

Can four fish oil pills a day keep the doctor away?

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Fish oil is one of the most popular dietary supplements in the U.S. because of the perceived cardiovascular benefits of the omega-3 it contains. However, scientific findings on its effectiveness have been conflicting. New research in *Physiological Reports* supports the claims for seniors, reporting that taking omega-3 fish oil supplements every day can improve the cardiovascular health of healthy seniors after 12 weeks of use.

Risk of cardiovascular disease increases with age because the arteries become stiffer. Arterial stiffness affects how blood travels through them and ultimately how strongly the heart needs to pump. The most commonly used measures of [arterial stiffness](#) are pulse wave velocity (PWV) and augmentation index. When the heart ejects blood into the blood vessels, pressure increases, creating a bulge in the vessel. PWV is the speed at which the bulge ripples through the arteries. When the pressure pulse hits a fork in the arteries, part of the pressure pulse bounces back towards the heart and combines with the new pulse coming out of the heart. How much the reflected pulse enhances the new one is called augmentation index. High PWV and high augmentation index values reflect stiffer arteries.

Reported [cardiovascular benefits](#) of omega-3 include reduced arterial stiffness seen through improved PWV and augmentation index. In this new study, researchers at Pennsylvania State University College of Medicine examined whether omega-3 supplements could reverse the effects of aging on the blood vessels in healthy older adults and reduce

PWV and augmentation index.

Healthy subjects ages 60 to 80 took two omega-3 capsules twice daily for 12 weeks. Each capsule contained 1000 mg of omega-3 (465 mg eicosapentaenoic acid and 375 mg docosahexanoic acid). The researchers measured PWV, augmentation index and blood pressure before and after the 12-week regimen. The results were compared to young healthy subjects, ages 21 to 35, who also followed the same omega-3 supplement schedule.

The researchers found that 12 weeks of supplementation significantly decreased PWV in the older subjects, supporting improvement in vascular health, although PWV was still higher than in young subjects. While PWV improved, augmentation index and blood pressure did not. The omega-3 supplements also did not improve either index of arterial stiffness in the young subjects.

According to the researchers, "These findings provide support for the concept that increased omega-3 intake may be an efficacious therapy in the primary prevention of [cardiovascular disease](#) in aging humans through effects on central arterial stiffness." They also noted that "these effects occurred over a relatively short period of time."

The article "Effect of omega-3 polyunsaturated fatty acid supplementation on central arterial stiffness and arterial wave reflections in young and older healthy adults" is published in the June issue of *Physiological Reports*, a joint journal of the Physiological Society and the American Physiological Society.

More information: "Effect of omega-3 polyunsaturated fatty acid supplementation on central arterial stiffness and arterial wave reflections in young and older healthy adults." *Physiological Reports* Published 24 June 2015 Vol. 3 no. e12438 [DOI: 10.14814/phy2.12438](https://doi.org/10.14814/phy2.12438)

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