

XEROSTOMIA

The hidden cause of gum disease and tooth loss in a quarter of adult population

Some drugs that may cause xerostomia

Anaesthesia

- **General anaesthesia**
- **Sedative and analgesic peri-operative drugs**
- **Non-opioid analgesics**
Ketorolac trometamol

Cardiovascular System

- **Diuretics**
- **Loop diuretics**
- **Potassium sparing diuretics and aldosterone antagonists**
- **Anti-arrhythmic drugs**
- **Drugs for arrhythmias Supraventricular and ventricular arrhythmias**
Disopyramide
Propafenone hydrochloride
- **Beta-adrenoceptor blocking drugs**
Carvedilol
- **Hypertension and heart failure**
- **Centrally acting Hypertension drugs**
Clonidine hydrochloride
Methyldopa
Moxonidine
- **Alpha- adrenoceptor blocking drugs**
Indoramin
- **Phaeochromocytoma**
Phenoxbenzamine hydrochloride
- **Angiotensin-converting enzyme inhibitors**
Enalapril maleate
Imidapril hydrochloride
Lisinopril
Moexipril hydrochloride
Ramipril
Trandolapril
- **Angiotensin –II receptor antagonists**
Telmisartan
- **Nitrates, calcium channel-blockers and other antianginal drugs**
- **Calcium channel-blockers**
Amlodipine
- **Anticoagulants and protamine**
- **Parental anticoagulants**
Epoprostenol

Central Nervous System

- **Hypnotics and anxiolytics**
- **Hypnotics**
Zaleplon
Zolpidem
Zopiclone
- **Anxiolytics**
Buspirone
Buspirone hydrochloride
- **Drugs used in Psychoses and related disorders**
- **Antipsychotic drugs**
Benperidol
Chlorpromazine hydrochloride
Flupentixol/ Flupentixol
Fluphenazine hydrochloride
Haloperidol
Levomopromazine/Methotrimeprazine
Pericyazine/pericazine
Perphenazine
Pimozide
Prochlorperazine
Promazine hydrochloride
Sulpride
Trifluoperazine
Zuclopentixol acetate
Zuclopentixol Dihydrochloride

Atypical antipsychotics

- Amisulpride
Clozapine

- Quetiapine
Sertindole
Zotepine
- **Antidepressant drugs**
- **Tricyclic and related antidepressant drugs**
Tricyclic antidepressants
Amitriptyline hydrochloride
Amoxapine
Clomipramine hydrochloride
Dosulepin hydrochloride/ Dothiepin hydrochloride
Doxepin
Imipramine hydrochloride
Lofeframine
Nortriptyline
Trimipramine

- **Related antidepressants**
Maprotiline hydrochloride
Mianserin Hydrochloride
Trazodone hydrochloride

- **Monoamine-oxidase inhibitors (MAOIs)**
Phenelzine
Socarbocaxid
Tranylcypromine

- **Reversible MAOIs**
Moclobemide

- **Selective serotonin re-uptake inhibitors**
Citalopram
Escitalopram
Fluoxetine
Fluvoxamine maleate
Paroxetine
Sertraline
- **Other antidepressant drugs**
Reboxetine
Venlafaxine
- **CNS stimulants and other drugs used for attention deficit hyperactivity disorder**
Atomoxetine
Dexamfetamine sulphate/
Dexamphetamine sulphate
Modafinil
- **Drugs used in treatment of obesity**
- **Centrally acting appetite suppressants**
Sibutramine hydrochloride
- **Drugs used in nausea and vertigo**

- **Antihistamines**
Cinnarizine
Cyclizine
Meclozine hydrochloride
Promethazine hydrochloride
Promethazine teoclate

- **Phenothiazines and related drugs**
Chlorpromazine hydrochloride
Perphenazine
Prochlorperazine
Trifluoperazine

