

Ribose: Fuel for the Heart

As we age, our bodies produce less ribose — just when we need it most.

BY VERA TWEED

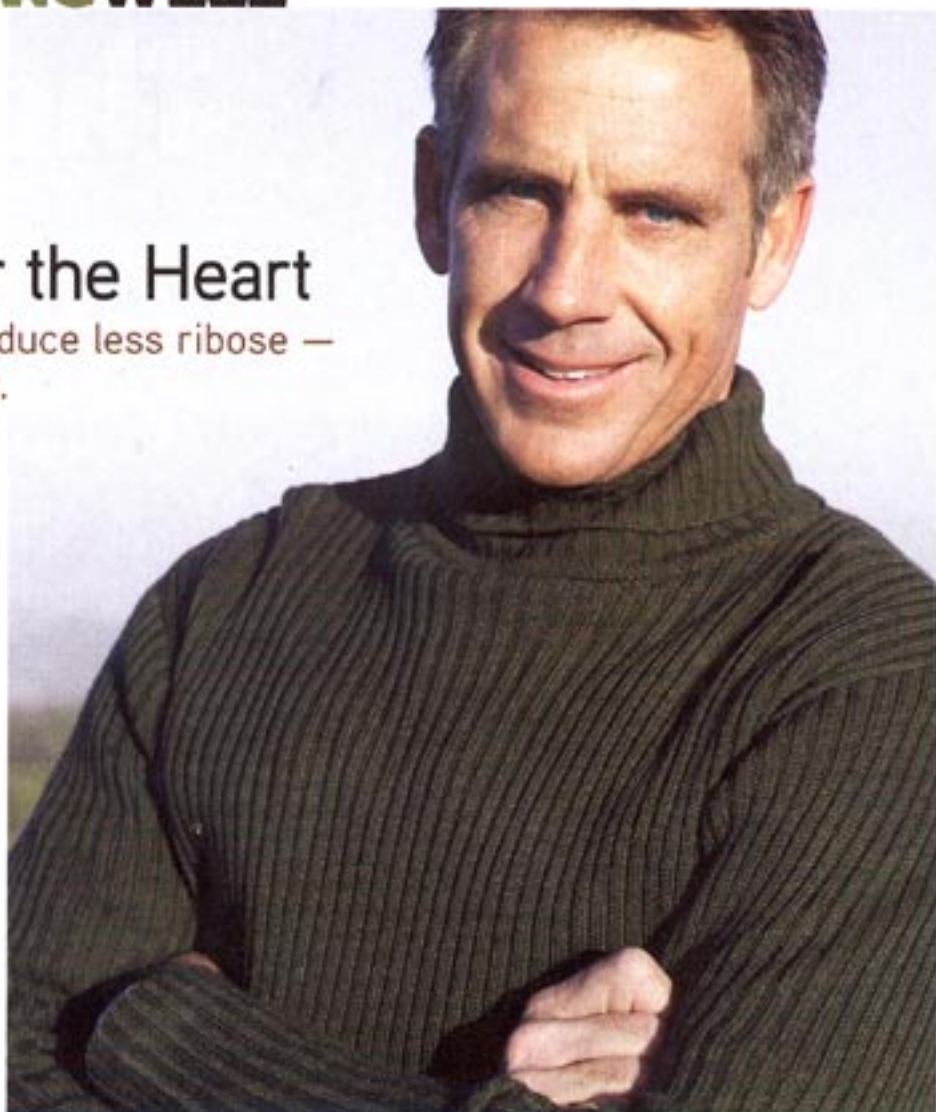
Once heart failure has developed, most people don't magically bounce back, but that's what happened to a patient of Mark Silver, M.D., a board-certified cardiologist, chairman of the department of medicine and director of the Heart Failure Institute at Advocate Christ Medical Center in Oak Lawn, Ill. The patient had obtained Silver's permission to take ribose, a dietary supplement, and a year-and-a-half later, came in to Silver's office markedly improved.

"His enlarged heart had shrunk, his leaky valve went away, and his ability to exercise and his functional capacity had improved," says Silver. As a scientist, he doesn't assume that every patient will respond to ribose supplementation in the same way. However, he says, "The potential for its impact is huge."

What Is Ribose?

A special type of carbohydrate, ribose (also called D-ribose) is a natural substance our bodies make and use for a variety of purposes, including to produce key energy molecules known as ATP, or adenosine triphosphate. Without adequate energy in the form of ATP, the heart can't function properly. Ribose is also a vital ingredient for the heart to pump blood properly.

When the heart beats, it has two phases: It relaxes and stretches to take in blood (the diastolic phase), then contracts and ejects blood to the rest of the body (the systolic phase). Ribose improves the stretching, or diastolic phase. "Diastolic heart failure is a common problem," says Silver, "and as much as half of the heart failure cases in the United States may be attributable to it."



How to Benefit from Ribose

In addition to improving the function of the heart, ribose has been shown to provide significant relief in many cases of fibromyalgia. It may help healthy people improve strength in body-building, recover from intense exercise, and

enhance energy levels in every-day life. Ribose is an ingredient in numerous energy and sports drinks. When taken as a dietary supplement, the usual recommended dosage is 5 gm two to three times daily.

People with sufficiently high blood pressure suffer from some degree of diastolic malfunction, and while the condition can cause some degree of fatigue and shortness of breath, symptoms may be too mild to prompt a visit to the doctor (high blood pressure usually causes no symptoms). With time, the inability of the heart to relax and stretch adequately leads to a malfunction in the contraction phase of the beat, and at that point, symptoms are likely to be noticeable enough to compel someone to see a physician.

Ribose is in food but in amounts lower than supplemental dosages. As we age, our bodies produce less of it — just when we need it most. "With age," says Silver, "some of the tissue in the heart is replaced with scar tissue instead

of normal tissue." A supplement can help the heart get the energy it needs to function properly.

Research Results

When people who suffer from heart disease perform exercise stress tests in a doctor's office as part of their checkups, they may experience extreme fatigue for days or weeks following because a malfunctioning heart can't replenish energy rapidly after extreme exertion. Using this setting to test ribose, multiple studies have found that it significantly improves patients' recovery from exercise.

For example, researchers at the University of Utah in Salt Lake City and at the Aurora Cardiology Clinic in Denver, Colo., collaborated on a study of 23 patients with advanced congestive heart failure. Exercise stress tests before and after eight weeks of supplementation with 5 gm of ribose (three times daily) showed

improved heart function and an increased ability to utilize oxygen.

In an earlier controlled study, German researchers examined the impact of the same dose of ribose on 15 patients with congestive heart failure. Researchers tested subjects on a stationary bicycle and used a questionnaire to assess changes in quality of life. Patients were divided into two groups and took either a placebo or ribose for three weeks; participants had a one-week wash-out period, and then switched substances for three weeks. Ribose significantly increased the amount of blood flow to the heart and improved physical function and quality of life following the three-week supplementation period. ❁

Vera Tweed is a Los Angeles-based writer with more than 10 years in the health and fitness field.

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