

## Search for Articles:

Title / Keyword

Author / Affiliation / Email

Nutrients

All Article Types

Search

Advanced

Journals / Nutrients / Volume 14 / Issue 5

IMPACT  
FACTOR  
5.0Indexed in:  
PubMedCITESCORE  
9.1

nutrients

Submit to Nutrients

Review for Nutrients

## Journal Menu

- Nutrients Home
- Aims & Scope
- Editorial Board
- Reviewer Board
- Topical Advisory Panel
- Instructions for Authors
  - Special Issues
  - Topics
  - Sections & Collections
- Article Processing Charge
- Indexing & Archiving
- Editor's Choice Articles
- Most Cited & Viewed
- Journal Statistics
- Journal History
- Journal Awards
- Society Collaborations
- Conferences
- Editorial Office

## Journal Browser

volume

issue

Go

- Forthcoming issue
- Current issue

Vol. 17 (2025)	Vol. 8 (2016)
Vol. 16 (2024)	Vol. 7 (2015)
Vol. 15 (2023)	Vol. 6 (2014)
Vol. 14 (2022)	Vol. 5 (2013)
Vol. 13 (2021)	Vol. 4 (2012)
Vol. 12 (2020)	Vol. 3 (2011)
Vol. 11 (2019)	Vol. 2 (2010)
Vol. 10 (2018)	Vol. 1 (2009)
Vol. 9 (2017)	



## Nutrients, Volume 14, Issue 5 (March-1 2022) – 212 articles



**Cover Story** (view full-size image): Three classes of molecules present in chicory root were analyzed: fructose, chlorogenic acids, and sesquiterpene lactones. Experiments on the murine model led us to a nutrigenomic analysis, a metabolic hormone assay, and a gut microbiota analysis, associated with in vitro observations for different responses. We have highlighted a large number of effects of all these classes of molecules that suggest a pro-apoptotic activity, an anti-inflammatory, antimicrobial, antioxidant, hypolipidemic, and hypoglycemic effect, and a prebiotic role. Fructose seems to be the most involved in these activities, contributing to approximately 83% of recorded responses, but the other classes of tested molecules have shown a specific role for these different effects, with an estimated contribution of 23–24%. [View this paper](#)

- Issues are regarded as officially published after their release is announced to the [table of contents alert mailing list](#).
- You may [sign up for e-mail alerts](#) to receive table of contents of newly released issues.
- PDF is the official format for papers published in both, html and pdf forms. To view the papers in pdf format, click on the "PDF Full-text" link, and use the free [Adobe Reader](#) to open them.

Order results

Publication Date

Result details

Normal

Section

All Sections

Show export options

Open Access

Article

17 pages, 9036 KiB

**Soy Formula Is Not Estrogenic and Does Not Result in Reproductive Toxicity in Male Piglets: Results from a Controlled Feeding Study**

by Martin J. J. Ronis, Horacio Gomez-Acevedo, Kartik Shankar, Leah Hennings, Neha Sharma, Michael L. Blackburn, Isabelle Miousse, Harry Dawson, Celine Chen, Kelly E. Mercer and Thomas M. Badger

Nutrients 2022, 14(5), 1126; <https://doi.org/10.3390/nu14051126> - 7 Mar 2022

Cited by 4 | Viewed by 4080

**Abstract** Soy infant formula which is fed to over half a million infants per year contains isoflavones such as genistein, which have been shown to be estrogenic at high concentrations. The developing testis is sensitive to estrogens, raising concern that the use of soy [...] [Read more](#).

(This article belongs to the Section **Phytochemicals and Human Health**)

[► Show Figures](#)

Open Access

Article

12 pages, 719 KiB

**Selenium Deficiency during Pregnancy in Mice Impairs Exercise Performance and Metabolic Function in Adult Offspring**

by Pierre Hofstee, Anthony V. Perkins and James S. M. Cuffe

Nutrients 2022, 14(5), 1125; <https://doi.org/10.3390/nu14051125> - 7 Mar 2022

Cited by 5 | Viewed by 3129

**Abstract** Selenium deficiency during the perinatal period programs metabolic dysfunction in offspring. Postnatal exercise may prevent the development of programmed metabolic disease. This study investigated the impact of selenium deficiency on offspring exercise behavior and whether this improved metabolic health. Female C57BL/6 mice were [...] [Read more](#).

(This article belongs to the Special Issue **Dietary Selenium Intake and Human Health**)

[► Show Figures](#)

Open Access

Article

13 pages, 621 KiB

**The Effect of Oral Probiotics (*Streptococcus Salivarius* K12) on the Salivary Level of Secretory Immunoglobulin A, Salivation Rate, and Oral Biofilm: A Pilot Randomized Clinical Trial**

by Ksenia Babina, Dilara Salikhova, Maria Polyakova, Oxana Svitch, Roman Samoylikov, Samya Ahmad El-Abed, Alexandr Zaytsev and Nina Novozhilova

Nutrients 2022, 14(5), 1124; <https://doi.org/10.3390/nu14051124> - 7 Mar 2022

Cited by 24 | Viewed by 10361

**Abstract** We aimed to assess the effect of oral probiotics containing the *Streptococcus salivarius* K12 strain on the salivary level of secretory immunoglobulin A, salivation rate, and oral biofilm. Thirty-one consenting patients meeting the inclusion criteria were recruited in this double-blind, placebo-controlled, two-arm, parallel-group [...] [Read more](#).

(This article belongs to the Topic **Probiotics, Prebiotics and Postbiotics in Human Health**)

[► Show Figures](#)



Open Access Article

8 pages, 554 KiB

## A Decentralized Study Setup Enables to Quantify the Effect of Polymerization and Linkage of $\alpha$ -Glucans on Post-Prandial Glucose Response

by Frederik Delodder, Andreas Rytz, Fabien Foltzer, Lisa Lamothe, Carmine d'Urzo, Ludivine Feraille-Naze, Julia Mauger, Justine Morlet, Nathalie Piccardi, Lionel Philippe, François Caijo, Jeroen Schmitt and Sara Colombo Mottaz

*Nutrients* 2022, 14(5), 1123; <https://doi.org/10.3390/nu14051123> - 7 Mar 2022

Cited by 4 | Viewed by 3148

**Abstract** The complexity of the carbohydrate structure is associated with post-prandial glucose response and diverse health benefits. The aim of this study was to determine whether, thanks to the usage of minimally invasive glucose monitors, it was possible to evaluate, in a decentralized study [...] [Read more](#).

(This article belongs to the Section Carbohydrates)

[► Show Figures](#)



Open Access Article

10 pages, 568 KiB

## Altered Serum Acylcarnitines Profile after a Prolonged Stay in Intensive Care

by Anne-Françoise Rousseau, Sarah Schmitz, Etienne Cavalier, Benoît Misset and François Boemer

*Nutrients* 2022, 14(5), 1123; <https://doi.org/10.3390/nu14051123> - 7 Mar 2022

Cited by 6 | Viewed by 2354

**Abstract** A stay in intensive care unit (ICU) exposes patients to a risk of carnitine deficiency. Moreover, acylated derivatives of carnitine (acylcarnitines, AC) are biomarkers for metabolic mitochondrial dysfunction that have been linked to post-ICU disorders. This study aimed to describe the AC profile [...] [Read more](#).

