

<b>ANTIHYPERTENSIVES</b>			
<b>DRUG CLASS</b>	<b>DRUGS IN CLASS</b>	<b>WHEN TO HOLD</b>	<b>REASON</b>
<b>Angiotensin Converting Enzyme (ACE) Inhibitors</b>	Benazepril / amlodipine (Lotrel®) Benazepril (Lotensin®) Benazepril / HCTZ (Lotensin HCT®) Captopril (Capoten®) Captopril / HCTZ (Capozide®) Enalapril (Vasotec®) Enalapril / HCTZ (Vaseretic®) Fosinopril (Monopril®) Fosinopril / HCTZ (Monopril HCT®) Lisinopril (Prinivil®, Zestril®) Lisinopril / HCTZ (Prinzide® or Zestoretic®) Moexipril (Univasc®) Moexipril / HCTZ (Uniretic®) Perindopril (Aceon®) Quinapril (Accupril®) Quinapril / HCTZ (Accuretic®) Ramipril (Altace®) Trandolapril (Mavik®) Trandolapril/verapamil (Tarka®)	<b>HOLD Day of Surgery</b>  (Do <b>NOT</b> hold day of surgery for cataract patients)	Potential Hypotension intra-op risk
<b>Angiotensin Receptor Blockers (ARB)</b>	Azilsartan (Edarbi®) Candesartan (Atacand®) Candesartan/HCTZ (Atacand HCT®) Eprosartan (Teveten®) Eprosartan/HCTZ (Teveten HCT®) Irbesartan (Avapro®) Irbesartan / HCTZ (Avalide®) Losartan (Cozaar®) Losartan / HCTZ (Hyzaar®) Olmesartan (Benicar®) Olmesartan / HCTZ (Benicar HCT®) Telmisartan (Micardis®) Telmisartan/HCTZ (Micardis HCT®) Valsartan (Diovan®) Valsartan / HCTZ (Diovan HCT®)	<b>HOLD Day of Surgery</b>  (Do <b>NOT</b> hold day of surgery for cataract patients)	Potential Hypotension intra-op risk
<b>Beta Blockers</b>	Acebutolol (Sectral) Atenolol (Tenormin) Betaxolol (Kerlone) Bisoprolol (Zebeta) Carvedilol (Coreg) Metoprolol (Lopressor, Toprol XL) Nadolol (Corgard) Nebivolol (Bystolic) Penbutolol (Levatol) Pindolol (Visken) Propranolol (Inderal) Sotalol (Betapace)	<b>Do NOT</b> hold prior to surgery	Withdrawal/rebound effects if held

DRUG CLASS	DRUGS IN CLASS	WHEN TO HOLD	REASON
<b>Calcium Channel Blockers</b>	Amlodipine (Norvasc®) Clevipidine (Cleviprex®) Diltiazem (Cardizem®) Felodipine (Plendil®) Isradipine (Dynacirc®) Nicardipine (Cardene®) Nifedipine (Procardia®, Adalat®) Nimodipine (Nimotop®) Verapamil (Calan®, Covera-HS®, Verelan®)	Do <b>NOT</b> hold prior to surgery	
<b>Clonidine</b>	Clonidine (Catapres®)	Do <b>NOT</b> hold prior to surgery	Withdrawal/ rebound effects if held
<b>Digoxin</b>	Digoxin (Lanoxin®)	Do <b>NOT</b> hold prior to surgery	
<b>Diuretics</b>	Acetazolamide (Diamox®) Amiloride Amiloride/Hydrochlorothiazide (Moduretic®) Bendroflumethiazide Bumetanide (Bumex®) Chlorothiazide (Diuril®) Chlorthalidone (Thalitone®) Eplerenone (Inspra®) Ethacrynic acid (Edecrin®) Furosemide (Lasix®) Hydrochlorothiazide (Microzide®, Esidrix®) Indapamide (Lozol®) Metolazone (Zaroxolyn®) Methazolamide Methyclothiazide Metolazone (Zaroxoxlyn®) Spironolactone (Aldactone®) Spironolactone/Hydrochlorothiazide (Aldactazide®) Torsemide (Demadex®) Triamterene (Dyrenium®) Triamterene / HCTZ (Dyazide®, Maxzide®)	<b>HOLD</b> day of surgery	Increases the risk of hypokalemia / hypovolemia
<b>Statins</b>	Atorvastatin (Lipitor) Fluvastatin (Lescol) Lovastatin (Mevacor) Pitavastatin (Livalo) Pravastatin (Pravachol) Rosuvastatin (Crestor) Simvastatin (Zocor)	Do <b>NOT</b> hold prior to surgery	

