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www.cashewishealthy.com, promoted by www.cashewinformation.com and Eventell Global Advisory Pvt Ltd, is pleased to release this publication for the benefit of consumers. The intention is to educate consumers about the health benefits of cashew nuts for all age groups. It is a myth that cashew is not healthy.

Please read this publication to know more about the scientific findings about cashew and its healthy benefits.

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We thank the following sponsors for their support in releasing this unique publication:

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https://kalbavi.com/

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VIDEOGRAPHER
RA Jirali

PUBLISHING OFFICE
Cashewinformation.com
#146, 1-2 Floor, Gopal Towers
Ramaiah Street, HAL Airport Road, Kodihalli
Bangalore - 560008

Tel: +91-80-41535476, +91 9343840608
Email: content@cashewinformation.com

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Dear Readers,

We are delighted to unveil a special publication, "Cashew is Healthy for the Entire Family," on the occasion of the National Cashew Day, celebrated every year on the 23rd of November. During the last 15 years, several path-breaking scientific studies and clinical trials have been undertaken by globally renowned institutions to investigate the effect of cashew consumption on children, women and the elderly. For the first time, there was also a study by INC to comprehensively profile the nutritional aspects of cashews of all origins. Through this publication, we aim to bring an abstract of 14 such seminal clinical studies on cashew consumption. We thank each one of the research institutions and the International Nut & Dried Fruit Council (INC) for the commendable work.

A couple of things stand out. From nutritional profiling, it is clear that cashews are zero cholesterol. From the most extensive study by the Madras Diabetic Institute, it is clear that regular consumption of cashews in moderate quantity is seen to increase HDL and is seen to be beneficial for even patients with diabetes. Nutrient-wise, cashews are rich in Copper, Magnesium, Phosphorous, Potassium, Zinc, Calcium and Iron. Its rich in fibre, carbohydrate and heart-healthy fats. Its low-glycemic index and high satiety factor makes cashews ideal snacking option. It is being increasingly used as a part of vegan diet, due to its versatility, from cashew milk and cashew cheese to cashew pastes for gravies.

Cashew is beneficial for planet and people. One hectare of cashew plantation can sequester about 60 tons of total carbon in 10 years and up to 100 tons of total carbon in 20 years. Thus, cashew plantation could be a noble exercise in mitigating the ill-effects of climate change. Cashew processing mainly happens in Tier-2, Tier-3 cities and towns and villages of India such as Panruti, Kanyakumari, Marthandam, Palasa, SriKakulam, Rajmundhry, Ganjam, Contai, Jaypore, Palanpur, Rathnagiri, Ponda, Mangalore, Udipi, Karkala, Kollam to name a few. Over 70% of the total 800,000 directly employed at factories are women. Thus, cashew processing provides year-round employment to over 550,000 families in remote centres of the country. Lastly, cashew tree gives several useful products besides kernels. These include cashew apple that is rich in vitamin-c, cashew shell liquid that is used as paints and in the preparation of friction dust, cashew charcoal for bio-char and cashew husk for tannin extraction. Taken together, contribution of cashew is incredible.

We take this opportunity to thank all the sponsors for their contribution. Special thanks to Mr Hari Nair, President of WIC for his editorial inputs. I also thank my team at cashewinformation.com for their efforts in putting this publication together. We plan to translate the content into regional languages and bring out e-book version of the same soon. This, we hope, would help spread the message far and wide. We request your support to take the core message of health benefit of cashews to your circle.

Please send your comments and feedback to gsv@eventellglobal.com or venkat@eventellglobal.com. We value your suggestions.

Best wishes,
www.cashewishealthy.com Team

Table of Content

Cashew Nut Consumption Increases HDL Cholesterol and Reduces Systolic Blood Pressure in Asian Indians with Type 2 Diabetes: A 12-Week Randomized Controlled Trial

Cashew and Cholesterol and Type 2 Diabetes

Author(s): Viswanathan Mohan, Ranjit Mohan Anjana , Rajagopal Gayathri, Nagarajan Lakshmipriya, Raman Ganesh Jeevan, Kandappa K Balasubramaniam, Parthasarathy Vijayalakshmi, Mookambika Ramya Bai R, Vasudevan Sudha, Kamala Krishnaswamy, Donna Spiegelman, Jordi Salas-Salvadó, Walter C Willett

Author Affiliation: Departments of Diabetology and Foods, Nutrition & Dietetics Research, Madras Diabetes Research Foundation, Chennai, Tamil Nadu, India; Departments of Global Health and Population, Nutrition, and Epidemiology, Harvard T.H. Chan School of Public Health, Boston, MA and Human Nutrition Unit, Hospital Universitari Sant Joan de Reus, Biochemistry and Biotechnology Department, IISPV, Universitat Rovira i Virgili, Reus, Spain, and CIBERobn Physiopathology of Obesity and Nutrition, Instituto de Salud Carlos III, Madrid, Spain

Abstract

Background: There is increasing evidence that nut consumption decreases the risk of cardiovascular disease. However, there are few data on the health effects of cashew nuts among adults with type 2 diabetes (T2DM).

Objective: The study aimed to investigate the effects of cashew nut supplementation on glycemia, body weight, blood pressure, and lipid profile in Asian Indians with T2DM. Methods: In a parallel-arm, randomized controlled trial, 300 adults with T2DM [mean ± SD age: 51 ± 9.3 y; body mass index (BMI; in kg/m2): 26.0 ± 3.4; 55% male] were randomly assigned to receive advice to follow a standard diabetic diet (control) or similar advice plus 30 g cashew nuts/d (intervention) for 12 wk.

The macronutrient composition of the prescribed diabetic diet was 60–65% energy from carbohydrates, 15–25% from fat, and the rest from protein. Differences between groups in changes in anthropometric and biochemical variables were analysed using linear models with robust variance estimation under an assumed independence working correlation.

Keywords: body weight; cashew nut; high-density lipoprotein cholesterol; type 2 diabetes.

Results: Participants in the intervention group had a greater decrease in systolic blood pressure from baseline to 12 weeks than did controls (–4.9 ± 13.7 compared with –1.7 ± 11.6 mm Hg; P = 0.04) and a greater increase in plasma HDL cholesterol compared with controls (+1.7 ± 5.6 compared with +0.1 ± 4.6 mg/dL; P = 0.01). There were no differences between the groups with respect to changes in body weight, BMI, blood lipid, and glycemic variables. Plasma oleic acid concentrations and self-reported dietary intake of nuts, oleic acid, and monounsaturated fatty acids suggested excellent compliance with the nut consumption

Conclusion

Cashew nut supplementation in Asian Indians with T2DM reduced systolic blood pressure and increased HDL cholesterol concentrations with no deleterious effects on body weight, glycemia, or other lipid variables. This study was registered at the clinical trial registry of India as CTRI/2017/07/009022.
J Nutr 2018;148:63–69.

Consumption of Cashew Nuts Does not Influence Blood Lipids or other Markers of Cardiovascular Disease in Humans: A Randomized Controlled Trial

Cashew and Lipids

Author(s): Baer David J, Novotny Janet A

Journal article: The American Journal of Clinical Nutrition
Volume 109, Issue 2, February 2019, Pages 269-275

Background
The US Food and Drug Administration (FDA) approved a qualified health claim for tree nuts and reduction of cardiovascular disease. However, cashews are excluded from that claim due to their content of saturated fats, which is predominantly stearic acid. Because stearic acid is neutral with respect to blood lipids, several studies have been conducted to test the effect of cashew nuts on blood lipids, and these studies have produced conflicting results.

Objectives
The aim of this study was to conduct a highly controlled intervention to determine the effect of cashews fed at the amount specified in the health claim on risk factors for cardiovascular disease.

Methods
A total of 42 adults participated in a controlled-feeding study conducted as a randomized crossover trial with 2 treatment phases. The volunteers were provided the same base diet in both treatment phases, with no additions during the control phase and with the addition of 1.5 servings (42 g) of cashews/d for the cashew nut phase. During the cashew nut phase, the amount of all foods was decreased proportionally to achieve isocaloric overall diets in the 2 phases. After 4 week of intervention, assessments included blood lipids, blood pressure, central (aortic) pressure, augmentation index, blood glucose, endothelin, proprotein convertase subtilisin/kexin type 9 (PCSK9), adhesion molecules, and clotting and inflammatory factors.

Results: There were no significant differences in blood lipids, blood pressure, augmentation index, blood glucose, endothelin, adhesion molecules, or clotting factors in this weight-stable cohort. PCSK9 was significantly decreased after cashew consumption, although there was no change in LDL cholesterol.

Conclusion
Consumption of 1.5 servings of cashew nuts/d, the amount associated with the FDA qualified health claim for tree nuts and cardiovascular disease, did not positively or adversely affect any of the primary risk factors for cardiovascular disease. This trial was registered at clinicaltrials.gov as NCT02628171.

