, yellow pus, inflamed tissue, or live bacteria on his face, would you take him to the doctor right away? Of course you would! But often, when the same condition occurs inside a person's mouth, where it is not so easily seen, it goes untreated for years and years. Routinely, other conditions that have "silent" symptoms are treated—conditions like high blood pressure, diabetes, high cholesterol, and cancers. However, dental conditions often go ignored. It is unfortunate that oral health is frequently overlooked by patients and physicians alike, because oral health is not just a cosmetic or a grooming issue. Rather, oral health is linked to total body health.

We all know that meeting the needs of a loved one with a disability or complex medical condition presents challenges everyday, and it becomes very easy for a parent or caregiver to allow concerns such as dental health to fall by the wayside in the face of other priorities. But healthy teeth and gums are necessary for overall health. And people with special needs are especially predisposed to rampant tooth decay and aggressive gum disease, often as a result of their medical conditions or prescribed medications. Not only can a person's ability to chew, eat, and smile be affected, but infections can also seed to other parts of the body, jeopardizing the person's overall medical health. Problems that go unchecked can result in costly future treatments.

For these reasons, taking care of the teeth and gums should be as important to every person's daily routine as taking medications or exercising. And since dental diseases will not go away on their own, professional care from a dentist is necessary for maintaining oral health. Seeking the right dentist is important, as very few dentists treat those with special needs. To further complicate the lack of available care, many patients with severe medical conditions, dementia, or other disabilities are offered only tooth removal and dentures as

a method for remedying oral problems, rather than the more functional and cosmetically appealing dental solutions more readily available to the general public.

lower jaw), and result in significant pain and potentially life-threatening infection. Adults are especially vulnerable to gum disease. Chronic diseases such as temporo-

You Cannot Be Healthy without Oral Health

Good Oral Health

Healthy Mouth
General Health
Comfort
Ability to Taste, Chew, and Swallow
Speech
Positive Self Image, Smiling
Good Socialization and Behavior
Cost-effective Preventative Care

Poor Oral Health

Dental Decay, Gum Disease, and Infections
Increased Risk for Systemic Diseases
Moderate to Severe Pain
Malnutrition
Altered Communication
Poor Self-image and Self-esteem, Depression
Diminished Quality of Life
Expensive Emergency Dental Care and Restorative Care

The leading dental diseases are dental caries (decay) and periodontal (gum) diseases. They are so common that they affect nearly everyone at some point in life.

Tooth decay (sometimes called cavities) is actually a transmissible, chronic, infectious disease. Bacteria live in every person's mouth and feed on the same carbohydrates we do (sugars and starches such as milk, soda, candy, and even sticky fruits). The bacteria produce acids that destroy tooth enamel, resulting in tooth decay.

Gum (Periodontal) disease is a transmissible, bacterial infection that destroys the attachment fibers and supporting bone that hold the teeth in the mouth. It begins as gingivitis, an inflammation of the gums around the teeth. Left untreated, gingivitis becomes periodontitis, which involves progressive loss of the bone around the teeth, which may lead to loss of teeth.

Children are at risk for tooth decay, which is the single most common chronic childhood disease (five times more common than asthma and seven times more common than hay fever).^{*} It can affect children's growth, lead to malocclusion (a misalignment of the teeth or upper and

mandibular disorders, Sjögren's syndrome, diabetes, and osteoporosis further compromise oral health.^{*} Older adults are at risk because dental problems continue to worsen with age and include recession of the gums away from the teeth, severe gum disease, tooth-root decay, decay around old dental fillings/crowns, oral cancers, and tooth loss.

Medications can exacerbate oral problems. Dry mouth (xerostomia) is the condition of not having enough saliva to wash away food and neutralize plaque. In addition to causing such problems as a sore throat, hoarseness, or difficulty swallowing and speaking, dry mouth can lead to rampant tooth decay, periodontal disease, oral infections, and pain. There are more than 400 commonly prescribed medications that cause dry mouth, including antihistamines, diuretics, pain killers, NSAIDs, high blood pressure medications, and antidepressants.

What if Dental Diseases Go Untreated?

