

Researchers prove that moderate to high aerobic capacity decreases the risk of suffering a sudden death event

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David Jiménez Pavón. Credit: Universidad de Cádiz

UCA researchers, collaborating with the Exercise and Epidemiology Science and Biostatistics Departments from the University of South Carolina in Columbine (USA), have carried out a study focused on the importance of aerobic capacity in the prevention of sudden death, paying

special attention to those people who have some pathology such as obesity and hypertension.

This investigation has been led by David Jiménez Pavón (Ramón y Cajal researcher) and Vanesa España Romero, both of the University of Cadiz. The study has been published in *Mayo Clinic Proceedings*.

To conduct the study, more than 55,000 people from the USA were evaluated and were followed up during an average of 14 years. All of them took an exhaustive initial exam that included the measuring of aerobic capacity through a specific laboratory test. After that, the [sudden death](#) cases were registered over the period of the study.

It was verified that the aerobic capacity level is inversely proportional to the risk of suffering a [sudden cardiac death](#) event. Those participants with moderate or high levels of aerobic capacity had between a 44 and 48 percent lower risk of suffering a sudden [cardiac death](#) event than those with low aerobic capacity. These results were higher when analysing the specific role of the aerobic capacity in people with obesity and hypertension, since it was proved that moderate or high aerobic capacity could reduce the risk of sudden cardiac death between 58 and 72 percent.

The main conclusion of this study suggests that the risk of sudden cardiac death in men and women could be partially reduced with moderate to high aerobic capacity levels. The improvements are noted progressively with small increments of [aerobic capacity](#). "It is necessary to encourage the population to entrust professional of physical activity and exercise to improve their physical fitness in a safe and progressive way," according to the researchers in charge of this study from the Physical, Plastic Arts and Music Education Department from the UCA, where they carry out their research activity currently.

More information: Jiménez-Pavón D, Artero, EG, Lee, DC, España-Romero V., Sui X, Pate RR. Church TS, Moreno LA, Lavie CJ, Blair SN. "Cardiorespiratory Fitness and Risk of Sudden Cardiac Death among Men and Women in the United States. A Prospective Evaluation from the Aerobics Center Longitudinal Study". Mayo Clin Proc. 2016, 91 (7); 849-57.

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