



# THE STATE OF THE SCIENCE ON FRESH MANGOS & HEALTH

Mango is tropical fruit that has essential nutrients, including dietary fiber, as well as a unique composition of phytochemicals (1). Fresh mangos are available year-round in grocery stores and farmers markets throughout the world. Findings from a 2025 literature review, published in Food and Function provide more insights on the role of fresh mangos in cardiometabolic health, weight maintenance, glucose control, and emerging areas of gut, brain and skin health (1).

## KEY TAKEAWAYS



**Mangos are a nutritious fruit that have essential vitamins, minerals and bioactive compounds associated with many health benefits. Fresh mango consumers have better diet quality compared to non-consumers.**



**In some populations, fresh mango intake has been associated with satiety and weight maintenance as well as improved insulin sensitivity and glucose control.**



**Emerging research on fresh mango's role in supporting cognitive performance and a healthy gut microbiome is promising.**

**PEOPLE THAT ATE FRESH MANGO DURING A PARTICULAR MEAL OR SNACK HAD HIGHER INTAKES OF FIBER, MAGNESIUM, POTASSIUM, VITAMINS C AND D AND LOWER SUGAR INTAKE COMPARED TO PEOPLE THAT DIDN'T EAT FRESH MANGO (4).**

## FRESH MANGO & BLOOD GLUCOSE CONTROL

Fresh mango intake has been associated with improved insulin activity and lower blood sugar (5). In a randomized cross-over study with 23 overweight or obese adults who ate either 100 kcal of fresh mango or an isocaloric low-fat cookie on two separate occasions, findings show after-meal glucose and insulin were significantly lower in the fresh mango group compared to the low-fat cookie group after 30 and 45 minutes (3). Similarly, a crossover design trial with 34 healthy adults who ate either 100 kcal of fresh mango, dried mango or white bread on three separate occasions found mango intake decreased glucose concentrations when compared to white bread (5).

## FRESH MANGO & WEIGHT MAINTENANCE

Strong evidence supports an inverse relationship between fruit intake and weight gain, including studies on fresh mangos (2). A randomized cross-over study with 23 overweight or obese adults who ate either 100 kcal of fresh mango or an isocaloric low-fat cookie on two separate occasions found higher satiety in the fresh mango group after 2 hours (3). Even though the calories were matched in the groups, after 12 weeks the cookie group gained weight, and the fresh mango group maintained their weight. Additionally, a study that looked at NHANES data (2001-2018) found that adult males that consumed mango (vs non-consumers) had lower BMI-z scores (4).

**FRESH MANGO INTAKE CAN RAISE ADIPONECTIN, A PROTEIN LINKED TO LOWER INFLAMMATION AND BETTER INSULIN SENSITIVITY, WHICH MAY HELP EXPLAIN ITS EFFECTS ON INSULIN MARKERS.**

## FRESH MANGO & CARDIOVASCULAR HEALTH

Human studies on the role of fresh mangos on cardiovascular health have shown mostly a neutral impact. Studies with varying types of intervention (randomized controlled trial and single arm) investigated daily consumption of mango pulp (280 grams) or 100 kcal of fresh mango for 8 weeks or 12 weeks on lipid changes among 27 adults were generally neutral (6,7). Likewise, studies investigating mango consumption and impacts on blood pressure among 27 adults were also generally neutral. However, one study did show a statistically significant reduction in systolic blood pressure (SBP) as a secondary outcome of interest among a lean-group of 12 adults consuming 400 g mango daily for 6 weeks compared to 9 obese adults (~ 3% lower SBP,  $P = 0.05$ ) (8). Future studies should measure the emerging risk factors for CVD, inflammatory markers, oxidative stress and hypercoagulability and fresh mango intake.

### A $\frac{3}{4}$ OF A CUP OF FRESH MANGO IS 70 CALORIES AND PROVIDES:

- **50% DV FOR VITAMIN C**
- **15% DV FOR FOLATE**
- **8% DV FOR VITAMINS A, E & B6**
- **7% DV FOR FIBER**

## FRESH MANGO INTAKE & EMERGING RESEARCH AREAS

### BRAIN HEALTH

Limited research is available on the role of fresh mango fruit on brain health. Both mangiferin and gallotannins, bioactive compounds found in mango, may play a role in neuronal and brain health (9).

### GASTRO-INTESTINAL HEALTH

The data available on fresh mango fruit intake and a healthy gut microbiome is growing. While more human clinical trials are needed, research investigating fresh mango consumption and impacts on the gut microbiome, intestinal inflammation and intestinal permeability are promising (10, 11, 12).

