

Exercise could lower risk of heart disease even in those with family history

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Regular exercise could reduce the risk of heart disease even in those who already have a high genetic risk, according to new research.

Led by researchers at Stanford University School of Medicine along with Uppsala University in Sweden, the team looked at data from 482,702 participants age 40 to 69 in the U.K., making it one of the largest observational studies to be carried out to date on fitness and heart disease.

To assess their fitness and activity levels, participants completed grip-strength and stationary-cycling tests, answered questions about levels of physical activity, and wore accelerometers on their wrists for a seven-day period.

The team also looked at genetic data taken from 468,095 of the same participants to see who was at a higher genetic risk for coronary heart disease and atrial fibrillation -- a quivering or irregular heartbeat which can lead to blood clots, stroke, heart failure and other heart conditions.

The results showed that those who had higher levels of grip strength, physical activity and cardiorespiratory fitness also had a reduced risk of several cardiovascular conditions, including heart attacks, stroke, and atrial fibrillation, even if they had a genetic predisposition for heart disease.

For participants who were classed as having an intermediate genetic risk, those with the strongest grips were 36 percent less likely to develop coronary heart disease, and 46 percent less likely to develop atrial fibrillation when compared to participants with the same genetic risk but the weakest grips.

When looking at participants with a high genetic risk, those with a high level of cardiorespiratory fitness had a 49 percent lower risk for coronary heart disease and a 60 percent lower risk for atrial fibrillation compared to those with a low level of fitness.

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Although a link between physical activity and heart health has already been found in previous studies, little has been known about the effect of exercise in those who had a family history of cardiovascular disease.

"People should not just give up on exercise because they have a high genetic risk for heart disease," said senior author Erik Ingelsson. "And vice versa: Even if you have a low genetic risk, you should still get exercise. It all ties back to what we have known all along: It's a mix of genes and environment that influence health."

Ingelsson did point out that the study did not show what type or how much exercise is beneficial, and as the results come from an observational study, "we can't definitely claim a causal connection."

However, he added that the findings are strong enough to be considered in guidelines, and that for health professionals, "This is important because of how we advise our patients. It's basically indicating that you can make some lifestyle changes, be more physically active and it can make a difference to your long-term health."

The results can be found published online in the journal *Circulation*.

Note from Dr. Ouellette

We see from science that even mild exercise has benefits. This has been known for a long time but evidence has been scant. We would go so far as to say that if you combine sedentary activity with a meal then your risk of bad things happening to you goes up because food plugs up the vascular system temporarily while exercise keeps that blood flowing. Keeping your blood flowing lowers your risk to all sorts of problems. There are several capillary beds in the body. Virtually every organ and gland has some sort of capillary bed. It is that capillary bed that is susceptible to plugging up.

See <http://ChronicDiseasePreventionStrategies.com>
and <http://WellnessRisk.com>