The Effects of Cashew Consumption on Serum Glucose, Insulin and Lipoprotein in Type 2 Diabetic Patients

Cashew and Diabetes

Author(s): Damavandi, R. D.; Shidfar, F. ; Rajab, A. ; Mohammadi, V. Hosseini, Sh.

Author Affiliation: The Institute of Medical History Studies, Islamic Medicine and Supplements, Tehran University of Medical Sciences, Tehran, Iran.

Journal article: Iranian Journal of Endocrinology and Metabolism 2012 Vol.14 No.4 pp.Pe325-Pe334, En413 ref.40

Abstract

Introduction: Diabetic dyslipidemia is a complication of diabetes and several studies have demonstrated that nut consumption exerts beneficial effects on serum lipid profile. We designed an intervention study to evaluate the effects of cashew on fasting serum glucose, insulin and lipoprotein in type 2 diabetic patients.

Materials and Methods: In an 8-week randomized parallel clinical trial, 50 diabetic patients (34 women and 16 men) were randomly assigned to two groups) the intervention (cashew) and the control (regular diet) groups. Cashews replaced 10% of total daily calorie intake in the intervention group. Blood samples were collected from fasting subjects at entry to the study and at the end of the study. All dietary data were obtained using 24-hours recalls at baseline, in the middle and at the end of the study.

Results: Mean HDL-C and insulin concentrations were statistically different between the intervention and control groups (P=0.01, P=0.023, P=0.043 and P=0.023 respectively), while other biochemical indices such as serum glucose and other lipoproteins, were not.

Conclusion

The results indicated that replacing 10% of daily calorie intake with cashew in patients with type 2 diabetes may prevent HDL-C reduction and also decrease serum insulin, and hence possibly play an important role in decreasing cardiovascular risk factors in diabetic patients.

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Effects of Cashew Nut Consumption on Body Composition and Glycemic Indices: A Meta-Analysis and Systematic Review of Randomised Controlled Trials

Cashew and Family

Author(s): Sanaz Jamshidi, Ghazaleh Nameni, Yousef Moradi, Mohammad Ali Mohsenpour, Mohammadreza Vafa

Author Affiliation: Department of Nutrition, School of Public Health, Iran University of Medical Sciences, Tehran, Iran; Electronic address: vafa.m@ iums.ac.ir; Social Determinants of Health Research Center, Research Institute for Health Development, Kurdistan University of Medical Sciences, Sanandaj, Iran; Department of Clinical Nutrition, School of Nutrition and Food Sciences, Shiraz University of Medical Sciences, Shiraz, Iran.

PMID: 33725628 DOI: 10.1016/j.dsx.2021.02.038

Abstract

Background and aims: A present meta-analysis and systematic review were conducted to synthesise a definitive conclusion from previous randomised controlled clinical trials (RCTs).

Methods: A comprehensive search was done up to July 2020 to extract RCTs which investigated the effect of cashew nuts on weight, body mass index (BMI), waist circumference (WC), fasting blood sugar (FBS), insulin, and Homeostatic Model Assessment for Insulin Resistance (HOMA-IR). Weighted mean difference (WMD) and 95% confidence interval (CI) were used to estimate effect size. Meta-regression analysis was done to identify probable sources of heterogeneity.

Results: Six clinical trials with 521 participants were included. Combined effect sizes demonstrated no effect of cashew consumption on weight (WMD): 0.02, 95% CI: -1.04, 1.09, P > 0.05), BMI (WMD: 0.1, 95% CI: -0.72, 0.74, P > 0.05), and WC (WMD: -0.13, 95% CI: -1.97, 1.70, P > 0.05). Results were also not significant for FBS (WMD: 3.58, 95% CI: -3.92, 11.08, P > 0.05), insulin (WMD: -0.19, 95% CI: -1.63, 1.25, P > 0.05), and HOMA-IR (WMD: 0.25, 95% CI: -0.55, 1.06, P > 0.05).3.58, 95% CI: -3.92, 11.08, P > 0.05), insulin (WMD: -0.19, 95% CI: -1.63, 1.25, P > 0.05), and HOMA-IR (WMD: 0.25, 95% CI: -0.55, 1.06, P > 0.05).

Conclusion

In summary, incorporating cashews into the diet does not significantly affect body composition or modify glycemic indices.

Keywords: Body composition; Cashew; Glycemic indices; Insulin; Meta-analysis.

Cashew Oral Immunotherapy for Desensitizing Cashew-Pistachio Allergy (Nut Cracker Study)

Author(s): Arnon Elizur, Michael Y. Appel, Liat Nachshon, Michael B. Levy, Naama Epstein-Rigbi, Yael Koren, Marie Holmqvist, Helena Porsch, Jonas Lidholm, Michael R. Goldberg
First published: 09 January 2022

Abstract

Background

Oral immunotherapy (OIT) is a treatment option for patients with milk, egg, and peanut allergy, but data on the efficacy and safety of cashew OIT are limited.

Methods

A cohort of 50 cashew-allergic patients aged ≥4 years, who were consecutively enrolled into cashew OIT (target dose 4000 mg protein) between 4/2016 and 12/2019. Fifteen cashew-allergic patients who continued cashew elimination served as observational controls. Co-allergy to pistachio and walnut was determined. Full desensitization rate and associated immunological changes in both groups were compared. Patients fully desensitized to cashew were instructed to consume a dose of 1200 mg cashew protein for 6 months and were then challenged to a full dose. Patients with co-allergy to pistachio or walnut were challenged to the respective nut.

Results: Forty-four of 50 OIT-treated patients (88%) compared to 0% in controls tolerated a dose of 4000 mg cashew protein at the end of the study (odds ratio 8.3, 95% CI 3.9–17.7, $p < 0.001$). An additional three patients were desensitized to 1200 mg cashew protein, and three patients stopped treatment. Three patients (6%) were treated with injectable epinephrine for home reactions. Desensitized patients had decreased SPT, sIgE, basophil reactivity, and increased sIgG4, following treatment. Following cashew desensitization, all pistachio (n = 35) and four of eight walnut co-allergic patients were cross-desensitized to the respective nut. All (n = 44) patients consuming a low cashew dose for ≥6 months following desensitization passed a full-dose cashew OFC.

Conclusion

Cashew OIT desensitizes most cashew-allergic patients and cross-desensitizes to pistachio. Safety is similar to OIT for other foods.

Feasibility and Safety of Introducing Cashew Nut Spread in Infant Diets - A Randomized Trial

Cashew and Children

Author(s): Debra J. Palmer, Desiree T. Silva, Susan L. Prescott
First published: 08 June 2023

Abstract

Background

To reduce peanut allergy prevalence, infant feeding guidelines now recommend introducing peanuts in an age-appropriate form (such as peanut butter) as part of complementary feeding. However, due to a lack of randomized trial evidence, most infant feeding and food allergy prevention guidelines do not include tree nuts. The aims of this trial were to determine safety and feasibility of dosage consumption recommendations for infant cashew nut spread introduction.

Methods

This is a parallel, three-arm (1:1:1 allocation), single-blinded (outcome assessors), randomized controlled trial. General population term infants were randomized at 6–8 months of age to either a one teaspoon (Intervention 1 n = 59) or increasing dosage regime of one teaspoon at 6–7 months, two teaspoons at 8–9 months, and three teaspoons from 10 months of age onwards (Intervention 2 n = 67) cashew nut spread, both three times per week, or no specific advice on cashew introduction (Control n = 70). At one (1) year of age, food challenge-proven IgE-mediated cashew nut allergy was assessed.

Results: Compliance in Intervention 1 (92%) was higher than in Intervention 2 (79%), p = .04. Only one infant had delayed (at five hours) facial swelling and eczema flare to cashew introduction at 6.5 months, but no cashew allergy at one (1) year. Only one infant (Control) had a cashew allergy at one (1) year, and this infant had not been introduced to cashews prior to 12 months of age.

Conclusion

Regular infant consumption of one teaspoon of cashew nut spread three times per week from 6 to 8 months of age was found to be feasible and safe.

The Effects of Cashew Nut Intake on Lipid Profile and Blood Pressure: A Systematic Review and Meta-Analysis of Randomised Controlled Trials

Cashew and Blood Pressure

Author(s): Mohammad Jalali, Seyedeh Parisa Moosavian, Morteza Zare , Malihe Karamizadeh , Gordon A Ferns, Marzieh Akbarzadeh

Author Affiliation: Student Research Committee, Shiraz University of Medical Sciences, Shiraz, Iran; Electronic address: m_akbarzadeh@sums.ac.ir; Nutrition Research Center, School of Nutrition and Food Sciences, Shiraz University of Medical Sciences, Shiraz, Iran; Brighton & Sussex Medical School, Division of Medical Education, Falmer, Brighton, Sussex, UK; Department of Clinical Nutrition, School of Nutrition and Food Science, Food Security Research Center, Isfahan University of Medical Sciences, Isfahan, Iran.