- **5HT3 antagonists**
Palonosetron

- **Neurokinin receptor agonist**
Aprepitant

- **Cannabinoid**
Nabilone

- **Hyoscine**
Hyoscine hydrobromide/ Scopolamine hydrobromide
- **Analgesics**
- **Non-opioid analgesics**

- Nefopam hydrochloride
- **Opioid analgesics**
Morphine salts
Buprenorphine
Codeine Phosphate
Diamorphine hydrochloride/Heroin hydrochloride
Dihydrocodeine tartrate
Dipipanone hydrochloride
Fentanyl
Hydromorphone hydrochloride
Meptazinol
Methadone hydrochloride
Oxycodone hydrochloride
Papaveretum
Pentazocine
Pethidine hydrochloride
Tramadol hydrochloride
- **Anti migraine drugs**
- **Treatment of acute migraine attack**

- **5HT agonists**
Almotriptan
Eletriptan
Frovatriptan
Rizatriptan
Zolmitriptan
- **Prophylaxis of migraine**
Pizotifen (antimuscarinic effects)
Clonidine hydrochloride
- **Antiepileptics**
- **Control of epilepsy**
Gabapentin pregabalin
Topiramate
- **Drugs used in parkinsonism and related disorders**
- **Dopaminergic drugs used in parkinsonism**
Entacapone
Rasagiline
Selegiline hydrochloride

- **Antimuscarinic drugs used in parkinsonism**
Benzatropine mesilate/ Benztropine mesylate
Orphenadrine hydrochloride
Procyclidine hydrochloride
Trihexyphenidyl hydrochloride/
Benzhexol hydrochloride
- **Drugs used in essential tremor, chorea, tics and related disorders**

- **Torsion dystonias and other involuntary movements**
Botulinum A toxin (specific side-effects in torticollis)
Botulinum B toxin
- **Drugs used in substance dependence**

- **Cigarette smoking**
Bupropion/ Amfebutamone nicotine

- **Opioid dependence**
Lofexidine Hydrochloride

Endocrine System

- **Drugs affecting bone metabolism**
- **Bisphosphonates and other drugs affecting bone metabolism**
- **Other endocrine drugs**
- **Bromocriptine and other dopaminergic drugs**
Bromocriptine

Eye

- **Corticosteroids and other anti-inflammatory preparations**
Epinephrine Hydrochloride

- Ketotifen
- **Treatment of glaucoma**
- **Sympathomimetics**
Brimonidine tartrate
- **Carbonic anhydrase inhibitors and systemic drugs**
Brinzolamide
- **Miscellaneous ophthalmic preparations and photodynamic treatment**
- **Ocular diagnostic and peri-operative preparations and photodynamic treatment**
- **Ocular Peri-operative drugs**
Apraclonidine

Gastro intestinal System

- **Antispasmodics and other drugs altering gut motility**
Antimuscarinics
Atropine Sulphate
Dicycloverine hydrochloride/
Dicyclomine hydrochloride
Hyoscine butylbromide
Propantheline bromide
- **Ulcer healing drugs**
- **H2 Receptor antagonists**
Famotidine
- **Chelates and complexes**
Sucralfate
- **Proton Pump inhibitors**
Esomeprazole
Lansoprazole
Omeprazole
Pantoprazole
Rabeprazole sodium

Infections

- **Antibacterial drugs**
- **Cephalosporins, and other beta-lactams**
- **Other beta-lactam antibiotics**
Ertapenem
- **Some other antibacterials**
Chloramphenicol
Linezolid
- **Antituberculous drugs**
Isoniazid
- **Quinolones**
Moxifloxacin
- **Antiviral drugs**
- **HIV Infection**
Nucleoside reverse transcriptase inhibitors
Didanosine(ddI,DDI)
Zalcitabine (ddC,DDC)
Protease Inhibitors
Indinavir
Lopinavir with Ritonavir
Ritonavir
- **Respiratory syncytial virus**
Ribavirin (Tribavirin)

Malignant Disease and Immunosuppression

- **Sex Hormones and hormone antagonists in malignant disease**
- **Hormone agonists**
- **Prostate Cancer and gonadorelin analogues**
Triptorelin

