

## SOME DENTAL CONSIDERATIONS FOR SELECTED PSYCHIATRIC MEDICATIONS

### ANTIDEPRESSANT DRUGS

SSRIs	Can produce xerostomia <sup>1</sup> (generally less frequently than tricyclics). Can increase risk of bleeding (platelet effect similar to aspirin and NSAIDs but by different mechanism). Increased risk of bleeding (GI [though rare] and other) with aspirin and NSAIDs (ibuprofen, naproxen, others). May increase side effects but fewer CV risks with epinephrine and other vasoconstrictors. <sup>2</sup> Can decrease/eliminate analgesia from codeine, oxycodone, hydrocodone (in Vicodin, others), and tramadol due to decreased metabolism to active analgesic. Increased risk of side effects with tramadol (seizures, serotonin syndrome).
SNRIs	Same as for SSRIs (xerostomia <sup>1</sup> , bleeding risk, drug interaction risks with aspirin, NSAIDs, codeine, oxycodone, hydrocodone, and tramadol). Increased side effects/CV risks when using epinephrine and other vasoconstrictors. Limit their use. Do not use levonordefrin (Neo-Cobefrin) <sup>2</sup> .
Other Agents	Can produce xerostomia <sup>1</sup> (generally less frequently than the tricyclics) via an anticholinergic (maprotiline) or unidentified mechanism (others). Can cause orthostatic hypotension <sup>3</sup> (most with trazodone, nefazodone, and mirtazapine). Increased side effects/CV risks when using epinephrine and other vasoconstrictors. Limit their use. Do not use levonordefrin (Neo-Cobefrin) <sup>2,3</sup> .
Tricyclics (TCAs)	All are anticholinergic <sup>1</sup> . All can cause orthostatic hypotension <sup>3</sup> . Increased side effects/CV risks when using epinephrine and other vasoconstrictors. Limit their use. Do not use levonordefrin (Neo-Cobefrin) <sup>2,3</sup> .
MAO Inhibitors (MAOIs)	All are anticholinergic <sup>1</sup> , but less so than tricyclics. All can cause hypotension (especially orthostatic). Special consideration needed when using dental anesthesia or prescribing pain medication. Limit the use of epinephrine <sup>2,3</sup> and other vasoconstrictors. Never use meperidine (Demerol, others) or tramadol (Ultram, others). Do not use phenylephrine. MAOIs interact with a number of medications to cause hypertensive crisis or serotonin syndrome (either of which can be fatal). Always check with a pharmacist or patient's prescriber before administering/prescribing any medication.

### MOOD STABILIZER DRUGS

Lithium	Dry mouth <sup>1</sup> frequently reported, generally secondary to lithium-induced polyuria; may be effect of lithium on thirst and saliva flow. Rarely, stomatitis can occur. Altered taste due to taste of lithium tablet (metallic) or secretion of lithium into saliva. Can get increased lithium levels (with toxicity) with concurrent nonsteroidal anti-inflammatory agents (NSAIDs, e.g., ibuprofen [Motrin, Advil, others]; naproxen [Naprosyn, Anaprox, Aleve, others]).
Carbamazepine, Oxcarbazepine	Anticholinergic <sup>1</sup> side effects. Can cause orthostatic hypotension <sup>3</sup> . Increased side effects/CV risks when using epinephrine and other vasoconstrictors. Limit their use. Do not use levonordefrin (Neo-Cobefrin) <sup>2,3</sup> . Avoid erythromycin or clarithromycin with carbamazepine (Tegretol, others) due to significant risk of severe carbamazepine toxicity. Mouth sores and unexplained sore throat may be early signs of potentially serious hematologic toxicity (agranulocytosis, aplastic anemia). (Risk greater with carbamazepine [Tegretol, others], though rare.)
Gabapentin	Can cause orthostatic hypotension <sup>3</sup> . Increased side effects/CV risks when using epinephrine and other vasoconstrictors. Limit their use <sup>3</sup> .
Valproic Acid, Divalproex	Can increase risk of bleeding (platelet effect similar to aspirin and NSAIDs but by a different mechanism). May increase risk of bleeding with aspirin and NSAIDs (e.g., ibuprofen, naproxen, others).

### ANTIPSYCHOTIC DRUGS

All have anticholinergic<sup>1</sup> side effects. All can cause orthostatic hypotension<sup>3</sup>.  
Increased side effects/CV risks when using epinephrine and other vasoconstrictors. Limit their use<sup>3</sup>.  
All produce extrapyramidal<sup>4</sup> side effects (stiffness in the jaw, neck, and other muscle groups; motor restlessness).  
All can produce tardive dyskinesia<sup>4</sup> (repetitive, involuntary movements of extremities and trunk, "chewing" motion of jaw). Early signs include abnormal movements of tongue (rolling, lateral, protruding movements) and mouth (lip-smacking, chewing motions, grimacing).  
Patient can control these movements temporarily with attention.

