

Oral Health Fact Sheet for Dental Professionals

Individuals with Intellectual Disability

Intellectual disability (formerly mental retardation) refers to a group of disorders characterized by significant limitations both in **intellectual functioning** (reasoning, learning, problem solving) and in **adaptive behavior**, which covers a range of everyday social and practical skills such as managing money, schedules, and routines, or social interactions. Intellectual disability (ID) may originate before the age of 18 and may result from physical causes such as Autism or Cerebral Palsy, or from non-physical causes such as lack of stimulation and adult responsiveness. ID can be caused by injury (Traumatic Brain Injury), disease (Alzheimer's), genetics, or a brain abnormality.

Developmental disability is a severe, long-term disability that can affect cognitive ability, physical functioning, or both. These disabilities appear before age 22 and are likely to be life-long. The term "developmental disability" encompasses intellectual disability but also includes physical disabilities. Some developmental disabilities may be solely physical, such as blindness from birth. Others involve both physical and intellectual disabilities stemming from genetic or other causes, such as Down syndrome and fetal alcohol syndrome.

Manifestations

Clinical

Determine the underlying cause of the Intellectual Disability (ID) and any co-existing conditions when reviewing the health history. There may be specific clinical manifestations due to the underlying cause or co-existing conditions, such as Autism Spectrum Disorders, Attention Deficit Hyperactivity Disorder (ADHD), Cerebral Palsy, Down syndrome, Epilepsy, Traumatic Brain Injury, Alzheimer's disease and dementia, dyspraxia (developmental coordination disorder), tic disorders, learning disabilities, sensory impairments and/or mental disorders. Condition specific fact sheets are available at:

<http://dental.washington.edu/departments/oral-medicine/special-needs-fact-sheets.html>

Oral

- **Periodontal disease:** Individuals with ID have a higher rate of gingivitis and periodontal disease than the general population. Oral hygiene is often a challenge for those with ID. Specific underlying causes of ID, such as Down syndrome, have specific periodontal implications.
- **Dental caries:** People with ID develop caries at the same rate as the general population. However, the prevalence of untreated dental caries can be higher among persons with specific conditions depending on the local oral environment, diet, home care, and other factors.
- Malocclusion, missing permanent teeth, delayed eruption, and enamel hypoplasia are more common.
- Damaging oral habits may be present, including bruxism, mouth breathing, tongue thrust, self-injurious behavior (lip biting, gingival picking) and pica (the hunger for or ingestion of nonfood items).
- Increased risk for oral trauma and injury.

Other Potential Disorders/Concerns

Epilepsy is frequently present in patients with ID. Complex and also subtle presentations of epilepsy are much more common in young people with ID.

Individuals with Intellectual Disability continued

Management

Medication

- There are no specific medications for ID, but patients may be on multiple medications for underlying or co-existing conditions. Obtain a thorough health history and update medications at each visit.
- Medications are prescribed based on symptoms. Medications associated with specific conditions available at: <http://dental.washington.edu/departments/oral-medicine/special-needs-fact-sheets.html>

Behavioral: Many individuals with ID can successfully be treated in the dental office

Guidance

- Plan a pre-appointment (in person/phone) to discuss patient special needs prior to the first visit. Determine if there is a caregiver. Discuss patient's needs with the care provider.
- Schedule appointments early in the morning or best time of day for patient.
- Talk with the parent or caregiver to determine the patient's level of intellectual and functional abilities, and explain each procedure at a level the patient can understand. Most Down syndrome patients understand more than they can verbalize.
- Use short, clear instructions; repeat, using the same terms to compensate for short-term memory difficulties. Speak directly to the patient.
- Minimize distractions, such as sights and sounds, which may make it difficult for the patient to cooperate. Music may be helpful in calming the patient—determine if they enjoy it.
- Start the oral examination slowly, using only fingers at first. If this is successful, begin using dental instruments.
- Use the Tell-Show-Do approach when introducing new instruments or procedures.
- Reward cooperative behavior with positive verbal reinforcement. Consider positive reinforcement at the end of the appointment, such as new toothbrush, tube of toothpaste, sticky notes, etc.
- Develop trust and consistency between the dental staff and the patient. Use the same staff, dental operator, and appointment time each visit if appropriate.

Dental Treatment and Prevention

- Determine who can give informed consent. Be sure they are present at the appointment.
- Monitor periodontal disease and caries activity closely.
- Consider prescribing Chlorhexidine or other antimicrobial agents for daily use. Determine if patient is able to rinse with the agent or if a spray application would be more appropriate.
- Evaluate malocclusions. Some patients are good candidates for full orthodontic treatment. Maintain primary teeth (if present) as long as possible and consider space maintenance and orthodontic consultation for missing teeth.
- A power toothbrush, if tolerated, can be an effective oral hygiene tool.
- A mouthguard (if it can be tolerated) may be useful for cases involving bruxism, self-injurious behaviors, or mouth trauma.

Considerations due to associated medical conditions:

- Seizure management during treatment: **Remove** all dental instruments from the mouth. **Clear** the area around the dental chair. **Stay** with the patient and turn 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).
- May have increased gag reflex during oral examination.
- Chronic respiratory infections, open mouth posture, and/or mouth breathing may lead to xerostomia.

Individuals with Intellectual Disability continued

Look for signs of physical abuse during the examination. Note findings in chart and report any suspected abuse, as required by law. For children, contact Child Protective Services and for adults contact, 1-866-ENDHARM or www.dshs.wa.gov/endharm.shtml. Abuse is more common in individuals with developmental disabilities and often manifests in oral trauma.