If dental diseases go untreated, a person's medical health is at risk. The U.S. Surgeon

Mandy Robbins: A Case Study

At the time of her treatment in 2004, Mandy Robbins was 21 years old. Mandy has profound autism and a history of seizures. As a small child, she had relatively few problems with her teeth. However, as she matured and her permanent teeth came in, her parents and dentist discovered she had Amelogenesis Imperfecta, an inherited disorder that affected the formation of the enamel on her teeth, leaving them soft and brittle. She also had a severe overbite that prevented her teeth from closing properly, leaving her without adequate chewing surfaces.

Mandy was referred to the Blende Dental Group by a dentist in her hometown, Dr. Ray Lyons, who was the past president of the Special Care Dentistry Association. She flew from Albuquerque, NM with her parents to be treated using the group's One-Sleep-Visit™ Total Dentistry Method. An assembled team of specialists completed Mandy's extensive full mouth restoration in less than one week.

| DAY | Treatment |
|------------------------------|---|
| Wednesday | Consult upon arrival in San Francisco from Albuquerque, NM |
| Thursday | Surgery One at California Pacific Medical Center (CPMC) Hospital <ul style="list-style-type: none">• 27 crown preparations and impressions• Extractions: #1, #16, #18, #32, palatally impacted #13• Root canal therapy: #6, #7, #11• 4 quadrants: gingivoplasty, curettage, and root planing |
| Friday, Saturday, and Sunday | Mandy and her family enjoyed the weekend touring San Francisco |
| Monday | Surgery Two at CPMC Delivery of 27 porcelain-fused-to-gold crowns |
| Tuesday | Mandy returned home to New Mexico with her case complete |

Mandy's dental work continues to be maintained as planned, and she is doing great. Ruthie Robbins, Mandy's mom, wrote an article for her local Autism Society's newsletter about the experience. Here is an excerpt: "Dr. Blende [was] able to save Mandy's teeth, correct her overbite as well as make her chewing teeth meet in the back. However, not only had he given her a functional mouth, but he also gave her beautiful white teeth, as he was able to place metal only on her chewing surfaces. We, as parents, would not advocate this extreme type

of dentistry in all cases. We decided it was right for Mandy on the basis that her mouth was going to deconstruct if we did not do something. Moreover, due to the difficulty she poses as a patient, this "extreme makeover" was by far the simplest method for her and for the professionals involved. The mouth she has now will last her a minimum of 40 years but probably more." To read the full article, please visit www.drblende.com/approach_mandy.html.



General refers to the mouth as a "window to your overall health."* This is because an examination of oral tissues can detect signs of nutritional deficiencies as well as many systemic diseases, including general infections, immune disorders, injuries, and some cancers. Sometimes oral manifestations may be the first sign of a disease and may serve as a prompt for further assessment and diagnosis.

The mouth is also a route for infections to travel to other parts of the body. There are over 49 types of bacteria commonly found in dental plaque. These bacteria typically do not enter your bloodstream when your gums are healthy. However, gum disease may allow bacteria to enter your bloodstream, where they can travel to the heart, lungs, kidneys, and other parts of the body, affecting general health.

Oral Health and Heart Disease and Stroke

While the exact relationship is still unknown, many researchers believe that when oral bacteria enter the bloodstream, they cause inflammation and subsequent plaque buildup in the blood vessels that can lead to inflammation of the heart. This increases risk for heart disease and bacterial endocarditis. The inflammatory response is also thought to increase risk of blood clots in the heart and brain, which may cause heart attacks, strokes, or even death.

Oral Health and Diabetes

If blood sugar levels are high in your body, they are high in your mouth as well, providing food for oral bacteria. Diabetes increases your risk of gum disease, cavities, tooth loss, and dry mouth. Diabetes lowers your resistance to infection, which makes managing gum disease difficult. Further complicating matters, gum disease also makes it more difficult for people who have diabetes to control their blood sugar.