(This article belongs to the Section Lipids)

[► Show Figures](#)



Open Access Article

11 pages, 737 KiB

## Dietary Sodium and Potassium Intake and Risk of Non-Fatal Cardiovascular Diseases: The Million Veteran Program

by Dong D. Wang, Yanping Li, Xuan-Mai T. Nguyen, Rebecca J. Song, Yuk-Lam Ho, Frank B. Hu, Walter C. Willett, Peter W. F. Wilson, Kelly Cho, J. Michael Gaziano, Luc Djoussé and on behalf of the VA Million Veteran Program

*Nutrients* 2022, 14(5), 1121; <https://doi.org/10.3390/nu14051121> - 7 Mar 2022

Cited by 15 | Viewed by 3515

**Abstract** Objective: To examine the association between intakes of sodium and potassium and the ratio of sodium to potassium and incident myocardial infarction and stroke. Design, Setting and Participants: Prospective cohort study of 180,156 Veterans aged 19 to 107 years with plausible dietary intake [...] [Read more](#).

(This article belongs to the Section Nutrition and Public Health)

[► Show Figures](#)



Open Access Feature Paper Editor's Choice Review

14 pages, 1618 KiB

## The Effects of Enteral Nutrition in Critically Ill Patients with COVID-19: A Systematic Review and Meta-Analysis

by Omorogieva Ojo, Osarhumwese Osaretin Ojo, Qianqian Feng, Joshua Boateng, Xiaohua Wang, Joanne Brooke and Amanda Rodrigues Amorim Adegbeye

*Nutrients* 2022, 14(5), 1120; <https://doi.org/10.3390/nu14051120> - 7 Mar 2022

Cited by 32 | Viewed by 8754

**Abstract** Background: Patients who are critically ill with COVID-19 could have impaired nutrient absorption due to disruption of the normal intestinal mucosa. They are often in a state of high inflammation, increased stress and catabolism as well as a significant increase in energy and [...] [Read more](#).

(This article belongs to the Section Nutritional Epidemiology)

[► Show Figures](#)



Open Access Article

11 pages, 280 KiB

## Short-Term Ingestion of Medium-Chain Triglycerides Could Enhance Postprandial Consumption of Ingested Fat in Individuals with a Body Mass Index from 25 to Less than 30: A Randomized, Placebo-Controlled, Double-Blind Crossover Study

by Naohisa Nosaka, Shougo Tsujino and Kazuhiko Kato

*Nutrients* 2022, 14(5), 1119; <https://doi.org/10.3390/nu14051119> - 7 Mar 2022

Cited by 4 | Viewed by 4038

**Abstract** The elimination of obesity is essential to maintaining good health. Medium-chain triglycerides (MCTs) inhibit fat accumulation. However, studies examining energy expenditure and fat oxidation with continuous ingestion of MCTs show little association with the elimination of obesity. In this study, we conducted a [...] [Read more](#).

(This article belongs to the Collection Food Supplements and Functional Foods Assessment for Health and Nutrition)



Open Access Article

13 pages, 1904 KiB

## Beneficial In Vitro Effects of a Low *Myo*-Inositol Dose in the Regulation of Vascular Resistance and Protein Peroxidation under Inflammatory Conditions

by Agata Rolnik, Beata Olas, Joanna Szablińska-Piernik, Lesław Bernard Lahuta, Andrzej Rynkiewicz, Piotr Cygański, Katarzyna Socha, Leszek Gromadziński, Michael Thoene and Michał Majewski

*Nutrients* 2022, 14(5), 1118; <https://doi.org/10.3390/nu14051118> - 7 Mar 2022

Cited by 6 | Viewed by 3395

**Abstract** Oxidative stress induces functional changes in arteries. Therefore, the effect of *myo*-inositol, a possible anti-inflammatory/antioxidant agent was studied on human plasma and rat thoracic arteries. Aortic rings from male Wistar rats (3 months of age) were incubated with *myo*-inositol (1, 10 [...] [Read more](#).

(This article belongs to the Special Issue Cycloitols in Cardiometabolic Syndrome)

[► Show Figures](#)



Open Access Reply

2 pages, 297 KiB

**Reply to Hodac, N.; Wittekind, A. Comment on “Moz-Christofoletti, M.A.; Wollgast, J. Sugars, Salt, Saturated Fat and Fibre Purchased through Packaged Food and Soft Drinks in Europe 2015–2018: Are We Making Progress? *Nutrients* 2021, 13, 2416”**

by Maria Alice Moz-Christofoletti and Jan Wollgast

*Nutrients* 2022, 14(5), 1117; <https://doi.org/10.3390/nu14051117> - 7 Mar 2022

Viewed by 1723

**Abstract** We acknowledge the points raised by Hodac and Wittekind [...] [Full article](#)  
(This article belongs to the Section Nutrition and Public Health)

► [Show Figures](#)

Open Access Comment

2 pages, 178 KiB

**Comment on Moz-Christofoletti, M.A.; Wollgast, J. Sugars, Salt, Saturated Fat and Fibre Purchased through Packaged Food and Soft Drinks in Europe 2015–2018: Are We Making Progress? *Nutrients* 2021, 13, 2416**

by Nicholas Hodac and Anna Wittekind

*Nutrients* 2022, 14(5), 1116; <https://doi.org/10.3390/nu14051116> - 7 Mar 2022

Cited by 1 | Viewed by 1844

**Abstract** The European soft drinks industry fully supports efforts to monitor nutrition composition of food products [...] [Full article](#)  
(This article belongs to the Section Nutrition and Public Health)

Open Access Article

9 pages, 826 KiB

**Adverse Effects of Infant Formula Made with Corn-Syrup Solids on the Development of Eating Behaviors in Hispanic Children**

by Hailey E. Hampson, Roshonda B. Jones, Paige K. Berger, Jasmine F. Plows, Kelsey A. Schmidt, Tanya L. Alderete and Michael I. Goran

*Nutrients* 2022, 14(5), 1115; <https://doi.org/10.3390/nu14051115> - 7 Mar 2022

Cited by 6 | Viewed by 6643

**Abstract** Few studies have investigated the influence of infant formulas made with added corn-syrup solids on the development of child eating behaviors. We examined associations of breastmilk (BM), traditional formula (TF), and formula containing corn-syrup solids (CSSF) with changes in eating behaviors over a [...] [Read more](#).

