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TRIATHLONS MAY BE RISKIER TO THE HEART THAN MARATHONS

Sudden Death Occurs in All Race Lengths, Mostly During Swim Segment

Orlando, FL – The risk of sudden death (SD) associated with triathlons – even in the short races – appears to exceed that of marathons, according to research presented today at the American College of Cardiology’s 58th Annual Scientific Session. ACC.09 is the premier cardiovascular medical meeting, connecting cardiologists and cardiovascular specialists to the latest and most innovative findings in cardiovascular science.

This study – the first to examine the risk of SD in triathlon competition – finds the risk of SD is higher in this sport than for marathon races (1.5/100,000 vs. 0.8/100,000, $p=0.058$). According to estimates, U.S. participation in triathlons has grown by 22 percent since 2005.

“This data for the first time alerts us to the risk of triathlon competition, which appears to exceed that of the marathon race,” said Kevin M. Harris, M.D., F.A.C.C., director of echocardiography, Minneapolis Heart Institute at Abbott Northwestern Hospital, and the lead investigator of the study. “This sudden death risk is not inconsequential, and a search for ways to make triathlons safer is extremely important. There is, for example, evidence that instituting safety precautions and deploying external defibrillators along marathon race courses has helped reduce the risk over the years.”

Most of the deaths associated with triathlons were in males between 30 and 55 years of age; fatal events occurred in all races of all lengths but were essentially confined to the swimming portion.

“Sudden deaths occur in all lengths of triathlon races, so a shorter distance race is not necessarily without risk,” Harris said. “We also found that nearly all of the fatalities occurred during swimming, although it’s unclear why.”

One plausible theory, according to Harris, has to do with the ability of an athlete to rest or signal for help. For example, if athletes get tired while running or biking, they can slow down or stop to rest. In the swim portion, it is not easy to take a break and there are often waves of swimmers around. Most of these events occur in lakes, rivers and the ocean, so the ability of rescue personnel to spot someone in trouble in the water may be more difficult.

Researchers identified the fatal events occurring in 2,846 USA Triathlon-sanctioned events between January 2006 and September 2008. The total number of triathlon participants was identified using on-line tabulations of race results. Triathlons were characterized based on length of the swimming segment: short (<750m); medium (751-1500m); long (>1500m). There were a total of 922,810 participants, and 40 percent were female.

Over the 33-month period, 14 deaths occurred, including 13 during the swimming segment and one during the cycling segment. Ages were 28 to 55 years; 11 were male. The overall risk of SD was higher in males than in females (2.0 vs. 0.8, respectively; $p= 0.13$). Of the 14 deaths, six occurred in short distance, four in medium distance and four in long distance races. SD rate in relation to event length was: 1.7/100,000 participants for short, 0.8 for medium and 2.9 for long events ($p= 0.40$).

“As with any training program or competitive athletic event, individuals should discuss their participation with their doctor,” Harris said. “Individuals that may have increased risk of SD during competition include, but are not limited to those with a family history of heart disease, personal history of signs of heart disease such as chest pain, shortness of breath, passing out, a history of a heart murmur or cardiac risk factors such as diabetes, tobacco use, high blood pressure or high cholesterol.”

This study was sponsored by the Minneapolis Heart Institute Foundation.

Dr. Harris will present the study, “Sudden Death Risk Associated With United States Triathlon Competition,” on Tuesday, March 31 at 9:30 a.m. in West Hall D.

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The American College of Cardiology (www.acc.org) works to influence health care policy and represents the majority of board certified cardiovascular care specialists through education, research, promotion, and the development and application of standards and guidelines. ACC.09 is the largest cardiovascular meeting, bringing together cardiologists and cardiovascular specialists to share the newest discoveries in treatment and prevention, while helping the ACC achieve its mission to address and improve issues in cardiovascular medicine.