### ANTIPARKINSON DRUGS AND PROPRANOLOL

All have anticholinergic<sup>1</sup> side effects. Special precautions required when using epinephrine and other vasoconstrictors with propranolol.  
Contact a dental practitioner familiar with their combined use for further recommendations. *(Footnotes on reverse side)*

## FOOTNOTES for DENTAL CONSIDERATIONS ...

CV = cardiovascular

NSAIDs = nonsteroidal anti-inflammatory agents

ADHD = attention deficit hyperactivity disorder

<sup>1</sup>Xerostomia (or dry mouth) secondary to decreased flow of saliva (via anticholinergic or other mechanisms) predisposes patient to increased caries and gingival changes that may affect denture fit. Another anticholinergic side effect of dental concern is tachycardia.

<sup>2</sup>Drugs that potentiate norepinephrine directly (e.g., stimulants used to treat ADHD, bupropion) or indirectly by blocking norepinephrine reuptake (e.g., SNRIs, TCAs, bupropion, nefazodone and mirtazapine; carbamazepine and oxcarbazepine) or inhibiting norepinephrine metabolism (MAOIs) can cause a serious increase in blood pressure and/or cardiac arrhythmias (including tachycardia) with epinephrine and other vasoconstrictors (e.g., levonordefrin). Limit or avoid use. Use with caution, careful attention to administration technique and careful monitoring for CV toxicity (blood pressure, heart rate). Further precautions are necessary if concurrent cardiac risk factors, disease and/or treatment for cardiovascular disease. For specific dental vasoconstrictor recommendations: Contact a dental practitioner familiar with their combined use.

<sup>3</sup>Orthostatic hypotension caused by many antidepressants (TCAs, some other agents), most antipsychotics, carbamazepine (Tegretol, others), oxcarbazepine (Trileptal, others), gabapentin and other drugs, via alpha-1 blockade, can cause a serious drop in blood pressure when combined with epinephrine and similar vasoconstrictors. Limit their use. Use with caution, careful attention to administration technique and careful monitoring for CV toxicity (blood pressure, heart rate). Further precautions are necessary in patients with cardiac disease or risk factors (see footnote 2 above). For specific dental vasoconstrictor recommendations: Contact a dental practitioner familiar with their combined use.

<sup>4</sup>Atypical antipsychotics cause fewer of these (muscle) side effects.

NOTE: All psychiatric medications (except stimulants) are to some degree sedating. All can potentiate both anesthesia and the effects/side effects of sedating pain medications.

NOTE: Limit acetaminophen (Tylenol, others) dose to 2 grams per day in chronic alcohol users to minimize risk of liver damage.

NOTE: Nitrous Oxide (N<sub>2</sub>O) should be used with extreme caution in people who are on psychotropic medications due to potential for initiating a hypotensive reaction and an increased risk of hallucinations in psychotic patients. Do not administer N<sub>2</sub>O to recovered alcoholics and drug abusers as it may increase the risk of a relapse.

### ADDITIONAL RESOURCES:

Little JW, Falace DA, Miller CS, Rhodus NL: *Dental Management of the Medically Compromised Patient*, 7th ed. St. Louis: Mosby/Elsevier, 2008.

Malamed SF: *Handbook of Local Anesthesia*, 5th ed. St. Louis: Mosby, 2004.

Schatzberg AF, Cole JO, DeBattista C: *Manual of Clinical Psychopharmacology*, 7th ed. Arlington, VA: American Psychiatric Publishing, 2010.

Yagiela JA, Dowd FJ, Johnson BS, Mariotti AJ, Neidle EA. *Pharmacology & Therapeutics for Dentistry*, 6<sup>th</sup> ed. St. Louis, Mosby/Elsevier, 2011.

### Articles:

Adverse Drug Interactions in Dental Practice, Parts I–V (a series), *JADA*, January–May, 1999, comments in September 1999.

I. Moore PA, et al: *JADA*, 130(1):47–54, 1999; II. Hersh EV. *JADA* 130(2):236–51, 1999; III. Haas DA. *JADA* 130(3):397–407, 1999.

IV. Moore PA. *JADA* 130(4):541–554, 1999; V. Yagiela JA. *JADA* 130(5):701–709, 1999.

Becker DE, Psychotropic Drugs: Implications for Dental Practice, *Anesth Prog* 55:89–99, 2008.

By: Karen P. Hansen, PharmD, MS, BCPP, BCPS; (except dental resources and nitrous oxide recommendations)

For additional information, contact: Patricia E. Doyle, RDH, BS, FADPD