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

<table>
<thead>
<tr>
<th>SYMPTOM</th>
<th>MEDICATION</th>
<th>SIDE EFFECTS</th>
</tr>
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<tbody>
<tr>
<td>Seizures</td>
<td>Anti-convulsants (Dilantin)</td>
<td>Gingival hyperplasia</td>
</tr>
<tr>
<td>Hypertension</td>
<td>Calcium channel blockers</td>
<td>Xerostomia</td>
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</table>
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


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
- MCH Resource Center
- ASTDD-Special Needs
- Block Oral Disease, MA
- NOHIC-NIDCR publications