IN MATTERS OF THE HEART, GENDER COUNTS

Learn why differences in male and female hearts affect everything from their size to a heart attack diagnosis.

When it comes to their hearts, men might as well be from Mars and women from Venus. Among the differences between the sexes: the average size of their hearts. And research tells us physiological contrasts are critical when diagnosing heart attacks. Since February is Heart Health Month, it’s a good time to learn why gender really does matter.

Men's and women's hearts are physically different—10 ounces vs. 8 ounces respectively, according to Heart Disease: An Essential Guide for the Newly Diagnosed. A woman's heart generally beats faster, at a rate of 78 beats per minute vs. a man's 70. But the distinctions don’t stop there.

According to the Johns Hopkins University School of Medicine, during a heart attack women are more likely to show symptoms such as indigestion, shortness of breath, and back pain. These are often subtle and mistaken for a host of less serious health challenges, such as acid reflux or the flu. Because doctors often diagnose heart attacks based on a common set of symptoms that may not be specific to women—think of the classic chest-clutching scene we often see in Hollywood films and on TV—women's heart attacks can go undiagnosed.

Doctors also use lab tests to diagnose heart attacks by measuring levels of troponin, a protein that can indicate the heart muscle isn’t receiving enough oxygen because of an obstruction in its blood vessels. Troponin is barely detectable in healthy people, but is elevated in those who have suffered a heart attack. Here again, critical differences between men’s and women's hearts come into play: the amount of troponin present in the blood that signals damage to the heart muscle is higher in men than in women. This gender difference means that doctors may not be using tests sensitive enough to detect the lower, but clinically relevant, level of troponin present that would allow them to identify women's heart attacks. In the broad category of cardiovascular disease, the American Heart Association reports that heart disease claims more women's lives than any other disease.

Also, females tend to be older than men—by almost 10 years, in fact—when they learn they have coronary heart disease. According to "Subtle and Dangerous: Symptoms of Heart Disease in Women" from the U.S. National Institute of Nursing Research (NINR), this may be related to the female hormone estrogen, which plays a key role in maintaining the body’s levels of heart-protecting “good” HDL cholesterol. It also helps maintain normal blood pressure and prevent blood vessel damages. But estrogen levels fall after menopause—and the rate of heart disease-related fatalities among women steadily increase.

Add other normal age-related health challenges to the mix, says the NINR, and women become even less likely to notice or report heart-related symptoms. And according to the National Heart, Lung, and Blood Institute, women are more likely than men to suffer from coronary microvascular disease (MVD), in which the walls of the heart's tiny arteries are damaged or diseased. Standard tests for coronary heart disease aren't designed to detect coronary MVD. That means women's test results may incorrectly show that they're at low risk for heart disease.

Of course, the best defense against heart disease is a good offense—and that means preventing it in the first place. Understand what your potential risk factors are through the American Heart Association's risk assessment. Learn the ABCs of heart attack prevention, and make those proactive lifestyle changes that will keep your ticker healthy for years to come.
For more information on heart attacks in women, click here.

Read more about troponin.