RESPIRATORY MEDICATIONS			
DRUG CLASS	DRUGS IN CLASS	WHEN TO HOLD	REASON
<b>Bronchodilators</b>	Albuterol (ProAir®, Proventil®, Ventolin®) Albuterol/Ipratropium (Duoneb®, Combivent®) Formoterol/Budesonide (Symbicort®) Formoterol/Mometasone (Dulera®) Ipratropium (Atrovent®) Levalbuterol (Xopenex®) Salmeterol (Serevent®) Salmeterol/Fluticasone (Advair®)	Use on day of surgery and bring inhaler on surgery day	
<b>Inhaled Steroids</b>	Beclomethasone (QVAR®) Flunisolide (AeroBid®) Fluticasone (Flovent®) Mometasone (Asmanex®) Triamcinolone (Asmacort®)	Use on day of surgery	
ANTICOAGULANTS			
DRUG CLASS	DRUGS IN CLASS	WHEN TO HOLD	REASON
<b>Direct Thrombin Inhibitors</b>	Dabigatran (Pradaxa®)	<b>Do not discontinue without consulting prescribing physician</b>	Increased risk of bleeding complications. No spinal or epidural within seven days of last dose.
<b>Factor XA Inhibitor</b>	Fondaparinux (Arixtra®) Apixaban (Eliquis®) Rivaroxaban (Xarelto®)	<b>Do not discontinue without consulting prescribing physician</b>	Increased risk of bleeding complications.
<b>Heparin SQ</b>	Heparin SQ	At least 4 hours prior to surgery	Increased risk of bleeding complications.
<b>Low molecular weight heparin</b>	Dalteparin (Fragmin®) Enoxaparin (Lovenox®)	24 hrs prior to surgery if on full anticoagulant dose (1 mg/kg), 12 hrs prior to surgery if on DVT prophylaxis dose (0.5 mg/kg)	Increased risk of bleeding; No spinal or epidural within 12 hrs of prophylaxis dose (0.5 mg/kg) and 24 hrs of therapeutic dose (1 mg/kg)
<b>Warfarin</b>	Warfarin (Coumadin®)	<b>Do not discontinue without consulting prescribing physician</b>	Increased bleeding risk.

DRUGS CLASS	DRUGS IN CLASS	WHEN TO HOLD	REASON
<b>Aspirin (and Aspirin- containing drugs)</b>	Aspirin  Aspirin/acetaminophen/caffeine (Excedrin®) Aspirin/butalbital/caffeine (Fiorinal®) Aspirin/carisoprodol (Soma Compound®) Aspirin/carisoprodol/codeine (Soma compound w/ codeine®) Aspirin/dipyridamole (Aggrenox®) Aspirin/orphenadrine/caffeine (Norgesic®) Aspirin/oxycodone (Percodan®)	<b>If no history of CAD or stroke:</b> Discontinue 5-10 days prior to surgery, especially for ophthalmologic and neurosurgical procedures.  <b>Patients with hx of CAD or stroke:</b> <b>Continue Aspirin, including day of surgery if at all possible. Need to consult with surgeon if neuro/ spine/ ophthalmologic surgeon.</b>	Increased risk of bleeding complications
<b>Anti-Platelet Drugs</b>	<b>Clopidogrel (Plavix®)</b>  <b>Prasugrel (Effient®)</b>  <b>Ticagrelor (Brilinta®)</b>  <b>Ticlopidine (Ticlid®)</b>  Cilostazol (Pletal®)  Dipyridamole (Persantine®)  Diipridamole/Aspirin (Aggrenox®)	<b>Do NOT discontinue without explicit instructions from prescribing physician! Must be documented by prescribing physician on form N-372 (Request for Preoperative Cardiac Evaluation)</b> <b>HOLD 4 days preop</b>  <b>HOLD 2 days preop</b>  <b>HOLD 7 days preop</b>	Increased risk of bleeding complications
<b>Short-acting NSAIDs</b>	Diclofenac (Cataflam®, Voltaren®) Etodolac (Lodine®) Fenoprofen (Nalfon®) Flurbiprofen (Ansaid®) Ibuprofen (Advil®, Motrin®) Ibuprofen/Hydrocodone (Vicoprofen®) Ibuprofen/Oxycodone (Combunox®) Indomethacin (Indocin®) ketoprofen (Orudis KT®, Oruvail®) ketorolac (Toradol®) Meclofenamate (Meclomen®) Mefenamic Acid (Ponstel®) Tolmetin (Tolectin®)	<b>HOLD</b> day prior to surgery	Increased risk for bleeding and renal complications