• PMID: 32444052 DOI: 10.1016/j.ctim.2020.102387

Abstract

Background: Dyslipidemia and hypertension are important risk factors for cardiovascular disease (CVD). Some studies have suggested that the consumption of nuts may reduce CVD risk.

Objective: The present systematic review and meta-analysis were conducted to investigate the efficacy of cashew nut consumption on lipid profile and blood pressure.

Methods: PubMed, Embase, Scopus, Web of Science and Cochrane Library were systematically searched to identify randomized control trials (RCTs) examining the effects of cashew nut intake on serum triglycerides (TG), high density lipoprotein-cholesterol (HDL-C), low density lipoprotein-cholesterol (LDL-C), serum total cholesterol (TC), systolic blood pressure (SBP) or diastolic blood pressure (DBP) until 15 November 2019. A random-effects model was used to pool weighted mean difference (WMD) and 95 % confidence intervals (CI). Potential publication bias was assessed using Egger's test. Sensitivity analysis was performed to assess the impact of each individual study on the pooled results.

Results: A meta-analysis of 392 participants showed that cashew nut consumption had no significant effects on lipid profile and DBP. However, there was a significant reduction in SBP (WMD = -3.39, 95 % CI = [-6.13, -0.65], P = 0.01, I2 = 0.0 %) in the group receiving cashew nuts compared to the controls. There was no significant publication bias in the meta-analysis. A sensitivity analysis showed that omitting each study did not change the significance of the results.

Conclusion

This meta-analysis demonstrated that cashew nut consumption might reduce SBP but does not affect lipid profile and DBP.

Keywords: Blood pressure; Cashew nut; Lipid profile; Meta-analysis; Review.

Effects of Cashew Nut (Anacardium Occidentale L.) Seed Flour in Moderately Malnourished Children: Randomized Clinical Trial

Cashew and Malnourished Children

Author(s): Ana Cristina Pereira de Jesus Costa, Mércia Kelly dos Santos Silva, Samae Batista de Oliveira, Luana Leite Silva, Alessandra Cruz Silva, Raidanes Barros Barroso, José de Ribamar Macedo Costa, Virlane Kelly Lima Hunaldo, Marcelino Santos Neto, Lívia Maia Pascoal, Márcia Caroline Nascimento Sá Ewerton Martins, Floriacy Stabnow Santos, Leonardo Hunaldo dos Santos, Gledson Weslley Pereira Santos, Maria Aparecida Alves de Oliveira Serra, Ariadne Siqueira de Araújo Gordon, Thiago Moura de Araújo, and Márcio Flávio Moura de Araújo

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7222489/pdf/JNME2020-6980754.pdf

Abstract

The monitoring and combined use of dietary supplements to restore adequate growth is paramount and highly recommended in child malnutrition, an important public health problem. This study aimed to analyse the effects of cashew nut seed flour in children with moderate malnutrition treated at primary healthcare services. This is a randomised clinical trial conducted from April to October 2017 in the city of Imperatriz, Brazil. The sample comprised 30 children born at term, aged between 2 and 5 years, and newly diagnosed with malnutrition (60 days or less), randomised into experimental and control groups. The intervention consisted of a daily intake of cashew nut seed flour. There was an intragroup statistically significant difference in the glucose levels of children who were assigned to the control group ($p=0.02$) and in the glycated haemoglobin in the experimental group ($p < 0.01$). Intergroup analysis of glycated haemoglobin levels showed statistically significant differences in favour of the experimental group ($p=0.01$). HDL and LDL had, respectively, increased and decreased in the experimental group.

The use of cashew nut seed flour in a 24-week period had positive effects on glycated haemoglobin, HDL, and LDL parameters in moderately malnourished children.

Acknowledgments

The authors sincerely thank the Clinical Analysis Laboratory of the Integrated Women's Health Center for assistance with handling and preparing blood samples; Federal University of Maranhão for the concession of equipment and materials for the experiment; and all study participants for their time. This research was funded by the Foundation for Research and Scientific and Technological Development of Maranhão, Grant no. 01405/16.

Conclusion

Our study showed that a monthly nutritional intervention consisting in the use of cashew nut seed flour, during a 24-week period, had positive effects on glycated hemoglobin, HDL-C, and LDL-C parameters in moderately malnourished children.

Nuts as a Part of Dietary Strategy to Improve Metabolic Biomarkers: A Narrative Review

Cashew and Metabolism

Author(s): Leila Khalili, Thoraya Mohamed Elhassan A-Elgadir, Ayaz Khurram Mallick, Hesham Ali El Enshasy , R Z Sayyed

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9001892/pdf/fnut-09-881843.pdf

Author Affiliation

- Department of Community Nutrition, Faculty of Nutrition and Food Sciences, Tabriz University of Medical Sciences, Tabriz, Iran
- 2Department of Clinical Biochemistry, College of Medicine, King Khalid University, Abha, Saudi Arabia
- 3Insitute of Bioproduct Development (IBD), Universiti Teknologi Malaysia (UTM), Skudai, Malaysia
- 4School of Chemical and Energy Engineering, Faculty of Engineering, Universiti Teknologi Malaysia (UTM), Skudai, Malaysia
- 5City of Scientific Research and Technology Applications (SRTA), Alexandria, Egypt
- 6Department of Microbiology, PSGVP Mandal's Arts, Science, and Commerce College, Shahada, India

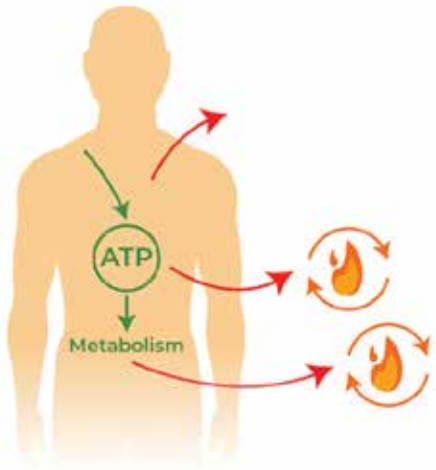
Background: Nuts are in the spotlight because of their association with improved health outcomes. We aimed to summarize the findings of previous studies to evaluate the impact of nuts consumption on glycaemic and lipid profile, inflammation, and oxidative stress.

Methods: Electronic searches for observational and intervention studies were undertaken in PubMed, Embase, Web of Science, and Science Direct until 2022 for searching the studies aiming the application of different types of nuts and the beneficial effects of nuts in improving glycemia, dyslipidemia, inflammation, and oxidative stress.

Keywords: glycemic control (A1C); inflammation; lipid profile; metabolic biomarkers; oxidative stress.

Conclusion

Considering the efficacy of nuts in improving metabolic markers, incorporation of, incorporating nuts the effectiveness of nuts in improving metabolic markers, incorporating nuts in the diet may prevent the incidence or aggravation of chronic metabolic diseases. Considering the health benefits of the nuts' components, including essential micronutrients, if consumed in the appropriate dose and duration to provide the necessary number of effective micronutrients to improve health, we will see an improvement in metabolic factors. At the same time, more research is required to determine the optimal type, dose, and duration of nut intervention with regards to metabolic control and reducing the risk of developing metabolic disorders.



Results: Results from 56 interventional, 9 narrative and 3 systematic reviews, and 12 meta-analysis studies, aiming at the evaluating beneficial effects of different types of nuts on metabolic markers, showed that nut consumption could improve metabolic markers, including glycaemic factors, lipid profile, and inflammatory and oxidative stress parameters in both healthy and individuals with metabolic disorders in a type-, dose- and duration-dependent manner. According to their unique nutrient components, nuts can be known as a part of a healthy diet, resulting in improved metabolic biomarkers.

Brazil and Cashew Nuts Intake Improve Body Composition and Endothelial Health in Women at Cardiometabolic Risk (Brazilian Nuts Study): A Randomised Controlled Trial

Cashew and Women's Health

Published online by Cambridge University Press: 23 February 2022

Author(s): Ana Paula Silva Caldas , Daniela Mayumi Usuda Prado Rocha , Helen Hermana Miranda Hermsdorff , Josefina Bressan, Ana Paula Dionísio

Author Affiliation

- Department of Nutrition and Health, Universidade Federal de Viçosa, Viçosa, Minas Gerais, 36570-900, Brazil.
- Embrapa Agroindústria Tropical, Sara Mesquita Street, 2270, 60511-110, Fortaleza, Ceará, Brazil.

Abstract

Several mechanisms have been proposed for the beneficial effect of nuts on health. However, Brazil and cashew nuts remain the least studied. We aim to evaluate the effect of these nuts within an energy-restricted diet on body weight, body composition, cardiometabolic markers and endothelial function in cardiometabolic risk women. Brazilian nuts study is a randomised controlled parallel 8-week dietary intervention trial. Forty women were randomly allocated to (1) control group: energy-restricted diet without nuts, n 19 or (2) Brazil and cashew nuts group (BN-Group): energy-restricted diet containing daily 45 g of nuts (15 g of Brazil nuts + 30 g of cashew nuts), n 21. At the beginning and final intervention, anthropometry, body composition and blood pressure were measured. Fasting blood sampling was obtained to evaluate lipid profile, glucose homeostasis and endothelial function markers.

