

# Early fitness



The researchers searched for links between exercise capacity and heart attacks later in life.

# improves heart attack survival

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Keeping fit early on can increase chances of survival from a heart attack later in life.

**A** large multi-ethnic study demonstrates that a history of strong exercise capacity can be beneficial even for those who eventually suffer heart health problems.

It has long been known that keeping fit can reduce the risk of heart disease, but the effect of a history of fitness on what happens if you have a heart attack years later has not been well-studied.

The Henry Ford Exercise Testing Project (FIT) addressed this knowledge gap by recording the fitness regime of a large sample of people, then monitoring them as they aged. Mouaz Al-Mallah, the project’s principal investigator, undertook this research with colleagues at several medical institutions in the US, where the study was based.

“The outcome for people who have a heart attack is better if they had a high level of fitness years beforehand,” says cardiologist Al-Mallah of King Abdullah International Medical Research Center.

Nearly 70,000 people were recruited

into the project between 1991 and 2009. They were monitored while exercising on a treadmill to determine their “exercise capacity” (EC). This measures the maximum amount of physical exercise a person can sustain. More than 2,000 participants, who at the time of the treadmill test had no history of heart problems, eventually suffered myocardial infarction: a sudden deficiency in blood supply to the heart muscle causing a heart attack. The researchers then looked back at the FIT project data in search of links between the EC levels measured earlier and the fate of patients after their heart attacks.

The data clearly revealed that patients who had very high EC levels before their heart attack were 52% less likely to die in the first year after a heart attack than those who had lower EC levels. The protective effect was identified up to one year after the heart attack.

“Everyone, but especially patients who are at risk for myocardial infarction, should maintain high fitness levels since it improves survival,” says Al-Mallah. He and his co-workers are now planning further studies in other similar populations. This work will also investigate if exercise training in people with existing low fitness levels can improve their chances of survival after subsequent heart attacks.

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shaya, g. e., al-mallah, m. h., hung, r. k., nasir, k., blumenthal, r. s. *et al.* High exercise capacity attenuates the risk of early mortality after a first myocardial infarction: The Henry Ford Exercise Testing (Fit) Project *Mayo Clinic Proceedings* <http://dx.doi.org/10.1016/j.mayocp.2015.11.012> (2016).