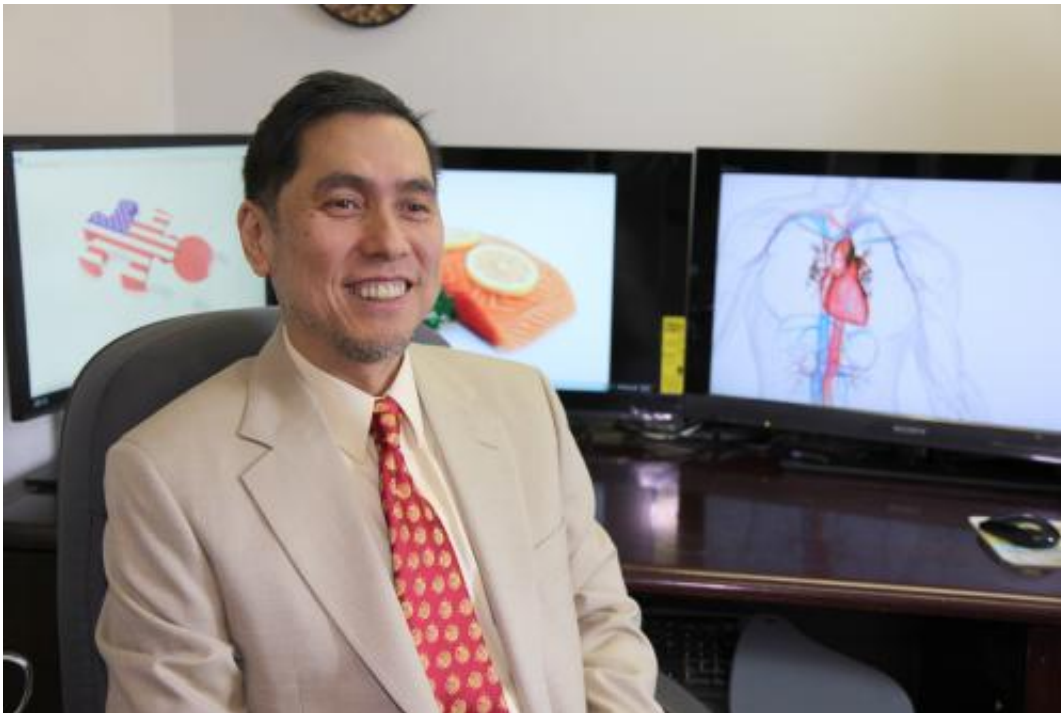


High consumption of fish oil may benefit cardiovascular health

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This is Akira Sekikawa, M.D., Ph.D., associate professor of epidemiology at the University of Pittsburgh Graduate School of Public Health. Credit: Tim Betler/UPMC

Eating fish in amounts comparable to those of people living in Japan seems to impart a protective factor that wards off heart disease, according to an international study funded by the National Institutes of Health (NIH) and led by the University of Pittsburgh Graduate School of Public Health.

Middle-aged Japanese men living in Japan had lower incidence of [coronary artery calcification](#), a predictor of [heart disease](#), than middle-aged white men living in the United States, likely due to the significantly higher consumption of [omega-3 fatty acids](#) found in fish. The findings will be published in the March 6 issue of the journal *Heart*.

"Multiple studies have looked at the effect of fish oil on [cardiovascular health](#), with mixed results," said lead author Akira Sekikawa, M.D., Ph.D., associate professor of epidemiology at Pitt Public Health.

"Previous studies investigated substantially lower intake of [omega-3 fatty acids](#) than what people in Japan actually get through their diet. Our study seems to indicate that the level of marine-derived omega-3 fatty acids consumed must be higher than previously thought to impart substantial protection."

Marine-derived omega-3 fatty acids, which are found in fish, especially oily fish, as well as in squid and krill, may help to reduce inflammation and slow the formation of fatty plaques in arteries.

Researchers at Pitt partnered with scientists in Japan, Hawaii and Philadelphia to follow nearly 300 men for five years, tracking multiple factors that affect cardiovascular health, including cigarette smoking, the level of cholesterol in the blood and alcohol consumption, as well as their rates of diabetes and [high blood pressure](#).

After accounting for risk factors for heart disease, the U.S. men had three times the incidence of [coronary artery](#) calcification as the Japanese men. Meanwhile, the levels of marine-derived omega-3 fatty acid in the blood were more than 100 percent higher in the Japanese than in the white men.

"The vast difference in heart disease and levels of marine-derived omega-3 fatty acid are not due to genetic factors," said Dr. Sekikawa.

"When we look at Japanese Americans, we find that their levels of coronary [artery calcification](#) are actually higher than that of the rest of the U.S. population."

The average dietary intake of fish by Japanese people living in Japan is nearly 100 grams each day, which the American Heart Association considers 1 ½ servings. The average American eats about 7 to 13 grams of fish a day, or about one serving a week.

Heart disease is the leading cause of death in the U.S. and globally, according to the World Health Organization. However, Japan bucks this trend, with cancer as the leading cause of death.

"I am not encouraging Americans to start consuming massive amounts of fish, which may have harmful contaminants, such as mercury, in their flesh," said Dr. Sekikawa. "However, our findings indicate that it is worthwhile to take another look at the effect of marine-derived omega-3 fatty acids on heart disease, particularly when consumed at higher rates than previously investigated."

Provided by University of Pittsburgh Schools of the Health Sciences

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