

# Oral Health Fact Sheet for Medical Professionals

## Children with Traumatic Brain Injury

*Traumatic brain injury (TBI), a form of acquired brain injury, occurs when a sudden trauma causes damage to the brain. TBI can result when the head suddenly and violently hits an object, or when an object pierces the skull and enters brain tissue. Symptoms of a TBI can be mild, moderate, or severe, depending on the extent of the damage to the brain. (National Institute of Neurological Disorders and Stroke/NIH)*

### Oral Manifestations and Considerations

#### Oral

- Oral/dental trauma from TBI or self-injurious behaviors
- Bruxism
- GERD
- Inadequate oral hygiene due to cognitive impairments, spasticity and ataxia

#### Other Potential Disorders/Concerns

- Seizures
- Depression/Anxiety
- Post-traumatic stress disorder
- Personality disorders
- Substance abuse

### Oral Side Effects of Commonly Prescribed Medications

**Medication:** Manifestations from TBI vary; therefore a range of medications may be prescribed:

SYMPTOM	MEDICATION	SIDE EFFECTS
	<i>Muscle Relaxants</i>	Xerostomia
Repetitive Behaviors	<i>Antidepressants</i>	Xerostomia, dysgeusia, stomatitis, gingivitis, glossitis, sialadenitis, bruxism, dysphagia, discolored tongue, oral edema
Aggressive Behaviors	A. <i>Anticonvulsants</i> (Dilantin) B. <i>Antipsychotics</i>	A. Gingival hyperplasia, xerostomia, stomatitis, glossitis, dysgeusia B. Xerostomia, sialorrhea, dysphagia, dysgeusia, stomatitis, gingivitis, tongue edema, glossitis, discolored tongue
Hyperactivity	A. <i>Antihypertensive</i> B. <i>CNS Stimulant</i>	A. Xerostomia, dysphagia, sialadenitis, dysgeusia B. Xerostomia

# Children with Traumatic Brain Injury continued

## Parent/Caregiver Support and Guidance

- 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.
- 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](#)

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## References

- Taylor, HG., Yeates, KO., Wade, SL., 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.

## Additional Resources

- [NIH Institute for Traumatic Brain Injury](#)
- [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](#)