(This article belongs to the Special Issue Determinants, Screening, Prevention and Management of Obesity in Youth)

► [Show Figures](#)

Open Access Editor's Choice Article

16 pages, 3031 KiB

**GlyNAC (Glycine and N-Acetylcysteine) Supplementation in Mice Increases Length of Life by Correcting Glutathione Deficiency, Oxidative Stress, Mitochondrial Dysfunction, Abnormalities in Mitophagy and Nutrient Sensing, and Genomic Damage**

by Premranjan Kumar, Ob W. Osahon and Rajagopal V. Sekhar

*Nutrients* 2022, 14(5), 1114; <https://doi.org/10.3390/nu14051114> - 7 Mar 2022

Cited by 56 | Viewed by 38127

**Abstract** Determinants of length of life are not well understood, and therefore increasing lifespan is a challenge. Cardinal theories of aging suggest that oxidative stress (OxS) and mitochondrial dysfunction contribute to the aging process, but it is unclear if they could also impact lifespan. [...] [Read more](#).

(This article belongs to the Section Proteins and Amino Acids)

► [Show Figures](#)

Open Access Reply

2 pages, 185 KiB

**Reply to Janssen et al. Comment on “Sobczyk, M.K.; Gaunt, T.R. The Effect of Circulating Zinc, Selenium, Copper and Vitamin K<sub>1</sub> on COVID-19 Outcomes: A Mendelian Randomization Study. *Nutrients* 2022, 14, 233”**

by Maria K. Sobczyk and Tom R. Gaunt

*Nutrients* 2022, 14(5), 1113; <https://doi.org/10.3390/nu14051113> - 7 Mar 2022

Cited by 3 | Viewed by 2593

**Abstract** In their correspondence arising from our recent manuscript [...] [Full article](#)

(This article belongs to the Special Issue Mendelian Randomization Studies on Nutritional Factors and Health Outcomes)

Open Access Comment

2 pages, 180 KiB

**Comment on Sobczyk, M.K.; Gaunt, T.R. The Effect of Circulating Zinc, Selenium, Copper and Vitamin K<sub>1</sub> on COVID-19 Outcomes: A Mendelian Randomization Study. *Nutrients* 2022, 14, 233**

by Rob Janssen, Cees Vermeer, Jona Walk and Allan Linneberg

*Nutrients* 2022, 14(5), 1112; <https://doi.org/10.3390/nu14051112> - 7 Mar 2022

Cited by 3 | Viewed by 2646

**Abstract** Sobczyk and Gaunt genetically predicted circulating zinc, selenium, copper, and vitamin K<sub>1</sub> levels—instead of directly measuring nutrients in blood—and hypothesized that these levels would associate with SARS-CoV-2 infection and COVID-19 severity [...] [Full article](#)

(This article belongs to the Special Issue Mendelian Randomization Studies on Nutritional Factors and Health Outcomes)

Open Access Article

12 pages, 280 KiB

**Lifestyle-Related Risk Factors of Orthorexia Can Differ among the Students of Distinct University Courses**

by Monica Guglielmetti, Ottavia Eleonora Ferraro, Ilaria Silvia Rossella Gorrasi, Elisabetta Carraro, Simona Bo, Giovanni Abbate-Daqa, Anna Taqilabue and Cinzia Ferraris

**Abstract** Orthorexia nervosa (ON) is defined as the excessive attention on healthy eating, and studies especially focused on food quality ON prevalence in university students can be extremely variable. The objective of this study is to investigate whether there was a difference in ON [...] [Read more](#).

(This article belongs to the Section Nutrition and Public Health)

Open Access

Article

12 pages, 289 KiB

### Nutrition Risk, Resilience and Effects of a Brief Education Intervention among Community-Dwelling Older Adults during the COVID-19 Pandemic in Alberta, Canada

by Michelle Capicio, Simran Panesar, Heather Keller, Leah Gramlich, Naomi Popeski, Carlota Basualdo-Hammond, Marlis Atkins and Catherine B. Chan

Nutrients 2022, 14(5), 1110; <https://doi.org/10.3390/nu14051110> - 6 Mar 2022

Cited by 8 | Viewed by 6045

**Abstract** Up to two-thirds of older Canadian adults have high nutrition risk, which predisposes them to frailty, hospitalization and death. The aim of this study was to examine the effect of a brief education intervention on nutrition risk and use of adaptive strategies to [...] [Read more](#).

(This article belongs to the Special Issue Dietary and Lifestyle-Related Behaviours in Community-Dwelling Older Adults)

► Show Figures

Open Access

Article

17 pages, 339 KiB

### Polish Adaptation and Validation of the Intuitive (IES-2) and Mindful (MES) Eating Scales—The Relationship of the Concepts with Healthy and Unhealthy Food Intake (a Cross-Sectional Study)

by Aleksandra Małachowska and Marzena Jeżewska-Zychowicz

Nutrients 2022, 14(5), 1109; <https://doi.org/10.3390/nu14051109> - 6 Mar 2022

Cited by 14 | Viewed by 3685

**Abstract** Intuitive (IE) and mindful (ME) eating share internally focused eating, yet previous studies have shown that these concepts are not strongly correlated, which suggests that they might be differently related to food intake. The study aimed to adapt the original Intuitive (IES-2) and [...] [Read more](#).

(This article belongs to the Section Nutrition and Public Health)

Open Access

Article

13 pages, 511 KiB

### Prevalence and Predictors of Insufficient Plasma Vitamin C in a Subtropical Region and Its Associations with Risk Factors of Cardiovascular Diseases: A Retrospective Cross-Sectional Study

by Yao-Tsung Lin, Li-Kai Wang, Kuo-Chuan Hung, Chia-Yu Chang, Li-Ching Wu, Chung-Han Ho and Jen-Yin Chen

Nutrients 2022, 14(5), 1108; <https://doi.org/10.3390/nu14051108> - 6 Mar 2022

Cited by 6 | Viewed by 3943

**Abstract** Background: to evaluate the prevalence and predictors of insufficient plasma vitamin C among adults in a subtropical region and its associations with cardiovascular disease risk factors including dyslipidemia and lipid-independent markers, namely homocysteine, high-sensitivity C-reactive protein (hs-CRP) and lipoprotein(a). Methods: Data of this [...] [Read more](#).

(This article belongs to the Special Issue Nutritional Assessment and Chronic Disease)

► Show Figures

Open Access

Review

39 pages, 2179 KiB

### The Problem of Malnutrition Associated with Major Depressive Disorder from a Sex-Gender Perspective

by Cielo García-Montero, Miguel A. Ortega, Miguel Angel Alvarez-Mon, Oscar Fraile-Martinez, Adoración Romero-Bazán, Guillermo Lahera, José Manuel Montes-Rodríguez, Rosa M. Molina-Ruiz, Fernando Mora, Roberto Rodríguez-Jimenez, Javier Quintero and Melchor Álvarez-Mon

Nutrients 2022, 14(5), 1107; <https://doi.org/10.3390/nu14051107> - 6 Mar 2022

Cited by 28 | Viewed by 12081

**Abstract** Major depressive disorder (MDD) is an incapacitating condition characterized by loss of interest, anhedonia and low mood, which affects almost 4% of people worldwide. With rising prevalence, it is considered a public health issue that affects economic productivity and heavily increases health costs [...] [Read more](#).

