

MIDTOWN WEST MEDICAL AT KING PLOW ARTS CENTER

Midtown West Medical, PC
957 W. Marietta Street NW • Atlanta, GA 30318
Tel: 404.817.0062 • Fax: 404.817.0064
www.midtownwestmedical.com

Kimball A. Johnson, MD
Gloria J. Carusi, RN, Nurse Practitioner
Suzanne Combs, RN

CRP: A Simple Test Can Predict Your Heart Attack Risk By Kimball A. Johnson, M.D.



Could you be at risk for heart attack or stroke? You aren't alone if you believe heart attacks and brain attacks from cardiovascular disease strike only the elderly and the out-of-shape. In reality, cardiovascular disease (CVD) kills more Americans each year than do the next seven causes of death *combined*, including cancers and infectious diseases.¹ It is among the top five leading causes of death for *all* age groups.² Still, many of us are unaware our own level of risk for CVD.

There are several well-established risk factors for heart disease, including obesity, smoking, family history of heart disease, and a high level of LDL cholesterol in the blood. Now an additional tool has emerged to assess heart attack and stroke risk: the high-sensitivity C-Reactive Protein (hs-CRP) test. C-reactive protein is a marker of inflammation in the major blood vessels, including the vessels around the heart and brain; the hs-CRP test measures those markers. Inflammation in the major blood vessels is believed to play a role in atherosclerosis, which leads to CVD.

A study published in *The New England Journal of Medicine* in November 2002 reported on the tracking of hs-CRP and LDL cholesterol test results in a group of approximately 28,000 seemingly healthy women over an eight-year period. While those among the study group found to be at highest risk for a first CVD event had high marker levels of both LDL cholesterol and CRP, the study also showed that the participants with low LDL levels and high CRP levels were at a greater risk than were those with high LDL levels and low CRP levels. While more research is required, these results strongly suggest that CRP levels may be just as important in determining heart disease risk as are LDL cholesterol levels – if not more so.^{3, 4}

In a recent statement issued jointly by the American Heart Association and the Centers for Disease Control, the hs-CRP test was recommended for use in the identification of risk for CVD.⁵ Because the presence of inflammation can precede a heart attack or stroke by eight or more years,⁶ hs-CRP testing can allow for effective preventative therapies. The hs-CRP

¹ American Heart Association. *Heart Disease and Stroke Statistics — 2003 Update*. Dallas, Texas: American Heart Association; 2002.

² Minino AM, Smith BL. *Deaths: Preliminary data for 2000*. National vital statistics reports; vol 49 no 12. Hyattsville, Maryland: National Center for Health Statistics; 2001.

³ Quest Diagnostic Laboratories. *New study shows high-sensitivity C-Reactive Protein (hs-CRP) to be a better risk marker than LDL-Cholesterol*. Teterboro, New Jersey: Quest Diagnostic Laboratories; 2003.

⁴ Ridker PM, et al. Comparison of C-Reactive Protein and low density lipoprotein cholesterol levels in the prediction of first cardiovascular events. *N Engl J Med*. 2002; 347:1615-17.

⁵ Pearson TA, Mensag GA, et al. Markers of Inflammation and Cardiovascular Disease: Application to Clinical and Public Health Practice. A Statement for Healthcare Professionals from the Centers for Disease Control and the American Heart Association. *Circulation*. 2003; 107:499-511.

⁶ American Heart Association. *Inflammation, Heart Disease and Stroke: The Role of C-Reactive Protein*. Dallas, Texas: American Heart Association; 2001.

test is a simple and inexpensive blood test that will likely be covered by most insurers in the near future.

If you have already been identified as being at high risk for CVD, you should already be on treatment protocols and would not benefit from the hs-CRP test. If your risk level is moderate or unknown, however, the hs-CRP test could identify a risk factor that might otherwise go undetected. Even athletes and other active, healthy individuals who have borderline risk factors should consider hs-CRP testing. Those at moderate risk for CVD include:

- Smokers
- Individuals with family histories of CVD
- Mildly overweight individuals
- Individuals with mildly elevated LDL cholesterol levels (130-140)

If hs-CRP testing indicates that you may be at high risk for CVD, your doctor can recommend lifestyle modifications and/or prescribe medications to control your blood pressure, lipids, and glucose levels. Statin drugs, which have anti-inflammatory as well as cholesterol-lowering effects, may be considered, as well as a small daily aspirin dose and a diet that limits animal fats.

Although its applications in identifying heart disease risk are only now being widely recognized, the hs-CRP test is not new. Some physicians have been utilizing the test for a number of years based on early studies linking CVD with inflammation in the blood vessels.

If you have questions about your risk for heart disease, be sure to ask about it during your next office visit. CRP testing could give you the opportunity to make the changes and choices that will save your life.