

High fitness level reduces chance of developing hypertension

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Credit: American Heart Association

People with the highest fitness levels are less likely to develop hypertension, according to new research in the *Journal of the American Heart Association*.

"If you're exercising and you're fit, your chances of developing [hypertension](#) are much less than someone else who has the same

characteristics but isn't fit," said Mouaz H. Al-Mallah, M.D., senior author of the study and a cardiologist at the Henry Ford Heart and Vascular Institute in Detroit, Michigan. "Increasing exercise and fitness levels probably protects against many diseases."

More than 57,000 participants in the Henry Ford Exercise Testing Project (The FIT Project) in 1991-2009 were referred for a treadmill stress test because they experienced chest pain or shortness of breath or to rule out ischemia.

Researchers measured the participants' physical fitness by calculating how much energy they burned in metabolic equivalents (METs), an estimate of the amount of oxygen the body uses per kilogram of body weight per minute. One MET is the amount of energy expended at rest; anything above that represents a level of exertion. High-intensity workouts translate to more METs.

At the beginning of the study, 35,175 participants had a history of high [blood pressure](#).

Researchers found:

- Those whose maximal exercise output was less than six METs had an over 70 percent chance of having high blood pressure at baseline compared to less than 50 percent for those with METs of greater than or equal to 12.
- Those who reached 12 METs or more during the stress test had a 20 percent lower risk of developing hypertension compared to those reaching
- Of the 8,053 new cases of hypertension diagnosed during the study, 49 percent were in the lower fitness (less than six METs) group and 21 percent were in the higher fitness group (more than 12 METs).

- There was a relationship between fitness and hypertension regardless of age, gender, race, obesity, resting blood pressure, or diabetes.

Further study is needed to determine how increasing and decreasing [fitness levels](#) impact hypertension risk over time, Al-Mallah said.

"Fitness is a strong predictor of who develops hypertension and who does not," said Al-Mallah, who is also an associate professor of medicine at Wayne State University and head of cardiac imaging at King Abdulaziz Cardiac Center in Saudi Arabia. "Hypertension is associated with a lot of other illnesses and adds significantly to healthcare costs, so we need to know how we can reduce it.

"This is a clear message to everyone: patients, physicians and lawmakers. It's very important to be fit."

According to the American Heart Association, [high blood pressure](#) affects 1 out of 3 American adults. Normal blood pressure is when the top number in a reading, which measures pressure when the heart muscle contracts, is less than 120 millimeters of mercury (mm Hg), and the bottom number, which measures pressure when the heart relaxes between beats, is less than 80 mm Hg. Blood pressure is considered high when it's greater than 140/90 mmHg. Regular physical activity and a healthy diet can help keep blood pressure in a healthy range.

Provided by American Heart Association

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