(This article belongs to the Special Issue Impact of DHA/EPA and Other Nutrients on Development: From Perinatal to Menopause)

► Show Figures

Open Access

Article

15 pages, 335 KiB

### Eating Behaviors, Depressive Symptoms and Lifestyle in University Students in Poland

by Julia Suwalska, Kalina Kolasieńska, Dorota Łojko and Paweł Bogdański

Nutrients 2022, 14(5), 1106; <https://doi.org/10.3390/nu14051106> - 6 Mar 2022

Cited by 21 | Viewed by 5107

**Abstract** Young adulthood is the period from the late teens through the twenties and is associated with life transitions that could contribute to the development of obesity. Targeting this group will be critical to reversing the obesity epidemic. The aim of the study was [...] [Read more](#).

(This article belongs to the Section Nutrition and Obesity)

Open Access

Article

11 pages, 1048 KiB

### The Individual Nutrition Education Needs among Patients with Type 2 Diabetes at the Public Health Centers in Padang, Indonesia: A Cross-Sectional Study

by Ice Yolanda Puri, Barakatun-Nisak Mohd Yusof, Zalina Abu Zaid, Amin Ismail, Hasnah Haron and Nur Indrawaty Lipoeto

Nutrients 2022, 14(5), 1105; <https://doi.org/10.3390/nu14051105> - 5 Mar 2022

Cited by 1 | Viewed by 3487

**Abstract Background:** The Indonesian Public Health Care (PHC) of Management Nutrition Therapy (MNT) guidelines describe that individual nutrition education is aimed to improve quality of MNT services. The guidelines were originally developed for non-communicable diseases (NCDs), not specially for type 2 diabetes mellitus [...] [Read more](#).  
(This article belongs to the Section Nutritional Policies and Education for Health Promotion)

► [Show Figures](#)

[Open Access](#) [Review](#)

60 pages, 1273 KiB [Download](#)

## The Effect of Dietary Interventions on Hypertriglyceridemia: From Public Health to Molecular Nutrition Evidence

by **Karla Paulina Luna-Castillo**, **Xochitl Citlalli Olivares-Ochoa**, **Rocio Guadalupe Hernández-Ruiz**, **Iris Monserrat Llamas-Covarrubias**, **Saraí Citlalic Rodríguez-Reyes**, **Alejandra Betancourt-Núñez**, **Barbara Vizmanos**, **Erika Martínez-López**, **José Francisco Muñoz-Valle**, **Fabiola Márquez-Sandoval** and **Andrés López-Quintero**  
*Nutrients* 2022, 14(5), 1104; <https://doi.org/10.3390/nu14051104> - 5 Mar 2022

Cited by 44 | Viewed by 10078

**Abstract** Approximately 25–50% of the population worldwide exhibits serum triglycerides (TG) ( $\geq 150$  mg/dL) which are associated with an increased level of highly atherogenic remnant-like particles, non-alcoholic fatty liver disease, and pancreatitis risk. High serum TG levels could be related to cardiovascular disease, which is [...] [Read more](#).

(This article belongs to the Special Issue The Role of Triglycerides and Triglyceride Metabolism in Human Health)

► [Show Figures](#)

[Open Access](#) [Article](#)

13 pages, 4818 KiB [Download](#)

## Ellagic Acid Alleviates Diquat-Induced Jejenum Oxidative Stress in C57BL/6 Mice through Activating Nrf2 Mediated Signaling Pathway

by **Xiangyu Zhang**, **Shilan Wang**, **Yujun Wu**, **Xiaoyi Liu**, **Junjun Wang** and **Dandan Han**  
*Nutrients* 2022, 14(5), 1103; <https://doi.org/10.3390/nu14051103> - 5 Mar 2022

Cited by 21 | Viewed by 3728

**Abstract** Ellagic acid (EA) is the main constituent found in pomegranate rind, which has anti-inflammatory and antioxidant effects. However, whether EA can alleviate diquat-induced oxidative stress is still unknown. Here, the effects and mechanisms of EA on jejenum oxidative stress induced by diquat was [...] [Read more](#).

(This article belongs to the Special Issue Exploration and Discovery of Natural Plant Pigments' Benefits to Human Health)

► [Show Figures](#)

[Open Access](#) [Article](#)

8 pages, 1043 KiB [Download](#)

## Weak Association between Skin Autofluorescence Levels and Prediabetes with an ILERVAS Cross-Sectional Study

by **Enric Sánchez**, **Mohsen Kerkeni**, **Marta Hernández**, **Ricard Gavalda**, **Ferran Rius**, **Ariadna Sauret**, **Gerard Torres**, **Marcellino Bermúdez-López**, **Elvira Fernández**, **Eva Castro-Boqué**, **Francisco Purroy**, **Didac Mauricio**, **Cristina Farràs-Sallés**, **Miquel Buti**, **Pere Godoy**, **Reinald Pamplona** and **Albert Lecube**  
*Nutrients* 2022, 14(5), 1102; <https://doi.org/10.3390/nu14051102> - 5 Mar 2022

Cited by 1 | Viewed by 2906

**Abstract** A large body of evidence demonstrates a relationship between hyperglycemia and increased concentrations of advanced glycation end-products (AGEs). However, there is little information about subcutaneous AGE accumulation in subjects with prediabetes, and whether or not this measurement could assist in the diagnosis of [...] [Read more](#).

(This article belongs to the Special Issue Advanced Glycation End Products (AGEs): Link between Modern Health and Disease)

► [Show Figures](#)

[Open Access](#) [Article](#)

11 pages, 1961 KiB [Download](#)

## Citrus junos Tanaka Peel Extract and Its Bioactive Naringin Reduce Fine Dust-Induced Respiratory Injury Markers in BALB/c Male Mice

by **Dong-Hun Lee**, **Jin-Kyung Woo**, **Wan Heo**, **Wen-Yan Huang**, **Yunsik Kim**, **Soohak Chung**, **Gyeong-Hweon Lee**, **Jae-Woong Park**, **Bok-Kyung Han**, **Eui-Chul Shin**, **Jeong-Hoon Pan**, **Jae-Kyeom Kim** and **Young-Jun Kim**  
*Nutrients* 2022, 14(5), 1101; <https://doi.org/10.3390/nu14051101> - 5 Mar 2022

Cited by 9 | Viewed by 3802

**Abstract** Particulate matter (PM) 10 refers to fine dust with a diameter of less than 10  $\mu$ m and induces apoptosis and inflammatory responses through oxidative stress. *Citrus junos* Tanaka is a citrus fruit and contains bioactive flavonoids including naringin. In the present study, we [...] [Read more](#).

