



AVOCADOS and HEART HEALTH

Can eating one avocado per day improve risk factors for heart disease?

Nutrient-dense avocados contribute monounsaturated fats, antioxidants, fiber and phytosterols.

DID YOU KNOW?

30% of the fiber in an avocado is soluble fiber which helps prevent your digestive tract from absorbing cholesterol and reduces the risk of heart disease.

Replacing half a serving/day of margarine, butter, egg, yogurt, cheese, or processed meats with the equivalent amount of avocado was associated with a 16% to 22% lower risk of Cardiovascular Disease.¹



A GROWING BODY OF SCIENTIFIC EVIDENCE DEMONSTRATES THAT AVOCADOS CAN BE PART OF A HEART-HEALTHY EATING PLAN.

A 30-year study following 110,487 non-Hispanic primarily white health professionals and nurses found that people who reported eating at least one avocado a week was associated with reduced cardiovascular disease and coronary heart disease, but not risk for stroke, than participants who never or rarely ate avocados. The results were adjusted for diet and lifestyle, do not show a direct cause and effect, and are limited to self-

reported dietary collection.

In a clinical trial, participants who ate an avocado a day, as part of a moderate-fat diet, had reduced total cholesterol and bad LDL-cholesterol and improved the ratio of total cholesterol to good HDL-cholesterol levels, compared to participants who did not consume avocado (low-fat or moderate-fat oils diets). By adding the avocado, researchers noted increased blood antioxidant levels and decreased the oxidation of small, dense LDL-cholesterol levels.

In a 26-week clinical study with 1,008 adults who had abdominal obesity, half of the participants ate one large avocado daily while sticking to their usual diet. This group had higher blood monounsaturated fatty acid levels than the control group. The control group's fatty acids were associated with unfavorable changes in measures of belly fat, lipid profiles, glucose, insulin, and inflammatory CRP. Despite similar overall fatty acid profiles, the avocado group bloodwork was not associated with those negative health effects.

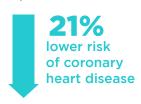
Lastly, a meta-analysis evaluated the impact of avocado intake on LDL cholesterol. Researchers concluded with moderate evidence that avocado intake has a medium to large effect on LDL-C levels. This study relies on published work, presenting unique limitations, and the findings cannot be generalized to all populations. The researchers assessed the risk of bias and strength of evidence for each of the 12 clinical trials and 14 comparisons. The results from this large study support avocados as a heart-healthy fruit.



HIGHER AVOCADO INTAKE (≥2 SERVINGS/WEEK) HAD:

16%
lower risk of
Cardiovascular
Disease





Adjusted for lifestyle and other dietary factors, and compared with non-consumers.

These findings support avocados as a heart-healthy fruit.

- * Some of the studies were supported by the Avocado Nutrition Center. All studies have their limitations. Additional longer-term research is needed to understand whether eating a serving of avocado (50 g) in a larger, U.S. representative population would provide the same benefits.
- 1. Pacheco, L.S., et al. Avocado Consumption and Risk of Cardiovascular Disease in US Adults. Journal of the American Heart Association. 2022.
- 2. Wang, L., et al. A Moderate-Fat Diet with One Avocado per Day Increases Plasma Antioxidants and Decreases the Oxidation of Small, Dense LDL in Adults with Overweight and Obesity: A Randomized Controlled Trial. *Journal of Nutrition*. 2020.
- 3. Wang L., et al. The Effect of a Moderate Fat Diet With and Without Avocados on Lipoprotein Particle Number, Size and Subclasses in Overweight and Obese Adults A Randomized, Controlled Trial. *Journal of American Heart Association*. 2015.
- 4. Schoeneck M., et al. The Effects of Foods on LDL Cholesterol Levels: A Systematic Review of the Accumulated Evidence from Systematic Reviews and Meta-Analyses of Randomized Controlled Trials. *Nutrition, Metabolism, and Cardiovascular Diseases*. 2021.
- 5. Matthan, N.R., et al. Effect of Daily Avocado Consumption for 6-Months Compared to Habitual Diet on Red Blood Cell Fatty Acid Profiles and Association with Cardiometabolic Risk Factors in Individuals with Abdominal Obesity: A Randomized Trial. The American Journal of Clinical Nutrition. 2024.

WHAT YOUR PATIENTS EAT CAN BE JUST AS IMPORTANT AS WHAT THEY DON'T EAT.

As shown in the research¹⁻⁴, consuming one avocado per day may be a delicious and easy way to facilitate heart-healthy diet changes. Making small dietary changes to include more fiber, phytosterols, and replacing saturated fat with unsaturated fat may help your patients lower their LDL cholesterol.

For example, replace:

1 ounce of regular cream cheese with



1/3 of a medium avocado on a bagel

1 Tbsp. mayonnaise *with*



1/3 of a medium avocado on a sandwich

2 Tbsp. oil-based salad dressing with



1/3 of a medium avocado on a salad

With these simple daily swaps, you can provide:



- 97 less calories
- 12 grams *less fat*
- 6 grams *less saturated fat*
- 8 grams *more monounsaturated fat*
- 10 grams *more fiber*
- 178 mg *less sodium*
- 404 mcg *more lutein*
- and 100 mg *more phytosterols*

Note: Food items calculated using the Recommended Amount Customarily Consumed (RACC) and USDA Food Data Central, SR Legacy accessed on February 2020. 1 oz cheese, cream; 1 Tbsp. salad dressing, mayonnaise, regular; 2 Tbsp. Salad dressing, home recipe, vinegar and oil.