### SKIN HEALTH

The data available on fresh mango fruit intake and skin health are limited. Research on bioactive compounds found in mangos shows possible photoprotection effects on wrinkles (13).

### STUDY LIMITATIONS

More research is needed in humans to fully understand the impact of regular fresh mango intake. In addition, research with early intervention like those with pre-diabetes would benefit the literature. Fresh mango fruit intake and cognition is an interesting area of research and looking at cognitive markers would benefit the aging population. Larger sample sizes and randomized controlled trials would benefit the body of evidence on fresh mango's health benefits.

### REFERENCES

1. Burton-Freeman B, Sandhu AK, Edirisinghe I. The Health Benefits of Mango Fruit—Recent Review of the Literature. *Biomolecules*. 2025; 15, x. [KH1]
2. Sharma SP, Chung HJ, Kim HJ, Hong ST. Paradoxical Effects of Fruit on Obesity. *Nutrients*. 2016;8(10):633. doi: 10.3390/nu8100633.
3. Pinneo S, O'Mealy C, Rosas M Jr, et al. Fresh Mango Consumption Promotes Greater Satiety and Improves Postprandial Glucose and Insulin Responses in Healthy Overweight and Obese Adults. *J Med Food*. 2022;25(4):381–388. doi:10.1089/jmf.2021.0063.
4. Papanikolaou Y, Fulgoni VL III. Mango Consumption Is Associated with Improved Nutrient Intakes, Diet Quality, and Weight-Related Health Outcomes. *Nutrients*. 2022; 14(1):59. <https://doi.org/10.3390/nu14010059>.
5. Stamper C, Safadi S, Gehr A, Asuncion P, Hong MY. Effects of fresh vs dried mango consumption on satiety and postprandial glucose in healthy adults. *Metabol Open*. 2023;19:100253. doi:10.1016/j.metop.2023.100253
6. Keathley J, Kearney M, Carneau V, et al. Changes in systolic blood pressure, postprandial glucose, and gut microbial composition following mango consumption in individuals with overweight and obesity. *Appl Physiol Nutr Metab*. 2022;47(5):565–574. doi:10.1139/apnm-2021-0637.
7. Rosas M, Pinneo S, O'Mealy C, Tsang M, Liu C, Kern M, Hooshmand S, Young Hong M. Effects of fresh mango consumption on cardiometabolic risk factors in overweight and obese adults. *Nutrition, Metabolism and Cardiovascular Diseases*. 2022; 23(2):494–503. <https://doi.org/10.1016/j.numecd.2021.11.001>.
8. Fang C, Kim H, Barnes RC, Talcott ST, Mertens-Talcott SU. Obesity-Associated Diseases Biomarkers Are Differently Modulated in Lean and Obese Individuals and Inversely Correlated to Plasma Polyphenolic Metabolites After 6 Weeks of Mango (*Mangifera indica* L.) Consumption. *Mol Nutr Food Res*. 2018;62(14):e1800129. doi:10.1002/mnfr.201800129
9. Lum PT, Sekar M, Can SH, Pandey V, Bonam SR. Protective effect of mangiferin on memory impairment: A systematic review. *Saudi J Biol Sci*. 2021;28(1):917–927. doi:10.1016/j.sjbs.2020.11.037.
10. Asuncion P, Liu C, Castro R, et al. The effects of fresh mango consumption on gut health and microbiome – Randomized controlled trial. *Food Sci Nutr*. 2023;11(4):2069–2078. doi:10.1002/fsn3.3243.
11. Kim H, Venancio VP, Fang C, Dupont AW, Talcott ST, Mertens-Talcott SU. Mango (*Mangifera indica* L.) polyphenols reduce IL-8, CRO, and CM-SCF plasma levels and increase *Lactobacillus* species in a pilot study in patients with inflammatory bowel disease. *Nutr Res*. 2020;75:85–94. doi:10.1016/j.nutres.2020.01.002
12. Barnes RC, Kim H, Fang C, et al. Body Mass Index as a Determinant of Systemic Exposure to Gallotannin Metabolites during 6-Week Consumption of Mango (*Mangifera indica* L.) and Modulation of Intestinal Microbiota in Lean and Obese Individuals. *Mol Nutr Food Res*. 2019;63(2):e1800512. doi:10.1002/mnfr.201800512.
13. Evans SF, Meister M, Mahmood M, et al. Mango supplementation improves blood glucose in obese individuals. *Nutr Metab Insights*. 2014;7:77–84. doi:10.4137/NMI.S17028.