(This article belongs to the Special Issue Nutrition, Nutraceuticals and Bioactive Compounds in the Prevention and Fight against Inflammation)

► [Show Figures](#)

[Open Access](#) [Article](#)

12 pages, 278 KiB [Download](#)

## Greater Consumption of Total and Individual Lignans and Dietary Fibers Were Significantly Associated with Lowered Risk of Hip Fracture—A 1:1 Matched Case–Control Study among Chinese Elderly Men and Women

by **Zhaomin Liu**, **Bailing Chen**, **Baolin Li**, **Cheng Wang**, **Guoyi Li**, **Wenting Cao**, **Fangfang Zeng** and **Yuming Chen**  
*Nutrients* 2022, 14(5), 1100; <https://doi.org/10.3390/nu14051100> - 5 Mar 2022

Cited by 5 | Viewed by 2975

**Abstract** The study aims to examine the association of dietary intake of lignans with the risk of hip fractures in Chinese older adults. This was a 1:1 age- and gender- matched case–control study. Dietary survey was conducted by face-to-face interviews using a 79-item validated [...] [Read more](#).

(This article belongs to the Special Issue Dietary Factors on Cardiovascular and Endocrine Health)

[Open Access](#) [Article](#)

22 pages, 1670 KiB [Download](#)

## EGCG Prevents the Onset of an Inflammatory and Cancer-Associated Adipocyte-like



## Phenotype in Adipose-Derived Mesenchymal Stem/Stromal Cells in Response to the Triple-Negative Breast Cancer Secretome

by **Narjara Gonzalez Suarez**, **Yuniel Fernandez-Marrero**, **Sima Torabidastgerdooei** and **Borhane Annabi**

*Nutrients* 2022, 14(5), 1099; <https://doi.org/10.3390/nu14051099> - 5 Mar 2022

Cited by 28 | Viewed by 4561

**Abstract** Background: Triple-negative breast cancer (TNBC) cells secretome induces a pro-inflammatory microenvironment within the adipose tissue, which hosts both mature adipocytes and adipose-derived mesenchymal stem/stromal cells (ADMSC). The subsequent acquisition of a cancer-associated adipocyte (CAA)-like phenotype is, however, unknown in ADMSC. While epidemiological studies [...] [Read more](#).

(This article belongs to the Special Issue Polyphenols and Cancer Prevention)

[► Show Figures](#)

Open Access

Article

13 pages, 2066 KiB  

## *Dendropanax trifidus* Sap-Mediated Suppression of Obese Mouse Body Weight and the Metabolic Changes Related with Estrogen Receptor Alpha and AMPK-ACC Pathways in Muscle Cells

by **Ahreum Lee**, **Eugene Koh**, **Dalnim Kim**, **Namkyu Lee**, **Soo Min Cho**, **Young Joo Lee**, **Ik-Hyun Cho** and **Hyun-Jeong Yang**

*Nutrients* 2022, 14(5), 1098; <https://doi.org/10.3390/nu14051098> - 5 Mar 2022

Cited by 2 | Viewed by 3283

**Abstract** *Dendropanax trifidus* (DT) is a medicinal herb native to East Asia, which has been used extensively for its therapeutic properties in traditional medicine. In this study, we examined the effects of DT sap on the regulation of body weight and muscle metabolism in [...] [Read more](#).

(This article belongs to the Special Issue Functional Properties of Natural Products and Human Health)

[► Show Figures](#)

Open Access

Article

16 pages, 4340 KiB  

## (–)-Epicatechin Improves Vasoreactivity and Mitochondrial Respiration in Thermoneutral-Housed Wistar Rat Vasculature

by **Ji Hye Chun**, **Melissa M. Henckel**, **Leslie A. Knaub**, **Sara E. Hull**, **Greg B. Pott**, **Lori A. Walker**, **Jane E.-B. Reusch** and **Amy C. Keller**

*Nutrients* 2022, 14(5), 1097; <https://doi.org/10.3390/nu14051097> - 5 Mar 2022

Cited by 9 | Viewed by 3565

**Abstract** Cardiovascular disease (CVD) is a global health concern. Vascular dysfunction is an aspect of CVD, and novel treatments targeting vascular physiology are necessary. In the endothelium, eNOS regulates vasodilation and mitochondrial function; both are disrupted in CVD. (–)-Epicatechin, a botanical compound known for [...] [Read more](#).

(This article belongs to the Special Issue The Relationship between Physical Activity, Food Intake and Metabolic Diseases)

[► Show Figures](#)

Open Access

Article

21 pages, 3381 KiB  

## Untargeted Metabolome Analysis Reveals Reductions in Maternal Hepatic Glucose and Amino Acid Content That Correlate with Fetal Organ Weights in a Mouse Model of Fetal Alcohol Spectrum Disorders

by **Nipun Saini**, **Manjot S. Virdee**, **Kaylee K. Helfrich**, **Sze Ting Cecilia Kwan**, **Sandra M. Mooney** and **Susan M. Smith**

*Nutrients* 2022, 14(5), 1096; <https://doi.org/10.3390/nu14051096> - 5 Mar 2022

Cited by 10 | Viewed by 3117


**Abstract** Prenatal alcohol exposure (PAE) causes fetal growth restrictions. A major driver of fetal growth deficits is maternal metabolic disruption; this is under-investigated following PAE. Untargeted metabolomics on the dam and fetus exposed to alcohol (ALC) revealed that the hepatic metabolome of ALC and [...] [Read more](#).

(This article belongs to the Special Issue The Roles of Maternal and Child Nutrition in Fetal Alcohol Spectrum Disorders (FASD): From Mechanistic Insights to Opportunities for Intervention)

[► Show Figures](#)

Open Access

Article

12 pages, 1698 KiB 

## Is a Non-Caloric Sweetener-Free Diet Good to Treat Functional Gastrointestinal Disorder Symptoms? A Randomized Controlled Trial

by **Viridiana Montserrat Mendoza-Martinez**, **Mónica Rocio Zavala-Solares**, **Aranza Jhosadara Espinosa-Flores**, **Karen Lorena León-Barrera**, **Raúl Alcántara-Suárez**, **José Damián Carrillo-Ruiz**, **Galileo Escobedo**, **Ernesto Roldan-Valadez**, **Marcela Esquivel-Velázquez**, **Guillermo Meléndez-Mier** and **Nallely Bueno-Hernández**

*Nutrients* 2022, 14(5), 1095; <https://doi.org/10.3390/nu14051095> - 5 Mar 2022

Cited by 14 | Viewed by 7942

**Abstract** Background: A diet containing non-caloric sweeteners (NCS) could reduce calorie intake; conversely, some animal studies suggest that NCS consumption may increase functional gastrointestinal disorder symptoms (FGDs). This study aimed to compare the effect of consuming a diet containing NCS (c-NCS) versus a non-caloric [...] [Read more](#).

