

# MEG Demo (Staff App) - MEG Demo - MEG Staff app: Pre-Op section

## Notes

Content update approved by Perioperative Medicine Drugs & Therapeutics Subcommittee Chairperson September 2022  
 Read in conjunction with Q-Pulse "Pre-Operative Fasting Times for Adult Surgery Guideline"

## Notes

- In the immediate pre-operative period, interruption to the patient's normal drug regimen can result in poor control of underlying disease .
- In general, medication should be continued and given on the morning of surgery.**
- Some medication, if continued, may interact with anaesthesia or adversely affect the surgical procedure and should be held in advance of surgery.

**Prescribed medications (including pre-medication) can be taken up until induction of anaesthesia with a small drink of water (less than 30 mL) EXCEPT IN THE FOLLOWING CIRCUMSTANCES:**

- Do not administer if there are **specific directions to hold** one or many medications for a patient (e.g. "hold" beside drugs on the patient's drug chart or anaesthesiologist note on pre-assessment sheet);
  - Do not administer if the patient is **unable to swallow oral medication** (fasting for surgery is not in itself a reason to withhold medication):  
 If the drug belongs to the drug classes below- **CHECK WHAT TO DO** . The table below is not exhaustive.
    - Where there is concern , **refer the patient to the anaesthesiologist, surgeon or prescribing team** for a decision on an individual basis.
    - Inform anaesthesiologist** if any drug in the table below was given even though it should have been held.
- Some medications may be omitted prior to surgery as result of other protocols e.g. anticoagulants and oral hypoglycaemic agents. Refer to the appropriate protocols (for example within the Medicines Guide) and/or Consultant's notes.
  - Unless otherwise requested by the Consultant, or specified below, analgesic drugs should not be omitted due to fasting.
  - Postoperatively, oral medications can be given as appropriate when free oral intake is established.

## CARDIOVASCULAR SYSTEM & ANTICOAGULATION

Pre-drug changes to fasting status table- CHECK WHAT TO DO			
Disclaimer: If not in the table, prescribed medications (including pre-medication) can be taken up until induction of anaesthesia with a small drink of water (less than 30 mL).			
Generic examples	Brand examples	Recommendation	
<b>CARDIOVASCULAR SYSTEM - ANTICOAGULATION</b>			
<b>Antiplatelets (oral)</b>			
Aspirin	Aspirin	Hold 100mg daily in advance of surgery, usually held	
Clopidogrel	Plavix	Hold 7 days in advance of surgery, usually held	
Ticagrelor	Bridgel	Hold 5 days in advance of surgery, usually held	
P2Y12 inhibitors			
Warfarin	Warfarin	Refer to appropriate protocols (e.g. MEG Demo) for management of warfarin in advance of surgery. Refer to Table 2.	
Dabigatran	Pradaxa	Hold 2 days in advance of surgery, usually held	
Apixiban	Eliquis	Hold 35 days in advance of surgery, usually held	
Factor Xa inhibitors			
Direct thrombin inhibitors			
Direct Factor Xa inhibitors			
Factor IIa inhibitors			
Factor Xa inhibitors			
Factor XIa inhibitors			
Factor XIIIa inhibitors			
Factor XIVa inhibitors			
Factor XVa inhibitors			
Factor XVIa inhibitors			
Factor XVIIa inhibitors			
Factor XVIIIa inhibitors			
Factor XIXa inhibitors			
Factor XXa inhibitors			
Factor XXIa inhibitors			
Factor XXIIa inhibitors			
Factor XXIIIa inhibitors			
Factor XXIVa inhibitors			
Factor XXVa inhibitors			
Factor XXVIa inhibitors			
Factor XXVIIa inhibitors			
Factor XXVIIIa inhibitors			
Factor XXIXa inhibitors			
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**DIABETES**

**If the drug belongs to the drug classes below- CHECK WHAT TO DO.**  
 Otherwise, if not in the table, prescribed medications (including pre-medication) can be taken up until induction of anaesthesia with a small drink of water (less than 30 mL)

