Update to the AHA/ASA Recommendations for the Prevention of Stroke in Patients with Stroke and Transient Ischemic Attack

Robert Adams MS, MD, FAHA, Chair, Greg Albers MD, Mark J. Alberts, MD, Oscar Benavente MD, Karen Furie MD, MPH, FAHA, Larry B. Goldstein MD, FAHA, Philip Gorelick MD, MPH, FAHA, Jonathan Halperin MD, Robert Harbaugh, MD, FACS, S.Claiborne Johnston MD, PhD, Irene Katzan MD, MS, FAHA, Margaret Kelly-Hayes, RN, EdD, FAHA, Edgar J. Kenton, MD, FAHA, FAAN, Michael Marks, MD, Ralph L. Sacco MS, MD, FAHA, and Lee H. Schwamm, MD, FAHA
This slide set was adapted from the 2008 Update on Secondary Prevention of Stroke and TIA
Applying Classification of Recommendations and Level of Evidence
<table>
<thead>
<tr>
<th>LEVEL A</th>
<th>LEVEL B</th>
<th>LEVEL C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple (3-5) population risk strata evaluated*</td>
<td>Limited (2-3) population risk strata evaluated*</td>
<td>Very limited (1-2) population risk strata evaluated*</td>
</tr>
</tbody>
</table>

**CLASS I**

- Benefit >> Risk
- Procedure/Treatment SHOULD be performed/administered

**CLASS IIa**

- Benefit >> Risk
- Additional studies with focused objectives needed
- IT IS REASONABLE to perform procedure/administer treatment

**CLASS IIb**

- Benefit ≥ Risk
- Additional studies with broad objectives needed; additional registry data would be helpful
- Procedure/Treatment MAY BE CONSIDERED

**CLASS III**

- Risk ≥ Benefit
- No additional studies needed
- Procedure/Treatment should NOT be performed/administered since it is NOT HELPFUL AND MAY BE HARMFUL

**Suggested phrases for writing recommendations**

- should
- is recommended
- is indicated
- is useful/effective/beneficial
- is reasonable can be useful/effective/beneficial
- is probably recommended or indicated
- may/might be considered
- may/might be reasonable
- usefulness/effectiveness is unknown/unclear/uncertain or not well established
- is not recommended
- is not indicated
- should not
- is not useful/effective/beneficial
- may be harmful
Stroke Statistics

- About 15% of strokes are heralded by TIA.
- Estimates of age and gender adjusted incidence rates range from 68.2-83/100,000. 780,000 new or recurrent strokes each yr.
- 600,000 are new and 180,000 are recurrent.
- Stroke Mortality – about 150,074, but total mentioned mortality was 253,000.

http://circ.ahajournals.org/cgi/reprint/CIRCULATIONAHA.107.187998
2006 Antiplatelet Focused Recommendations Secondary Prevention Guidelines

• For patients with noncardioembolic ischemic stroke or TIA, antiplatelet agents rather than oral anticoagulation are recommended to reduce the risk of recurrent stroke and other cardiovascular events (Class I, Level of Evidence A)

• Aspirin (50 to 325 mg/d), the combination of aspirin and extended-release dipyridamole, and clopidogrel are all acceptable options for initial therapy (Class IIa, Level of Evidence A)

http://stroke.ahajournals.org/cgi/content/full/37/2/577
2006 Secondary Prevention Guidelines – Focused Recommendations

- Compared with aspirin alone, both the combination of aspirin and extended-release dipyridamole and clopidogrel are safe. The combination of aspirin and extended-release dipyridamole is suggested over aspirin alone (Class IIa, Level of Evidence A).

- Clopidogrel may be considered over aspirin alone on the basis of direct-comparison trials (Class IIb, Level of Evidence B).

- http://stroke.ahajournals.org/cgi/content/full/37/2/577
2006 Secondary Prevention Guidelines – Focused Recommendations

• The addition of aspirin to clopidogrel increases the risk of hemorrhage. Combination therapy of aspirin and clopidogrel is not routinely recommended for ischemic stroke or TIA patients unless they have a specific indication for this therapy (ie, coronary stent or acute coronary syndrome) (Class III, Level of Evidence A).

• http://stroke.ahajournals.org/cgi/content/full/37/2/577
2008 Secondary Prevention Recommendations for Antiplatelet therapy

- Aspirin (50 to 325 mg/d) monotherapy, the combination of aspirin and extended-release dipyridamole, and clopidogrel monotherapy are all acceptable options for initial therapy (Class I, Level of Evidence A).

- The combination of aspirin and extended-release dipyridamole is recommended over aspirin alone (Class I, Level of Evidence B).

- [http://stroke.ahajournals.org/cgi/reprint/STROKEAHA.107.189063](http://stroke.ahajournals.org/cgi/reprint/STROKEAHA.107.189063)
2008 Secondary Prevention Recommendations for Lipids

• For patients allergic to aspirin, clopidogrel is reasonable (Class IIa, Level of Evidence B).

• Based on the SPARCL trial, administration of statin therapy with intensive lipid lowering effects is recommended for patients with atherosclerotic ischemic stroke or TIA and without known CHD to reduce the risk of stroke and cardiovascular events. Class I, Level B

• [Link](http://stroke.ahajournals.org/cgi/reprint/STROKEAHA.107.189063)
Update to the AHA/ASA Recommendations for the Prevention of Stroke in Patients with Stroke and Transient Ischemic Attack

The full-text this Secondary Prevention Update is also available on the American Heart Association Web site:
www.american-heart.org