(This article belongs to the Section Clinical Nutrition)

[► Show Figures](#)

Open Access

Article

17 pages, 4158 KiB 

## Potential “Therapeutic” Effects of Tocotrienol-Rich Fraction (TRF) and Carotene “Against” Bleomycin-Induced Pulmonary Fibrosis in Rats via TGF-β/Smad, PI3K/Akt/mTOR and NF-κB Signaling Pathways

by **Yifei Lu**, **Yihan Zhang**, **Zhenyu Pan**, **Chao Yang**, **Lin Chen**, **Yuan Yuan Wang**, **Dengfeng Xu**, **Hui Xia**, **Shaokang Wang**, **Shiqing Chen**, **Yoong Jun Hao** and **Guiju Sun**

*Nutrients* 2022, 14(5), 1094; <https://doi.org/10.3390/nu14051094> - 5 Mar 2022

Cited by 14 | Viewed by 3892

**Abstract** Background: Pulmonary fibrosis (PF) is a chronic, progressive, and, ultimately, terminal interstitial disease caused by a variety of factors, ranging from genetics, bacterial, and viral infections, to drugs and other influences. Varying degrees of PF and [...] [Read more](#).

its rapid progress have been widely reported [...] [Read more](#).  
(This article belongs to the Section **Nutrigenetics and Nutrigenomics**)

► [Show Figures](#)

[Open Access](#) [Article](#)

13 pages, 2456 KiB [D](#) [E](#)

## Fasting-Mimicking Diet Reduces Trimethylamine N-Oxide Levels and Improves Serum Biochemical Parameters in Healthy Volunteers

by **Melita Videja, Eduards Sevostjanovs, Sabine Upmale-Engela, Edgars Liepinsh, Ilze Konrade and Maija Dambrova**

*Nutrients* 2022, 14(5), 1093; <https://doi.org/10.3390/nu14051093> - 5 Mar 2022

Cited by 20 | Viewed by 11161

**Abstract** Elevated plasma levels of trimethylamine N-oxide (TMAO) have been proposed as a diet-derived biomarker of cardiometabolic disease risk. Caloric restriction is the most common dietary intervention used to improve cardiometabolic health; however, novel trends suggest a fasting-mimicking diet (FMD) as a more feasible [...] [Read more](#).

(This article belongs to the Special Issue **The Implication of Intermittent Fasting on Health and Diseases**)

► [Show Figures](#)

[Open Access](#) [Article](#)

12 pages, 295 KiB [D](#)

## Cow's Milk Intake and Risk of Coronary Heart Disease in Korean Postmenopausal Women

by **Ae-Wha Ha, Woo-Kyoung Kim and Sun-Hyo Kim**

*Nutrients* 2022, 14(5), 1092; <https://doi.org/10.3390/nu14051092> - 5 Mar 2022

Cited by 3 | Viewed by 3735

**Abstract** Numerous studies have reported conflicting results associated with cow's milk intake and coronary heart disease (CHD). However, studies involving postmenopausal women are very limited. This study was therefore undertaken to identify the relationship between cow's milk intake and CHD risk in postmenopausal women, [...] [Read more](#).

(This article belongs to the Topic **Advances in Dairy Foods: From Production to Nutritional and Health Attributes**)

[Open Access](#) [Article](#)

11 pages, 1577 KiB [D](#) [E](#)

## Assessing the Causal Effects of Adipokines on Uric Acid and Gout: A Two-Sample Mendelian Randomization Study

by **Ruyi Cong, Xiaoyu Zhang, Zihong Song, Shanshan Chen, Guanhua Liu, Yizhi Liu, Xiuyu Pang, Fang Dong, Weijia Xing, Youxin Wang and Xizhu Xu**

*Nutrients* 2022, 14(5), 1091; <https://doi.org/10.3390/nu14051091> - 5 Mar 2022

Cited by 11 | Viewed by 3660

**Abstract** Previous observational studies have highlighted associations between adipokines and hyperuricemia, as well as gout, but the causality and direction of these associations are not clear. Therefore, we attempted to assess whether there are causal effects of specific adipokines (such as adiponectin (ADP) and [...] [Read more](#).

(This article belongs to the Special Issue **Mechanisms of Adipokine Action in Obesity Mediated Metabolic Comorbidities**)

► [Show Figures](#)

[Open Access](#) [Article](#)

13 pages, 2021 KiB [D](#)

## Effects of $\beta$ -Hydroxy $\beta$ -Methylbutyrate Supplementation on Working Memory and Hippocampal Long-Term Potentiation in Rodents

by **Alejandro Barranco, Llenalia Garcia, Agnes Gruart, Jose Maria Delgado-Garcia, Ricardo Rueda and Maria Ramirez**

*Nutrients* 2022, 14(5), 1090; <https://doi.org/10.3390/nu14051090> - 5 Mar 2022

Cited by 6 | Viewed by 3046

**Abstract**  $\beta$ -hydroxy  $\beta$ -methylbutyrate (HMB), a metabolite of the essential amino acid leucine, has been shown to preserve muscle mass and strength during aging. The signaling mechanism by which HMB elicits its favorable effects on protein metabolism in skeletal muscle is also preserved in the [...] [Read more](#).

(This article belongs to the Section **Geriatric Nutrition**)

► [Show Figures](#)

[Open Access](#) [Review](#)

12 pages, 475 KiB [D](#)

## Magnesium as an Important Factor in the Pathogenesis and Treatment of Migraine—From Theory to Practice

by **Izabela Domitrz and Joanna Cegielska**

*Nutrients* 2022, 14(5), 1089; <https://doi.org/10.3390/nu14051089> - 5 Mar 2022

Cited by 37 | Viewed by 21501

**Abstract** So far, no coherent and convincing theory has been developed to fully explain the pathogenesis of migraine, although many researchers and experts emphasize its association with spreading cortical depression, oxidative stress, vascular changes, nervous excitement, neurotransmitter release, and electrolyte disturbances. The contribution of [...] [Read more](#).

(This article belongs to the Special Issue **Magnesium: From In Vitro to Clinical Research**)

► [Show Figures](#)

[Open Access](#) [Article](#)

11 pages, 1489 KiB [D](#) [E](#)

## Protein Quality Changes of Vegan Day Menus with Different Plant Protein Source Compositions

by **Zaray Rojas Conzuelo, Natalie S. Bez, Steffen Theobald and Katrin A. Kopf-Bolanaz**

*Nutrients* 2022, 14(5), 1088; <https://doi.org/10.3390/nu14051088> - 4 Mar 2022

Cited by 13 | Viewed by 8234

**Abstract** To underline the importance of protein quality in plant-based diets, we estimated the protein quality of different exclusively plant-protein-based day menus that are based on the “planetary health diet” developed by the EAT-Lancet Commission. PDCAAS and DIAAS were used to estimate the protein [...] [Read more](#).

