

## SLCSN Guidance on Low-Dose Aspirin For the Prevention of Cardiovascular Events

*The guidance does not override the individual responsibility of healthcare professionals to make decisions appropriate to the circumstances of the individual patient, in consultation with the patient and/or guardian or carer.*

Antiplatelet therapy has been shown to reduce the risk of cardiovascular (CV) events (such as myocardial infarction and stroke) in patients with established CV disease (secondary prevention), and to a lesser extent those considered at high risk of CV events but without known CV disease (primary prevention).

Aspirin is the antiplatelet of choice as it is of comparable efficacy to other currently-available antiplatelet agents, is widely available and inexpensive. The evidence suggests that, for most indications, 75mg daily is as effective as higher doses and less likely to cause gastric irritation, bleeding or constipation.

### Primary Prevention

There remain concerns over the role of aspirin in primary prevention. Meta-analyses demonstrate that aspirin use does help prevent CV events but also increases the likelihood of gastrointestinal bleeding and possibly haemorrhagic stroke. A recent Drug and Therapeutic Bulletin (2009) concludes that **“current evidence for primary prevention suggests the benefits and harms of aspirin in this setting may be more finely balanced than previously thought, even in individuals estimated to be at high risk of experiencing cardiovascular events, including those with diabetes or elevated blood pressure. We believe, therefore, that low-dose aspirin prophylaxis should not be routinely initiated for primary prevention.”**

Until further evidence is available it is not possible to identify a specific sub-group of patients that may benefit from aspirin in primary prevention, therefore any decision to prescribe is at the discretion of the clinician, based on the balance of risks and benefits for an individual patient.

### Secondary Prevention

Aspirin therapy should be prescribed for:

- **All patients with known cardiovascular (CV) disease or other atherosclerotic vascular disease (such as ischaemic stroke or peripheral vascular disease)**

Contraindications	Cautions
<ul style="list-style-type: none"> <li>• Known allergy</li> <li>• Age under 16 years (risk of Reye's syndrome)</li> <li>• Active peptic ulceration</li> <li>• History of recent gastrointestinal bleeding</li> <li>• History of recent intracranial bleeding</li> <li>• Bleeding disorders including haemophilia, von Willebrand's disease, thrombocytopenia and severe liver disease</li> <li>• For primary prevention: BP&gt;150/90mmHg (Note: not routinely recommended for primary prevention – see guidance above)</li> </ul>	<ul style="list-style-type: none"> <li>• Asthma / History of bronchospasm with NSAIDs</li> <li>• For secondary prevention: uncontrolled severe hypertension (risk of intracranial bleeding)</li> <li>• Previous peptic ulceration (risk of gastrointestinal bleeding: proton pump inhibitors or H2-receptor antagonists may be considered for prophylaxis)</li> <li>• Concomitant prescription of drugs which increase risk of bleeding, such as anticoagulants, SSRIs</li> </ul>

### Initiation

Aspirin should be initiated at a dose of 75mg daily and continued indefinitely. Patients should be advised to take the dose with or after food to minimise gastric side effects.

### Dealing with adverse effects

- **Bronchospasm in asthmatics:** Limited evidence from a systematic review indicates that aspirin, even at low doses, can trigger bronchospasm in patients with asthma. If initiation triggers bronchospasm, stop aspirin therapy and, if for secondary prevention, consider clopidogrel as an alternative.
- **Gastrointestinal disturbance (nausea, dyspepsia, heartburn):**
  - Ensure the dose is taken with or after food
  - Review, and stop where possible, other drugs with GI adverse effects (e.g. bisphosphonates, corticosteroids, NSAIDs)
  - For patients who do not tolerate aspirin alone or are at high risk of gastro-intestinal bleeding consider adding a proton pump inhibitor (lansoprazole 15mg capsules or omeprazole 20mg capsules daily with dose titration if necessary to control symptoms) in the first instance
  - There is no benefit in using enteric-coated aspirin preparations
- **Bleeding:** patients should be advised to seek medical advice should unexplained bruising or bleeding occur during treatment with aspirin

### References

- Antithrombotic Trialists' Collaboration. Aspirin in the primary and secondary prevention of vascular disease: collaborative meta-analysis of individual participant data from randomised trials. *Lancet* 2009; 373: 1849–60.
- Drug and Therapeutics Bulletin 2009; Vol 47 (11), 122-125
- Jenkins, C., Costello, J. and Hodge, L. (2004) Systematic review of prevalence of aspirin induced asthma and its implications for clinical practice. *British Medical Journal* 328(7437), 434
- Covar RA, Macomber BA, Szeferl SJ, Medications as Triggers for Asthma. *Immunol Allergy Clin NA*. 2005; 25: 169