WOMEN: Take your Heart to Heart

Mary Bunning has been called “one of the world's finest political campaigners.” She's been a key asset in the political career of her husband, Jim Bunning, the former Philadelphia Phillies pitcher, baseball hall-of-famer, and current United States Senator from Kentucky. Today, she has a new campaign: women's heart health.

“Women are good about getting mammograms and other cancer screenings,” she says. “But too few are aware of the dangers of heart disease.”

According to the American Heart Association, more women die of heart disease than all forms of cancer combined. Mary Bunning herself had heart disease. She was treated at the Cleveland Clinic Heart Center. “I always exercised,” she says. “I did tae bo and walked miles a day.” She tried to ignore the slight chest pain and shortness of breath she began to experience last year. But a friend convinced her to see a cardiologist.

Mrs. Bunning had a bicuspid aortic valve, a congenital condition (her two sisters had it, too) that can hamper the efficient flow of blood through the heart. Her cardiologist monitored her for four months, until a subsequent CAT scan revealed something quite serious: an aortic aneurysm.

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**Sudden Death: Simple Test for Risk**

Many people are at-risk for sudden death from coronary artery disease, heart failure or other heart conditions. Cardiologists need to be able to assess that risk in any given patient, so as to monitor the patient’s condition or prescribe preventive therapies. Up until now, cardiologists have relied on costly and invasive electrophysiological studies for this purpose. Now, Michael Lauer, M.D., director of the Exercise Stress Laboratory at the Cleveland Clinic Heart Center, has successfully tested a simple, inexpensive alternative.

Called the T-wave alternans (TWA) test, it resembles a standard stress test: the patient walks on a treadmill and is monitored through electrodes taped to the chest. The TWA test, however, uses special electrodes and signal-processing software. The TWA test tracks subtle beat-to-beat changes in the electrical stability of the heart, and converts this information into indicators of risk.

“For those with known coronary artery disease, this test appears to be as good, if not better, than electrophysiological studies in predicting risk,” says Dr. Lauer.

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**Better Surgical Treatment for Marfan’s Syndrome**

A dramatic surgical treatment for a rare condition has recently been improved by refinements pioneered at the Cleveland Clinic Heart Center. The condition is called Marfan’s syndrome. It is an inherited condition that affects the connective tissues of the body. (People with Marfan’s syndrome are generally very tall and slender, like President Abraham Lincoln, whom some medical historians believe had the condition.) It can also affect the heart, which is full of connective tissue. Most often, Marfan’s causes weakness in the aorta — the main conduit though which blood leaves the heart for the rest of the body — and the aortic valve in the aortic root. As a result, the valve may leak and the aorta may be at risk of fatal tearing or bursting.

Surgeons treat this condition by replacing the aorta with a synthetic tube. Up until now, they have also replaced the leaky valve with a synthetic valve. But Cleveland Clinic Heart Center surgeons have discovered that patients enjoy a better quality of life when the valve is repaired and re-implanted, rather than replaced.

“Fewer prosthetic parts means fewer sites for potential bacterial infection,” says Lars Svensson, M.D., Ph.D., head of the Center for Aortic Surgery, Marfan’s Syndrome and Connective Tissue Disorders at the Cleveland Clinic Heart Center. “The re-implantation approach also eliminates the need for life-long anticoagulant therapy.”

It is estimated that some 50 percent of patients with Marfan’s would be eligible for this type of surgery.

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**Aortic root and arch support**

— Patients with Marfan’s syndrome can have a damaged aortic arch replaced with a flexible mesh tube at The Cleveland Clinic Heart Center. (The aorta emerges from the top of the heart and lies beneath the breastbone.) Combined with repair — rather than replacement — of the aortic valve, this procedure can improve their quality of life.

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The aorta is the big vessel that carries blood from the heart to the rest of the body. An aortic aneurysm is a balloon-like swelling of the wall of this vessel. Aneurysms usually have no symptoms until they burst. A burst blood vessel can have fatal complications.

Mrs. Bunning needed surgery. Her preference was to be treated in her home state. But her Kentucky doctor referred her to the Cleveland Clinic Heart Center.

