

Drug Side Effects That Cause Oral Issues

Class	Example Drugs	Suggested Treatment
Xerostomia		
Antihistamines	(diphenhydramine, fexofenadine, cetirizine)	Medication change, OTC products such as Biotene or Act Dry Mouth Mouthwash, or prescription pilocarpine or cevimeline
Anticholinergics	(trihexyphenidyl, benztropine, chlorpromazine, carbidopa-levodopa)	Medication change, OTC products such as Biotene or Act Dry Mouth Mouthwash, or prescription pilocarpine or cevimeline
Antipsychotics	(quetiapine, olanzapine, aripiprazole)	Medication change, OTC products such as Biotene or Act Dry Mouth Mouthwash, or prescription pilocarpine or cevimeline
Antidepressants	(TCAs, SSRIs, SNRIs)	Medication change, OTC products such as Biotene or Act Dry Mouth Mouthwash, or prescription pilocarpine or cevimeline
Benzodiazepines	(lorazepam, alprazolam, clonazepam)	Medication change, OTC products such as Biotene or Act Dry Mouth Mouthwash, or prescription pilocarpine or cevimeline
Opiates	(hydrocodone, oxycodone, morphine)	Medication change, OTC products such as Biotene or Act Dry Mouth Mouthwash, or prescription pilocarpine or cevimeline
Oral Ulceration		
NSAIDs	(indomethacin, ibuprofen, naproxen)	Topical steroid trial, if no response then either dose reduction or change in drug may be required
Bisphosphonates	(alendronate, ibandronate)	Topical steroid trial, if no response then either dose reduction or change in drug may be required
Immunosuppressant	(methotrexate, some chemotherapies, everolimus)	Topical steroid trial, if no response then either dose reduction or change in drug may be required
Angioedema		
ACE-Inhibitors	(lisinopril, enalapril, captopril)	Antihistamines, corticosteroids, or epinephrine depending on severity
Analgesics	(ibuprofen, naproxen, aspirin, indomethacin)	Antihistamines, corticosteroids, or epinephrine depending on severity
Antibiotics	(sulfonamides, cephalosporins, beta-lactams)	Antihistamines, corticosteroids, or epinephrine depending on severity

Gingival Hyperplasia		
Calcium channel blockers	(nifedipine, verapamil, diltiazem)	May resolve on its own if drug discontinued. May need nonsurgical mechanical debridement and good home hygiene. If that does not work, may need surgery
Immunosuppressants	(cyclosporine, everolimus, mycophenolate)	May resolve on its own if drug discontinued. May need nonsurgical mechanical debridement and good home hygiene. If that does not work, may need surgery
Anticonvulsants	phenytoin, tiagabine, oxcarbazepine	May resolve on its own if drug discontinued. May need nonsurgical mechanical debridement and good home hygiene. If that does not work, may need surgery
Erythema Multiforme		
Calcium channel blockers	Amlodipine, nifedipine, diltiazem	Remove drug, treat with systemic antihistamines, analgesics as needed, local skin care, and soothing magic mouthwash
Anticonvulsants	Phenytoin, oxcarbazepine	Remove drug, treat with systemic antihistamines, analgesics as needed, local skin care, and soothing magic mouthwash
Mucositis		
Oncology Agents	5-fluorouracil, methotrexate, bleomycin, doxorubicin, mercaptopurine	Immunomodulatory agents, analgesics, antiseptics, antibacterials, antifungals, mucosal barriers, cytoprotectants, cryotherapy, allopurinol, mouthwashes
Candidiasis		
Steroids	Budesonide, betamethasone, fluticasone	Remove offending drug, use of topical and systemic antifungals such as nystatin or an –azole
Immunosuppressant	Cyclosporine, mycophenolate	Remove offending drug, use of topical and systemic antifungals such as nystatin or an –azole
Antibiotics	Amoxicillin, cephalosporins, fluoroquinolones	Remove offending drug, use of topical and systemic antifungals such as nystatin or an –azole
Taste Disturbances		
Proton pump inhibitors	Omeprazole, esomeprazole, rabeprazole, pantoprazole	Drug change or change when taking drug based on meals, artificial saliva
Carbonic anhydrase inhibitor	Dorzolamide, acetazolamide	Drug change or change when taking drug based on meals, artificial saliva

Antibiotics	Tetracyclines, metronidazole, macrolides	Drug change or change when taking drug based on meals, artificial saliva
Others	Eszopiclone, topiramate, captopril, lithium	Drug change or change when taking drug based on meals, artificial saliva
Osteonecrosis		
Bisphosphonates	Alendronate, ibandronate, zoledronic acid	Use of antiseptics, antibiotics, analgesics, and possible laser therapy. Surgical debridement or major surgery may be needed depending on severity. Possibly decrease dose or discontinue offending agent.
RANK ligand inhibitor	Denosumab	Use of antiseptics, antibiotics, analgesics, and possible laser therapy. Surgical debridement or major surgery may be needed depending on severity. Possibly decrease dose or discontinue offending agent.
Antiangiogenic agents	Bevacizumab, sunitinib, sorafenib	Use of antiseptics, antibiotics, analgesics, and possible laser therapy. Surgical debridement or major surgery may be needed depending on severity. Possibly decrease dose or discontinue offending agent.
m-TOR inhibitors	Everolimus	Use of antiseptics, antibiotics, analgesics, and possible laser therapy. Surgical debridement or major surgery may be needed depending on severity. Possibly decrease dose or discontinue offending agent.
Hypersalivation		
Cholinergics	Pilocarpine	Drug dose decrease or discontinue. Can try trihexyphenidyl, clonidine or ipratropium
Antipsychotics	Clozapine, risperidone, olanzapine	Drug dose decrease or discontinue. Can try trihexyphenidyl, clonidine or ipratropium
Parkinson's / movement disorder drugs	Ropinirole, rivastigmine, pyridostigmine	Drug dose decrease or discontinue. Can try trihexyphenidyl, clonidine or ipratropium
Oral Pigmentation (Black Hairy Tongue)		
Penicillins	Amoxicillin, Augmentin, Dicloxacillin, Penicillin V	May resolve on its own after completion of therapy. Practice proper oral hygiene.
Bismuth-Containing-Antacids	Bismuth Subsalicylate	May resolve on its own after completion of therapy. Practice proper oral hygiene.
Dental Discoloration		
Tetracyclines	Doxycycline, Minocycline, Tetracycline	Avoid use in children, particularly under the age of 8 years old to prevent permanent discoloration.

