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Almonds may improve markers of vascular health

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By **Vallari Mathure** | June 1, 2020



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Research finds almond snacking may reduce adjusted relative risk of cardiovascular disease by about 30%

For decades, researchers have investigated how eating almonds promotes heart health and now, there's a novel discovery related to almond benefits. In a newly-published study, snacking on almonds improved endothelial function, which is a key indicator of vascular health. In addition, consuming almonds instead of a usual snack also lowered "bad" LDL-cholesterol, which is consistent with previous research. The study was funded by the Almond Board of California.

The study was a 6-week randomized control, parallel-arm trial, where participants (with above average cardiovascular disease risk) consumed almonds or a calorie-matched control snack providing 20% of each participants' estimated daily energy needs. The research team then compared cardiometabolic health markers between the two groups. They found that the almond group, compared to the control group, had increased endothelium-dependent vasodilation by a 4% unit increase (measured through flow mediated dilation or FMD), which is a strong predictor of the initiation and progression of the disease atherosclerosis. Improved FMD means that arteries can dilate more easily in response to increased blood flow, which is a strong indicator of cardiovascular health.

LDL-cholesterol levels decreased in the almond group relative to the control group. There was no difference between the two groups in liver fat and several other measures (triglycerides, HDL-cholesterol, glucose, insulin and others).

"This study shows that eating almonds in place of the typical snacks that many of us consume (such as crisps, biscuits and pastries) is beneficial for our heart health by reducing levels of bad LDL-cholesterol and improving the health of our arteries. Based on existing data on risk of cardiovascular disease (CVD), we predict that replacing typical snacks with almonds in the long term would result in a 30% reduction in the adjusted relative risk of a cardiovascular event," said Dr. Wendy Hall, PhD, co-principal investigator and Reader in Nutritional Sciences at King's College London. Adjusted relative risk is the probability of an event happening to a

person compared to another person who does not take a step in disease prevention, such as making a diet change.

Speaking about the study, Regional Head-Dietetics, Max Healthcare – Delhi, Ritika Samaddar commented, “The results of this study are very favourable, especially for a country like India where CVD cases are on the rise. This study showcases how almond consumption helped improve flow mediated dilation (FMD) in the arteries, which is an important indicator of any person’s heart health. Simply targeting the quality of snacks eaten in between meals and replacing unhealthy options with whole roasted almonds can have a measurable beneficial impact on endothelial function, cardiac autonomic function, and lower LDL cholesterol and hence significantly reduce the risk of CVD.”

Commenting on the results of the study, Madhuri Ruia, Pilates Expert and Diet & Nutrition Consultant, commented, “According to the World Economic Forum, CVD is the leading cause for deaths globally, and number of epidemiological studies have also highlighted that Indians have a higher risk for heart diseases owing to their genetic make-up. The results of this study highlight the benefit of long term almond consumption and how this may contribute to a 30% reduction in the adjusted relative risk of a cardiovascular event for any person, which is a very promising outcome.”

Besides the new FMD finding in the almond group, the study took an innovative approach to the comparison food used in this study. The researchers developed a control food that was carefully matched in terms of fat and sugar (14% of energy from saturated fat and 23% of energy from sugar) to reflect a typical UK snack (excluding fruit) derived from the UK National Diet and Nutrition Survey (NDNS). This neutral comparator snack helped determine that the almonds, and nothing else, were responsible for the beneficial changes in health markers.

Speaking about the study, Sheela Krishnaswamy, Nutrition and Wellness Consultant said, “It’s interesting to note the results of this new study, which again indicates, how beneficial almond consumption can be to manage our heart health. Besides this, several other scientific studies have also showcased the positive impact of snacking on almonds especially with regard to weight and diabetes management, both established CVD risk factors amongst Indians.”

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