

Measuring hs-CRP Levels

1. Are there any specific preparations or precautions when measuring hs-CRP levels? How frequently should they be checked?

Question submitted by: **Dr. Len Grbac, Etobicoke, Ontario**

High Sensitivity C-Reactive Protein (hs-CRP) is an acute phase reactant that has recently gained attention as a predictor of future cardiovascular events. Levels are affected by any condition causing systemic inflammation, including upper respiratory infections and autoimmune diseases.

The 2009 Canadian Dyslipidemia Guidelines advocate the use of hs-CRP in men older than 50-years and women older than 60-years-of-age who are at moderate risk for CVD (determined by Framingham Risk Score) and whose level of LDL-C is less than 3.5 mmol/L,

because such individuals have been shown to benefit from statin therapy if they are found to have an elevated level. Subjects should be free of acute illness and the lower of two values should be used.

However, the clinical use of hs-CRP is highly controversial, fuelled by recent studies demonstrating variable incremental benefits beyond the use of traditional risk factors or noninvasive cardiovascular imaging and limited utility for decision-making regarding the use of statin therapy. The utility of repeat testing has not been clearly demonstrated. Owing to these findings, I order

hs-CRP quite infrequently in my clinical practice.

References

1. Ridker PM, Rifai N, Cook NR, *et al*: Non-HDL Cholesterol, Apolipoproteins A-I and B-100, Standard Lipid Measures, Lipid Ratios, and CRP as Risk Factors for Cardiovascular Disease in Women. *JAMA* 2005; 294(3):326–333.
2. Ridker PM, Danielson E, Fonseca FA, *et al*: JUPITER Study Group. Rosuvastatin to Prevent Vascular Events in Men and Women with Elevated C-reactive Protein. *N Engl J Med* 2008; 359:2195–207.
3. J Genest, R McPherson, J Frohlich, *et al*: 2009 Canadian Cardiovascular Society/Canadian Guidelines for the Diagnosis and Treatment of Dyslipidemia and Prevention of Cardiovascular Disease in the Adult – 2009 Recommendations. *Can J Cardiol* 2009; 25(10):567–579.

Answered by:
**Dr. Brett Heilbron and
Dr. Clarence Khoo**

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Reader's Response

There is an error in the Canadian Journal of CME, volume 23, number 8 on page 46 entitled Current Standards for Stroke Care, TIAs,

and AF in Rural Canada. The CHADS2 score, described by Dr. Wilson is incorrect. It is age over 75 that counts for a point in

this system (not age 60, as indicated in the article).

Submitted by:
Dr. Isabelle Vonder Muhll

Perspectives in Cardiology Doctor's Response

Unfortunately, I have to plead guilty. The Age in CHADS2 is ≥ 75 , not 60. I should also note that recent Canadian Cardiovascular Guidelines recommend oral anti-coagulant therapy for all persons with atrial fibrillation or atrial flutter unless their CHADS2 score is

zero.¹ They also recommend conditionally that "most patients should receive dabigatran in preference to warfarin." This latter recommendation continues to be controversial, but differs from the recommendation I made.

Reference

1. Cairns JA, Connolly S, McMurry S *et al*: Canadian Cardiovascular Society Atrial Fibrillation Guidelines 2010: Prevention of Stroke and Systemic Thromboembolism in Atrial Fibrillation and Flutter. *Can J Cardiol* 2011; 27(1):74-90

Answered by:
Dr. Thomas Wilson