



ORAL ANTIPLATELETS

Top tips for MURs

- Counsel patient on the purpose of oral antiplatelet medication and length of treatment
- Counsel the patient on the need to take antiplatelet medication regularly and address any compliance issues.
- Ensure that aspirin tablets are taken with or after food
- Check that patient has had annual renal and liver function tests (monitor more frequently in high risk patients)
- Recommend dipyridamole should be taken one or two hours before food for maximum benefit (if stomach upset occurs it can be taken after food)
- Advise patients to discard dipyridamole modified release capsules 6 weeks after opening
- Counsel patients on signs / symptoms that need referral (see red flags below) and common side effects (see overleaf)
- Review how long patient has been on dual antiplatelet therapy (usually up to 12 months unless specific indication to continue. Duration varies depending on STEMI/NSTEMI* and any PCI carried out). Do not advise stopping without specialist advice.
- Check patient has been supplied with an antiplatelet medicine card
- Report any relevant adverse drug reactions to the Yellow Card Scheme

What are oral antiplatelets used for?

Oral antiplatelets are licensed for use in the secondary prevention and treatment of thrombotic cerebrovascular or cardiovascular disease and prophylaxis of thromboembolism associated with prosthetic heart valves.

Lifestyle issues

- Counsel patient on reducing alcohol intake to within safe limits (up to 14 units a week, spread evenly over 3 more days, with several alcohol free days)
- Counsel patient on healthy eating, exercise & weight loss (if BMI > 25kg/m²) - reduce saturated fat and salt intake, avoid salt substitutes, increase oily fish intake, complete 30 minutes of aerobic exercise three to five times a week, reduce caffeine intake to no more than 5 cups a day and recommend 5 portions of fruit and vegetables a day
- Advise patients who smoke of the benefits of stopping smoking and how to access enhanced smoking cessation services in community pharmacy and GP practices

Red flags that need referral

- Chronic gastrointestinal bleeding, persistent vomiting or iron deficiency anaemia
- Any heaviness in the centre of your chest, triggered by effort or emotion, any fatigue, water retention or hypotension
- Severe itching or rash
- Any signs of stroke - numbness, weakness/paralysis, slurred speech, blurred vision, confusion and severe headache
- Pregnancy, as risk of teratogenicity and risk of haemorrhage
- Breastfeeding as present in milk and a risk of toxicity in the infant

How do oral antiplatelets work?

Aspirin (low dose)	Suppresses the formation of thromboxanes in platelets resulting in reduction of platelet aggregation and reduces the likelihood of a clot formation.
Adenosine diphosphate receptor inhibitors (Clopidogrel; Prasugrel & Ticagrelor)	Inhibits the platelet cell membrane receptors responsible for aggregation of platelets by blocking the glycoprotein pathway, which prevents arterial and venous thrombosis and blocks platelet activation.
Dipyridamole	Inhibits thrombus formation by acting as a thromboxane inhibitor preventing platelet aggregation and vasoconstriction. It also has an effect on phosphodiesterase enzymes preventing conversion of cyclic AMP to inactive 5 AMP, which blocks the platelet response to adenosine diphosphate.





What are the common side effects to look out for?

Gastro-intestinal disturbances including discomfort, nausea, diarrhoea, occasionally bleeding & ulceration	Take medication with milk or food as may reduce symptoms. Refer to prescriber for change of formulation, medication or addition of low dose gastro-protection (e.g. proton pump inhibitor) if persistent. Do not suggest changing aspirin to enteric coated preparation or clopidogrel, as no evidence for benefit.
Rashes / angioedema	Refer immediately for medical assistance as potentially life threatening.
Bronchospasm, jaundice, abdominal pain & renal failure	Refer to prescriber – medication needs to be stopped.
Headache, dizziness, vertigo and insomnia	Refer to prescriber if a problem.
Dyspnoea (see with ticagrelor)	Symptoms are normally transient, but if persistent or severe, refer to prescriber

* STEMI - ST elevation myocardial infarction; NSTEMI - non ST elevation myocardial infarction
PCI – percutaneous coronary intervention

Potential drug interactions? – See BNF Appendix 1: Interactions for more details

- Dipyridamole enhances the effects of adenosine and anticoagulants, with the latter requiring closer INR monitoring.
- An increased risk of bleeding with concomitant use of other antiplatelets and anticoagulants e.g. warfarin, NOACs, acenocoumarol and phenindione
- Clopidogrel and ticagrelor effects may be altered by antibacterials, antidepressants, antiepileptics, antifungals and antivirals
- Clopidogrel effects possibly enhanced by anticoagulants with a potential increased risk of bleeding
- Ticagrelor can increase plasma levels of simvastatin (use max 40mg simvastatin) and digoxin
- An increased risk of bleeding with concomitant use of aspirin and NSAIDs, anticoagulants, certain antidepressants and methotrexate. Concomitant use of aspirin and SSRI antidepressants should be avoided and if this is not possible, gastric protection should be considered
- Concomitant use of ticagrelor and strong CYP3A4 inhibitors e.g. clarithromycin, ketoconazole, ritonavir is not recommended

Where can you find more information?

- Antiplatelets – BNF sub-section 2.9
- Coronary heart disease distance learning packs that can be found on WCPPE website (<http://www.wcppe.org.uk>)
- NICE guidance on use of clopidogrel and modified release dipyridamole in prevention of occlusive vascular events and prasugrel and ticagrelor for treatment of acute coronary syndromes can be found on NICE website (<http://www.nice.org.uk>)
- European Society of Cardiology (ESC) guidelines on antiplatelet use post STEMI/NSTEMI (www.escardio.org)

