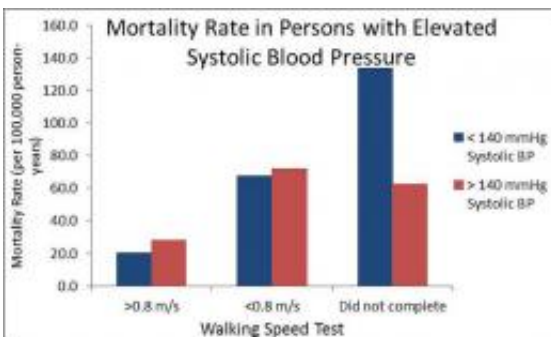


Frail, older adults with high blood pressure may have lower risk of mortality

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This chart designed by OSU College of Public Health and Human Sciences researcher Michelle Odden shows the link between elevated blood pressure, walking speed, and mortality.

A new study suggests that higher blood pressure is associated with lower mortality in extremely frail, elderly adults.

The study, published today in the [Journal of the American Medical Association's \(JAMA\) Archives of Internal Medicine](#), looked at a nationally representative group of 2,340 adults ages 65 and older. The researchers found that [lower blood pressure](#) protected healthier, robust [older adults](#) but the same may not be true for their more frail counterparts.

Lead author Michelle Odden, a public health [epidemiologist](#) at Oregon State University, said blood pressure rises naturally as people age. Her

study used [walking speed](#) as a measure of frailty. Participants were asked to walk a distance of about 20 feet at their normal rate. Those who walked less than 0.8 meters per second were defined as slower walkers. Those who walked faster than 0.8 meters per second were in the second group of more robust adults, who also had a lower prevalence of diabetes, [coronary heart disease](#), stroke and [heart failure](#).

The third group included those who were not able to complete the walking test for various reasons, including inability to walk 20 feet.

"As we age, our blood vessels lose [elasticity](#) and becomes stiff," Odden said. "Higher blood pressure could be a compensatory mechanism to overcome this loss of vascular elasticity and keep fresh blood pumping to the brain and heart."

Odden said the mortality differences between the fast walkers and slow walkers or non-completers can be explained simply – everyone ages differently.

"There is a profound difference in the physiological age of an 80-year-old man who golfs every day, and someone who needs a walker to get around," she said. "So in the fast walkers, high blood pressure may be more indicative of underlying disease, not just a symptom of the aging process."

Among the faster walkers, those with high blood pressure had a 35 percent greater risk of dying compared with those with normal blood pressure.

In contrast, there was no association between high blood pressure and mortality in the slow walking group. Strikingly, those who were unable to complete the walking test had the opposite results – those with higher blood pressure had a 62 percent lower mortality rate.

Since this is one of the first studies to examine walking speed, mortality and blood pressure, Odden cautioned against people making health decisions based on these early findings.

"Any sort of decision regarding medication use should be done in consultation with a physician," she said. "Our study supports treating high blood pressure in healthy, active older adults. But in frail older adults, with multiple chronic health conditions, we need to take a closer look at what sorts of effects high blood pressure could serve and whether having a higher blood pressure could be protective."

Odden is an expert on chronic disease and disease prevention in aging populations, particularly in regard to cardiovascular health and kidney disease. Her work is funded by the National Institute on Aging and the American Heart Association Western States Affiliate.

Provided by Oregon State University

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