# Grape Consumption Modifies Gut Microbiome, Lowers Blood Cholesterol Levels: Study

*By: News Staff, Sci-News*

Consuming grapes significantly increases the diversity of gut bacteria, decreases cholesterol levels as well as bile acids which play an integral role in cholesterol metabolism, according to a new pilot study published in the journal Nutrients.

“Grapes are one of the most commonly consumed fruits,” said senior author Dr. Zhaoping Li from the University of California, Los Angeles, and VA Greater Los Angeles Health Care System, and colleagues.

“They not only contain various phytochemicals, such as catechins, proanthocyanidins, anthocyanins, leucoanthocyanidin, quercetin, kaempferol, stilbenes, ellagic acid, and hydroxycinnamates, but are also a good source of fiber.”

“The antioxidant, antibacterial, and antiviral effects of grapes, grape extract, or grape phenolic compounds from grapes have been previously reported.”

“Eight weeks of dietary raisin consumption was found to ameliorate liver function and atherosclerotic lesion formation in rabbits fed an atherogenic diet (0.5% cholesterol).”

“A recent mouse study showed that table grape consumption can decrease adiposity and improve markers of hepatic steatosis, and is associated with an improvement in the gut microbiome.”

The researchers aimed to evaluate the effect of the daily consumption of whole grape powder, providing the equivalent of two servings of California table grapes, on the gut microbiome and cholesterol/bile acid metabolism in healthy adults.

The study included a 4-week standardization to a low-polyphenol diet, followed by 4 weeks of 46 g of grape powder consumption while continuing the low-polyphenol diet.

After four weeks of grape consumption there was an increase in microbial diversity as measured by the Shannon index, a commonly used tool for measuring diversity of species.

Among the beneficial bacteria that increased was *Akkermansia*, a bacteria of keen interest for its beneficial effect on glucose and lipid metabolism, as well as on the integrity of the intestinal lining.

Additionally, a decrease in blood cholesterols was observed including total cholesterol by 6.1% and LDL cholesterol by 5.9%.

Bile acids, which are linked to cholesterol metabolism, were decreased by 40.9%.

“We found that grapes have a beneficial effect on gut bacteria, which is great news, since a healthy gut is critical to good health,” Dr. Li said.

“This study deepens our knowledge and expands the range of health benefits for grapes, even as the study reinforces the heart health benefits of grapes with lowered cholesterol.”

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Jieping Yang *et al*. 2021. Effect of Standardized Grape Powder Consumption on the Gut Microbiome of Healthy Subjects: A Pilot Study. *Nutrients* 13 (11): 3965; doi: 10.3390/nu13113965