

CLINICAL PEARL

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PharMerica

Updated Recommendation Statements: Aspirin for Primary Cardiovascular Disease Prevention

Issue

April 17, 2022: U.S. Preventive Services Task Force (USPSTF*) issues Final Recommendation Statement to update 2016 recommendations on Aspirin for Primary CVD Prevention.

2022 USPSTF Recommendations on Aspirin Use for Primary CVD Prevention



What does the USPSTF recommend?



For adults aged 40 to 59 years with an estimated 10% or greater 10-year cardiovascular disease (CVD) risk:

The decision to initiate low-dose aspirin use for the primary prevention of CVD in this group should be an individual one.



For adults 60 years or older:

Do not initiate aspirin for the primary prevention of CVD.



To whom does this recommendation apply?

This recommendation applies to adults 40 years or older without signs or symptoms of CVD or known CVD and who are not at increased risk for bleeding (eg, no history of gastrointestinal ulcers, recent bleeding, or other medical conditions, or taking medications that increase bleeding risk).



What's new?

- The USPSTF has changed the age ranges and grades of its recommendation on aspirin use.
- The USPSTF currently recommends considering initiating aspirin in persons with an estimated 10% or greater CVD risk at a younger age: 40 years instead of 50 years.
- Aspirin should be initiated selectively based on individual decision-making rather than routinely for all persons in the recommended age and CVD risk group.
- There is a new recommendation not to initiate aspirin in adults 60 years or older for primary prevention.
- The evidence is unclear whether aspirin use reduces the risk of colorectal cancer incidence or mortality.



How to implement this recommendation?

- Consider the patient's age.
- **For adults aged 40 to 59 years:** Estimate CVD risk using a CVD risk estimator.
 - In patients whose estimated CVD risk is 10% or greater, use shared decision making, taking into account potential benefits and harms of aspirin use, as well as patients' values and preferences, to inform the decision about initiating aspirin.
 - For patients initiating aspirin use, it would be reasonable to use a dose of 81 mg/day.
- **For adults 60 years or older:** Do not initiate aspirin for primary prevention of CVD.

Updated Recommendation Statements: Aspirin for Primary Cardiovascular Disease Prevention

Abridged USPSTF Practice Considerations for Aspirin in Primary CVD Prevention

Scope

This recommendation applies to **adults ≥40yo**, eligible for **primary CVD prevention** – absent signs or symptoms of CVD or known CVD (including history of myocardial infarction or stroke) – who are **not** at **increased risk for bleeding** (eg, no history of GI ulcers, recent bleeding, other medical conditions, or use of medications that increase bleeding risk).

CVD Risk

The **American College of Cardiology/American Heart Association (ACC/AHA) Pooled Cohort Equations** (Access [web-based tool here](#)) may be used to estimate **10-year risk of CVD**. To date, it is the only US-based CVD risk prediction tool that has published external validation studies in other US-based populations. Clinicians should recognize that predictions of 10-year CVD events using the Pooled Cohort Equations are estimates and bias may exist.

Bleeding Risk

Risk for GI bleeding, intracranial hemorrhage, and hemorrhagic stroke, with or without aspirin use, increases with older age. Other risk factors include **male sex, diabetes, history of gastrointestinal issues** (such as peptic ulcer disease), **liver disease, smoking, and elevated blood pressure**. Certain medications, including **NSAIDs, steroids, and anticoagulants**, increase the risk of bleeding. These risk factors should be considered in the overall aspirin-initiation decision.

Treatment or Intervention

The benefits of aspirin for CVD prevention appear similar for a low dose (≤ 100 mg/d) and for all doses that have been studied in CVD prevention trials (50 to 500 mg/d). A pragmatic approach would be to use **81 mg/d**.

Implementation

Because CVD risk estimation is imprecise and imperfect at the individual level, the USPSTF suggests using these risk estimates as a starting point to discuss with appropriate candidates their desire for daily aspirin use. The benefits of initiating aspirin use are greater for individuals at higher risk for CVD events (eg, those with $>15\%$ 10-year CVD risk).

In addition to age and estimated level of CVD risk, decisions about initiating aspirin use should be based on **shared decision-making** between clinicians and patients about the potential benefits and harms. Persons who place a higher value on the potential benefits (decreasing an individual's risk of a myocardial infarction or stroke) than the potential harms (the risk of bleeding) may choose to initiate aspirin. Persons who place a higher value on the potential harms or the burden of taking a daily preventive medication than on the potential benefits may choose not to initiate aspirin.

Stopping Age

For persons who have initiated aspirin use, the net benefits continue to accrue over time in the absence of a bleeding event. The net benefits, however, generally become progressively smaller with advancing age because of an increased risk for bleeding, and modeling data suggest that it **may be reasonable to consider stopping aspirin use around age 75 years**.

**USPSTF is an independent, volunteer panel of national experts in prevention and evidence-based medicine, convened by the Agency for Healthcare Research and Quality (AHRQ). Independent of the U.S. government, these recommendations should not be construed as an official position of the AHRQ or the U.S. Department of Health and Human Services.*

Updated Recommendation Statements: Aspirin for Primary Cardiovascular Disease Prevention Other Relevant Guideline Recommendations

American College of Cardiology/American Heart Association (ACC/AHA) – Aspirin Use for Primary CVD Prevention

For decades, low-dose aspirin (75-100 mg with US 81 mg/day) has been widely administered for ASCVD prevention.

By irreversibly inhibiting platelet function, aspirin reduces risk of atherothrombosis but at the risk of bleeding, particularly in the gastrointestinal (GI) tract.

Aspirin is well established for secondary prevention of ASCVD and is widely recommended for this indication, but recent studies have shown that in the modern era, aspirin should not be used in the routine primary prevention of ASCVD due to lack of net benefit.

Most important is to **avoid aspirin** in persons with **increased risk of bleeding** including a history of GI bleeding or peptic ulcer disease, bleeding from other sites, **age >70 years, thrombocytopenia, coagulopathy, chronic kidney disease**, and concurrent use of **nonsteroidal anti-inflammatory drugs, steroids, and anticoagulants**.

The following are recommendations based on meta-analysis and three recent trials:

Low-dose aspirin *might* be considered for primary ASCVD prevention in select higher ASCVD-risk adults aged 40-70 years who are not at increased bleeding risk.

Low-dose aspirin should *not* be administered on routine basis for primary ASCVD prevention among adults >70 years.

Low-dose aspirin should *not* be administered for primary prevention among any adult at increased bleeding risk.

Despite minor variances across these organizations' recommendations, they are largely aligned, and emphasize the current totality of evidence indicating that the clinical benefit of low-dose aspirin for primary CVD prevention is marginal and must be carefully balanced against the well-known excess risk of major bleeding.

PharMerica, along with the writers, editors, and reviewers of this informational guide cannot be held responsible for the continued currency of information, for any errors or omissions and for any consequences arising from this guideline.

References

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