Results: After 8-week, plasma Se concentration increased in BN-group (Δ = + 31·5 (SEM 7·8) μg/l; P = 0·001). Brazil and cashew nuts intake reduced total body fat (–1·3 (SEM 0·4) %) parallel to improvement of lean mass percentage in BN-group compared with the control. Besides, the soluble adhesion molecule VCAM-1 decreased (24·03 (SEM 15·7) pg/ml v. -22·2 (SEM 10·3) pg/ml; P = 0·019) after Brazil and cashew nuts intake compared with the control. However, lipid and glucose profile markers, apolipoproteins and blood pressure remained unchanged after the intervention.

Conclusion: Thus, the addition of Brazil and cashew nuts to an energy-restricted diet can be a healthy strategy to improve body composition, Se status and endothelial inflammation in cardiometabolic risk women.

Keywords: Brazil nut; VCAM-1; body fat; cashew nut; obesity; weight loss.

Acute Consumption of a Shake Containing Cashew and Brazil Nuts did not Affect Appetite in Overweight Subjects: A Randomized, Cross-Over Study

Cashew and Obesity

Author(s): Mirian Aparecida de Campos Costa , Helen Hermana Miranda Hermsdorff , Ana Paula Silva Caldas , Daniela Mayumi Usuda Prado Rocha , Alessandra da Silva , Josefina Bressan, Leandro Licursi de Oliveira

Author Affiliation
Department of Nutrition and Health, Universidade Federal de Viçosa, Avenida PH Rolfs, s/n, Viçosa, MG, 36570-900, Brazil; Department of General Biology, Universidade Federal de Viçosa, Viçosa, MG, Brazil.

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Abstract

Purpose: Evidence from epidemiological and clinical studies suggests that nut consumption provides satiety and may contribute to the management of obesity. However, the effect of acute intake of nuts on appetite responses remains unclear. The objective of this study was to evaluate the acute effect of a shake containing 30 g of cashew nuts (Anacardium occidentale L.) and 15 g of Brazil nuts (Bertholletia excelsa H.B.K) on appetite responses in overweight subjects.

Methods: This was a clinical, randomized, controlled, single-blind, cross-over, pilot study. On two non-consecutive test days, 15 subjects received a shake containing nuts, and a shake absent of nuts matched for energy and macronutrient content. Subjective appetite sensation was evaluated by visual analogue scales (VAS). Food intake was measured by weighing the lunch served at the end of each morning-test, which subjects ate ad libitum. Total energy intake was estimated by food records. This study is registered on the Brazilian Registers of Clinical Trials-ReBEC (protocol: U1111-1203-9891).

Keywords: Brazil nuts; Cashew nuts; Food intake; Hunger; Obesity; Satiety.

Results: We observed no significant difference in subjective appetite sensations between the groups. Food intake at lunch, as well as energy intake throughout the day also did not differ between the treatments.

Conclusion

Our results suggest that the acute intake of a shake containing nuts was not able to enhance satiety, compared to a shake matched for energy and macronutrient content. Further studies are warranted to elucidate the satiety mechanisms of nuts intake.

Acute Effect of a Beverage Containing Brazil and Cashew Nuts on Oxidative Stress, Lipemia, and Blood Pressure of Women with Cardiometabolic Risk (Brazilian Nuts Study): A Randomised Clinical Trial

Abstract

Nuts are essential sources of antioxidants that combat oxidative stress and improve lipid profile and vascular function. However, the intake of typical Brazilian nuts and its acute effect on cardiovascular health must be better understood. Thus, the present study aimed to evaluate the acute effect of a beverage containing cashew (Anacardium occidentale L.) and Brazil nuts (Bertholletia excelsa H.B.K.) on postprandial oxidative stress, lipemia, and blood pressure of adult women aged 20 to 55 years with cardiometabolic risk. This was an acute, randomised, parallel arm, controlled clinical trial. The participants received either a beverage containing nuts (30 g Brazil nuts + 15 g cashew nuts) or a beverage without nuts with a similar macronutrient composition. Oxidative stress markers and lipid profiles were evaluated at fasting and four hours after beverage consumption. Blood pressure was measured during fasting and after beverage intake (1, 2, 3, and 4 h).

Results: In the postprandial state, there was a more significant reduction in malondialdehyde levels in the intervention group compared to the control group (-12.3 ± 0.59 vs. -10.7 ± 0.43 µmol/mL; $p < 0.05$), which was positively correlated with the concentrations of TG ($r = 0.399$; $p < 0.05$), VLDL ($r = 0.399$; $p < 0.05$), TG/HDL ($r = 0.380$; $p < 0.05$), and blood pressure (iAUC SBP $r = 0.391$; $p < 0.05$, iAUC DBP $r = 0.409$; $p < 0.05$). The remaining oxidative stress markers showed similar postprandial changes between groups.

Conclusion: In women with cardiometabolic risk, a beverage containing Brazilian nuts and cashew nuts promoted a significant acute reduction in postprandial malondialdehyde levels.

The study was registered in the Brazilian Clinical Trials Registry—ReBEC (protocol: RBR-3ntxrm).

Keywords: Brazil nut; cardiovascular diseases; cashew nut; lipid peroxidation.

No Difference in Health-Related Quality of Life, After a Food Challenge with Cashew Nut in Children Participating in a Clinical Trial

Cashew and Children

Author(s): J. P. M. van der Valk, R. Gerth van Wijk, B. M. J. Flokstra-de Blok, J. L. van der Velde, H. de Groot, H. J. Wichers, A. E. J. Dubois, N. W. de Jongt

Author Affiliation

- Department Of Internal Medicine, Allergology, Erasmus MC, Rotterdam, The Netherlands.
- Department of Pediatric Allergology, Diaconessenhuis Voorburg, RdGG, Delft, The Netherlands.
- Wageningen UR Food & Biobased Research, Wageningen, The Netherlands.
- Department of Pediatric Pulmonology and Pediatric Allergology, GRIAC Research Institute; Department of General Practice,University Medical Centre Groningen, University of Groningen, Groningen, The Netherlands.

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Background

Previous studies showed that health-related quality of life (HRQL) significantly improved after the food challenge, with greater improvements in HRQL after a negative outcome than after a positive outcome. It is currently unknown whether this also occurs in patients undergoing DBPCFCs with cashew nut in the context of a clinical trial.

Methods: Quality of life was studied in children enrolled in a cashew nut study using Food Allergy Quality of Life Questionnaires (FAQLQs). Children, teenagers and parents of the children completed the questionnaires before the challenge test and 6 months after the DBPCFC with cashew nut. The difference in the change in HRQL between the children with a positive and negative DBPCFC outcome was studied by Mann–Whitney U-test.

Results: In total, 112 children (67 boys, median age of 9 years) were included. The children, teenagers and parents of the children completed 143 sets of questionnaires in total. There were no significant differences in baseline total and domain scores compared to the follow-up scores in the FAQLQ-CF, FAQLQ-TF and FAQLQ-PF. In children, the delta FAIM score in the negative DBPCFC tested group was significantly better than the delta FAIM score in the positive challenged group ($p = 0.026$). There were no significant differences in the changes in the scores of the FAQLQ-CF and FAQLQ-PF in the children with a positive challenge outcome, compared to the children with a negative challenge result. However, there was a significant difference in the change in score between the latter groups in the domain 'accidental exposure' of the FAQLQ-TF ($p = 0.049$).

Conclusion

This study showed no difference in the change in HRQL scores after a DBPCFC with cashew nut in children participating in a clinical trial. The utility of HRQL as an outcome for clinical trials in food allergy may be limited if participant baseline HRQL is relatively unimpaired.

Effects of a High Walnut and High Cashew Nut Diet on Selected Markers of the Metabolic Syndrome: A Controlled Feeding Trial

High Cashew Intake and its Impact

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Author(s): Janine Mukuddem-Petersen, Johann C. Jerling, Susanna M. Hanekom and Zelda White

School of Physiology, Nutrition and Consumer Science, , and School of Computer, Mathematical and Statistical Sciences, North-West University (Potchefstroom Campus), Potchefstroom, South Africa

Welma Stonehouse (Oosthuizen), Institute of Food, Nutrition and Human Health, Massey University (Albany Campus), North Shore, Auckland, New Zealand

Abstract

We investigated the effects of a high walnut diet and a high unsalted cashew nut diet on selected markers of the metabolic syndrome. In a randomized, parallel, controlled study design, sixty-four subjects having the metabolic syndrome (twenty-nine men, thirty-five women) with a mean age of 45 (SD 10) years and who met the selection criteria were all fed a 3-week run-in control diet. Hereafter, participants were grouped according to gender and age and then randomized into three groups receiving a controlled feeding diet including walnuts, or unsalted cashew nuts or no nuts for 8 weeks. Subjects were required to have lunch at the metabolic ward of the Nutrition Department of the North-West University (Potchefstroom Campus).

