

## Test Finds Rare Heart Defect in Some Young Athletes

By Ed Edelson  
*HealthDay Reporter*

WEDNESDAY, Jan. 9 (HealthDay News) -- Italian researchers say they've identified an abnormal heartbeat pattern in young athletes that makes some of them vulnerable to severe heart disease later in life.

The report comes amid intense debate in the United States about screening athletes for potential cardiac problems, said Dr. Mark S. Link, director of the Tufts-New England Medical Center for the Evaluation of Athletes.

"In Italy and other European countries, screening is done," Link said. "In the U.S., it generally isn't. There is a very, very vigorous debate about screening in this country."

The new Italian report isn't likely to resolve that debate, because the study found that the percentage of young athletes who went on to develop heart problems was small, said study lead author Dr. Antonio Pelliccia, scientific director of the Institute of Sports Medicine and Science in Rome. The findings are published in the Jan. 10 issue of the *New England Journal of Medicine*.

The study authors reviewed a database of 12,550 trained athletes and found that 81 of them had electrocardiograms (EKGs) with an abnormal pattern called "diffusely distributed and deeply inverted T waves," but no obvious heart disease. Five of the athletes eventually developed severe heart disease before 50 years of age, including one who died suddenly at age 24.

The abnormal pattern doesn't necessarily mean an end to athletic activity, Pelliccia said. "We don't say, you have a [cardiomyopathy](#)," he said, using the formal term for severe heart disease in which the heart muscle becomes inflamed and doesn't work properly. "We say, you have something that may be associated with subsequent development of a cardiomyopathy. Also, numerous persons with the abnormality do not develop signs and symptoms of cardiomyopathy. That is why we suggest clinical prudence and caution."

Young athletes in Europe are routinely given EKGs, Link said. About 10 percent of them are found to have EKG abnormalities and are given a more detailed heart test, an [echocardiogram](#), which leads to medical disqualification for 10 percent of that group, he said.

In the United States, Link said, "Everyone is saying you should do some kind of screening. The debate is how the screening should be done."

The American Heart Association recommends a screening program that does not include EKGs. Young athletes should be asked if there is a family history of heart disease and should be examined physically to detect signs and symptoms of potential problems such as shortness of breath, [high blood pressure](#) and physical heart abnormalities.

"I think this report will add fuel to the fire for the group that wants EKGs," Link said. "Whether the data is enough to change the American Heart Association recommendations, I'm not sure."

Dr. Jeffrey R. Bytowski, medical team physician for Duke University, said he is pretty certain it won't because of the small number of abnormalities identified in the Italian study.

"The common rate for cardiomyopathies is one in 500," he said. "So in 12,500 examinations, you should have 25. They found five. When you look at screening tools, you want to do a test if there is a high incidence. In kids, cardiomyopathy is pretty rare."

The U.S. debate will go on, Bytowski said. "Every time one of these papers comes out, it kind of stirs it up again," he said. "But it is not compelling enough to say that this is worth screening for."

SOURCES: Antonio Pelliccia, M.D., scientific director, Institute of Sports Medicine and Science, Rome, Italy; Mark S. Link, M.D., director, Tufts-New England Medical Center for the Evaluation of Athletes, Boston; Jeffrey R. Bytowski, M.D., head medical team physician, Duke Medical Center, Durham, N.C.; Jan. 10, 2008, *New England Journal of Medicine*