

Unfit, lean people are better protected against heart attacks than fit, obese people

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(Medical Xpress)—In a study published in the *European Heart Journal*, a research team at Umeå University, Sweden, has shown that physical fitness in your teens can reduce the risk of heart attack later in life, while men who are fit and obese in their teens run a higher risk of having a heart attack than unfit, lean men.

In the study, Gabriel Högström, Anna Nordström and professor at the Department of Community Medicine and Rehabilitation, Geriatrics, at Umeå University, Peter Nordström, have analysed data from 743,498 Swedish men who received a medical examination at the age of 18 when they were conscripted into national service from 1969 to 1984. The men's fitness level was measured with a bicycle test in which the resistance was gradually increased until they were too exhausted to continue. The men were monitored for an average of 34 years until they suffered a heart attack or died or until 1 January 2011, whichever came first.

The study shows that being physically fit in your teenage years reduces the risk of a heart attack later in life. Fit but overweight or [obese men](#) also ran a significantly higher risk of suffering a heart attack than unfit, lean men.

"While being physically fit at the end of your teens can reduce the risk of heart attack, fitness alone does not appear to fully compensate for the risks with being overweight or obese. In other words, having a normal weight is more important than being in good physical shape, but it is

even better to be both fit and have a normal weight," says Peter Nordström.

The study shows that with every 15% increase in physical fitness, the risk of suffering a heart attack 30 years later is reduced by around 18 percent after factoring in different variables such as socioeconomic background and Body Mass Index, BMI. The results also indicate that regular fitness training late in your teenage years is consistent with a 35% lower risk of a premature heart attack.

Researchers estimate that in the whole data group 1,222 out of 100,000 men suffered heart attacks. Among these, 43 percent had a normal weight or were lean in their teens and had an above-average fitness level. In this section of the group, only 803 out of 100,000 men suffered heart attacks.

"The heart attack risk was reduced with about 35% among lean [men](#) and those with a [normal weight](#) at the end of their teens. But the study only shows that there is a correlation between fitness and a reduced prevalence of heart attack; we were unable to show specifically that a higher level of physical fitness reduces the risk of heart attacks," says Peter Nordström.

He says that the connection between fitness and heart disease is complex and can be influenced by a large number of error sources. Some people can be genetically predisposed to having a high level of physical fitness and a low risk of heart disease.

"As far as we know, this is the first real major study that explores the relationship between [physical fitness](#) in teenagers and the risk of [heart attack](#) later in life. As cardiovascular disease is such a big public health problem and fitness training is both readily-available and affordable, these results and these types of study are important for the

planning of preventative public health programmes," says Peter Nordström.

More information: [eurheartj.oxfordjournals.org/c...
artj.eht527.abstract](http://eurheartj.oxfordjournals.org/c...artj.eht527.abstract)

Provided by Umea University

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