Partnership for HEALTH

Heart and Circulation Clinician Fact Sheet

Using Aspirin for the Primary Prevention of Cardiovascular Disease

Your patients rely on you for accurate, up-to-date preventive health information. This fact sheet for clinicians provides information about the use of aspirin to prevent first myocardial infarctions in men and first ischemic strokes in women. It is designed to complement the patient brochures:

- *Talk With Your Health Care Provider About: Taking Aspirin to Prevent Heart Attacks—for Men*
- *Talk With Your Health Care Provider About: Taking Aspirin to Prevent Strokes—for Women*

Who should take aspirin to prevent cardiovascular disease?

The US Preventive Services Task Force (USPSTF) recommends the use of aspirin for the primary prevention of cardiovascular disease (CVD) when a *net* benefit is present. A *net* benefit means that the potential benefit from taking aspirin outweighs the harms, mainly gastrointestinal (GI) bleeding. Specifically,

- Aspirin is recommended for *men* age 45–79 to reduce risk of myocardial infarction (MI) when a *net* benefit is present.
- Aspirin is recommended for *women* age 55–79 to reduce risk of ischemic stroke when a *net* benefit is present.

The USPSTF recommends AGAINST the use of aspirin for the primary prevention of MI in men less than age 45 or stroke in women less than age 55.

The USPSTF found the evidence insufficient to recommend for or against the use of aspirin for MI or stroke reduction in men and women age 80 and older.

Aspirin provides differential benefits for men as compared to women. Primary prevention studies of aspirin have found the following:

Aspirin use in *men*

- 32% relative risk reduction for MI
- No effect on stroke or all-cause mortality

Aspirin use in *women*

- 17% relative risk reduction for strokes
- No effect on MI or all-cause mortality

Source: U.S. Preventive Services Task Force. Aspirin for the Prevention of Cardiovascular Disease: Recommendation Statement. *AHRQ Publication No. 09-05129-EF-2, March 2009. Agency for Healthcare Research and Quality, Rockville, MD. http://www.ahrq.gov/clinic/uspstf09/aspirincvd/aspcvdrs.htm*

How do I determine benefit?

An individual's potential clinical benefit from aspirin depends on his or her baseline risk.

MI Risk Factors for *Men*

- Age
- Diabetes
- Total cholesterol level
- HDL cholesterol level
- High blood pressure
- Smoking

Use the following tool to calculate 10-year CHD risk in men:
http://hp2010.nhlbihin.net/atpiii/calculator.asp

Stroke Risk Factors for *Women*

- Age
- Atrial fibrillation
- Coronary heart disease
- Left ventricular hypertrophy
- High blood pressure
- Smoking
- Diabetes

Use the following tool to calculate 10-year stroke risk in women:
http://www.westernstroke.org

How do I determine harms?

Harms from aspirin include the risks of serious upper GI bleeding and hemorrhagic stroke. An individual's risk for GI bleeding from aspirin increases with age:

	Risk of serious upper GI complications over 10 years	
Age	Men	Women
< 60	8/1,000	4/1,000
60–69	24/1,000	12/1,000
70–79	36/1,000	18/1,000

The concomitant use of NSAIDS with aspirin increases the risk of serious GI complications by a factor of 3–4. Prior GI ulcer, GI bleeding, or GI pain also increases risk by a factor of 2–3.

Aspirin increases the risk of hemorrhagic stroke in men by a factor of 1.7 but does not appear to increase this risk in women. This risk does not increase with age.

How do I determine *net* benefit?

Net benefit is assessed by weighing the potential clinical benefit against the potential harms.

The baseline 10-year MI or stroke risk at which an individual would receive a favorable net benefit from taking aspirin varies by age because of increased harms in older age groups.

The following table provides the 10-year risk level at which the *net* benefit from aspirin becomes favorable.

Favorable Net Benefit from Aspirin Use			
Age	10-year MI risk (men)	Age	10-year stroke risk (women)
45–59	≥ 4 %	55–59	≥ 3 %
60–69	≥ 9 %	60–69	≥ 8 %
70–79	≥ 12 %	70–79	≥ 11 %

Shared decision making about the use of aspirin should be used with individuals close to (either above or below) these 10-year risk levels. For these individuals, the benefits and risks of using aspirin are closely balanced. The recommendation to take aspirin becomes stronger as the patient's 10-year risk increases above these thresholds.

How often should you assess *net* benefit from aspirin and discuss with patients?

Risk assessment and discussion should probably be held at least every 5 years with middle-aged and older people or when CVD risk factors are detected. Focus on the individual's risk of MI or stroke, the potential benefits and harms of aspirin therapy, and patient preferences.

What aspirin dose should you recommend?

While the optimum dose and timing is not yet known, a variety of regimens are effective. Readily available formulations include one baby aspirin (81 mg) every day **OR** one regular aspirin (325 mg) every other day. Taking a higher dose is no more effective and is associated with a higher risk of bleeding.

What are other considerations for the use of aspirin?

Concomitant NSAID or anticoagulant therapy increases the risk of GI bleeding. If concomitant NSAID therapy is required because of other conditions, advise the patient to take aspirin at least 2 hours before other NSAIDs to reduce the likelihood of an interaction that could reduce aspirin's protective effects on the vascular system.

U.S. Department of Veterans Affairs
Veterans Health Administration, Office of Patient Care Services
National Center for Health Promotion and Disease Prevention
www.prevention.va.gov

U.S. Department of Health and Human Services
Agency for Healthcare Research and Quality
US Preventive Services Task Force
www.preventiveservices.ahrq.gov

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