

How You Can Keep High Blood Pressure at Bay

Aerobic exercise leading to strong heart fitness can delay a man's onset of age-related high blood pressure by nearly a decade, a new study suggests. Blood pressure naturally increases as people grow older and their arteries become stiffer with age.

But men with strong cardio-fitness don't start drifting toward high blood pressure until their mid-50s. On the other hand, largely sedentary men usually experience the early signs of high blood pressure in their mid-40s, researchers report in the Sept. 15 issue of the *Journal of the American College of Cardiology*.

"A higher level of fitness can significantly delay this natural increase of blood pressure with age," said study co-author Dr. Xuemei Sui, an assistant professor in the department of exercise science at the University of South Carolina's Arnold School of Public Health.

"For those with a high level of fitness, it will take almost [an additional] decade" to develop early signs of high blood pressure, Sui added.

Men received this benefit regardless of how much body fat they had, indicating that fitness may trump some of the bad effects of being overweight, the researchers said.

However, while the study found an association between exercise and better blood-pressure levels, it wasn't designed to show that exercise is the exact cause of the effect. Other factors, such as diet, may also play a role in the improved blood pressure, noted the authors of an accompanying editorial.

The new findings are based on heart-health data from nearly

14,000 men studied between 1970 and 2006.

Researchers tracked each man's blood pressure and kept tabs on their fitness using a strenuous treadmill exercise test.

The investigators found that systolic blood pressure—the pressure in the arteries during a heartbeat, as blood is being forced through the vessels—increases to pre-high blood pressure levels beginning around age 46 for a man with low fitness.

But men with high fitness don't reach those same warning levels of systolic blood pressure until around age 54, the researchers found.

Doctors generally place more emphasis on systolic blood pressure as a major risk factor for heart disease in people older than 50, according to the American Heart Association.

However, the study authors found that fitness also benefits diastolic blood pressure, which is the pressure in the arteries between heartbeats.

A man with low fitness will reach warning levels of diastolic blood pressure at about the age of 42, the study reports. Men who are very fit won't reach those levels of diastolic blood pressure until a very advanced age, around 90.

Doctors aren't sure why physical fitness might have such a tremendous impact on blood pressure, said Sui and Dr. Rani Whitfield, a cardiologist in Baton Rouge, La., and a spokesperson for the American Heart Association.

Exercise makes a person's heart stronger, which helps it more efficiently pump blood through arteries even if the vessels have become stiff, Sui and Whitfield said. Exercise also can improve elimination of sodium from the body; high levels of sodium are a risk factor for high blood pressure.

But so many factors influence blood pressure that "I don't

think we'll ever know that answer completely," Whitfield said. "There are so many things that are happening on a cellular level that we will probably never know why it works, but we become more efficient and stronger."

While men who start working out as boys and teenagers will receive the most benefit, Sui and Whitfield said that older men could still use exercise to help control their blood pressure.

"It's never too late to start but always the earlier the better," Whitfield said.

Although the study focused on men, Sui said she expects follow-up research will find the same fitness benefits for women.

"I would expect the higher fitness level will have a similar benefit for women, but there may be some other factors that influence this blood pressure/aging trajectory because there are some biological differences between men and women," she said.

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