Oral Health and People with Autism Spectrum Disorder

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Maintaining the oral health of people with Autism Spectrum Disorder (ASD) is important, but it can be challenging. ASD varies widely in terms of symptoms and severity. Therefore, an individualized approach to providing home care and professional oral health care to those with ASD is recommended.

Rates of tooth decay and gum disease among people with ASD are comparable to rates among those without it. However, oral habits, diet and snacking frequency, coexisting conditions, and intellectual and developmental disabilities can significantly affect the oral health of people with ASD.

- **Oral Habits**
  People with ASD can have damaging oral habits, such as bruxism (teeth grinding), tongue thrusting, or self-injurious behaviors (for example, picking at gum tissue or biting lips). Over time, these habits and behaviors can result in worn and flattened teeth, temporal mandibular joint pain, poor tooth alignment, gum recession, and ulcers in the soft tissue and surrounding areas of the mouth.

  Another potentially damaging habit is eating non-nutritive substances. These can include ice, clay, chalk, dirt, sand, pens, and other objects. Over time, this habit can result in cracked or eroded teeth, temporal mandibular joint pain, or other problems.

- **Diet and Snacking Frequency**
  The risk of developing tooth decay increases significantly among people with ASD, who are often rewarded with soft, sticky, or sweet foods, and/or who tend to snack frequently throughout the day. Tooth decay occurs when the bacteria *Streptococcus*
**mutans**, which are part of the normal oral flora, use sugar in food to produce acid. The acid then removes minerals from the tooth surface. If acid is present throughout the day, the risk of tooth decay increases significantly.

- **Coexisting Conditions**
  Coexisting conditions controlled with medication can increase risk for tooth decay among people with ASD. Sugar is added to some medications to improve taste. Medications can also decrease salivary flow, resulting in dry mouth. Saliva plays an important role in removing food from the mouth and buffering acid.

  Some people with ASD take medications, such as phenytoin, to prevent seizures. In the presence of bacterial plaque, these medications can enlarge gum tissue and increase risk for developing gum disease. Gum tissue enlargement from taking seizure medication can also delay tooth eruption.

  Injury or trauma to the mouth from falls and other accidents occur more frequently among people with seizure disorders. Injuries or traumas can include chipped, broken, or extruded teeth.

- **Intellectual and Developmental Disabilities**
  Maintaining good oral hygiene may be problematic for people with intellectual or developmental disabilities. Some people with ASD may not have the motor skills needed to brush their teeth safely or effectively, may not understand verbal directions on how to brush and floss, or may not cooperate with parents or other caregivers while they are trying to brush and floss the person’s teeth.

**Oral Health Care at Home**
Maintaining the oral health of people with ASD can be difficult. Some may object to the toothbrush color. For others, having the teeth brushed is uncomfortable, or the flavor and/or texture of the toothpaste or floss are unacceptable. Sometimes the lighting or the noise level in the bathroom is disturbing. There are myriad reasons why people with ASD resist tooth brushing and flossing.

  These challenges can be addressed by letting the person with ASD select a toothbrush, toothpaste, and dental floss, as well as the location where brushing takes place. Limit choices to a soft bristled brush that is an appropriate size for the person (for example, a toothbrush with a small head for a child). Also, have the person try various fluoridated toothpastes until she or he finds one that is acceptable. The same can be done with dental floss.

  Brushing and flossing may feel intrusive to people with ASD. Working with an occupational therapist or an autism or behavioral professional can help address this issue. In addition, various techniques can be used to acclimate the person to brushing and flossing. Some of these techniques include timer use, tell-show-do, desensitization, Applied Behavior Analysis (ABA), and visual supports, which are described below.
• **Timer Use**—This technique involves setting a timer to help the person with ASD understand how long it takes to brush and floss. Egg timers and stopwatches work well.

• **Tell–Show–Do**—This technique involves explaining how the teeth will be brushed or flossed. The parent or other caregiver then demonstrates by brushing and flossing his or her own teeth, and then brushing and flossing the person’s teeth.

• **Desensitization**—This technique uses a gradual approach to introducing new activities and experiences. To desensitize a person to tooth brushing, start by touching the toothbrush to the lips. Over time, the toothbrush can be placed just inside the mouth, then on the front teeth, and then on the back teeth.

• **ABA**—This technique involves breaking each skill into specific steps. Each step is taught separately, and the person with ASD is rewarded as he or she learns each step. Do not use food as a reward, as this does not promote good oral health, especially in conjunction with tooth brushing.

• **Visual Supports**—This technique uses photographs with simple captions to describe a skill or concept in a reassuring manner that is easy to understand. Task strips that break down tasks into individual steps can be found on the Internet, or created by taking step-by-step photographs of the tooth brushing process, as described under ABA (see above). The photographs are arranged to show the order in which each step occurs. As each step is completed, the photograph is checked off or removed. Digital picture frames or tablets timed to display each photo for 10 or more seconds can also be helpful in displaying visual supports.

**Dental Visits**
Many people with ASD experience anxiety when visiting a dental office. Numerous factors can cause anxiety, including fear of the unknown and difficulty expressing feelings. Dental offices also pose many sensory challenges to people with ASD. The sounds, smells, lights, textures, and tastes can be anxiety provoking. Anxiety can result in uncooperative behavior that interferes with oral health care delivery.

To minimize anxiety and improve the overall experience of visiting the dentist for all involved, it is imperative that the dental practice, the person with ASD, and parents or other caregivers work together and with mutual respect.

Before making an appointment with a new dental practice, ask for a consultation to speak with the dentist about the oral health needs of the person with ASD and learn more about the practice. Ask about the expertise of all of the dental office staff in working with people with ASD. Inquire about whether the staff has received any specialized education and training related to ASD. Find out how many people with ASD the dentist sees. Determine
whether it is possible, within patient confidentiality parameters, to talk to parents and other caregivers about their experience with the dental practice.

Learn about specific procedures dental practice staff uses to optimize the experience for people with ASD. Such procedures can include desensitization appointments to help those with ASD become familiar with the practice, staff, and equipment; scheduling appointments at the best time of day for the person with ASD; minimizing waiting time; and having the same staff at each visit to help the person feel comfortable. Find out what techniques the practice uses to engage and communicate with people with ASD. Do they use tell-show-do, desensitization, ABA, visual supports, or other techniques?

Inform the dentist, dental hygienist, and other dental practice staff about the health and oral health history, communication skills, sensory issues, behavioral challenges, and incentive and motivation preferences of the person with ASD. If applicable, relay previous experiences with other dental practices and any oral hygiene challenges that the person with ASD has.

Open and honest communication between the person with ASD, the parent or other caregiver, and dental practice staff is key to establishing a partnership that enables positive experiences for all involved and for maintaining the oral health of the person with ASD.

Resources
Following are resources that parents, other caregivers, and health professionals may find useful in helping to ensure that people with ASD have the best possible oral health.


