ANTIPLATELET / ANTICOAGULANT RECOMMENDATIONS

Appropriate medications are based on the treatment situation (elective PCI or acute coronary syndrome), on whether or not the patient is preloaded with a P2Y₁₂ inhibitor (clopidogrel/Plavix, prasugrel/Effient, or ticagrelor/Brilinta) and on an elective PCI patient’s risk level.

**Table 1. Antiplatelets/anticoagulants for stent placement**

<table>
<thead>
<tr>
<th>Situation</th>
<th>P2Y₁₂ Status</th>
<th>PRE-STENT</th>
<th>Immediately POST-STENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elective PCI</td>
<td>NO P2Y₁₂ inhibitor effect</td>
<td>• Aspirin 325 mg</td>
<td>• Aspirin 81 or 325 mg daily</td>
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<tr>
<td></td>
<td></td>
<td>• Heparin</td>
<td>• P2Y₁₂ inhibitor (see dosing and function testing guidelines below):</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• GP IIB / IIIa antagonist</td>
<td>– Clopidogrel with loading for lower-risk patients <strong>OR</strong></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>– Prasugrel or ticagrelor with loading for higher-risk patients</td>
</tr>
<tr>
<td>Currently taking P2Y₁₂ inhibitor or effectively LOADED*</td>
<td></td>
<td>• Aspirin 325 mg</td>
<td>• Aspirin 81 or 325 mg daily</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Heparin or Bivalirudin</td>
<td>• P2Y₁₂ inhibitor (see dosing and function testing guidelines below):</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• If high risk, consider GP IIB / IIIa antagonist †</td>
<td>– Clopidogrel, no load, for lower-risk patients <strong>OR</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>– Prasugrel or ticagrelor, no load, for higher-risk patients</td>
</tr>
<tr>
<td>Acute Coronary Syndrome (ACS), including STEMI, NSTEMI</td>
<td>NO P2Y₁₂ inhibitor effect</td>
<td>• Aspirin 325 mg</td>
<td>• Aspirin 81 or 325 mg daily</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Heparin and GP IIB / IIIa antagonist †</td>
<td>• P2Y₁₂ inhibitor (see dosing and function testing guidelines below):</td>
</tr>
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<td></td>
<td></td>
<td></td>
<td>– Clopidogrel with loading <strong>OR</strong></td>
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<tr>
<td></td>
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<td>– Prasugrel with loading <strong>OR</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>– Ticagrelor with loading</td>
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<td>Currently taking P2Y₁₂ inhibitor or effectively LOADED*</td>
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<td></td>
<td></td>
<td>• Heparin and GP IIB / IIIa antagonist † <strong>OR</strong></td>
<td>• P2Y₁₂ inhibitor (see dosing and function testing guidelines below):</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Bivalirudin</td>
<td>– Clopidogrel <strong>OR</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>– Prasugrel (no load) <strong>OR</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>– Ticagrelor (no load)</td>
</tr>
</tbody>
</table>

*Effective P2Y₁₂ loading: **Clopidogrel:** 600 mg dose given ≥4 hours prior to stent. **Prasugrel:** 60 mg dose given ≥2 hours prior to stent. **Ticagrelor:** 180 mg dose given ≥2 hours prior to stent.
† GP IIB / IIIa antagonist (eptifibatide/tirafibiban): May consider discontinuing 4 hours after clopidogrel load or 2 hours after prasugrel or ticagrelor load. However, consider infusing up to 18 hours for highest risk cases.

### P2Y₁₂ DOSES AND GUIDELINES

- **Clopidogrel (Plavix):** 600 mg load, then 75 mg daily
- **Prasugrel (Effient):**
  - **Indications:** Consider using if patient is high risk, STEMI, diabetic, or has a history of stent thrombosis.
  - **Contraindications:** Do NOT use if history of stroke/TIA.
  - **Dose** based on age and weight:
    - Age ≤ 75 and weight ≥ 60 kg: 60 mg daily, then 10 mg daily
    - Age > 75 or weight <60 kg: 60 mg load, then 5 mg daily
- **Ticagrelor (Brilinta):**
  - **Indications:** Consider using if high risk, ACS, diabetes, or history of stent thrombosis; preferred over prasugrel if history of stroke.
  - **Dose:** 180 mg load, then 90 mg twice daily
  - **Concurrent aspirin dose:** must use only 81 mg daily maintenance dose after 325 mg load
P2Y\textsubscript{12} FUNCTION TESTING

Consider platelet reactivity testing for all ACS and high-risk elective PCI patients, using the VerifyNow P2Y\textsubscript{12} assay.

VerifyNow P2Y\textsubscript{12} assay timing:

- **Early post-stent**: Can order VerifyNow assay:
  - P2Y\textsubscript{12} (loading): 4 hours after clopidogrel dose or 2 hours after prasugrel/ticagrelor dose
  - P2Y\textsubscript{12} (maintenance): 1 to 2 hours after daily P2Y\textsubscript{12} dose
  - Eptifibatide/tirafibran: at least 12 hours after infusion is discontinued (eptifibatide/tirafibran may shorten PRU up to 48 hours after discontinuing infusion)
  - Abciximab: 4 days after initial dose

- **Ongoing**: Order assay at 2 to 4 weeks on stable home regimen or 2 weeks after any change in dosage. Time the assay for 1 to 2 hours after daily P2Y\textsubscript{12} dose.

Using assay results, reported as P2Y\textsubscript{12} Platelet Reactivity Units (PRU):

- If P2Y\textsubscript{12} PRU is >200:
  - If on clopidogrel, switch to prasugrel or ticagrelor (with loading as on previous page), or increase clopidogrel dose (300 mg load, then 150 mg total daily).
  - If on prasugrel, add 5 mg to daily dose.
  - If on ticagrelor, increase dose to 270 mg total daily.
- If P2Y\textsubscript{12} PRU is 100 to 200: Continue current dose.
- If P2Y\textsubscript{12} PRU is <100: Consider decreasing dose by 50%.

GENERAL REFERENCES


These guidelines apply to common clinical circumstances, and may not be appropriate for certain patients and situations. The treating clinician must use judgment in applying guidelines to the care of individual patients.