Generic examples	Brand examples	Recommendation
<b>DIABETES</b>		
<b>Insulins</b>		
All injectable insulins - See <a href="#">section 6.1.2</a> of the Guide, or Adult Diabetes Chart		
<b>Sodium-Glucose Co-Transporter 2 Inhibitors (SGLT-2 inhibitors)</b>		
Canagliflozin	Invokana, Vokanamet	Hold for 72 hours prior to surgery. See <a href="#">section 6.1.2</a> of the Guide, or Adult Diabetes Chart
Dapagliflozin	Forxiga, Xigduo, Qtern	
Empagliflozin	Jardiance, Synjardy, Glyxambi	
Ertugliflozin	Steglatro, Stegliuromet, Stegliujan	
<b>Other Hypoglycaemic Agents</b>		
Acarbose	Glucobay	Hold all oral hypoglycaemics and non-insulin injections on morning of surgery. See <a href="#">section 6.1.2</a> of the Guide, or Adult Diabetes Chart
Alogliptin	Vipidia, Vipdomet	
Dulaglutide	Trulicity	
Exenatide	Byetta, Bydureon	
Glibenclamide	Daonil	
Gliclazide	Diamicron	
Glimepiride	Amaryl	
Glipizide	Minodiab	
Linagliptin	Trajenta, Jentadueto	
Liraglutide	Victoza, Saxenda	
Lixisenatide	Lyxumia	
Metformin	Glucophage, combination products	
Nateglinide	Starlix	
Pioglitazone	Actos, Competact	
Repaglinide	Prandin, Novonorm	
Saxagliptin	Onglyza, Komboglyze	
Semaglutide	Ozempic	
Sitagliptin	Januvia, Janumet	
Tolbutamide	Galvus	
Vildagliptin	Eucreas	

**CENTRAL NERVOUS SYSTEM**

# IMMUNE SYSTEM

**If the drug belongs to the drug classes below- CHECK WHAT TO DO.**  
 Otherwise, if not in the table, prescribed medications (including pre-medication) can be taken up until induction of anaesthesia with a small drink of water (less than 30 mL)

IMMUNE SYSTEM		
<b>Immunosuppressants</b>		
Generic examples	Brand examples	Recommendation
DMARDs i.e.		
Azathioprine	Imuran	Continue
Cyclosporin	Neoral, Sandimmun	If surgeon or prescribing team are concerned RE risk of infection (implants involved etc), depending on the indication, it may be stopped 1 week prior to operation. (Do not stop in transplant patients)
Hydroxychloroquine	Plaquenil	
Mycophenolate	Cellcept, Mycolat	Advice as per DMARDs above, but if stopping, stop 2 weeks prior to operation.
Sulfasalazine	Salazopyrin	
Leflunomide	Arava	Advice as per DMARDs above. Continue, but not on morning of surgery. If the weekly dose will therefore be missed, it can be given 24-48 hours postoperatively (48 hours if contrast involved) once renal function is normal. Give the dose on the usual day the following week.
Methotrexate		
<b>Cytokine modulators</b>		
Biologic agents	<p>Stop prior to surgery and schedule surgery at the end of the dosing cycle, if feasible. Resume medications a minimum 14 days after surgery in the absence of wound healing problems, surgical site infection or systemic infection. Check with patient for their individual dosing interval (general dosing intervals below).</p> <p>For non-rheumatology patients on immunomodulators undergoing surgery, discuss with <b>prescribing team</b> prior to holding or restarting post-surgery.</p>	
		<b>Dosing Interval</b>
Abatacept	Orencia	Weekly (SC) or monthly (IV)
Adalimumab	Humira, Amgevita, Hulio, Idacio, Imraldi	Weekly or every 2 weeks
Anakinra	Kineret	Daily
Certolizumab pegol	Cimzia	Every 2 or 4 weeks
Etanercept	Enbrel, Benepali	Weekly or twice weekly
Golimumab	Simponi	Every 4 weeks
Infliximab	Remsima	Every 4, 6 or 8 weeks
Rituximab	MabThera	Every 4-6 months
Secukinumab	Cosentyx	Every 4 weeks
Tocilizumab	RoActemra	Weekly (SC) or every 4 weeks (IV)
Ustekinumab	Stelara	Every 12 weeks
Vedolizumab	Entyvio	Every 2 weeks (SC) or every 4 or 8 weeks (IV)
<p>Example: Mr AS taking Tocilizumab IV every 4 weeks takes his treatment as usual on 1st June and was due his next treatment on 29th June but holds this. Surgery can be scheduled any time from 30th June onwards. He restarts treatment 14 days after surgery when wound closed and dry with no sign of infection.</p>		
<b>Janus Kinase Inhibitors</b>		
Baricitinib	Olumiant	Withhold for 3 days prior to surgery.
Filgotinib	Jyseleca	Resume medications a minimum 14 days after surgery in the absence of wound healing problems, surgical site infection or systemic infection. For non-rheumatology patients on immunomodulators undergoing surgery, discuss with <b>prescribing team</b> prior to holding or restarting post-surgery.
<a href="#">Tofacitinib</a>	Xeljanz	
Upadacitinib	Rinvoq	
<b>Corticosteroids (Systemic routes only)</b>		
Betamethasone	Betnesol	Continue oral steroids preoperatively as normal (additional IV hydrocortisone may also be indicated on induction of anaesthesia: see <a href="#">section 6.4</a> of the Guide).
Budesonide	Entocort, Cortimet	
Deltazacort	Calcort	
Dexamethasone		
Fludrocortisone	Florinet	
Hydrocortisone	Et Cortesol, Solu-Cortel	
Methylprednisolone	Solu-Medrone, Depo-Medrone	
Prednisolone	Deltacortril	
Prednisone	Lodotra	
Triamcinolone	Kenalog, Adcortyl	