Musculoskeletal and Joint Diseases

- **Drugs in rheumatic diseases and gout**
- **Non-steroidal anti-inflammatory drugs**
Etoricoxib
Lumiracoxib
- **Drugs used in neuromuscular disorders**

- **Skeletal muscle relaxants**
Baclofen
Tizanidine

Nutrition and Blood

- **Anaemias and some other blood disorders**
- **Drugs used in platelet disorders**
Anagrelide

Obstetrics, Gynaecology and Urinary-Tract Disorders

- **Drugs for genitourinary disorders**
- **Drugs for urinary retention**
Alpha-blockers
Alfuzosin hydrochloride
Doxazosin
Indoramin
Prazosin hydrochloride
Tamsulosin hydrochloride
Trazosin
- **Drugs for urinary frequency, enuresis and incontinence**
Duloxetine
Flavoxate hydrochloride
Oxybutynin hydrochloride
Propantheline bromide
Propiverine hydrochloride
Solifenacin succinate
Tolterodine tartrate
Trospium Chloride
- **Drugs for erectile dysfunction**
Alprostadil

Respiratory System

- **Bronchodilators**
- **Adrenoceptor agonists**
- **Other adrenoceptor agonists**
Ephedrine hydrochloride
- **Antimuscarinic bronchodilators**
Ipratropium bromide
Tiotropium
- **Cromoglicate and related therapy, leukotriene receptor agonists and omalizumab**
Ketotifen
- **Leukotriene receptor antagonists and omalizumab**
Montelukast
- **Antihistamines, hyposensitisation and allergic emergencies**
- **Antihistamines**
Non sedating antihistamines
Acrivastine
Cetirizine hydrochloride
Desloratadine
Fexofenadine Hydrochloride
Levocetirizine Dihydrochloride
Loratadine
Mizolastine
- **Sedating antihistamines**
Alimemazine tartrate/Trimeprazine tartrate
Chlorphenamine maleate/Chlorpheniramine meclate
Clemastine
Cyproheptadine hydrochloride
Hydroxyzine hydrochloride
Promethazine hydrochloride

Skin

- **Topical local anaesthetics and antipruritics**
Doxepin hydrochloride

MEDICATION

Most cases of xerostomia are the side effect of the use of medication^{1,2}. There are hundreds of prescription and non-prescription drugs associated with xerostomia¹. A few specific categories of drugs that can lead to this condition are:

- Anticholinergics
- Antihistamines
- Antihypertensives
- Appetite suppressants
- Chemotherapeutic agents
- Neurological agents
- Overactive bladder medication
- Psychotropic drugs

People who take multiple medications are more susceptible. Simultaneous use of 3 or more different types of medication increases the likelihood of developing xerostomia by 40%³.

bioXtra is a range of oral care products which have been specially formulated to help relieve dryness in the oral cavity and regulate the microenvironment of the mouth. They supplement the natural protective and lubricating systems in saliva, which are essential for a healthy, comfortable mouth.

And because Dry Mouth (xerostomia) can cause sensitive, sore gums, for added comfort bioXtra products contain no alcohol, menthol, strong flavors or detergents.

bioXtra products are Medical Devices Class IIa.



bioXtra comforts & protects dry, sore or sensitive mouths

1. Gordon J. Christensen, Common Prescriptions associated with xerostomia. Clinician Report; volume 5, Issue 10: Addendum.
2. Ann Eshenaur Spolarich (2005), Medication Use and Xerostomia- Treating Drug-induced Dry Mouth. Dimensions of Dental Hygiene ;3(7): 22-24.
3. Leo Sreebny and Arjan Vissink (2010) Dry mouth: the malevolent symptom: a clinical guide.



Lifestream Pharma n.v., s.a., Rue Jules Bordet, Zone C, B-7180 Seneffe, Belgium

See for distributors: www.bioxtra.info