

SHOULD I PRESCRIBE ASPIRIN FOR PRIMARY PREVENTION IN MY PATIENTS?

If more healthy adults took daily low-dose aspirin, the number of strokes and heart attacks would be greatly reduced.^{1,2} In fact, if 90% of U.S. adults at risk for heart disease and stroke took daily aspirin, 45,000 lives could be saved each year.³ Aspirin, of course, should always be part of a comprehensive approach to chronic disease prevention.

Expert Guidance from the U.S. Preventive Services Task Force (USPSTF)

In 1996, the USPSTF developed federal guidelines on aspirin for primary prevention. A thorough analysis of scientific studies found insufficient evidence for or against aspirin for prevention. These guidelines were updated in 2002 and 2009 based on significant and compelling new research findings. Aspirin, for primary prevention of cardiovascular disease, was recommended in adult men and women based on age, risk status and risk for side effects.

Four key USPSTF recommendations on aspirin for cardiovascular disease prevention¹

The USPSTF recommends a 10-year risk assessment before prescribing aspirin and includes the following overall recommendations:

- 1. Encourage aspirin use in men 45 to 79 years of age** when the likely benefit of reduced heart attacks outweighs the increased risk of GI bleeding (Grade A Recommendation).
- 2. Encourage aspirin use in women 55 to 79 years of age** when the likely benefit of reduced ischemic strokes outweighs the increased risk of GI bleeding (Grade A Recommendation).
- 3. Do not recommend aspirin for cardiovascular disease prevention in women younger than 55 years and in men younger than 45 years** where the potential benefits of aspirin are too small to outweigh the harms (Grade D Recommendation).
- 4. There is insufficient evidence to recommend aspirin in men and women 80 years or older** (Grade I Recommendation).

Grade	Significance	Suggestions for aspirin
A	High certainty that the net benefit is substantial	Recommend aspirin for primary prevention in men 45-79 and women 55-79 where benefits are sufficient
D	Moderate or high certainty that there is no net benefit or that there are harms associated with this recommendation that outweigh the benefits	Discourage use of aspirin for primary prevention in men under 45 and women under 55
I	Evidence is lacking, of poor quality, or conflicting, and the balance of benefits and harms cannot be determined	If aspirin is offered to those 80 and older, patients should understand the uncertainty about benefits and harms

The National Commission on Prevention Priorities identified “*discussion of aspirin use with high-risk adults*” as one of the highest value preventive services based on disease burden, extent of current shortfall in practices, and cost-effectiveness.⁴

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Identifying patients suitable for daily aspirin

Step One: Assess each patient's risk of having a heart attack or stroke

Conduct a 10-year heart attack risk assessment in men 45 and older and a 10-year stroke risk assessment in women 55 and older.

- **For 10-year heart attack risk in men, the USPSTF recommends a Framingham-style risk assessment** based on patient age, smoking status, diabetes status, systolic blood pressure, and cholesterol levels (both total cholesterol and HDL cholesterol). For more information go to <http://bit.ly/1j1GDBA>.
- **For 10-year stroke risk in women, the USPSTF recommends a Framingham-style stroke risk assessment** based on patient age, smoking status, systolic blood pressure, blood pressure medication status, and the presence of diabetes, atrial fibrillation status, and heart enlargement. For more information go to <http://bit.ly/1cSUNAj>.
- **A combined heart attack and stroke risk calculator** has been recently developed by the American Heart Association (<http://bit.ly/IWXTJp>)⁵. It may have advantages over other risk calculators and is currently being evaluated by the USPSTF.

Step Two: Determine if your patient has sufficient risk to warrant low-dose aspirin

After finding your patient's cardiovascular disease risk, use the table below to find the risk threshold that applies, based on their age and gender. Prescribe aspirin to patients who meet these risk thresholds. For example, a 65-year-old woman with a calculated 10-year stroke risk of 10% has a stroke risk that exceeds the threshold of 8% and aspirin should be recommended.

USPSTF risk thresholds for recommending aspirin

In Men – Recommend aspirin for primary prevention when 10-year heart attack risk meets these age-related thresholds		In Women – Recommend aspirin for primary prevention when 10-year stroke risk meets these age-related thresholds	
Age	Risk	Age	Risk
45-59	≥ 4%	45-59	≥ 3%
60-69	≥ 9%	60-69	≥ 8%
70-79	≥ 11%	70-79	≥ 11%

This table accounts for the increased risk of bleeding with age.^{1,2} For patients with history of GI ulcers or who are taking NSAIDs regularly, bleeding risk is higher and these thresholds may not apply. NSAIDs (non-steroidal anti-inflammatory drugs) are pain medicines like ibuprofen, naproxen and celecoxib.

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What are the most common side effects of low-dose aspirin?

The USPSTF risk thresholds increase with age because as people get older, their susceptibility to aspirin-induced bleeding increases.^{1,2} Be sure to consider NSAID use and history of GI ulcers as these further raise the risk of serious GI bleeding and should be considered in determining the balance of benefits and harms.^{2,6-8} Some people have additional risk factors for aspirin-induced bleeding, such as being older than 80 years or taking other anti-clotting medications, that should also impact your decision to recommend daily aspirin.

Are aspirin benefits limited to cardiovascular disease?

Accumulating data show aspirin has benefits in prevention of cancer and dementia.⁹⁻¹² Future USPSTF guidelines may broaden the use of aspirin for prevention. For now, it is prudent to discuss aspirin's benefits and harms in patients who fall just short of eligibility based on cardiovascular disease benefits. This may include selected patients younger than the current minimum age recommendations (45 years for men and 55 for women).

A Special Note: Our Most Elderly

The USPSTF's recommendations end at age 79 primarily because past clinical trials provide little information about older individuals.¹ Regardless, experts believe that if prescribed with caution, low-dose aspirin may benefit those 80 and older and should be discussed if patients are receptive to this intervention.

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