Results: Both the walnut and the unsalted cashew nut intervention diets had no significant effect on the HDL-cholesterol, TAG, total cholesterol, LDL-cholesterol, serum fructosamine, serum high-sensitivity C-reactive protein, blood pressure and serum uric acid concentrations when compared to the control diet. Low baseline LDL-cholesterol concentrations in the cashew nut group may have masked a possible nut-related benefit. Plasma glucose concentrations increased significantly (P = 0·04) in the cashew nut group compared to the control group. By contrast, serum fructosamine was unchanged in the cashew nut group while the control group had significantly increased (P = 0·04) concentrations of this short-term marker of glycaemic control. Subjects displayed no improvement in the markers of the metabolic syndrome after following a walnut diet or a cashew nut diet compared to a control diet while maintaining body weight.

Information: British Journal of Nutrition , Volume 97 , Issue 6 , June 2007 , pp. 1144 - 1153
DOI: https://doi.org/10.1017/S0007114507682944[Opens in a new window]

Nutritional Facts About Cashew

Nutrients	Units	Plain Cashew Nuts Value/100 g	Cashew Nuts, Oil Roasted, with Salt Value/100 g	Cashew Nuts, Dry roasted, without Salt Value/100 g
Water	g	1.7	2.34	1.7
Energy	kcal	574	581	574
Energy	kJ	2402	2430	2400
Protein	g	15.31	16.8	15.3
Total lipid (fat)	g	46.35	47.8	46.4
Ash	g	3.95	2.89	3.95
Carbohydrate, by difference	g	0	30.2	32.7
Fiber, total dietary	g	0	3.3	3
Sugars, total including NLEA	g	5.01	5.01	5.01
Sucrose	g	0	4.84	
Glucose	g	0	0.08	
Fructose	g	0	0.08	
Lactose	g	0	0	
Maltose	g	0	0	
Galactose	g	0	0	
Starch	g	0	10.9	
Calcium, Ca	mg	45	43	45
Iron, Fe	mg	6	6.05	6
Magnesium, Mg	mg	260	273	260
Phosphorus, P	**mg**	**490**	**531**	**490**
Potassium, K	**mg**	**565**	**632**	**565**
Sodium, Na	**mg**	**16**	**308**	**16**
Zinc, Zn	mg	5.6	5.35	5.6
Copper, Cu	mg	2.22	2.04	2.22
Manganese, Mn	mg	0.826	1.67	0.826
Selenium, Se	**µg**	**11.7**	**20.3**	**11.7**
Vitamin C, total ascorbic acid	mg	0	0.3	0
Thiamin	mg	0.2	0.363	0.2
Riboflavin	mg	0.2	0.218	0.2
Niacin	mg	1.4	1.74	1.4
Pantothenic acid	mg	1.217	0.88	1.22
Vitamin B-6	mg	0.256	0.323	0.256
Folate, total	**µg**	**69**	**25**	**69**
Folic acid	µg	0	0	0
Folate, food	**µg**	**69**	**25**	**69**
Folate, DFE	**µg**	**69**	**25**	**69**
Choline, total	mg	61	61	61
Betaine	mg	0	11.2	
Vitamin B-12	µg	0	0	0
Vitamin B-12, added	µg	0	0	0
Vitamin A, RAE	µg	0	0	0
Retinol	µg	0	0	0

Nutritional Facts About Cashew

Nutrients	Units	Plain Cashew Nuts Value/100 g	Cashew Nuts, Oil Roasted, with Salt Value/100 g	Cashew Nuts, Dry roasted, without Salt Value/100 g
Carotene, beta	µg	0	0	0
Carotene, alpha	µg	0	0	0
Cryptoxanthin, beta	µg		0	0
Vitamin A, IU	IU	0	0	0
Lycopene	µg	0	0	0
Lutein + zeaxanthin	µg	23	23	23
Vitamin E (alpha-tocopherol)	mg	0.92	0.92	0.92
Vitamin E, added	mg	0	0	0
Tocopherol, beta	mg	0	0.03	
Tocopherol, gamma	mg	0	5.4	
Tocopherol, delta	mg	0	0.37	
Tocotrienol, alpha	mg		0	
Tocotrienol, beta	mg		0.1	
Tocotrienol, gamma	mg		0.2	
Tocotrienol, delta	mg		0	
Vitamin D (D2 + D3), International Units	IU	0	0	0
Vitamin D (D2 + D3)	µg	0	0	0
Vitamin K (phylloquinone)	µg	34.7	34.7	34.7
Vitamin K (Dihydrophylloquinone)	µg		0	
Fatty acids, total saturated	g	9.157	8.48	9.16
SFA 4:0	g		0	0
SFA 6:0	g		0	0
SFA 8:0	g		0.016	0.132
SFA 10:0	g		0.016	0.132
SFA 12:0	g		0.016	0.784
SFA 14:0	g		0.016	0.347
SFA 15:0	g		0	
SFA 16:0	g		4.26	4.35
SFA 17:0	g		0.051	
SFA 18:0	g		3.51	2.97
SFA 20:0	g		0.29	
SFA 22:0	g		0.188	
SFA 24:0	g		0.11	
Fatty acids, total monounsaturated	g	27.317	25.9	27.3
MUFA 14:1	g		0	0.318
MUFA 15:1	g		0	26.8
MUFA 16:1	g		0.149	0.139
MUFA 17:1	g		0	0
MUFA 18:1	g		25.6	
MUFA 20:1	g		0.15	
MUFA 22:1	g		0	
Fatty acids, total polyunsaturated	g	7.836	8.55	7.84
PUFA 18:2	g		8.48	7.66
PUFA 18:3	g		0.068	0.161

Nutritional Facts About Cashew

Nutrients	Units	Plain Cashew Nuts Value/100 g	Cashew Nuts, Oil Roasted, with Salt Value/100 g	Cashew Nuts, Dry roasted, without Salt Value/100 g
PUFA 18:4	g		0	0
PUFA 20:2 n-6 c,c	g		0	
PUFA 20:3	g		0	
PUFA 20:4	g		0	0
PUFA 20:5 n-3 (EPA)	g		0	0
PUFA 22:5 n-3 (DPA)	g		0	0
PUFA 22:6 n-3 (DHA)	g		0	0
Cholesterol	mg	0	0	0
Stigmasterol	mg	0	0	
Campesterol	mg	0	10	
Beta-sitosterol	mg	0	119	
Tryptophan	g	0.237	0.265	0.237
Threonine	g	0.592	0.636	0.592
Isoleucine	g	0.731	0.729	0.731
Leucine	g	1.285	1.36	1.28
Lysine	g	0.817	0.858	0.817
Methionine	g	0.274	0.334	0.274
Cystine	g	0.283	0.364	0.283
Phenylalanine	g	0.791	0.879	0.791
Tyrosine	g	0.491	0.469	0.491
Valine	g	1.04	1.01	1.04
Arginine	g	1.741	1.96	1.74
Histidine	g	0.399	0.421	0.399
Alanine	g	0.702	0.774	0.702
Aspartic acid	g	1.505	1.66	1.5
Glutamic acid	g	3.624	4.16	3.62
Glycine	g	0.803	0.866	0.803
Proline	g	0.69	0.751	0.69
Serine	g	0	0.997	0.849
Alcohol, ethyl	g	0	0	0
Caffeine	mg	0	0	0
Theobromine	mg	0	0	0

Source:
https://www.cashews.org/nutrition/
https://fdc.nal.usda.gov/fdc-app.html#/food-details/169422/nutrients
https://fdc.nal.usda.gov/fdc-app.html#/food-details/170571/nutrients

Glycaemic index (GI) of Cashew is 25 (Considered “low GI”)

Source: The University of Sydney. Glycaemi Index Research and GI News. Accessed 9 May 2022. Available at: https://glycemicindex.com/gi-search/

