

Oral Health Fact Sheet for Dental Professionals

Children with Autism Spectrum Disorder

Autistic disorder is the abnormal or impaired development in social interaction and communication coupled with a restricted repertoire of activity and interest. Manifestations of the disorder vary depending on the developmental level and chronological age of the individual. (ICD 9 Code 299.0)

Autism is one diagnosis on the Autism Spectrum Disorder (ASD), which includes:

- Autistic Disorder (also called “classic” autism)
- Pervasive Developmental Disorder (PDD) – Not Otherwise Specified
- Asperger syndrome

Prevalence

1/80 – 1/240, with an average of 1/100. 4-5:1 boys

41%, on average, have an Intellectual Disability (IQ < 70)

Unrelated to race, socioeconomic status, education

*There is no medical or genetic test for Autism. Diagnosis is solely on clinical diagnostic testing.

The manifestations below are relevant for children with classic autism:

Manifestations

Clinical

Impairment in social reciprocity

- inability to read and comprehend the feelings, experiences and motives of others

Impaired communication skills

- delayed language development, echolalia [repeating words], trouble using and understanding gestures; body language, and tone of voice

Atypical behavior

- repetitive motions, strict adherence to routines, attachment to unusual objects, stereotypical movements, self-injurious behaviors
- may include hyperactivity, short attention span, impulsivity, aggressiveness, temper tantrums, and unusual responses to sensory input

Oral

- Bruxism (20-25%)
- Non-nutritive chewing
- Tongue thrusting
- Self-injury (picking at gingiva, biting lips) creating ulcerations
- Erosion (many parents report regurgitation, medical consult may be indicated)
- Caries-similar to general population, however some children receive sweet foods as behavioral rewards (suggest sugar-free substitutes)
- Poor oral hygiene since home care measures are exceedingly difficult for many children/parents
- Many children have very limited dietary preferences (exclusively pureed foods, no fruits/vegetables, etc.)

Other Potential Disorders/Concerns

- Epilepsy over 30% have experienced seizures by adolescence
- Depression/Anxiety
- Attention Deficit Hyperactivity Disorder (ADHD)
- Obsessive Compulsive Disorder (OCD)
- Schizophrenia

Children with Autism Spectrum Disorder continued

Management

Medication

- Many children with autism are medically healthy and take few medications.
- Many children with autism take vitamins, herbal and mineral supplements.
- Medications are prescribed based on symptoms and can produce several side effects.

SYMPTOM	MEDICATION	SIDE EFFECTS
Hyperactivity	A. <i>CNS Stimulants</i> (Methylphenidate) B. <i>Antihypertensive</i> (Clonidine)	A. Xerostomia B. Xerostomia, dysphagia, sialadenitis. May cause orthostatic hypotension and potentiate CNS depression of other CNS depressants used in dentistry
Repetitive Behaviors	<i>Antidepressants</i> (Fluoxetine and Sertraline)	Xerostomia, dysphagia, sialadenitis, dysgeusia, stomatitis, gingivitis, glossitis, discolored tongue, bruxism
Aggressive Behaviors	A. <i>Anticonvulsants</i> (Carbamazepine and Valproate) B. <i>Antipsychotics</i> (Olanzapine and Risperidone)	A. Xerostomia, stomatitis, glossitis, dysgeusia. Excessive bleeding may result when either medication is combined with aspirin or non-steroidal anti-inflammatory drugs B. Xerostomia, sialorrhea, dysphagia, dysgeusia, stomatitis, gingivitis, tongue edema, glossitis, discolored tongue

Behavioral: Difficulty cooperating in the dental chair and adhering to oral hygiene regimens

Guidance:

Before any dental care:

- Plan a desensitization appointment to help the child become familiar with the office and staff.
- Allow child to bring comfort items such as a stuffed animal or to hold a parent/caregiver's hand.
- Talk to parent/caregiver about child's tolerance to physical contact and note findings.
- Determine the child's level of intellectual and cognitive abilities.

Determine if additional patient management strategies may be required. During appointment:

- Communicate with the child at a level that he or she can understand. Use a "tell, show, do" approach when explaining treatment and procedures. Speak directly in clear, concrete terms.
- Start the oral examination slowly, using only fingers at first. If this is successful, begin using dental instruments.
- Keep dental instruments out of sight and keep light out of the child's eyes. Reduce other sensory input such as sounds and odors that may be distracting to the child.
- Avoid interruptions and have as few staff as needed in operator.
- Reward cooperative behavior with positive verbal reinforcement.
- Observe unusual body movements and anticipate future movements. Keep area around the dental chair clear.
- Immobilization techniques may be used only with parental consent to keep the child from potential injury.
- Use the same staff, dental operator, and appointment time each visit if appropriate.
- Sedation may be used with appropriate precautions and possible physician consult.
- General anesthesia may be required for complex surgical or restorative treatment.

Children with Autism Spectrum Disorder continued

Follow up appointments:

- Keep subsequent appointments short and to the point.

Dental Treatment and Prevention

- Consider prescribing a mouth guard for higher functioning children with severe bruxism or self-injurious behavior.
- Powered toothbrushes may be too stimulating for some children and should be recommended only after determining if the child will tolerate one.
- Seizure management during treatment: **Remove** all dental instruments from the mouth. **Clear** the area around the dental chair. **Stay** with the child and turn child to one side. **Monitor** airway to reduce risk of aspiration. **Note time** seizure begins: if seizure continues >3 min call **EMS** – Danger of Status Epilepticus (potentially life threatening).

Look for signs of physical abuse during the examination. Note findings in chart and report any suspected abuse to Child Protective Services, as required by law. Abuse is more common in children with developmental disabilities and often manifests in oral trauma.

Additional information: [Special Needs Fact Sheets for Providers and Caregivers](#)

References

- Friedlander, A.H., Yagiela, J.A., Paterno, V.I., Mahler, M.E. (2006) The neuropathology, medical management and dental implications of autism. *J Am Dent Assoc*, 137(11): 1517-1527.
- Loo, C., Graham, R., Hughes, C. (2008) The caries experience and behavior of dental patients with autism spectrum disorder. *J Am Dent Assoc*, 139: 1518-1524.
- Ming, X., Brimacombe, M., Chaaban, J., Zimmerman-Bier, B., Wagner, G. C. (2008). Autism Spectrum Disorders: Concurrent Clinical Disorders. *Journal of Child Neurology*. 23, 6-13

Additional Resources

- [Autism and CDC](#)
- [NIH institute for Autism Spectrum Disorders](#)
- [Special Care: an Oral Health Professionals Guide to Serving Young Children with Special Health Care Needs](#)
- [Bright Futures Oral Health Pocket Guide](#)
- [American Academy of Pediatric Dentistry: 2011–2012 Definitions, Oral Health Policies and Clinical Guidelines](#)
- [MCH Resource Center](#)
- [ASTDD-Special Needs](#)
- [Block Oral Disease, MA](#)
- [NOHIC-NIDCR publications](#)
- Free of charge CDE courses: [MCH Oral Health CDE](#) (4 CDE hours); [NIDCR CDE](#) (2 CDE hours)