SINCE 1993, published research has been investigating how eating walnuts affects various heart health biomarkers and risk markers including:

- LDL and HDL cholesterol
- Apolipoprotein B and non-HDL cholesterol
- Blood pressure
- Inflammation
- Endothelial function
- Plaque formation

A two-year parallel group randomized controlled clinical trial explored the effects of a walnut-enriched diet on overall cholesterol in 708 cognitively healthy elders (63-79 years old) without major comorbidities residing in Barcelona, Spain and Loma Linda, California. Participants were allocated either a walnut-free or walnut-supplemented diet (=15% of energy, 30-60 grams/day) and had the options to eat a variety of other foods in addition to walnuts. Researchers went beyond LDL cholesterol and looked at all types of lipoproteins to better assess participants’ cardiovascular disease risk. One ½ cup serving of walnuts a day made a positive effect on lipoproteins, including a reduction in the number of total LDL particles by 4.3% and small LDL particles by 6.1% as well as a decrease in Intermediate Density Lipoprotein (IDL) cholesterol, a subclass of lipoproteins that can negatively affect your risk for heart disease, by 16.9%. These changes may be associated with a lower risk of cardiovascular disease. This study is part of the Walnuts and Healthy Aging (WAHA) study, carried out in two centers – Loma Linda University, California, USA (LLU) and Hospital Clinic, Barcelona, Spain (BCN). WAHA is the largest and longest nut trial to date, overcoming the limitations of prior smaller and shorter nut studies.

A clinical trial revealed there may be a connection between heart and gut health aided by consumption of walnuts. Findings showed that consuming walnuts enriched certain gut bacteria associated with improvements in blood pressure and cholesterol. Overweight and obese adults at risk for heart disease (42 in total) followed a diet that replaced some saturated fat with either walnuts, a vegetable oil with the same fatty acids as walnuts (including omega-3
In a separate epidemiological study by researchers from the Harvard T.H. Chan School of Public Health, they found higher walnut consumption – both in terms of the amount and frequency – may be associated with lower risk of death and an increase in life expectancy among older adults in the U.S., compared to those who do not consume walnuts. Study participants included over 67,000 women of the Nurses’ Health Study (1999 - 2018) and some 26,000 men of the Health Professionals Follow-up Study (1999 - 2018) who had their dietary assessment taken via a self-reported food frequency questionnaire. Both groups were on average around 63 years old and free of cancer, heart disease and stroke at baseline. Researchers found that participants who reported eating five or more servings of walnuts per week (one serving = one ounce) had a 14% lower risk of death (from any cause), 25% lower risk of dying from cardiovascular diseases and a gain in about 1.3 years of life expectancy, compared to participants who reported no walnut consumption. Results from the prospective observational study do not prove cause and effect, but it does shed light on how walnuts may support an overall healthy lifestyle that promotes longevity. Future research is needed to confirm the longevity benefits of eating walnuts in more diverse groups of individuals and these results cannot be applied to the general population.

Research from the landmark Prevención con Dieta Mediterránea (PREDIMED) study further demonstrated the potential heart health benefits of walnuts. The study was conducted among more than 7,000 Spanish individuals (ages 55 - 80) at high risk for cardiovascular disease and found that a Mediterranean diet supplemented with mixed tree nuts (primarily walnuts) was associated with a lower risk of cardiovascular events, including cardiovascular death, myocardial infarction (heart attack) and stroke, when compared to a low-fat control diet. It is important to note that the amount of walnuts the participants in this study ate was relatively large and might be tough to be consistent within a real-world setting.

In the PREDIMED study, it is also difficult to precisely define what part of the Mediterranean diet was associated with cardiovascular benefits. 

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**Due to the evidence supporting the cardiovascular benefits of walnuts, the U.S. Food and Drug Administration approved one of the first qualified health claims for a whole food in March of 2004:** “Supportive but not conclusive research shows that eating 1.5 ounces of walnuts per day as part of a low saturated fat and low cholesterol diet, and not resulting in the increased caloric intake, may reduce the risk of coronary heart disease.”

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