(This article belongs to the Special Issue **Dietary Amino Acids in Health and at All Stages of Life**)

► [Show Figures](#)

## Neohesperidin Dihydrochalcone and Neohesperidin Dihydrochalcone-O-Glycoside Attenuate Subcutaneous Fat and Lipid Accumulation by Regulating PI3K/AKT/mTOR Pathway In Vivo and In Vitro

by Minseo Kwon, Yerin Kim, Jihye Lee, John A. Manthey, Yang Kim and Yuri Kim

*Nutrients* 2022, 14(5), 1087; <https://doi.org/10.3390/nu14051087> - 4 Mar 2022

Cited by 19 | Viewed by 4469

**Abstract** Neohesperidin dihydrochalcone (NHDC), a semi-natural compound from bitter orange, is an intense sweetener. The anti-obesity effects of NHDC and its glycosidic compound, NHDC-O-glycoside (GNHDC), were investigated. C57BLKS/J db/db mice were supplemented with NHDC or GNHDC (100 mg/kg b.w.) for 4 weeks. Body weight [...] [Read more](#).  
(This article belongs to the Section Nutrition and Obesity)

► [Show Figures](#)

## Association between Dietary Calcium and Potassium and Diabetic Retinopathy: A Cross-Sectional Retrospective Study

by Yuan-Yuei Chen and Ying-Jen Chen

*Nutrients* 2022, 14(5), 1086; <https://doi.org/10.3390/nu14051086> - 4 Mar 2022

Cited by 11 | Viewed by 4265

**Abstract** Background: Micronutrients are considered to have an important role in metabolic process. The relationships between micronutrients and diabetic complication, such as retinopathy, are rarely discussed. The main purpose of the current study was to investigate the relationship between dietary micronutrients and diabetic retinopathy [...] [Read more](#).  
(This article belongs to the Section Micronutrients and Human Health)

► [Show Figures](#)

## Body Composition of Infants Born with Intrauterine Growth Restriction: A Systematic Review and Meta-Analysis

by Rukman Manapurath, Barsha Gadapani and Luís Pereira-da-Silva

*Nutrients* 2022, 14(5), 1085; <https://doi.org/10.3390/nu14051085> - 4 Mar 2022

Cited by 16 | Viewed by 5736

**Abstract** Intrauterine growth restriction (IUGR) may predispose metabolic diseases in later life. Changes in fat-free mass (FFM) and fat mass (FM) may explain this metabolic risk. This review studied the effect of IUGR on body composition in early infancy. Five databases and included studies [...] [Read more](#).  
(This article belongs to the Special Issue New Insights in Early Growth of Premature Infants: Lifelong Health Programming)

► [Show Figures](#)

## Food Addiction in Eating Disorders: A Cluster Analysis Approach and Treatment Outcome

by Lucero Munguía, Anahí Gaspar-Pérez, Susana Jiménez-Murcia, Roser Granero, Isabel Sánchez, Cristina Vintró-Alcaraz, Carlos Diéguez, Ashley N. Gearhardt and Fernando Fernández-Aranda

*Nutrients* 2022, 14(5), 1084; <https://doi.org/10.3390/nu14051084> - 4 Mar 2022

Cited by 17 | Viewed by 4716

**Abstract** Background: A first approach of a phenotypic characterization of food addiction (FA) found three clusters (dysfunctional, moderate and functional). Based on this previous classification, the aim of the present study is to explore treatment responses in the sample diagnosed with Eating Disorder(ED) of [...] [Read more](#).  
(This article belongs to the Special Issue Eating Disorders and Obesity: Through the Life Course)

► [Show Figures](#)

## Dietary Intake of Polyphenols or Polyunsaturated Fatty Acids and Its Relationship with Metabolic and Inflammatory State in Patients with Type 2 Diabetes Mellitus

by Marcin Kosmalksi, Anna Pękała-Wojciechowska, Agnieszka Sut, Tadeusz Pietras and Bogusława Luzak

*Nutrients* 2022, 14(5), 1083; <https://doi.org/10.3390/nu14051083> - 4 Mar 2022

Cited by 14 | Viewed by 4546

**Abstract** Background: The aim of the study was to evaluate the relationship between polyphenol or polyunsaturated fatty acids (PUFAs) consumption and the selected metabolic and inflammatory markers in type 2 diabetes (T2DM) patients. Methods: The study enrolled 129 diabetics (49 men, mean age 64.1 [...] [Read more](#).  
(This article belongs to the Section Phytochemicals and Human Health)

► [Show Figures](#)

## Cardiometabolic Indices after Weight Loss with Calcium or Dairy Foods: Secondary Analyses from a Randomized Trial with Overweight/Obese Postmenopausal Women

by Jasminka Z. Ilich, Pei-Yang Liu, Hyehyung Shin, Youjin Kim and Yichih Chi

*Nutrients* 2022, 14(5), 1082; <https://doi.org/10.3390/nu14051082> - 4 Mar 2022

Cited by 7 | Viewed by 5638

**Abstract** The role of dairy foods and calcium/vitamin D supplements in cardiometabolic diseases is unknown. The objective of this secondary analysis is to investigate cardiometabolic risk factors changes after a 6-month weight-loss intervention in overweight/obese postmenopausal women divided in three groups: Ca+vitamin D supplements [...] [Read more](#).  
(This article belongs to the Topic Advances in Dairy Foods: From Production to Nutritional and Health Attributes)

► [Show Figures](#)



## Beneficial Effects of the Very-Low-Calorie Ketogenic Diet on the Symptoms of Male Accessory Gland Inflammation

by Rosita A. Condorelli, Antonio Aversa, Livia Basile, Rossella Cannarella, Laura M. Mongioi, Laura Cimino, Sarah Perelli, Massimiliano Caprio, Sebastiano Cimino, Aldo E. Calogero and Sandro La Vignera

Nutrients 2022, 14(5), 1081; <https://doi.org/10.3390/nu14051081> - 4 Mar 2022

Cited by 5 | Viewed by 5378

**Abstract Introduction.** Obesity exposes individuals to the risk of chronic inflammation of the prostate gland. **Aim and design of the study.** A longitudinal clinical study was conducted on selected overweight/obese patients with male accessory gland inflammation (MAGI) to evaluate the effects of body weight [...] [Read more](#).

(This article belongs to the Special Issue The Role of Ketogenic Diet in Human Health and Diseases)

► Show Figures

Open Access

Article

12 pages, 943 KiB



## The Effects of Postprandial Walking on the Glucose Response after Meals with Different Characteristics

by Alessio Bellini, Andrea Nicolò, Ilenia Bazzucchi and Massimo Sacchetti

Nutrients 2022, 14(5), 1080; <https://doi.org/10.3390/nu14051080> - 4 Mar 2022

Cited by 8 | Viewed by 13974

**Abstract** We evaluated the effect of postprandial walking on the post-meal glycemic response after meals with different characteristics. Twenty-one healthy young volunteers participated in one of two randomized repeated measures studies. Study 1 (10 participants) assessed the effects of 30 min of brisk walking [...] [Read more](#).

