

The Present and Future of Health Research on Nuts and Dried Fruits: Special Issue in *Nutrients*



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The prestigious journal *Nutrients* has published a special issue entitled “Nuts: Where We Are and Where We Are Going in Research. Proceedings from the NUTS 2022 International Conference.” The 10 peer-reviewed articles included in this special issue represent each of the overarching themes discussed by the experts at this historic meeting.

The 10 articles included in the special issue provide comprehensive investigations and overviews of the information known on each topic and address what evidence is still needed in order to better inform practice guidelines and support health and well-being. Highlights from each article are provided below. The full text of these articles is freely accessible to all those who would like to gain further insight into where we are and where we are going in nut and dried fruit research.

Effect of Nuts on Gastrointestinal Health

This narrative review summarizes key findings and new research perspectives in relation to the importance of nut consumption on gastrointestinal health. Although the overall effect of nut consumption on gut microbial alpha- and beta-diversity (representing richness and distribution) has been inconsistent, some evidence suggests an increase in fecal butyrate (a short-chain fatty acid associated with health benefits) after almond consumption and a beneficial role of walnuts in the prevention of ulcerative colitis and protection against the development of gastric mucosal lesions.¹

Dried Fruits: Bioactives, Effects on Gut Microbiota, and Possible Health Benefits—An Update

The phytochemical profiles of different dried fruits are investigated in this article. While their bioaccessibility and bioavailability are not yet well understood, there are many opportunities for future research. Additional studies are needed to provide a better understanding of the biological effects of dried fruits on major chronic diseases.²

Dried Fruits, Nuts, and Cancer Risk and Survival: A Review of the Evidence and Future Research Directions

This narrative review summarizes the evidence for dried fruits and nuts in relation to cancer incidence, mortality, survival and potential anticancer properties. Of the 12 cancer sites investigated in the literature, inverse associations were most consistent across studies on the incidence of colorectal cancer and, more specifically, colon cancer. Studies showed that eating tree nuts may help in cancer prevention. The evidence for dried fruit consumption and cancer prevention is more limited than what has been established for nuts.³



Nuts, Energy Balance and Body Weight

Evidence from randomized clinical trials and observational cohorts indicate that higher nut consumption does not appear to cause greater weight gain; rather, nuts may be beneficial for weight control and prevention of long-term weight gain. Diet and lifestyle changes such as the replacement of less healthful food with nuts and other healthy foods have the potential to reduce risk of obesity and obesity-related chronic diseases.⁴

Effect of Nuts on Markers of Inflammation and Oxidative Stress: A Narrative Review

This article concludes that the current evidence from cohort studies and randomized clinical trials suggests that tree nuts and peanuts packed with potent bioactive nutrients (MUFAs, PUFAs, vitamin E, selenium and copper) and non-nutrients (fiber, polyphenols and phytosterols) have the potential to reduce inflammation and oxidative stress, two mechanisms explaining the beneficial effects observed on several diseases. However, the evidence has not been evaluated for many nut types.⁵

Impact of Nut Consumption on Cognition across the Lifespan

This narrative review discusses up-to-date epidemiological, clinical trial and mechanistic evidence on the effect of exposure to nuts on cognitive performance. While limited and inconclusive, the available evidence suggests a possible role for nuts in the maintenance of cognitive health and prevention of cognitive decline across the lifespan, particularly in older adults and those at higher risk. Walnuts are the most promising nut type for cognitive health, probably because they have been the object of several studies due to their fatty acid composition.⁶

Novel Lines of Research on the Environmental and Human Health Impacts of Nut Consumption

The aim of this narrative review was to outline new focal points for investigation that examine the environmental and some novel human health impacts of nut consumption and discuss future directions for research. The article concludes that nuts remain an important contributor to human health and sustainability. Also, early research now indicates possible beneficial effects of nut consumption on reproductive health.⁷

Nuts and Cardiovascular Disease Outcomes: A Review of the Evidence and Future Directions

This narrative review summarizes recommendations for nuts by clinical practice guidelines and governmental organizations, epidemiological evidence for nuts and cardiovascular disease (CVD) outcomes, nut-containing dietary patterns, potential mechanisms of nuts and CVD risk reduction, and future research directions, such as the use of biomarkers to better assess nut intake. There is a substantial amount of evidence supporting the notion that consuming nuts has a positive impact on primary and secondary prevention of CVD.⁸

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Nuts in the Prevention and Management of Type 2 Diabetes

This review considers the epidemiological and clinical evidence for the role of nut consumption as a dietary strategy for the prevention and management of type 2 diabetes (T2D) and related complications. It found that nut consumption may have a potential role in the prevention and management of T2D. However, future studies are needed to better elucidate the impact.⁹

Effects of Nut Consumption on Blood Lipids and Lipoproteins: A Comprehensive Literature Update

This article concluded that the consumption of total and specific types of nuts improves blood lipid profiles by multiple mechanisms. However, more research is needed in this field, including studies on lipoprotein particle size, apolipoprotein B and HDL (high-density lipoprotein cholesterol, sometimes called “good” cholesterol) function.¹⁰

Held at the INC headquarters last October, NUTS 2022 was the first meeting of international health researchers to discuss the present and future of health research on nuts and dried fruits. Now, with the publication of the proceedings in the journal *Nutrients*, the scientific community will reap the benefits of this historic gathering. 🍎

For more information or to read the scientific articles, visit the website of the special issue: https://www.mdpi.com/journal/nutrients/special_issues/NUTS_2022.

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