



Table 2: Summary of the potential risks that could occur with different classes of cardiac medication used while fasting

Drug	Condition used in	Risk in fasting
<p><i>Angiotensin Converting Enzyme inhibitor</i> e.g., Ramipril</p> <p><i>Aldosterone Receptor blockers</i> e.g., Candesartan</p> <p><i>Angiotensin Receptor Nephilysin Inhibitor (ARNI)</i> i.e., Sacubitril/Valsartan</p>	<p>Hypertension Heart failure</p>	<p>May worsen fasting associated hypotension, which may result in dizziness or loss of consciousness. May compound fasting-associated-dehydration resulting in an acute kidney injury and/or life-threatening electrolyte abnormalities e.g. hyperkalaemia.</p> <p>Medication non-compliance may result in uncontrolled hypertension, decompensated heart failure</p>
<p><i>Antiplatelet medications</i> e.g., Aspirin, Clopidogrel, Prasugrel, Ticagrelor</p>	<p>Coronary artery disease / Myocardial infarction</p>	<p>Medication non-compliance can increase risk of acute stent thrombosis, myocardial infarction and death if antiplatelets are not taken regularly - particularly in patients with recent coronary stent implantation (<6 month).</p> <p>Ticagrelor is taken twice a day and has a half-life of 7 hours - see above section on taking medications more than 12 hours apart and</p>



		the effect it may have.
<i>Antiarrhythmic Drugs (AADs)</i> e.g., Amiodarone, Flecainide, Sotalol	Atrial tachyarrhythmias Ventricular tachyarrhythmias	Some may worsen fasting-associated-hypotension, which may result in dizziness or loss of consciousness. Fasting-associated-dehydration may result in significant electrolyte abnormalities that may increase risk of AAD toxicity.
<i>Beta blockers</i> e.g., Bisoprolol	Coronary artery disease Heart failure Arrhythmias Hypertension	May worsen fasting associated hypotension, which may result in dizziness or loss of consciousness. Medication non-compliance may result in worsening angina, decompensated heart failure, more frequent arrhythmias
<i>Calcium channel blockers</i> e.g., Amlodipine, Diltiazem	Hypertension Arrhythmias Coronary artery disease	May worsen fasting associated hypotension, which may result in dizziness or loss of consciousness. Medication non-compliance may result in worsening angina, more frequent arrhythmias, uncontrolled hypertension
<i>Cardiac glycosides</i>	Arrhythmias Heart Failure	Digoxin toxicity may occur in potential case of fasting related acute kidney injury



e.g., Digoxin		
<i>Direct Oral Anticoagulants (DOAC)</i> e.g., Apixaban, Rivaroxaban, Edoxaban	Atrial Flutter/ Atrial Fibrillation Deep Venous Thrombosis/ Pulmonary Embolism	Twice daily DOACs: The half-life of apixaban is 12 hours - if taken early morning e.g., 3am (suhoor) and then again at e.g., 8pm (Iftaar), there may be a period in between where the patient is not adequately anticoagulated. Medication non-compliance may result in stroke or death.
<i>Immunosuppressant therapy</i> e.g., Tacrolimus	Heart transplant	May compound fasting-associated-dehydration and result in an acute kidney injury and/or life-threatening electrolyte abnormalities e.g. hyperkalaemia. Medication non-compliance may result in organ rejection and death. Tacrolimus is taken twice a day and therefore care must be taken to avoid long periods in between
<i>Loop diuretics</i> e.g., furosemide, bumetanide <i>Thiazide diuretics</i> e.g., Bendroflumethiazide	Hypertension Heart failure (HF)	May worsen fasting-associated-hypotension, which may result in dizziness or loss of consciousness. May worsen fasting-associated-dehydration resulting in an acute kidney injury and/or life-threatening electrolyte abnormalities e.g. hyperkalaemia. Medication non-compliance may result in uncontrolled hypertension, decompensated heart failure



<p><i>Mineralocorticoid receptor antagonists (MRAs)</i> e.g., Spironolactone</p>	<p>Hypertension Heart failure</p>	<p>May worsen fasting-associated-hypotension, which may result in dizziness or loss of consciousness. May worsen fasting-associated-dehydration resulting in an acute kidney injury and/or life-threatening electrolyte abnormalities e.g. hyperkalaemia.</p> <p>Medication non-compliance may result in uncontrolled hypertension, decompensated heart failure</p>
<p><i>Phosphodiesterase type 5 inhibitors</i> e.g., Sildenafil</p>	<p>Pulmonary Hypertension</p>	<p>May worsen fasting-associated-hypotension, which may result in dizziness or loss of consciousness. May result in diarrhoea, worsening fasting-associated-hypotension.</p>
<p><i>Prostanoids</i> e.g., Epoprostenol</p>	<p>Idiopathic Pulmonary Arterial Hypertension</p>	<p>May worsen fasting-associated-hypotension, which may result in dizziness or loss of consciousness.</p>
<p><i>Statins</i> e.g., Atorvastatin</p>	<p>Coronary artery disease / Myocardial infarction</p>	<p>Fasting associated dehydration may increase risk of acute kidney injury. This may compound a rare side effect of statins – rhabdomyolysis.</p>
<p><i>Sodium-Glucose co-Transporter-2 (SGLT2) inhibitors</i> e.g., Dapaglifozin</p>	<p>Heart failure Diabetes Mellitus</p>	<p>May worsen fasting-associated-hypotension, which may result in dizziness or loss of consciousness. May worsen fasting-associated-dehydration resulting in an acute kidney injury and/or life-threatening electrolyte abnormalities e.g. hyperkalaemia.</p> <p>Medication non-compliance may result in decompensated heart failure and cause/worsen hyperglycaemia in patients with diabetes mellitus.</p>



<i>Soluble guanylate cyclase inhibitors</i> e.g., Vericiguat	Heart failure	May worsen fasting-associated-hypotension, which may result in dizziness or loss of consciousness.
<i>Vasodilators:</i> Long-acting nitrates e.g., Isosorbide mononitrate. Alpha blockers e.g., Doxazocin, Hydralazine	Hypertension Coronary artery disease Pulmonary hypertension	May worsen fasting-associated-hypotension, which may result in dizziness or loss of consciousness.

Terms: Suhoor - Pre-dawn meal before Muslims initiate fast; Iftaar - Meal at sunset that breaks fast

NB: Medication changes may not be possible due to (1) significantly reduced outpatient consultations with specialists and/or GPs due to COVID-19 (2) a specialist may deem alternate medications to be less beneficial for a patient. Medication changes should be planned well in advance of Ramadan and should be discussed in a patient's next routine appointment with their specialist, GP and or pharmacist or if a patient is ever admitted to the hospital under the care of the Cardiology team.