

Xerostomia & Neurodevelopmental Disorders Medications: Directions for Caregivers

Maha Ibrahim, DDS ; Patricia Findley, DrPH, MSW ; Kim Fenesy, DMD
Rutgers School of Dental Medicine, Newark, NJ, USA

Aim/Objectives

- Raise awareness of xerostomia as an oral side effect of NDD medications. ^{1,2}
- Encourage detection and treatment by practitioners for those with NDD. ³
- Highlight the impact for caregivers of oral health overall well-being and quality of life. ^{4,5}

Methods

- Online literature review -Selection criteria: 55 English articles published in last 10 years.
- From: NIH, J Autism Dev Disord, AAPD, Am J Psychiatry, J ADA, Matern Child Health J, Am J Occup Ther, J Evid Based Dent Pract, J Autism Dev Disord, Am J Psychiatry

Results

- NDDs include intellectual disability, ASD, ADHD, communication, motor & learning disorders → unique oral health needs & proper oral care. ^{6,7,8}
- Various medications to treat comorbidities (anxiety, asthma, seizures, irritability, hyperactivity, repetitive or aggressive behaviors, compulsive disorder, depression, congenital cardiac disorder, cerebral palsy) ^{9,10,11,12} including stimulants or non-stimulants, selective serotonin reuptake inhibitor, serotonin-norepinephrine reuptake inhibitor, tricyclic antidepressants, antihistamines, antispasmodics, anticholinergics, muscle relaxants, diuretics, ACE inhibitor, antipsychotics, ADHD medications, ^{13,14} antidepressants, antihypertensive, antiseizures, alpha-2 agonists, and anticonvulsants... ^{15,16,17}
- Polypharmacy is increasing → oral side effects: xerostomia → dryness, burning, difficulty eating, speaking, swallowing, ^{18,19,20} impact nutrition, dental caries, intraoral infection, altered taste, soreness. ^{21,22,23}
- higher risk of unmet dental problems, high caries prevalence, ^{24,25,26} poor oral hygiene, behavioral difficulties, sensory sensitivities, and physical access limitations. ^{27,28,29,30}
- Caregivers oral hygiene literacy ^{31,32,33} + financial and social burdens are associated with oral status of children. ^{34,35,36,37}

Generic and Trade Name Medication Dental Watch List Causing Xerostomia:

-Abilify -Accutane	-Baclofen	-Chlorpromazine	-Cyproheptadine	-Famotidine	-Guanfacine-Haldol	-Isoniazid	-Lexapro-Lioresal	-Losartan-Mecizine	-Pentasa-Pepcid	-Salmeterol/Sertraline	-UroXartrol
-Acamprosate	-Benxotropine	-Citalopram-Claritin	-Darifenacin	-Felodipine	-Haloperidol	-Isotretinoin	-Lisdexamfetamine	-Mesalamine	-Paxil-Periactin	-Serevent-Sinemet	-Vistaril-Vyvanse
-Advair-Adderall	-Budesonide	-Clomipramine	-Doxazosin/Duloxetine	-Fentanyl-Foradil	-Hydroxysine	-Itraconazole	-Lisinoptil	-Metoprolol	-Plendil-Pulmicort	-Sporanox-Strattera	-Valproate-Valium
-Alfuzosin-Albuterol	-Buprenex-Bumex	-Clonidine-Clozapine	-Duragesic-Dilantin	-Fluvoxamine-	-Hyoscyamine	-Kytril-Kemadrin	-Loperamide	-Methylphenidate	-Prinivil-Prozac	-Subutex	-Wellbutrin
-Anafanil-Antivert	-Buprenorphine	-Clozaril-Cozaar	-dexedrine -	-Fluoxetine-Fosinopril	-Immodium	-Klonopin -Kapvay	-Lopid -Luvox	-Monopril-Mykrox	-Quetiapine	-Tacrine-Tenex	-Xopenex
-Aripiprazole	-Bupropion-Campral	-Concerta	-Enablex-Elavil	-Furosemide-Focalin	-INH -Insulin	-Levalbuterol	-Lopressor	-Neurontin-Nexium	-Rhinocort	-Thorazine	-Xyzal-Xanax
-Asacol-Atarax	-Carbidopa-Cardura	-Cymbalta-Celexa	-Escitalopram	-Gapapentin	-Ipratropium	-Lamictal-Levbid	-Lorazepam	-Norpramin	-Rowasa-Ritalin	-Toprol-Tofranil	-Zestril-Zoloft
-Atomoxetine	-Carbamazepine	-Chlorothiazide	-Esomeprazole	-Gemfibrozil	-Intuniv-Invega	-Levcetirizine	-Loratadine	-Oxcarbazepine	-Rispedal-Risperidon	-Tizanidine	-Zyban-Zyrtec
-Atrovebt-Atrane	-Catapres	-Captopril -Ceitirizine	-Effexor ,Eff xr	-Granisetron	-Imipramine	-Levodopa	-Lyrica	-Olanzapine	-Sirdalud	-Tegretol	-Zyprexa

Conclusion

For health providers:

- Obtain accurate med hx & medication regimen ^{38,39} + questionnaire for xerostomia ⁴⁰
- Symptoms:** fissured tongue & lips- filiform papillae atrophy- erythematous mucosa- gingival disease – cavities– halitosis- dry throat-difficulty swallow- painful tongue- increased plaque ⁴¹
- Managing:** preventative care (sealants + fluoride) ^{42,43}– prescribe saliva substitutes, stimulants, or OTC products- collaboration w/ occupational and speech therapist, physician (sugar-free meds) to personalize the approach. ^{44,45,46}
- provide dental +diet education related to child needs and diagnosis + offer handouts and adaptive aids on specific condition- make dental visit accessible and safe- sensory adapted dental environment-behavior guidance technique, the Picture Exchange Communication System (PECS) ^{47,48,49}

For Caregivers:

- Necessity of dental home + frequent visits w/ preparatory aids -bring list of medication
- Oral routine care at home: brushing 2x/day w/ fluoride toothpaste (use mouth prop) - After brushing, apply 1.1% neutral sodium toothpaste/gel or concentrated calcium/fluoride products (Prevident 5000 gel) ^{6, 50,51}
- Avoid meds w/ added sugar- try different toothpaste without sodium laurel sulfate– avoid sugary snacks
- Frequent sipping of fluoride water specially after medication-eat food to stimulate saliva production + caries resistance → xylitol mints, lozenges, and/or sugar free gum ^{52,53}
- Inspect child's mouth after to prevent pouching -sweep mouth with gauze -no sharing utensils
- Increase fluid intake- no juice in sip cups- no honey on pacifiers- bedtime water bottle only-Sucking on sugar-free candy–Rinsing with mouthwash with xylitol ⁵⁴
- Know what is normal in the child's mouth-mention triggers, preferences + communication skills ⁵⁵

