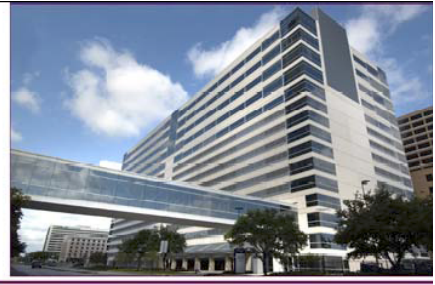


Baylor Clinic Healthletter



Focus on Cardiovascular Disease in Women

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By Ildiko Agoston, MD, Assistant Professor of Medicine, Section of Cardiology, and Director, Women's Center for Comprehensive Care at Baylor College of Medicine

Women, take heart. While historically most studies on cardiovascular disease were conducted on men with the findings applied to women, today researchers are shedding new light on how gender influences heart disease in women, improving our ability to predict, prevent, and treat this deadly disease.

Cardiovascular disease is the #1 killer of women in the U.S. In 2004, 1 in 6 women died from heart disease, compared to 1 in 30 from breast cancer. Two thirds of women who die suddenly from heart disease have no previously recognized symptoms. For women age 40 and older, 43 percent will die within five years of their first heart attack, compared to only 33 percent of men. Why the disparity? Because we're just now gaining the research data and the knowledge we need to address critical gender-based differences in preventive, diagnostic and therapeutic interventions.

Today, we're improving cardiovascular care in women by improving our understanding of key areas like the role hormones play in the disease, how heart disease symptoms differ in women, and the impact of gender on common diagnostic tests and treatments.

Assessing a Woman's Risk

We know the prevalence of cardiovascular disease increases in women with the onset of menopause, because of the influence of hormones. However, while the disease typically presents itself 10 to 15 years later in women than in men, it is important to recognize it is *not* a disease purely for postmenopausal patients.

A common tool used today to assess the risk of heart disease in both men and women age 20 and older is the Framingham Risk Score. This tool predicts an individual's 10-year risk based on age, gender, cholesterol levels, blood pressure, and smoking status. However, because the tool was originally developed for men, it consistently underestimates the risk in women, due to the 10-year delay in the onset of cardiovascular disease compared to men.

Today we're able to improve the accuracy of risk assessment in women with a new tool known as the Reynolds Risk Score. The Reynolds Risk Score builds on the predictive value of the Framingham Risk Score by measuring two additional risk factors: a blood test called high-sensitivity C-reactive protein or hsCRP (a measure of inflammation) and whether or not either parent had a heart attack before they reached age 60 (a measure of genetic risk). For use by healthy women without diabetes, this tool predicts a woman's risk of having a heart attack, stroke or other major heart disease in the next 10 years, enabling the patient and the physician to develop a more effective, long-term prevention plan.

The Reynolds Risk Score was developed and validated using data collected on more than 24,000 American women over a 10-year period. When compared to results from the Framingham Risk Score, the new model reclassified almost half of the women at intermediate risk into higher- or lower-risk categories, corresponding almost perfectly to what actually happened to these women over the next 10 years.

Yet another valuable tool for the female patient is the American Heart Association's 2007 Guidelines for Preventing Cardiovascular Disease in Women. Based on new clinical data, the updated guidelines include:

- New directions on the use of aspirin, hormone therapy, and vitamin and mineral supplements in heart disease and stroke prevention in women;
- Expanded recommendations on lifestyle factors such as physical activity, nutrition and smoking cessation; and
- More in-depth recommendations on drug treatments for blood pressure, cholesterol control, and diabetes.

With more accurate risk assessment tools, healthcare providers can then better determine the need for and the type of diagnostic screening to perform on female patients. Commonly used diagnostic tools like the exercise treadmill test (ETT) are proving to be less accurate in women than in men. The diagnostic accuracy of the test can be improved by calculating the Duke Treadmill Score, a tool with well-validated results for both men and women. Newer imaging tools are crucial in cardiovascular risk assessment for women, such as: nuclear perfusion studies, stress echocardiograms and coronary calcium scores. With more research studies, we can continue to improve on the accuracy of cardiovascular diagnostic tools in women, improving treatment and outcomes.

Heart Attacks in Women: Know the Warning Signs

Women and their healthcare providers need to be educated on the way cardiovascular disease presents itself in female patients, and seek immediate, proper treatment when these symptoms occur. For example, studies show women are less likely to have chest pain during a heart attack compared to men. Women are also more likely to experience warning signs such as jaw pain, back pain, shortness of breath, nausea, vomiting, or indigestion. Many women fail to recognize these warning signs and delay getting treatment, leading to long-lasting heart damage or death.

The bottom line: when it comes to cardiovascular disease, men and women are not equal – nor should they be treated that way. With more gender-specific studies and increased participation of women in clinical trials of cardiovascular disease, we will continue to gain the knowledge we need to better prevent, diagnose and treat the disease in women, improving, prolonging and saving the lives of thousands of female patients each year.

For more information on heart health for women or to schedule an appointment, call the Women's Center for Comprehensive Care at **713.798.2616**.

Ildiko Agoston, MD, is assistant professor of Medicine in the section of Cardiology and director of the Women's Center for Comprehensive Care at Baylor College of Medicine. Dr. Agoston is board certified in internal medicine and cardiology. She earned her medical degree from Semmelweis University of Medicine in Budapest, Hungary, followed by a residency in internal medicine at Graduate Hospital Tenet, an affiliate of MCP-Hahnemann University in Philadelphia. Her fellowship training included a clinical cardiology fellowship at the University of Texas Medical Branch (UTMB) – Galveston, a cardiac MRI fellowship at Duke University, Durham, NC, and a clinical cardiology research fellowship at Baylor College of Medicine.

Women's Center for Comprehensive Care
at Baylor College of Medicine
Baylor Clinic
6620 Main Street
12th Floor, Suite 1225
Houston, Texas 77030

Monday - Friday 8 a.m. to 5 p.m.
713.798.2616

www.baylorclinic.com (select Women's Center)