

## Using Nontraditional Risk Factors to Estimate Risk for Coronary Heart Disease

*Summaries for Patients* are a service provided by *Annals* to help patients better understand the complicated and often mystifying language of modern medicine.

The full reports are titled “Using Nontraditional Risk Factors in Coronary Heart Disease Risk Assessment: U.S. Preventive Services Task Force Recommendation Statement,” “C-Reactive Protein as a Risk Factor for Coronary Heart Disease: A Systematic Review and Meta-analyses for the U.S. Preventive Services Task Force,” and “Emerging Risk Factors for Coronary Heart Disease: A Summary of Systematic Reviews Conducted for the U.S. Preventive Services Task Force.” They are in the 6 October 2009 issue of *Annals of Internal Medicine* (volume 151, pages 474-482, pages 483-495, and pages 496-507). The first report was written by the U.S. Preventive Services Task Force; the second report was written by D.I. Buckley, R. Fu, M. Freeman, K. Rogers, and M. Helfand; and the third report was written by M. Helfand, D.I. Buckley, M. Freeman, R. Fu, K. Rogers, C. Fleming, and L.L. Humphrey.

### Who developed these guidelines?

The U.S. Preventive Services Task Force (USPSTF) is a group of health experts that reviews published research and makes recommendations about preventive health care.

### What is the problem and what is known about it so far?

Coronary heart disease (CHD) involves blockages in the blood vessels that bring blood to the heart. When severe, these blockages can lead to a heart attack. Currently, doctors estimate a patient’s risk for CHD by examining traditional risk factors, such as cholesterol levels, diabetes, high blood pressure, smoking status, and age. However, some people who have no traditional risk factors develop CHD, and others who have multiple risk factors do not. Researchers wonder whether adding additional factors would improve the ability to estimate a person’s chances of developing disease and more effectively treat them to lower risk. Sometimes doctors call these additional risk factors “nontraditional” risk factors.

Nontraditional risk factors include blood tests to measure white blood cell count and levels of fasting blood sugar, homocysteine, lipoprotein(a), and C-reactive protein. Other nontraditional risk factors include the presence of gum disease, calcium in the heart (measured with electron-beam computed tomography), blockages in the blood vessels in the legs (measured with a test that compares blood pressure in the arms and legs, called the *ankle-brachial index*), and abnormalities in the blood vessels in the neck (measured with a special ultrasound test that looks at carotid intima-media thickness). These nontraditional risk factors seem to be associated with CHD. However, just because they are associated with the risk for CHD does not mean that knowing them in addition to the traditional risk factors would improve a doctor’s ability to predict who will develop CHD or to guide treatment so that patients have better health outcomes.

### How did the USPSTF develop these recommendations?

The authors reviewed published studies to identify the benefits and harms of including nontraditional risk factors when estimating patients’ risk for CHD.

### What did the authors find?

Too few studies have determined the benefits and harms of adding nontraditional risk factors to traditional risk factors when estimating a patient’s risk for CHD. To know whether doctors should routinely measure nontraditional risk factors, we need studies that compare the CHD outcomes of patients who did have these factors measured with the outcomes of those who did not.

### What does the USPSTF suggest that patients and doctors do?

The USPSTF states that not enough information is available about the benefits and harms of measuring nontraditional risk factors when screening for CHD to recommend for or against using them in addition to traditional risk factors. Doctors should continue to measure traditional risk factors and discuss the uncertainty about the benefits and harms of measuring the nontraditional risk factors with patients.

### What are the cautions related to these recommendations?

These recommendations may change as new studies become available.

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