At the Cleveland Clinic Heart Center, Mrs. Bunning was treated by Lars Svensson, M.D., Ph.D., one of the world’s leading experts in the type of surgery she needed. In February, 2003, Dr. Svensson performed a two-part operation on Mrs. Bunning. The first part replaced her defective aortic valve—a possible cause of her aortic aneurysm. The second part removed her aorta up to the blood vessels for her arms and brain, and replaced it with a flexible prosthetic tube made of a fine plastic mesh.

“Dr. Svensson was an angel,” says Mrs. Bunning, whose surgery had been scheduled during a senatorial break, so her husband could be with her. “Everyone at The Cleveland Clinic was wonderful. They went out of their way to explain things. It was a good experience.”

Her children came to visit during her recovery. “I enjoyed that part,” she laughs.

Seven weeks after her operation, Mary Bunning stood on the pitcher’s mound at Philadelphia’s Veterans Stadium. It was opening day. Mrs. Bunning was with her husband at a ceremony retiring her husband’s number. It was cold and rainy, as opening day often is, but Mrs. Bunning was feeling well. “Women need to take their hearts to heart,” she says. “We need to pay attention, even if we’re in good shape. Screening for heart disease is as important as getting a mammogram.”

“A new treatment being tested by The Cleveland Clinic for heart failure has successfully completed an early clinical trial.

Called immune modulation therapy, the therapy addresses the theory that heart failure is caused by inflammation, such as arthritis. The treatment begins by withdrawing of a small vial of blood, which is placed in a special machine that zaps it with ultraviolet light and ozone gas. These stressed-out blood cells are then reinjected into the patient, where they self-destruct and trigger an anti-inflammatory response from the patient’s own immune system.

“It is hoped that this little burst of unexpected cell death sends a signal to the immune system to suppress the inflammation and halt damage to the heart,” says James Young, M.D., who led the study.

In an initial 73-person study, only one heart failure patient died among those given six months of immune modulation therapy, compared with seven deaths among those administered a placebo treatment.

Dr. Young is now leading a 2,000 patient follow-up study that is expected to produce a more reliable picture of the technique’s effectiveness.
Diabetes and Your Heart

Most people know that diabetes can have serious complications, such as blindness. But few people are aware of what diabetes does to the heart. It’s a fact that while only about two percent of diabetic patients are struck with blindness, almost half of all diabetic patients have some form of heart disease — usually atherosclerosis.

“If you have diabetes, you can be fairly certain you have heart disease as well,” says Deepak Bhatt, M.D., an interventional cardiologist at the Cleveland Clinic Heart Center. “That means you should take the same precautions as a heart patient. That is, you should lose weight, get regular exercise, and lower your blood pressure.”

Vegetarian Diet Fights Heart Disease

“Following a vegetarian dietary pattern is one of the best ways to minimize your risk for coronary heart disease,” says Melissa Stevens, MS, RD, LD, nutrition program coordinator in Preventive Cardiology at the Cleveland Clinic Heart Center. “Rich in grains, fruits, vegetables, legumes, nuts and seeds, a vegetarian diet provides a host of phytonutrients, dietary fiber, vitamins and minerals found to help fend off disease.”

A vegetarian diet not only reduces your heart disease risk, it can boost your health overall. People who follow a vegetarian or plant-based diet enjoy reduced risk of high blood pressure, lower total and LDL cholesterol levels, lower body weight and reduced risk for obesity and risk of breast and colon cancer, and increased longevity.

If you are considering changing your current eating habits to a vegetarian meal plan, it is a good idea to make an appointment with a registered dietitian,” says Ms. Stevens.

Aspirin Doesn’t Work for All People

Aspirin is a potent anti-clotting agent whose blood-thinning properties can help prevent heart attacks and strokes. But a new Cleveland Clinic study shows that some people do not derive its benefits. For at least five percent of the population, aspirin simply doesn’t work.

The study, led by Eric Topol, M.D., co-chairman of the Cleveland Clinic Heart Center, looked at people with cardiovascular disease who were taking aspirin on a daily preventive basis. Among these, it turned out that those with “aspirin resistance” had three times the risk of heart attack, stroke or death.

“There are excellent alternatives, such as clopidogrel, that can be taken preventively for heart attack and stroke,” says Dr. Topol. But none are as inexpensive or convenient as over-the-counter aspirin.

Is there any way for an individual to tell if he or she is aspirin resistant? “As of this time, there is no quick or reliable way of detecting aspirin resistance,” says Dr. Topol. “We are in the midst of further studies in this area, and hope to develop a rapid, practical test for this condition.”