Oral Health and Other Medical Conditions

Many other conditions have early symptoms that may be seen in your mouth before you experience symptoms elsewhere in your body, including Sjogren's syndrome, certain cancers, HIV/AIDS, eat-

ing disorders, osteoporosis, syphilis, gonorrhea, and substance abuse. People with weakened immune systems and those in skilled nursing facilities or hospitals are at greater risk of death due to an oral infection that enters their bloodstream. Elderly people with gum disease or oral infections are at greater risk for pneumonia, the leading cause of death attributable to

infection in patients 65 and older. Women who wish to become pregnant should know that gum disease has been linked to low-birth-weight and premature births. People with disabilities and complex health conditions are at greater risk for oral diseases that will further complicate their health conditions.

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Oral Health and Quality of Life

In addition to the direct health effects described above, oral health has a major impact on quality of life issues. Poor oral health can lead to pain, interrupted sleep, and missed activities. More than 51 million school hours are lost each year to dental-related illness, and employed adults lose more than 164 million hours of work each year due to dental disease or dental visits.*

Oral diseases can impact a person's ability to bite, chew, and swallow foods, which may limit food selection and result in inadequate nutrition. They may make speech problematic and contribute to negative social interactions, leading to poor self-image, self-esteem, and even depression.

Oral Health and People with Special Needs

Although oral health needs and concerns are the same for everyone, people with special needs are even more likely to encounter these problems as their health conditions are already complex. And because people with disabilities are often unable to cooperate with dentistry, either

physically or mentally, they face additional challenges with access to care.

Special Needs Dentists

Special needs dentists typically concentrate on those populations of patients who are poorly served by traditional dentistry—adults and children with disabilities, people with dental phobias or medical conditions, and seniors. In addition to their specialized training, these dentists often offer treatment rooms that accommodate patients who use wheelchairs, acknowledging the accessibility and positioning issues that confront many of their patients when trying to access a typical dentist's office.

When seeking a special needs dentist, be sure to ask them about their experience with issues that are relevant for your loved one, such as existing medical conditions, complex dental conditions (problems with tooth eruption, malocclusion, developmental defects, grinding, etc.), medications that may cause dry mouth, neuromuscular problems that affect the mouth (gagging, swallowing), uncontrolled body movements, seizures, cardiac disorders, gastroesophageal reflux, com-

promised immune system, latex allergies, mental capabilities, behavior problems, communication techniques, visual impairments, hearing loss, food pouching, mouth breathing, tongue thrusting, and risk for aspiration. Additional considerations should be made for people who are afraid of the dentist, as one in seven Americans are.

Most patients with special needs will require sedation in order to receive treatment. Options range from nitrous oxide, to oral sedatives (pills), to I.V. sedation to general anesthesia. Most general dentists are only able to offer limited treatments or limited sedation; however, it is important for patients and caretakers to investigate options and not to settle for the minimum level of care. A special needs dentist is more likely to be experienced in providing treatment that utilizes a variety of sedation techniques.

Prevention is Key

Regular, professional examinations and cleanings are the most cost-effective, oral healthcare you can receive. Restorative work is costly, and emergencies are painful. So see a dentist regularly. The standards for dental care are:

An Interview with Dr. David Blende

Interview conducted by Jan Carter Hollingsworth

Dr. David Blende is the founder of the Blende Dental Group, a San Francisco Bay Area private practice, which is dedicated to caring for the dental needs of people with intellectual and physical disabilities, the elderly, people who are medically compromised, and those who have a dental phobia. EP spoke recently with Dr. Blende. That interview follows:

Exceptional Parent magazine (EP): How did you get into the niche field of special needs dentistry?

Dr. David Blende (DB): I had the opportunity early in my career to work as an associate in a dental group with three pediatric dentists. There I realized that I enjoyed working with children, using my dental skills to work in small mouths. I later worked in Switzerland, and for part of my rotation, I was sent out to special care facilities because at that time Switzerland was the "hospital" for a lot of Eastern European and North African families [who had members with special needs]. They often sent their family members "away," and they were never seen again by the families. So it was much like the institutions that were used in the United States many years ago and were still being used by Europeans and Africans well into the 1980s. You would go to these facilities and find a mix of people—from those with profound disabilities to those who were higher functioning. I got to work with these patients very early in my career and developed the skill sets that have served me well in my current practice.