DRUG CLASS	DRUGS IN CLASS	WHEN TO HOLD	REASON
<b>Long-acting NSAIDs</b>	Diflunisal (Dolobid®) Etodolac (Lodine XL®) Meloxicam (Mobic®) Nabumetone (Relafen®) Naproxen (Aleve®, Anaprox®, Naprosyn®) Oxaprozin (Daypro®) Piroxicam (Feldene®) Sulindac (Clinoril®)	At least 3 days prior to surgery	Increased risk for renal, thrombo-embolic complications
<b>Cox-2 Inhibitors</b>	Celecoxib (Celebrex®) Nabumetone (Relafen)	At least 3 days prior to surgery	Increased risk for renal, thrombo-embolic Complications
<b>OPIOID PAIN MEDICATIONS</b>			
DRUG CLASS	DRUGS IN CLASS	WHEN TO HOLD	REASON
<b>Long-Acting Opioids</b>	Fentanyl Patch (Duragesic®) Hydromorphone SR (Exalgo®) Methadone (Dolophine®) Morphine SR (MS Contin®, Kadian®, Avinza®) Morphine SR/Naltrexone (Embeda®) Oxycodone SR (Oxycontin®) Oxymorphone (Opana ER®)	Do <b>NOT</b> hold prior to surgery	Discontinuation may result in opioid withdrawal and difficulty with postoperative pain control.
<b>Short-Acting Opioids</b>	Hydrocodone Hydrocodone/Acetaminophen (Hycet®, Lorcet®, Lortab®, Norco®, Vicodin®, Zydone®) Hydrocodone/Ibuprofen (Vicoprofen®) Hydromorphone (Dilaudid®) Hydromorphone ER (Exalgo®) Morphine Oxycodone (Roxicodone®) Oxycodone/Acetaminophen (Percocet®, Endocet®, Roxicet®) Oxycodone/Aspirin (Percodan®, Endodan®) Propoxyphene/Acetaminophen (Darvocet®) Propoxyphene/Aspirin (Darvon®) Tapentadol (Nucynta)	Do <b>NOT</b> hold prior to surgery  <b>Switch patient from Aspirin and Ibuprofen containing drugs one week pre-op.</b>	Discontinuation may result in opioid withdrawal and difficulty with postoperative pain control.

<b>Opioid Agonist/ Antagonists</b>	Buprenorphine/Naloxone (Suboxone®) Buprenorphine patch (Butrans®)  Naltrexone (Vivitrol, ReVia, Depade)	<b>Buprenorphine can be continued as prescribed including day of surgery and bring daily dose to hospital for post-op.</b>  <b>Naltrexone should be transitioned to alternative medication 1-2 weeks prior to elective surgery by the prescribing physician.</b>	May cause difficulty with postoperative pain control, high opioid requirements.
<b>DRUG CLASS</b>	<b>DRUGS IN CLASS</b>	<b>WHEN TO HOLD</b>	<b>REASON</b>
<b>Topical local Anesthetic</b>	Lidocaine patch	Continue	
<b>Skeletal Muscle Relaxant</b>	Carisoprodol Soma Metaxalone (Skelaxin)	Continue	
<b>STERIOD AND IMMUNE MEDICATIONS</b>			
<b>DRUG CLASS</b>	<b>DRUGS IN CLASS</b>	<b>WHEN TO HOLD</b>	<b>REASON</b>
<b>Steroids</b>	Prednisone Methylprednisolone (Medrol®)	Do <b>NOT</b> hold prior to surgery	Adrenal insufficiency
<b>THYROID MEDICATIONS</b>			
<b>DRUG CLASS</b>	<b>DRUGS IN CLASS</b>	<b>WHEN TO HOLD</b>	<b>REASON</b>
<b>Thyroid hormone</b>	Levothyroxine (Synthroid®, Levoxyl®) Dessicated thyroid (Armour Thyroid®)	Do <b>NOT</b> hold prior to surgery	
<b>DIABETES MEDICATIONS</b>			
<b>DRUG LASS</b>	<b>DRUGS IN CLASS</b>	<b>WHEN TO HOLD</b>	<b>REASON</b>
<b>Short-Acting Insulin</b>	Regular Insulin (Humulin, Novolin) Insulin Aspart (Novolog) Insulin Glulisine (Apidra) Insulin Lispro (Humalog)	<b>Hold day of surgery – unless otherwise specified by prescriber</b>	
<b>Intermediate- Acting Insulin</b>	Insulin NPH (Humulin N, Novolin N) Humulin 70/30 Humalog 50/50 Humalog 75/25 Novolin 70/30 Novolog 70/30	Take ½ dose of long acting night prior – unless otherwise specified by prescriber	
<b>Long-Acting Insulin</b>	Insulin Glargine (Lantus, Toujeo) Insulin Detemir (Levemir) Insulin Degludec (Tresiba)	Take ½ dose of long acting night prior – unless otherwise specified by prescriber	
<b>Non-Insulin Injections</b>	Linagliptin (Tradjenta) Pramlintide (Symlin®)	Per regimen unless otherwise specified by prescriber	

