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Studies find health benefits of mangos

As low fruit and vegetable consumption continues to contribute to diet-related chronic diseases like diabetes and heart disease, two new research studies find regular mango consumption may improve diets and help manage key risk factors that contribute to chronic disease.

Specifically, these new studies report findings in two areas: 1) mango consumption is associated with better overall diet quality and intake of nutrients that many children and adults lack at optimum levels, and 2) snacking on mangos may improve glucose control and reduce inflammation in contrast to other sweet snacks. With mangos consumed widely in global cuisines and [58 percent of Americans reporting snacking at least once a day in 2021](#), this new research provides added evidence that regularly consuming mangos may have health advantages and be relevant to cultural dietary preferences and current eating patterns.

Mango consumption associated with higher diet quality and better intakes of nutrients of concern in children and adults

A recent observational [study](#) found positive outcomes in nutrient intakes, diet quality, and weight-related health outcomes in individuals who consume mangos versus those who do not. The study, published in *Nutrients* in January 2022, used United States National Health and Nutrition Examination Survey (NHANES) 2001-18 data to compare the diets and nutrient intakes of mango consumers to people who did not consume mangos.

The study showed that children who regularly ate mango had higher intakes of immune-boosting vitamins A, C and B6, as well as fiber and potassium. Fiber and potassium are two of the four “nutrients of concern” as defined by the Dietary Guidelines for Americans, which means many Americans are not meeting recommendations for these. In adults, researchers found similar results, showing that mango consumption was associated with significantly greater daily intakes of fiber and potassium but also vitamins A, B12, C, E and folate, a vitamin critical during pregnancy and fetal development. For both children and adults, consuming mango was associated with a reduced intake in sodium and sugar, and for adults was associated with a reduced intake of cholesterol.

“We have known for a long time that there is a strong correlation between diet and chronic disease,” said Yanni Papanikolaou, researcher on the project. “This study reveals that both children and adults eating mangos tend to have significantly better diet quality overall along with higher intakes of fiber and potassium compared with those who don't eat mangos. It is also important that mango fits into many diverse cuisines. Whole fruits are under consumed, and mango can encourage fruit consumption especially among growing diverse populations.”

Snacking on mangos associated with better glucose control and lower inflammation

In addition to these broad benefits of mango consumption, a separate pilot [study](#), published in *Nutrition, Metabolism & Cardiovascular Diseases* in 2022 looked at mango as a snack and found that consuming whole mangos as a snack versus a control snack had better health outcomes in overweight and obese adults. Given 97 percent of American adults consume snacks that contribute up to [24 percent of their daily energy intake](#) this study sought to compare snacking on 100 calories of fresh mango daily to snacking on low-fat cookies that were equal in calories.

Twenty-seven adults participated in the study, all classified as overweight or obese based on Body

Mass Index and reported no known health conditions. Participants were given either mango or low-fat cookies as a snack while maintaining their usual diet and physical level for 12 weeks, and after a four-week wash-out period the alternating snack was given for another 12 weeks. Researchers measured the effects on glucose, insulin, lipid profiles, liver function enzymes and inflammation. At the end of the trial period, findings indicated that mango consumption improved glycemic control (an individual's ability to manage blood glucose levels, an important factor in preventing and managing diabetes) and reduced inflammation.

Results showed there was no drop in blood glucose when participants snacked on low-fat cookies. However, when snacking on mangos there was a statistically significant ($p= 0.004$) decrease in blood glucose levels at four weeks and again at 12 weeks, even though there was twice as much sugar — naturally occurring — in the mangos compared to the cookies. Researchers also observed statistically significant improvements to inflammation markers, total anti-oxidant capacity and C-reactive protein, when snacking on mangos. TAC is a measurement of overall antioxidant capacity, or how well foods can prevent oxidation in cells. CRP is biomarker used to measure inflammation in the body. The research suggest that the antioxidants abundant in mangos offered more protection against inflammation compared to the cookies.

“The findings of this study show that antioxidants, fiber and polyphenols abundant in mango may help to offset sugar consumption and aide in glucose control. Antioxidants may also offer protection against inflammation” says Mee Young Hong, lead investigator on the study and professor in the school of exercise and nutritional sciences at San Diego State University. “Further research is needed but the initial findings are encouraging for people who enjoy sweet snacks.”

Some limitations in this study include sample size, using only one dose of mango, and measuring effects on participants without any pre-existing conditions. Further research should explore optimal dose of mango and examine long-term effects of mango consumption on those with metabolic conditions. It would also be of benefit to compare mango to a fiber-matched control snack to distinguish the effects of fiber versus the bioactive compounds in mangos.

With only 99 calories and over 20 different vitamins and minerals, a one-cup serving of mango is nutrient-dense, making it a superfood. Because mangos are widely consumed in cultures around the world and United States, research into their health benefits contributes to a better understanding of their place in a healthy diet.

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