

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](#)



DOH 160-050 March 2012

Permission is given to reproduce this fact sheet. *Oral Health Fact Sheets for Patients with Special Needs* © 2010 by University of Washington and Washington State Oral Health Program



Fact sheets developed by the University of Washington DECOD (Dental Education in the Care of Persons with Disabilities) Program through funding provided to the Washington State Department of Health Oral Health Program by HRSA grant #H47MC08598).



For persons with disabilities, this document is available on request in other formats. To submit a request, please call 1-800-525-0127 (TTY/TDD 1-800-833-6388).