<b>GLP-1 Receptor Agonists</b>	Albiglutide (Tanzeum) Dulaglutide (Trulicity) Exenatide ER (Bydureon BCise) Exenatide IR (Byetta) Liraglutide (Saxenda, Victoza) Liraglutide/insulin degludec (Xultophy) Lixisenatide (Adlyxin) Lixisenatide/insulin glargine (Soliqua) Semaglutide (Ozempic, Rybelsus Wegovy) Tirzepatide (Mounjaro)	<b>Hold 1-2 weeks prior to surgery.</b>	Due to long half-life, GLP-1 receptor agonists delay gastric emptying, potentially increasing gastric volumes even after appropriate NPO time of >8 hours. This side effect raises concerns regarding risk of aspiration during anesthesia induction.
<b>Oral Diabetic Drugs</b>	Alogliptin (Nesina®) Alogliptin/Pioglitazone (Oseni®) Linagliptin (Tradjenta®) Metformin Pioglitazone (Actos®) Rosiglitazone (Avandia®) Saxagliptin (Onglyza®) Saxagliptin/Metformin ER (Kombiglyze XR®) Sitagliptin (Januvia®) Sitagliptin/Metformin ER (Janumet®)	<b>Hold PM dose night before surgery and also hold day of surgery – unless otherwise specified by prescriber</b>	
<b>CNS AGENTS</b>			
<b>DRUG CLASS</b>	<b>DRUGS IN CLASS</b>	<b>WHEN TO HOLD</b>	<b>REASON</b>
<b>Benzodiazepines</b>	Alprazolam (Xanax®) Chlordiazepoxide (Librium®) Diazepam (Valium®)	Do <b>NOT</b> hold prior to surgery	Risk of withdrawal if stopped abruptly; potential for additive effects
<b>Antidepressants - Monoamine Oxidase (MAO) Inhibitors</b>	Isocarboxazid (Marplan®) Phenelzine (Nardil®) Tranylcypromine (Parnate®)  Rasagiline (Azilect®)  Selegiline patch (Emsam®)	<b>Taper off 2 weeks prior to surgery if possible. Consult with prescribing provider for taper.</b>  OK to continue  <b>Discontinue at least 10 days prior to surgery if possible. Consult with prescribing provider for taper.</b>	Drug interactions (e.g., ephedrine, meperidine, methadone, tramadol), which could cause a hypertensive crisis.



<b>Antidepressants – SSRIs and SNRIs</b>	Citalopram (Celexa®) Duloxetine (Cymbalta®) Escitalopram (Lexapro®) Fluoxetine (Prozac®) Fluvoxamine (Luvox®) Paroxetine (Paxil®) Sertraline (Zoloft®) Strattera (Atomoxetine®) Desvenlafaxine (Pristiq, Khedezla)	Do <b>NOT</b> hold prior to surgery	Risk of withdrawal if stopped abruptly
<b>Antidepressants - Other</b>	Amitriptyline (Elavil®) Bupropion (Wellbutrin®) Desipramine (Norpramin®) Doxepin (Sinequan®) Imipramine (Tofranil®) Mirtazapine (Remeron®) Nefazodone (Serzone®) Nortriptyline (Pamelor®) Trazodone (Desyrel®)	Do <b>NOT</b> hold prior to surgery	Risk of withdrawal if stopped abruptly
<b>Lithium</b>	Lithium (Eskalith®, Lithonate®)	Do <b>NOT</b> hold prior to surgery	
<b>Acetyl- cholinesterase Inhibitors (for Alzheimer's)</b>	Donazepil (Aricept®) Galantamine (Razadyne®) Rivastigmine (Exelon®) Tacrine (Cognex®)	Do <b>NOT</b> hold prior to surgery	
<b>Anticonvulsants</b>	Carbamazepine (Tegretol®) Clonazepam (Klonopin®) Felbamate (Felbatol®) Gabapentin (Neurontin®) Levetiracetam (Keppra®) Lamotrigine (Lamictal®) Oxcarbazepine (Trileptal®) Phenytoin (Dilantin®) Pregabalin (Lyrica®) Primidone (Mysoline®) Tiagabine (Gabitril®) Topiramate (Topamax®) Valproic Acid (Depakote®) Zonisamide (Zonegran®)	Do <b>NOT</b> hold prior to surgery	
<b>ADHD Drugs (Stimulants)</b>	Dextroamphetamine (Adderall®) Lisdexamfetamine (Vyvanse®) Dexmethylphenidate (Focalin®) Methylphenidate (Ritalin®, Metadate®, Concerta®, Daytrana patch®)	Do <b>NOT</b> hold prior to surgery	No documented interaction with anesthesia medications
<b>ADHD Drugs (non-stimulant)</b>	Guanfacine (Intuniv®)	Do <b>NOT</b> hold prior to surgery	Risk of rebound hypertension if withheld.



