

# Putting Prevention into Practice

*An Evidence-Based Approach*

## Aspirin Use for the Primary Prevention of Cardiovascular Disease and Colorectal Cancer

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► See related U.S. Preventive Services Task Force Recommendation Statement at <http://www.aafp.org/afp/2016/1015/od1.html>.

This PPI quiz is based on the recommendations of the USPSTF. More information is available in the USPSTF Recommendation Statement and the supporting documents on the USPSTF website (<http://www.uspreventiveservicestaskforce.org>).

The practice recommendations in this activity are available at <http://www.uspreventiveservicestaskforce.org/Page/Document/UpdateSummaryFinal/aspirin-to-prevent-cardiovascular-disease-and-cancer>.

This series is coordinated by Sumi Sexton, MD, Associate Deputy Editor.

A collection of Putting Prevention into Practice published in *AFP* is available at <http://www.aafp.org/afp/ppip>.

**CME** This clinical content conforms to AAFP criteria for continuing medical education (CME). See CME Quiz Questions on page 598.

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### Case Study

S.L. is a 55-year-old man who presents to your office for a routine refill of his antihypertension medication. He also takes a statin and an antidepressant. Although he smokes, his blood pressure and cholesterol are well controlled. His history and physical examination are unremarkable.

### Case Study Questions

1. According to the U.S. Preventive Services Task Force (USPSTF), which of the following factors would prompt consideration for S.L. to start taking low-dose aspirin to prevent cardiovascular disease (CVD) and colorectal cancer (CRC)?

- A. Family history of CRC.
- B. Life expectancy of at least 10 years.
- C. Willingness to take low-dose aspirin daily for at least 10 years.
- D. History of nonsteroidal anti-inflammatory drug (NSAID) use for arthritis.

2. S.L.'s 65-year-old brother visits you to ask about taking low-dose aspirin, although he admits that he sometimes forgets to take his medications. He does not smoke, and his blood pressure and cholesterol levels are normal. Which one of the following would you advise?

- A. It is acceptable if he does not take aspirin every day, because any amount of aspirin reduces the risk of CVD and CRC.
- B. It is acceptable if he does not take aspirin every day, but he should take a dosage of 325 mg at least once per month to maintain a therapeutic level.
- C. He should use an enteric-coated formulation of aspirin to reduce the risk of gastrointestinal (GI) bleeding.
- D. Initiate a discussion about his 10-year CVD risk, his willingness to take a daily pill, and his GI and overall health to determine whether aspirin will be of benefit to him.

3. S.L.'s 55-year-old wife is also your patient. She does not smoke, and her blood pressure and cholesterol levels are normal. She has recently experienced abdominal pain, perhaps related to stomach ulcers. You recommended dietary changes, which seem to have resolved the pain. Which one of the following would you advise?

- A. She should take aspirin every day to reduce the risk of stroke.
- B. She should take aspirin every day to reduce the risk of heart attack.
- C. She should take aspirin every day but use an enteric-coated formulation because of her potential history of stomach ulcers.
- D. She should not take aspirin because her risk of a CVD event does not outweigh the risk of GI bleeding.

Answers appear on the following page.

### Answers

**1. The correct answers are B and C.** The USPSTF identified four criteria to be considered for the initiation of low-dose aspirin: increased risk of CVD, lack of increased risk of bleeding, life expectancy of at least 10 years, and willingness to take aspirin daily. The primary risk factors for CVD include older age, male sex, race/ethnicity, abnormal lipid levels, high blood pressure, diabetes mellitus, and smoking. Calculators are readily available to estimate the 10-year risk of a CVD event (<http://tools.acc.org/ASCVD-Risk-Estimator/>). Life expectancy is important because the benefit of CRC prevention is not apparent until 10 to 20 years after aspirin therapy is started. Patients need to take aspirin for at least five to 10 years to realize this potential benefit; persons unwilling to take aspirin for that duration or with shorter life expectancy are less likely to benefit. Concurrent NSAID and aspirin use increases the risk of harms due to bleeding. Patients with increased risk of CRC are not within the scope of this recommendation; these patients should discuss their options for preventing CRC with their health care professional.

**2. The correct answer is D.** For adults 60 to 69 years of age, the USPSTF recommends individualizing the decision for aspirin use based on patients' risk factors and values, because the overall net benefit in this age group is small. Persons who place a higher value on the potential benefits than the potential harms may choose to initiate low-dose aspirin. Understanding patient priorities can help guide the decision. Adults with a 10-year CVD risk greater than 10% are more likely to benefit. There is no indication that S.L.'s brother is at increased risk of bleeding (e.g., upper GI tract pain, GI ulcers, concurrent anticoagulant or NSAID use, uncontrolled hypertension). Regular daily aspirin use decreases the risk of CVD events and CRC, but intermittent or sporadic use has not been

shown to be of benefit. Although the optimal dose of aspirin to prevent CVD events is not known, lower dosages (e.g., 75 mg per day) appear to be as effective as higher dosages (e.g., 325 mg every other day) and may be less likely to cause bleeding. The USPSTF suggests a dosage of 81 mg per day as a pragmatic approach. There is no evidence that enteric-coated or buffered formulations reduce the risk of serious GI bleeding. Patients should talk to their health care professional before starting or stopping aspirin use.

**3. The correct answer is D.** Whereas the 2009 USPSTF recommendation established sex-specific outcomes for aspirin use (prevention of ischemic stroke in women and myocardial infarction in men), the USPSTF now recommends initiating low-dose aspirin use for the primary prevention of cardiovascular events (nonfatal myocardial infarction and stroke) in women and men 50 to 59 years of age if they have a 10% or greater 10-year CVD risk and are not at increased risk of GI bleeding. A nonsmoking, normotensive 55-year-old woman has a 10-year CVD risk below the threshold for initiating aspirin therapy. Moreover, a history of upper GI pain suggests risk of GI bleeding. There is no evidence that enteric-coated or buffered formulations reduce the risk of serious GI bleeding.

The views expressed in this work are those of the authors, and do not reflect the official policy or position of the Uniformed Services University of the Health Sciences, the Department of Defense, or the U.S. government.

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### SOURCES

U.S. Preventive Services Task Force. Aspirin use for the primary prevention of cardiovascular disease and colorectal cancer: U.S. Preventive Services Task Force recommendation statement. *Ann Intern Med.* 2016;164(12):836-845.

Guirguis-Blake JM, Evans CV, Senger CA, O'Connor EA, Whitlock EP. Aspirin for the primary prevention of cardiovascular events: a systematic evidence review for the U.S. Preventive Services Task Force. *Ann Intern Med.* 2016; 164(12):804-813. ■