Cashews: Nutrition, Health Benefits and Diet

- A 1-ounce serving of cashews is about 18 whole cashews.
- Every ounce (about 18 cashews) packs a solid 5 grams of protein, per USDA data. That's nearly 11 percent of women's protein needs and 9 percent for men.
- Cashews are abundant in healthy fats, such as mono-unsaturated and polyunsaturated fats. They are a rich source of protein too.
- Additionally, they are a good source of vitamins and minerals like Vitamin B6, Vitamin K, Magnesium, Manganese, Phosphorus and Zinc.
- Cashews are a good source of magnesium, which plays an important role in over 300 enzymatic reactions within the body.
- Cashews are one of the few food sources that are high in copper. One ounce of cashews contains 622 micrograms of copper. For adults aged 19 years and over, the recommended intake for copper each day is 900 micrograms.
- Copper also plays an important role in the maintenance of collagen and elastin, major structural components of our bodies. Without sufficient copper, the body cannot replace damaged connective tissue or the collagen that makes up the scaffolding for bone.
- Eating cashew is good for health because Vitamin K in cashews help maintain your bone density and reduce the risk of osteoporosis.
- Zinc, copper, and vitamin E are just a few of the minerals present in cashews that maintain a strong immune system.
- Immune cells require the minerals zinc and copper to grow and function.
- Vitamin E, a potent antioxidant, can shield cells from harm and reduce oxidative stress and inflammation.
- Cashews are also good in many essential vitamins such as pantothenic acid (vitamin B5), pyridoxine (vitamin B-6), riboflavin, and thiamin (vitamin B-1). 100 g nuts provide 0.147 mg or 32% of the daily recommended levels of pyridoxine. Pyridoxine reduces the risk of homocystinuria and sideroblastic anemia. Niacin helps prevent "pellagra" or dermatitis.
- Additionally, these vitamins are essential for the metabolism of protein, fat, and carbohydrates at the cellular level.
- Due to their high fibre content, cashew nuts help in improved digestion by reducing constipation and improving regular bowel movements.
- Prebiotics, present in cashews, are a class of fibre that aids in the development of good gut flora.
- Cashews have recently been used to make dairy alternatives, such as cashew milk, cashew-based cheese and cashew-based cream sauces and sour cream.
- Cashew butter is another way to add cashews to your diet. Spread it on toast or stir it into yogurt or oatmeal.
- The research findings concluded that eating nuts does not lead to a weight gain, and that it may help maintain a healthy weight.
- According to a study in the American Journal of Clinical Nutrition, frequent nut consumption is associated with a reduced risk of needing surgery to remove the gallbladder.
- Cashew nuts are also a strong source of antioxidants and help in lowering inflammation and enhancing cardiovascular health.
- Cashew nuts have a low glycemic index that helps to prevent spikes in blood sugar levels. While the high fibre content in kaju benefits in slowing down the absorption of sugar in the bloodstream, healthy fats improve insulin sensitivity.
- Cashew nuts can also lower the risk of chronic diseases like sore teeth, ringworm, scurvy, leprosy, warts, and elephantiasis.
- Cashews are also a great plant source of amino acid tryptophan, which is essential for creating and boosting levels of the neurotransmitter serotonin (important for stabilizing mood, promoting feelings of happiness, regulating sleep, aiding digestion, and many more functions).

Courtesy: isayorganic.com; medicalnewstoday.com; healthline.com; nutrition-and-you.com; realsimple.com

Cashew for Vegans

What does vegan mean?

A vegan diet is a strict form of vegetarianism and is characterized by the total avoidance of products derived from animals. Vegans do not consume meat, seafood, dairy products, eggs or other animal products, such as honey or gelatin. A balanced vegan diet is consisting of plant-based foods including fruits, vegetables, legumes, nuts, seeds and grains.

Cashew in Vegan Diet

- Cashews are one of the best plant-based alternatives to dairy. You can blend cashews to make cheese, milk, cream and dips, allowing you to enjoy the creamy taste and texture we love without the nasty consequences of consuming dairy products. Awesome, right?
- Instead of allowing dairy to wreak havoc on your system, using cashew nuts as a base in your meals will benefit your health. Nuts are a great plant-based source of antioxidants. An analysis of four studies showed that subjects who consumed nuts more than four times a week lowered their risk of heart disease by 37% compared to those who didn't. Cashews contain high levels of copper, which is essential for energy, strong bones and flexibility of blood vessels. And, out of all nuts, cashews are one of the lowest in fat.
- As well as helping to support your overall health, making cashews a staple in your kitchen will allow you to make so many tasty dishes.

Vegan Food Hacks with Cashew

1. **Cashew Milk**
   Cashews are naturally creamy and make delicious milk when blended with water.
2. **Cashew Cheese**
   The latest trend in vegan cheese is making your own. From creamy cheese spreads to firm blocks of sliceable cheese, cashews make it possible to satisfy your cheese cravings with none of the cruelty.
3. **Sweet Cashew Cream**
   Cashews can be used to make a sweet cream for cakes and pies or as a drizzle for fresh fruit and other desserts.
4. **Savory Cashew Cream**
   Using the same base of cashews blended with water or milk, you can also make a savoury cashew cream.
5. **Vegan Cheesecake**
   Cheesecake is one of people's favourite desserts. It's rich, creamy and decadent. It can also be dairy-free, thanks to cashews.
6. **Cashew Butter**
   Everyone loves peanut butter but when you're up for a change, try cashew butter. It's rich, creamy and a little more grown-up than peanut butter. You can buy jars of cashew butter, but it's so easy and economical to make yourself.
7. **Thick & Creamy Soups**
   One way to thicken soups while adding rich flavour is to add ground cashews or cashew butter. Adding blended cashews to soups is a smart way to make creamed soups without dairy. It also adds healthy fats and protein to your soups.
8. **Ice Cream**
   Blend up some cashews with non-dairy milk, something sweet and some vanilla and you have your own homemade ice cream.
9. **Condiments**
   It can get pretty pricey to buy lots of condiments and they may not always have ingredients you can feel good about. As long as you have cashews, you can make your own condiments.
10. **Pasta Sauce**
    One of my favourite pasta sauces is Alfredo Sauce which is rich, thick and luxuriant. You can feel better about eating it when you make it with healthy cashews.

Health Benefits of Cashews

Health Benefits of Cashews
Cashews contain all sorts of vital nutrients. They are high in monounsaturated fat, which may help to decrease bad cholesterol.1 They are high in iron,2 which contributes to the normal functioning of the immune system. They are also high in vitamin K, which may contribute to normal blood clotting and healthy bones." Cashews are also high in minerals like magnesium, phosphorus, zinc, manganese and copper, as well as a source of fiber, vitamin B1, vitamin B5, potassium and selenium.

Within the robust body of evidence demonstrating the health benefits of tree nuts, cashews are among the lesser-studied nuts. Fortunately, more and more researchers are recognizing this opportunity and the scientific literature supporting the health benefits of cashews is growing. Consumers, likewise, have more reasons than ever to incorporate this scrumptious nut into their diet!

Cardiovascular Disease and Diabetes
A 2018 study in a group of 300 Asian Indians with type 2 diabetes found that, after a 12-week intervention, consumption of a handful of cashews each day was associated with higher levels of high-density lipoprotein cholesterol-also known as "good" cholesterol, because it is associated with lower risk of heart disease.' Study participants who ate cashews also saw a decrease in systolic blood pressure from baseline, and no deleterious effects on body weight, blood sugar or other lipid variables were observed. With a low glycemic index, cashews can be included in a low-GI diet, which may help to manage blood glucose and insulin levels and therefore may help to reduce risk of type 2 diabetes.

Weight Management
A randomized controlled trial from 2022 shed light on the potential effects of cashew consumption on body weight, body composition, cardiometabolic markers and endothelial function. In this energy-restricted dietary intervention study, 40 women at cardiometabolic risk were divided into two different groups: 1) a control group that consumed no nuts, and 2) a group instructed to include 30 g of cashews and 15 g of Brazil nuts daily in their diet. At the end of the eight- week study, the nut group had higher plasma selenium concentration, lower total body fat and improved lean mass percentage compared to the control group. These findings suggest that adding cashews and Brazil nuts to an energy-restricted diet can be a healthy strategy for weight management.

Beyond the Kernel
Anacardium occidentale may be able to improve human health in ways that go beyond the cashew kernel itself. Researchers are working to unlock the potential of cashew nut shell liquid (CNSL), a versatile by-product of the cashew industry. For example, scientists found that novel compounds derived from anacardic acid and cardanol- phenolic lipids that are abundant in CNSL could represent a sustainable resource from which to generate affordable drugs to treat dyslipidemia and type 2 diabetes." In another study, CNSL showed effective antibacterial and antibiofilm activity against streptococci and enterococci, which are related to dental caries and chronic apical periodontitis, respectively.10 Finally, the development of new molecules derived from CNSL has emerged as a successful approach to the development of novel drug candidates against Alzheimer's disease."1 The cashew apple, too, holds untapped promise. Despite accounting for 90% of the total weight of the fruit, the hypocarp-or swollen stem-of the cashew flower has traditionally received much less attention from health researchers. Fortunately, this is starting to change. Cashew apples contain vitamin C, fiber, flavonoids, carotenoids, total polyphenols, flava and amino acids, as well as minerals such as potassium, magnesium, sodium and iron. A recent literature review suggested that cashew apples may offer therapeutic effects in the management of diabetes and cardiovascular diseases and may also potentially be beneficial for weight management, although further research is needed."