EP: To whom are you referring when you say "special needs dentistry?"

DB: In our office, special needs dentistry includes people with disabilities, those who are medically compromised or dentally complex, seniors with dementia, and those who are phobic about dental procedures. Often, by the time a patient gets referred to us, they're in crisis; for a person with a disability, it may have been three to five years since they were treated by their own dentist and their caregiver recognizes that there's something dramatically wrong with their mouth...or a person who is phobic may not have been to a dentist in 10 to 15 years. Therefore, for most of these patients, we use sedation dentistry so that they are pain-free, anxiety-free and the treatment can be done quickly, often in one appointment rather than over multiple appointments.

EP: What specialized training did you receive?

DB: When I was a new dentist, there were very few programs for

- Dental cleaning every one to six months. Some people may need this every 3 months. In some areas, this can be performed at home by a registered dental hygienist in alternative practice (RDHAP).
- Yearly dental exam with X-rays. In some areas, this can be performed at home by a dentist.
- Treatment, as needed. People who are have disabilities, are combative, uncooperative, or medically compromised may require sedation. •

*US DEPARTMENT OF HEALTH AND HUMAN SERVICES. ORAL HEALTH IN AMERICA: A REPORT OF THE SURGEON GENERAL— EXECUTIVE SUMMARY. ROCKVILLE, MD: US DEPARTMENT OF HEALTH AND HUMAN SERVICES, NATIONAL INSTITUTE OF DENTAL AND CRANIOFACIAL RESEARCH, NATIONAL INSTITUTES OF HEALTH, 2000.

*THE AMERICAN DENTAL ASSOCIATION

Dr. David Blende has practiced special needs dentistry for more than 20 years. Patients have traveled to the Blende Dental Group from over 18 countries and 30 states, where his team performs more definitive, full mouth rehabilitation under general anesthesia than any other practice in the country. For more information, please call 1-800-575-3375 or visit www.drblende.com.

training or treating the special needs population. My training in pediatrics was very helpful because oftentimes a toddler is not able to communicate their problems and needs, much like many of the patients that I am working with now. Intuition and the ability to read non-verbal communication is essential.

EP: What are some of the most common dental issues you see among the population of people with special needs?

DB: I want to give you more than a stock answer like “we see cavities and gum disease.” But truly, I think the biggest concern we have is that the oral cavity is a really delicate zone that people don’t like to have trespassed. Even well-intended parents and caregivers have trouble monitoring what is going on in the mouth of the person in their care. Attempts at brushing can be met with a great deal of resistance. So the problem is that the person’s dental condition goes overlooked—sometimes for years. Couple this with the fact that patients often don’t have access to capable care in the area where they live, and you can easily see how this becomes an enormous challenge for caregivers. As an example, you can bathe someone, talcum them, make sure they don’t have bedsores but to get their lips apart and to really look [in their] mouths...and do any type of daily, effective maintenance is very difficult. When the patient is in our office, under sedation, we can take photographs and x-rays of their mouth] and really see the problem for the first time.

EP: What do you think the future holds for special needs dentistry?

DB: In the spirit of being hopeful, it would be wonderful if there were sufficient federal funding for the special needs population. But the statistics we have seen are that 75 percent of this population nationally is under-funded. In order to provide adequate preventive maintenance and care, it will require federal or state assistance. A family’s first problem is finding funding. As an example of the grim part of the picture, recently one of the “saints” of the special needs dentistry world, Dr. Paul Glassman, Professor and Director of Community Oral Health at the University of the Pacific’s dental school, who has dedicated his career to creating community systems, healthcare delivery systems, and healthcare policy that positively affect the oral health of populations of people with special needs, is experiencing a reduction in size and scope of his program because of difficulties with financial support. On the bright side, the programs they’ve had in place for the last decade which have trained more dentists to be able to do these procedures for this population has increased as new dentists graduate. If they had just enough funding so that the dentists could survive doing this, the dental professionals would line up to take care of this population because it’s very rewarding to serve these families. The personal rewards to the dentists that treat these patients far outweigh the financial rewards. •