## OTHER DRUG CLASSES

If the drug belongs to the drug classes below- CHECK WHAT TO DO.

Otherwise, if not in the table, prescribed medications (including pre-medication) can be taken up until induction of anaesthesia with a small drink of water (less than 30 mL)

OTHER DRUG CLASSES		
HRT and oral contraceptives		<p>For Major Surgery &gt;45 minutes with high thrombosis risk or prolonged immobilisation:</p> <p>Hold HRT, OCP for 4 weeks pre-operatively</p> <p>For minor surgery &lt;45 minutes with:</p> <ul style="list-style-type: none"> <li>- No other VTE risk factors – Continue HRT, OCP</li> <li>- Other VTE risk factors (see <a href="#">section 11.1</a>) – continue HRT, but hold OCP for 4 weeks pre-operatively</li> </ul> <p>See <a href="#">sections 9.5</a> and <a href="#">9.6</a> for more details</p> <p>Note: Progesterone-only methods can be continued perioperatively</p> <p>Note: Transdermal HRT can be continued perioperatively</p>
Tibolone	Livial	<p>Consider stopping 4-6 weeks before surgery where prolonged immobilisation is likely.</p> <p>If continuing, ensure adequate thromboprophylaxis.</p>
Norethisterone	Primolut N	<p>Therapeutic doses &gt; 5 mg:</p> <p>Consider stopping 4-6 weeks before surgery where prolonged immobilisation is likely.</p> <p>If continuing, ensure adequate thromboprophylaxis.</p>
Tamoxifen	Nolvadex-D, Tamox	<p>For breast cancer, continue with thromboprophylaxis.</p> <p>For other indications, hold for 6 weeks pre-operatively</p>
Raloxifene	Evista	Hold for 72 hours pre-operatively
Herbal medicines and supplements		Hold for two weeks pre-operatively
Strontium	Protelos	Hold for two weeks pre-operatively
Bisphosphonates		Withhold on morning of surgery (requires swallowing with full glass of water)
Pentosan polysulfate sodium	Elmiron	<p>Possesses mild anticoagulant activity.</p> <p><b>For high-risk and intermediate-risk spinal procedures:</b> Hold for 5 days pre-operatively. Can be resumed 24 hours after the procedure.</p>
<b>Anion exchange resins</b>		
Colesevelam	Cholestagel	Hold for 24 hours before surgery
Colestipol	Colestid	
Colestyramine	Questran	

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