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Source: NUTFRUIT, November 2023
Courtesy: International Nut & Dried Fruit Council
https://inc.nutfruit.org

Cashew's Contribution to the Planet, People and Prosperity

People

"Cashew processing provides year-round direct employment to over 800,0000 people, over 70% of whom are women in tier-2 and tier-3 cities (roughly 20 crore mandays of employment a year)."

Source: Cashewinformation.com

Planet

Traditionally, cashew tree is grown to conserve soil. In Central Africa, it is found that one hectare of cashew plantation of 10 years age captures and stores roughly about 60 tons of Carbon in bark, branch, roots, and soil carbon. While 20 years cashew plantation stores roughly about 82 tons of Carbon. India has over 1 million hectares of cashew plantation. Thus, cashew plantations is a very good choice for reforestation. https://www.tandfonline.com/doi/pdf/10.1080/17583004.2020.1858682

Products from cashew

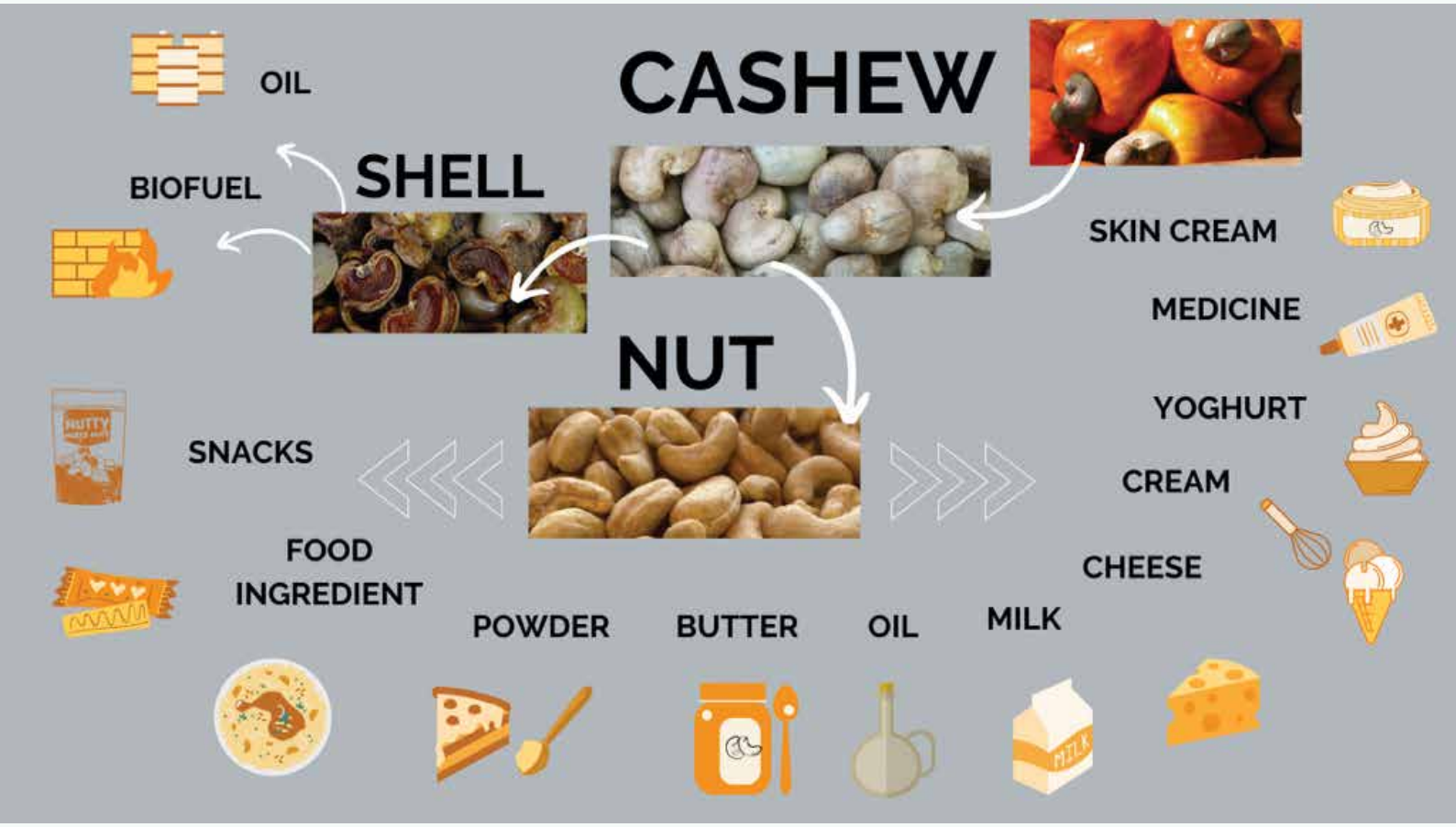
Cashew kernel:
Nutritious food for the entire family

Cashew apple: Rich in vitamin C, iron, phosphorus, calcium and used to make fresh juice, jam, jelly and pickle. In Goa, fermented cashew apple juice is marketed as 'Feni', the most popular drink in Goa and is considered the state's heritage drink. If unfit for human consumption, cashew apple juice can be used to produce bio-ethanol. The solid waste is an excellent manure.

Cashew shell: Has multiple uses. It has 20% oil, which is used for making products such as cardanol. Oil has multiple applications, such as friction linings, paints and varnishes, laminating resins, etc., Shell cake can be used for making bio-char and enriching soil carbon or as fuel

Cashew husk: used for extraction of tannin and also used in cattle-feed preparation in small quantities

Various Grades of Cashews and Innovative Use Cases



Courtesy: https://www.toskglobal.com/2021/02/23/13-cashew-nut-products-and-their-uses/

STANDARDS, GRADES & FORMS - Cashews

Premium Cashew nuts used for Corporate Gifting/special occasions/gifted with pride and prestige/sometimes roasted for the darker colour (Nut counts based on AFI standards)

WW180-King of Cashews - contains 266-395 white whole cashew kernels per kg

WW210 - Jumbo Nuts; Contains 395-465 white whole cashew kernels per kg

WW240 - White whole cashews - contains 485-530 nuts per kg

WW320 - premium white wholes cashews; contains 660-706 nuts per kg; also used as a popular snack globally; Often found on retail shelves and fast-selling ones

Kaju (or cashew) Katli can be prepared or manufactured using, pieces of cashew nut like JH, S, JK, LWP, K, SWP etc. The larger the pieces, the better the colour of the kaju katli.
Cashew katli made out of JH and JK appear whiter. In recent years various cashew sweets were manufactured using cashew grades such as W320, W300, SSW, SSW1, SW320, W450 and W400.

JH-Jumbo Halves-used in temples, premium kaju sweets and savourites

SWP-small white pieces, also used as ideal ingredient in cake toppings, ice creams-usually comes in around eight pieces per cashew

LWP-Large white pieces kernels broken in to 4 pieces-used in sweets, gravies and various rice preparations

Jumbo Kudka - big white pieces of cashew nuts; used to make premium cashew sweets and other sweets, popular choice of bakeries

W400/W450- means white whole cashews, usually contains 880 to 990 cashews per kg, the smallest and cheapest white whole cashew kernels and hence favourite among low priced whole grades. Consumed in plain raw form, also roasted with ghee in homes,

DW- Desert wholes used to make flavoured or coated cashew nuts, masala cashew nuts etc.,

NW – Natural whole cashew nuts (with skin), available in plain and value-added forms (roasted/salted), rich in taste

DP1 and DP2- Desert Pieces 1 and 2 used as food ingredients in biryani rice, pulav rice, ghee rice, Pongal, rava idli, nut-based ice cream sundaes etc.,

BB, BB1, BB2 - Baby Bites cashews are used for making cashew gravy, cashew butter, cashew paste, cashew cheese and cashew milk. Also used in biscuits