<b>Sleep Aids</b>	Zolpidem (Ambien®) Eszopiclone (Lunesta®)	<b>May</b> take night before surgery	
<b>Restless legs</b>	Ropinirole (Requip) Pramipexole (Mirapex)	Continue	
<b>REFLUX MEDICATIONS</b>			
<b>DRUG CLASS</b>	<b>DRUGS IN CLASS</b>	<b>WHEN TO HOLD</b>	<b>REASON</b>
<b>Proton Pump Inhibitors</b>	Esomeprazole (Nexium®) Lansoprazole (Prevacid®) Omeprazole (Prilosec®) Pantoprazole (Protonix®) Rabeprazole (Aciphex®)	Do <b>NOT</b> hold prior to surgery	Reflux prevention
<b>Histamine H2 blockers</b>	Cimetidine (Tagamet®) Famotidine (Pepcid®) Nizatidine (Axid®) Ranitidine (Zantac®)	Do <b>NOT</b> hold prior to surgery	Reflux prevention
<b>Particulate Antacids</b>	Gaviscon® Maalox®	<b>HOLD</b> day of surgery	Risk of particulate aspiration
<b>OTHER DRUGS</b>			
<b>DRUG CLASS</b>	<b>DRUGS IN CLASS</b>	<b>WHEN TO HOLD</b>	<b>REASON</b>
<b>Appetite Suppressant (Diet Drug)</b>	Phentermine (Adipex®, Lomaira®) Phentermine / Topiramate (Qsymia®) Benzphetamine (Didrex, Regimex) Diethylpropion Methamphetamine (Desoxyn) Phendimetrazine (Bontril PDM)	<b>Discontinue at least 7 days pre-op</b>	Risk of hypotension that is unresponsive to treatment.
<b>Other Medical patches</b>	Estrogen patch Nicotine patch	Continue	
<b>Herbal Supplements</b>	See List	Discontinue at least one week pre-op	Risk of bleeding, blood pressure problems, slow awakening from anesthesia, etc.

## Herbals and Dietary Supplements with the Potential to Increase Bleeding

Agrimony Andrographis Angelica Anise Arnica Asafoetida Aspen Bilberry Black Haw Bladder Wrack (Fucus) Bogbean Boldo Borage Bromelain Buchu Burdock Capsicum Carrageenan Celery Chamomile (German and Roman) Chinese prickly ash Cinchona Clove Cod liver oil Coltsfoot Danshen Deertongue DHA (docosahexaenoic acid) Dong quai EPA (eicosapentaenoic acid) Epimedium Evening primrose oil Evodia	Fenugreek Feverfew Fish oil Flaxseed Forskolin Forsythia Garlic Gamma linolenic acid German Sarsaparilla Ginger Ginkgo Biloba Ginseng (Panax, Siberian) Green tea Guggul Holy basil Honeysuckle Horse Chestnut Horseradish Inositol Nicotinate Japanese apricot Jiaogulan Krill Oil Kudzu Licorice Meadowsweet Melatonin Methoxylated flavones Nattokinase Onion Palm oil Pantethine Passion Flower Pau d'Arco	Peony Policosanol Poplar Prickly Ash (Northern) Quassia Red Clover Resveratrol Safflower Saw palmetto Sea buckthorn Selenium Senega Serrapeptase Swallowroot Sweet Clover Sweet Vernal grass Sweet Woodruff Tamarind Tiratricol Tonka Beans Turmeric Vanadium Vinpocetine Vitamin E Wild Carrot Wild Lettuce Willow Bark Wintergreen Yarrow
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**It is recommended that patients discontinue herbal supplements at least one week prior to surgery.**