PRACTICAL ADVICE FOR CLINICIANS

1 When to Measure hsCRP?

- Consider hsCRP in adults with borderline 10-year PREVENT-ASCVD risk (3% to <5%) when the result may influence treatment decisions.[3]
- If hsCRP is ≥2 mg/L, confirm the elevation on a second measurement and evaluate for other causes of inflammation.[3]
- Measure hsCRP in clinically stable patients when the result may inform cardiovascular risk assessment or treatment.[3]
- Avoid testing during acute illness or active infection; repeat testing after the condition resolves.[1,9]

2 How to Interpret High Values?

- If hsCRP is greater than 10 mg/L, testing should be repeated when the patient is stable to ensure the elevation reflects cardiovascular risk and not the acute phase response.[9]
- Obesity is not a confounder—hsCRP data are independent of BMI.[11]

3 Clinical Integration

- *Health Care Professionals will not treat what they do not measure—hsCRP should be part of routine cardiovascular risk assessment.*[9]
- Combine hsCRP with lipid panels, lifestyle assessments, and comorbidity profiles.

CONCLUSION

1. hsCRP is a well-established biomarker in preventive cardiology.
2. It complements lipid measurements and can help identify patients with residual inflammatory risk.
3. Incorporating hsCRP into risk assessment, when the result may change management, can refine cardiovascular risk stratification and treatment personalization.
4. The time for universal hsCRP screening in primary and secondary prevention is now, as its combination with cholesterol testing offers significant clinical value.[9]



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American Heart Association.

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American Heart Association.

hsCRP:

Toolkit for Professionals

"The time for taking action has arrived"

2025 ACC Scientific Statement on Inflammation and Cardiovascular Disease[9]



DEFINITION OF hsCRP

High-sensitivity C-reactive protein (hsCRP) is a measure of silent low-grade inflammation in the arteries.

In both primary and secondary prevention, individuals with increased levels of hsCRP are at high risk for future heart attack, stroke, and cardiovascular death regardless of cholesterol.[2,9]

Healthy individuals with elevated hsCRP levels are at a higher risk of developing coronary heart disease compared to those with normal levels.[1,12]

hsCRP RANGES: Relative CVD Risk Categories

- **LOWER RISK: <1.0 mg/L**
- **AVERAGE RISK: 1.0–3.0 mg/L**
- **HIGHER RISK: >3.0 mg/L**[10]

These hsCRP categories reflect relative cardiovascular risk and are distinct from the PREVENT-ASCVD 10-year risk categories used elsewhere in this toolkit.

Note: For treatment decisions, the 2026 ACC/AHA dyslipidemia guideline uses hsCRP ≥2 mg/L on 2 successive occasions, with no identifiable underlying cause, as the risk-enhancing threshold in adults at borderline risk.[3] If hsCRP is >10 mg/L, evaluate for acute inflammation and repeat testing when the patient is clinically stable.[1,9]

CLINICAL UTILITY

1 Detects low-grade systemic inflammation

2 Assesses cardiovascular risk

- hsCRP provides prognostic information independent of traditional cardiovascular risk factors, including LDL-C, obesity, hypertension, family history, smoking, and exercise.[9]
- Contemporary data show that hsCRP predicts future cardiovascular events at least as strongly as LDL-C among people taking and not taking statin therapy.[5]
- "Universal screening of hsCRP in both primary and secondary prevention patients, in combination with cholesterol, represents a major clinical opportunity and is therefore recommended".[9]

Use hsCRP when results may refine risk assessment or influence treatment decisions. In adults without ASCVD at borderline 10-year PREVENT-ASCVD risk (3% to <5%), if hsCRP is measured and is ≥2 mg/L on 2 successive occasions with no identifiable underlying cause, high-intensity statin therapy can be useful to reduce ASCVD risk (Class 2a).[3]

INFLAMMATION AND hsCRP IN PRIMARY AND SECONDARY PREVENTION

1 PRIMARY PREVENTION

- hsCRP predicts cardiovascular risk in individuals without known cardiovascular disease and among those without other traditional risk factors, including obesity.
- Heart-healthy lifestyle habits are recommended for all adults; an elevated hsCRP can reinforce this counseling.[3]
- Identifies individuals who will benefit from statin therapy even if cholesterol levels are in the low to normal ranges.[2] Consider hsCRP in adults with borderline 10-year PREVENT-ASCVD risk when the result may influence treatment decisions.[3]
- Universal screening in Primary Prevention is advocated by the 2025 ACC Scientific Statement on Inflammation and Cardiovascular Disease.[9]

2 SECONDARY PREVENTION

- Among patients with prior myocardial infarction, hsCRP ≥2 mg/L was associated with higher risk of MACE and all-cause death.[5]
- The 2025 ACC Scientific Statement on Inflammation and Cardiovascular Disease recommends hsCRP screening in secondary prevention to inform management, including consideration of anti-inflammatory therapy.[9]

PHARMACOLOGICAL INTERVENTIONS

1 STATINS
Lower both LDL-C and hsCRP and reduce cardiovascular events even among those with elevated hsCRP and normal LDL-C.[2,4]

2 BEMPEDOIC ACID
Reduces hsCRP and LDL-C; effective in statin-intolerant patients.[10]

3 LOW-DOSE COLCHICINE
FDA-approved to reduce cardiovascular event rates in patients with chronic stable atherosclerosis as an adjunct to statin therapy.[13]

4 EMERGING THERAPIES
IL-1β and IL-6 inhibitors under investigation for targeted inflammation reduction.[9]



MODIFYING INFLAMMATION WITH LIFESTYLE

1 DIET

- Heart-healthy dietary patterns such as Mediterranean-style and DASH eating patterns are associated with modest reductions in hsCRP.[7,8]
- Emphasize fruits, vegetables, whole grains, legumes, nuts, and fish, and replace saturated fats with unsaturated fats such as olive oil and other liquid plant oils.[3]

2 EXERCISE

- Regular moderate activity reduces hsCRP levels.[6]

3 OTHER FACTORS

- Weight management, smoking cessation, stress reduction, and adequate sleep all contribute to lower inflammation.[9]

CARDIOVASCULAR PREVENTION AND TREATMENT

1 Intergrated Risk Management

- Combine lipid-lowering and inflammation reducing strategies.
- hsCRP helps identify residual inflammatory risk even after LDL-C targets are met.[4]

2 Clinical Decision-Making

- In adults at borderline risk with hsCRP ≥2 mg/L on 2 successive occasions, high-intensity statin therapy can be useful.[3]
- In patients with established ASCVD, low- dose colchicine may be considered for secondary prevention; the 2025 ACC Scientific Statement recommends considering it when hsCRP is elevated.[9]
- Tailor interventions to overall ASCVD risk and comorbidities, using hsCRP as one input when measured.