Central and State Government Organizations

Agricultural and Processed Food Products Export Development Authority (APEDA) 3rd Floor, NCUI Building 3, Siri Institutional Area, August Kranti Marg, (Opp. Asiad Village) New Delhi headq@apeda.gov.in +91-11-41486013 /20863919 /20867008 /20867007 https://apeda.gov.in	**National Horticulture Board (NHB)** Ministry of Agriculture and Farmers Welfare Government of India 85, Institutional Area, Sector - 18 Gurugram - 122015 Haryana md@nhb.gov.in,helpdesk.nhb@gov.in +91 0124-2342992/2347441/234298990 http://www.nhb.gov.in
Indian Council of Agricultural Research -Cashew (ICAR) Post Darbe,Dakshina Kannada Puttur -574 202 Karnataka director.dcr@icar.gov.in, dircajures@gmail.com +91 8251230902	**Directorate of Cashewnut & Cocoa Development, Govt.of India (DCCD)** Ministry of Agriculture and Farmers Welfare, Department of Agriculture, Co-operation & Farmers Welfare, 8th & 9th Floor, Kera Bhavan, SRV High School Road, Cochin-682 011 Kerala dccd@nic.in +91 0484-2377151 https://www.dccd.gov.in/
Central Food Technological Research Institute (CFTRI) iandp@cftri.res.in +91 0821-2515910 https://cftri.res.in/	**Food Safety and Standards Authority of India (FSSAI)** 03rd & 04th Floor, FDA Bhawan, Kotla Road near Bal Bhawan New Delhi - 110002 helpdesk-foscos@fssai.gov.in https://www.fssai.gov.in/
National Institute of Food Technology Entrepreneurship and Management (NIFTEM) 97, Niftem Rd, HSIIDC, Industrial Estate, Kundli Sonipat - 131028 Haryana info@niftem.ac.in +91-130- 2281000 /+91-130-2219759-64 https://niftem.ac.in/	**National Institute of Nutrition (NIN)** Beside Tarnaka Metro Station Jamai-Osmania PO Hyderabad-500007 nin@nic.in, directornin@icmr.gov.in,dirnin_hyd@yahoo.co.in +91 94027197200 https://www.nin.res.in/
Karnataka Cashew Development Corporation Ltd (KCDC) Abbakkanagar,1 st Main , Kottara Mangalore-575 006 Karnataka kcdcltd@gmail.com +91 8242457227 https://kcdccashew.com/	**The Kerala State Cashew Development Corporation Ltd** Cashew House , P.B. No.13, Mundakkal, Kollam - 691001 Kerala kscdc@kerala.gov.in, ho@cashewcorporation.com, mdkscdc@cashewcorporation.com +91 0474- 2742271/ 2742172 / 2742273 https://cashewcorporation.com/
Odisha State Cashew Development Corporation Ltd At/PO-Ghatikia Dist-Khordha Bhubaneswar – 751029 Odisha contact@oscdc.com +91 06742387193/ 2387290/ 2387195/ 2387194 https://oscdc.nic.in/	**Tamil Nadu Forest Plantation Corporation Limited (Registered office)** Karur Main Road, Mallachipuram, Kambarasampettai Post, Tiruchirappalli -620101, Tamil Nadu. +91-431-2706602/2706604 tafcorn@yahoo.com https://www.tafcorn.tn.gov.in/
A.P Forest Development Corporation Ltd, H.No. 5-9-22/108 Adarsh Nagar Colony Opp. New MLA Quarters Hyderabad-500 063 +0863-2223700/800/600, admin@apfdc.gov.in, http://www.apfdcl.com/	

State Associations and Development Corporations

International Nut & Dried Fruit Council (INC) 4 Carrer de la Fruita Seca, Poligon Tecnoparc 43204 Reus Spain inc@nutfruit.org +34 977331416 https://inc.nutfruit.org/	**All India Cashew Association (AICA)** AICA, 54, Anupam Apartment, Vasundhara Enclave, East Delhi New Delhi president@allindiacashew.com +91 9443240866 https://www.allindiacashew.com/
Andhra Pradesh Cashew Manfacturers Associaition (APCMA) Andhra Pradesh apcma.off@gmail.com +91 8912550567	**Bengal Cashew Association (BCA)** Contai, Purba Medinipur, West Bengal West Bengal anowaruddin777@gmail.com +91 9932151212/+91 9933601108
Goa Cashew Manufaturer's Association (GCMA) Paz Wada Bicholim Goa rohit@zantyes.com +91 9860603634	**Gujarat Cashew Proceessor Association(GCPA)** SOHAM INDUSTRIAL PARK, PLOT NO 27, 1 BAREJA MAHIJADA DHOLKA ROAD, BAREJA Gujarat mail@dryfruitfactory.in +91 8511110856
Karnataka Cashew Manufacturers Association (KCMA) KCMA, 205-209, "Suprabhath" Bejai-Kapikad Mangalore Karnataka kcma.mlr@gmail.com +91 8242223287	**Maharashtra Cashew Manufacturers Association (MCMA)** Maharashtra bowlekarcashew@gmail.com +91 8043835278 http://www.mahacashewcluster.com/
Odisha Cashew Processors Association (OCPA) KHATA NO-123/156 PLOT NO-491,492, 0 MAIN ROAD,JAHAMI, RAMBHA Odisha - 761028 Odisha +91 9437078475	**Palasa Cashew Manufaturer's Association (PCMA)** Andhra Pradesh +91 9440531342
Tamil Nadu Cashew Processors & Exporters Association (TNCPEA) No: 164/65, Near Old Bridge, Kumbakonam Road, Cuddalore District Panruti - 607 106 Tamilnadu tncpeaprt@gmail.com +91 4142242266 https://tncpea.com/	**Telangana Cashew Association (TCA)** Hyderabad,Telangana Telangana alawwalinternational1dubai@gmail.com +91 9908807016
South India Cashew Manufacturers Association (SICMA) Kochupilamoodu, Kollam - 691001 Kerala +91 474-2748469 sicma1940@gmail.com	**Federation of Indian Cashew Industry** SABARI, MWRA-21 Mundackal, Kochupilamoodu, Kollam-691 001 Kerala cashewfederation@gmail.com

Research Institutions

Agriculture Experimental Station **Navsari Agricultural University** & Post: Paria Tal. Pardi, Dist. Valsad Gujarat aesparia@nau.in,aesnau@yahoo.co.in +91 2602337227 https://nau.in/index	**Dr . Balasaheb Sawant Konkan Krishi Vidyapeeth** Maharashtra dorbskkv@rediffmail.com, dor.dbskkv@gov.in, dorbskkv@dbskkv.ac.in +91 2358282417 https://dbskkv.org/
Bapatla Cashew Research Station WF8M+8H6, Viswabrahmana Colony, Bapatla - 522101 Andhra Pradesh headcrs_bapatla@drysrhu.edu.in +91 8643225304 https://drysrhu.ap.gov.in/HeadsofHRSs.html	**Bidhan Chandra Krishi Viswavidyalaya** Kadamkanan, Near Jhargram Rly. Station West Bengal rrrsjhargrambckv@gmail.com +91 8918137182 https://www.bckv.edu.in/index.php/en/
Birsa Agriculture University Kanke, Ranchi-834006 Jharkhand directorresearch@bauranchi.org, dr_bau@rediffmail.com, pksing-hbau@yahoo.co.in +91 6512450832/+91 8986720158 https://www.bauranchi.org/	**Kerala Agricultural University - Cashew Research Station** KAU Main Campus KAU P.O. Vellanikkara Thrissur - 680656 Kerala crsmadakkathara@kau.in +91 4872370339 https://crsmadakkathara.kau.in/
Orissa University of Agriculture & Technology Bhubaneswar-751003 Odisha registrarouat@gmail.com/registrar@ouat.ac.in +91 06742397970/2397818/ 2397719/ 2397669 / 2397719 / 2397919 / 2397868 https://ouat.ac.in/research/research-stations/	**Tamil Nadu Agricultural University - Regional Research Station** Regional Research Station Cuddalore Vridhachalam – 606 001 Tamilnadu arsvri@tnau.ac.in +91 4143238231 https://tnau.ac.in/site/research-vridhachalam/
Ullal Cashew Research Station Kapikad Ullal, Mangalore Karnataka hrhcashew@gmail.com +91 8242466249	**University Of Horticultural Sciences** Udyanagiri, Bagalkote - 587104 Karnataka registrar@uhsbagalkot.edu.in +91 8354230276 https://uhsbagalkot.karnataka.gov.in/english

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Testimonials

Dr V Mohan,

Chairman Dr Mohan's Diabetes Specialities Centre Pvt Ltd., Chennai
President – Madras Diabetes Research Foundation

Consumption of nuts does not impact cholesterol levels. Our research revealed that the consumption of cashews had no adverse effect on LDL (bad) cholesterol levels. Notably, it substantially increased HDL (good) cholesterol levels; moreover, weight, blood sugar, and HbA1c levels remain unaffected. Nuts are also a rich source of protein, healthy fats, and fibre. Remarkably, the consumption of cashews was associated with a decrease in blood sugar levels. Consequently, we can confidently conclude that all types of nuts benefit individuals with diabetes.

Dr Chetan Bargi, MBBS & MD, Baragi Hospital

Cashew nuts are highly nutritious. They improve our cardiac health and vision, strengthen our bones, and help digestion. They are a good source of protein. They contain most of the micronutrients required by our body. Their fat content is significantly less, and whatever fat they provide is essential for our body. I recommend consuming cashews regularly in a moderate quantity.

Dr Nutan Meharwade, MBBS & MD, Sparsha Hospital

Cashews are rich in essential nutrients such as iron, copper, zinc, potassium, manganese, and various micro-nutrients that play a crucial role in enhancing the body's overall immune system.

This delightful nut is highly recommended for working women and growing children. Contrary to popular belief, cashews contain zero cholesterol and contribute to heart health by increasing the levels of LDL and HDL in the body. These micronutrients actively combat superoxide radicals, delaying ageing and aiding cancer prevention.

Gynaecologists are increasingly recommending them for treating anaemia in pregnant patients