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

REFERENCES

Intellectual Disability

- [NIH Institute of Child Health and Human Development](#)
- [American Association on Intellectual and Developmental Disabilities](#)

ADHD

- Bimstein, E., Wilson, J., Guelmann, M., Primosch, R. (2008) Oral characteristics of children with attention-deficit hyperactivity disorder. *Special Care Dentistry*, 28(3): 107-110
- Blomqvist, M., Holmberg, K., Fernell, E., Ek, U., Dahllof, G. (2006) Oral health, dental anxiety, and behavior management problems in children with attention deficit hyperactivity disorder. *European Journal of Oral Sciences*, 114(5): 385-390.
- Clinical practice guideline: diagnosis and evaluation of the child with attention-deficit/hyperactivity disorder. American Academy of Pediatrics. *Pediatrics* 2000; 105:1158-1170.
- Friedlander, A.H., Yagiela, J.A., Mahler, M.E., Rubin, R. (2007) The pathophysiology, medical management and dental implications of adult attention-deficit/hyperactivity disorder. *J Am Dent Assoc.* 138(4):475-82.

Autism

- 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.
- Green, D., Flanagan, D. (2008) Understanding the autistic dental patient. *Gen Dent*, 56(2): 167-71.

Cerebral Palsy

- Goncalves, G.K., Carmagani, F.G., Correa, M.S., Duarte, D.A., Santos, MTBR. (2008) Dental erosion in cerebral palsy patients. *J Dent Child*, 75(2): 117-120.
- Rodrigues dos Santos, M.T., Masiero, D., Novo, N.F., Simionato, M.R. (2003) Oral conditions in children with cerebral palsy. *J Dent Child*, 70(1): 40-46.
- Dymont, H.A., Casas, M.J. 1999 Dental care for children fed by tube: a critical review. *Spec Care Dentist*, 19(5):220-4. Review.
- Costa, M.M., Afonso, R.L., Ruvieri, D.B., Aguiar, S.M. (2008) Prevalence of dental trauma in patients with cerebral palsy. *Spec Care Dentist* 28(2);61-4.

Down syndrome

- Dymont, H.A., Casas, M.J. 1999 Dental care for children fed by tube: a critical review. *Special Care Dentist*, 19(5):220-4. Review.
- Hennequin, M., Faulks, D., Veyrone, J.L., 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.
- Lopez-Perez, R., Borges-Yanez, S.A., Jimenez-Garcia, G., Maupome, G. (2002) Oral hygiene, gingivitis, and periodontitis in persons with Down syndrome. *Spec Care Dentist* 22(6):214-220.

Individuals with Intellectual Disability continued

- Seagriff-Curtin, P., Pugliese, S., Romer, M. Dental considerations for individuals with Down syndrome. (2006) N Y State Dent J 72(2):33-5.
- Goldstein, G. Task force on special dentistry makes meaningful improvement. (2006) N Y State Dent J 72(2):24-6.

Epilepsy

- Tan, H., Gurbuz, T., Dagsuyu, IM. (2004) Gingival enlargement in children treated with antiepileptics. J Child Neurol, 19(12): 958-63.
- Stoopler, E.T., Sollecito, T.P., Greenberg, M.S. (2003) Seizure disorders: update of medical and dental considerations. Gen Dent, 51(4): 361-66.
- Kossoff, E.H., Zupec-Kania, B.A., Rho, J.M. (Jun 17, 2009) Ketogenic Diets: An Update for Child Neurologists. J Child Neurol. 4(8): 979-88. Epub. Review.
- Dymont, H.A., Casas, M.J. (1999) Dental care for children fed by tube: a critical review. Spec Care Dentist, 19(5):220-4. Review.
- Stoopler, E.T., Sollecito, T.P., Greenberg, M.S. (2003) Seizure disorders: update of medical and dental considerations. Gen Dent, 51(4): 361-66.
- Fitzpatrick, J.J., McArdle, N.S., Wilson, M.H., Stassen, L.F. (2008). Epilepsy in dental practice. J Ir Dent Assoc, 54(4):176-8.
- Károlyházy, K., Kovács, E., Kivovics, P., Fejérdy, P., Arányi Z. (2003) Dental status and oral health of patients with epilepsy: an epidemiologic study. Epilepsia. 44(8):1103-8.

Traumatic Brain Injury

- Taylor, H.G., Yeates, K.O., Wade, S.L., Drotar, D., Stancin, T., Minich, N. (2002) A prospective study of short- and long-term outcomes after traumatic brain injury in children: behaviour and achievement. Neuropsychology, 16:15-27.
- McKinlay, A., Grace, R.C., Horwood, L.J., Fergusson, D.M., Ridder, E.M., MacFarlane, M. (2008) Prevalence of traumatic brain injury among children, adolescents and young adults: Prospective evidence from a birth cohort. Brain Injury, 22(2):175-81.
- Corrigan, J.D., Whiteneck, G., Mellick, D. (2004) Perceived needs following traumatic brain injury. J Head Trauma Rehabi. (3):205-16.
- Andrews, K. (2005) Rehabilitation practice following profound brain damage. Neuropsychological Rehabilitation 12(3):461-472.

Additional Resources

- [NIH Institute of Child Health and Human Development](#)
- [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](#)
- Free of charge CDE courses: [MCH Oral Health CDE](#) (4 CDE hours) [NIDCR CDE](#) (2 CDE hours)

