

Oral Health Fact Sheet for Medical Professionals

Children with Down Syndrome (Trisomy 21)

Down syndrome is a chromosome disorder associated with an extra chromosome (Trisomy 21) resulting in intellectual disability and specific physical features. (ICD-9 code 758)

Oral Manifestations and Considerations

Oral

- Early onset severe periodontal disease (most significant oral health problem)
- Lower prevalence of dental caries
- Delayed eruption of permanent teeth, malocclusion
- Congenitally missing and malformed teeth are common
- Hypoplasia of mid-facial region
- Hypodontia, microdontia,
- Macroglossia, fissured and protruding tongue
- Tongue thrust, bruxism, clenching, mouth breathing

Other Potential Disorders/Concerns

- Epilepsy
- Cardiac defects
- Atlantoaxial instability (fragility of cervical vertebrae/spinal chord)
- Diabetes
- Compromised immune system
- Sleep apnea
- Increased risk of leukemia
- Hearing loss
- Vision problems
- Hypothyroidism

Oral Side Effects of Commonly Prescribed Medications

| SYMPTOM | MEDICATION | SIDE EFFECTS |
|--------------|------------------------------------|----------------------|
| Seizures | <i>Anti-convulsants (Dilantin)</i> | Gingival hyperplasia |
| Hypertension | <i>Calcium channel blockers</i> | Xerostomia |

Children with Down Syndrome (Trisomy 21) continued

Parent/Caregiver Support and Anticipatory Guidance

- Discuss with parents if antibiotics are needed for dental treatment.
- Discourage consumption of cariogenic foods and beverages.
- Prescribe sugar-free medications, if available.
- Recommend preventive measures, such as topical fluoride and sealants.
- Advise the use of fluoridated toothpaste twice daily and support the family in following dental care instructions.
- Instruct caregiver on appropriate protocol following dental trauma (locate/preserve missing tooth and put in cold milk; seek immediate professional care).
- Review safety issues appropriate to the age of the child, such as mouth guards to prevent oral-facial trauma.
- Recommend rinsing with water thoroughly after taking each dose of sugar containing medication and frequent water intake for patients taking xerostomic medication.
- Discuss habits that may harm the child's teeth, such as propping baby bottles, putting child to bed with bottle.
- Refer to dentist any oral developmental abnormalities.

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

References

- Hennequin M, Faulks D, Veyrone JL, Bourdiol P. (1999) Significance of oral health in persons with Down syndrome: a literature review. *Dev Med Child Neurol.* 41(4):275-83.
- Fiske, J., and Shafik, H. (2001) Down's syndrome and Oral Care. *Dent Update*, 28(3): 148-156.
- Morgan, J. (2007) Why is periodontal disease more prevalent and more severe in people with Down syndrome? *Special Care Dentist*, 27(5):196-201.

Additional Resources

- [NIH Institute for Down Syndrome](#)
- [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 Pediatrics Oral Health Initiative](#)
- [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](#)



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