(This article belongs to the Special Issue Recent Advances in Nutrition for Disease Prevention and Sports Performance Enhancement)

► Show Figures

Open Access

Article

12 pages, 776 KiB



## Factors Associated with Overweight and Obesity in Adults from Rio Branco, Acre in the Western Brazilian Amazon

by Yara de Moura Magalhães Lima, Fernanda Andrade Martins and Alanderson Alves Ramalho

Nutrients 2022, 14(5), 1079; <https://doi.org/10.3390/nu14051079> - 4 Mar 2022

Cited by 3 | Viewed by 3079

**Abstract** This study aimed to assess factors associated with overweight and obesity in adults from Rio Branco, Acre, in the western Brazilian Amazon. This is a cross-sectional, population-based study conducted in Rio Branco, which used data on individuals aged 18 years or older collected [...] [Read more](#).

(This article belongs to the Section Nutrition and Public Health)

► Show Figures

Open Access

Article

16 pages, 1188 KiB



## Lemon Myrtle (*Backhousia citriodora*) Extract and Its Active Compound, Casuarinin, Activate Skeletal Muscle Satellite Cells In Vitro and In Vivo

by Ayumi Yamamoto, Shinichi Honda, Mineko Ogura, Masanori Kato, Ryuichi Tanigawa, Hidemi Fujino and Seiji Kawamoto

Nutrients 2022, 14(5), 1078; <https://doi.org/10.3390/nu14051078> - 4 Mar 2022

Cited by 14 | Viewed by 8191

**Abstract** Sarcopenia is an age-related skeletal muscle atrophy. Exercise is effective in improving sarcopenia via two mechanisms: activation of skeletal muscle satellite cells (SCs) and stimulation of muscle protein synthesis. In contrast, most nutritional approaches for improving sarcopenia focus mainly on muscle protein synthesis, [...] [Read more](#).

(This article belongs to the Section Geriatric Nutrition)

► Show Figures

Open Access

Article

12 pages, 1997 KiB



## Red and Processed Meat Intake, Polygenic Risk Score, and Colorectal Cancer Risk

by Xuechen Chen, Michael Hoffmeister and Hermann Brenner

Nutrients 2022, 14(5), 1077; <https://doi.org/10.3390/nu14051077> - 3 Mar 2022

Cited by 14 | Viewed by 5110

**Abstract** High red and processed meat intake (RPMI) is an established risk factor for colorectal cancer (CRC). We aimed to assess the impact of RPMI on CRC risk according to and in comparison with genetically determined risk, which was quantified by a polygenic risk [...] [Read more](#).

(This article belongs to the Section Nutrigenetics and Nutrigenomics)

► Show Figures

Open Access

Systematic Review

22 pages, 1214 KiB



## Vitamin D Supplementation and Sleep: A Systematic Review and Meta-Analysis of Intervention Studies

by Myriam Abboud

Nutrients 2022, 14(5), 1076; <https://doi.org/10.3390/nu14051076> - 3 Mar 2022

Cited by 40 | Viewed by 19854

**Abstract** Background: Vitamin D deficiency is associated with sleep disorders and poor sleep quality. Whether vitamin D supplementation (VDS) helps resolve these problems remains unclear. Objective: To systematically review the effect of VDS on sleep quantity, quality, and disorders, and perform a meta-analysis of [...] [Read more](#).

(This article belongs to the Section Micronutrients and Human Health)

► Show Figures

Open Access

Article

11 pages, 646 KiB



## An Active Image-Based Mobile Food Record Is Feasible for Capturing Eating Occasions

### among Infants Ages 3–12 Months Old in Hawai'i

by Marie K. Fialkowski, Jessie Kai, Christina Young, Gemady Langfelder, Jacqueline Ng-Osorio, Zeman Shao, Fengqing Zhu, Deborah A. Kerr and Carol J. Boushey

*Nutrients* 2022, 14(5), 1075; <https://doi.org/10.3390/nu14051075> - 3 Mar 2022

Cited by 4 | Viewed by 3153

**Abstract** The ability to comprehensively assess the diet of infants is essential for monitoring adequate growth; however, it is challenging to assess dietary intake with a high level of accuracy. Infants rely on surrogate reporting by caregivers. This study aimed to determine if surrogate [...] [Read more](#).

(This article belongs to the Special Issue **Dietary Assessment and Self-Monitoring Using Technology**)

► [Show Figures](#)

Open Access

Article

15 pages, 1231 KiB



### Vitamin D Deficiency and Its Associated Factors among Female Migrants in the United Arab Emirates

by Fatme Al Anouti, Luai A. Ahmed, Azmat Riaz, William B. Grant, Nadir Shah, Raghib Ali, Juma Alkaabi and Syed M. Shah

*Nutrients* 2022, 14(5), 1074; <https://doi.org/10.3390/nu14051074> - 3 Mar 2022

Cited by 9 | Viewed by 5283

**Abstract** Vitamin D is important for bone health, and vitamin D deficiency could be linked to noncommunicable diseases, including cardiovascular disease. The purpose of this study was to determine the prevalence of vitamin D deficiency and its associated risk factors among female migrants from [...] [Read more](#).

(This article belongs to the Special Issue **COVID-19 and Other Pleiotropic Actions of Vitamin D: Proceedings from the 5th International Conference "Vitamin D—minimum, maximum, optimum"**)

► [Show Figures](#)

Open Access

Article

15 pages, 822 KiB



### Body Composition Assessment in Mexican Children and Adolescents. Part 1: Comparisons between Skinfold-Thickness, Dual X-ray Absorptiometry, Air-Displacement Plethysmography, Deuterium Oxide Dilution, and Magnetic Resonance Imaging with the 4-C Model

by Desiree Lopez-Gonzalez, Jonathan C. K. Wells, Alicia Parra-Carriedo, Gladys Bilbao, Martín Mendez and Patricia Clark

*Nutrients* 2022, 14(5), 1073; <https://doi.org/10.3390/nu14051073> - 3 Mar 2022

Cited by 7 | Viewed by 3262

**Abstract** The evaluation of body composition (BC) is relevant in the evaluation of children's health-disease states. Different methods and devices are used to estimate BC. The availability of methods and the clinical condition of the patient usually defines the ideal approach to be used. [...] [Read more](#).

(This article belongs to the Section **Nutrition and Public Health**)

► [Show Figures](#)

Open Access

Article

11 pages, 824 KiB



### Pre-Pregnancy Body Mass Index and Risk of Macrosomia and Large for Gestational Age Births with Gestational Diabetes Mellitus as a Mediator: A Prospective Cohort Study in Central China

by Xinli Song, Jing Shu, Senmao Zhang, Letao Chen, Jingyi Diao, Jinqi Li, Yihuan Li, Jianhui Wei, Yiping Liu, Mengting Sun, Tingting Wang and Jiabi Qin

*Nutrients* 2022, 14(5), 1072; <https://doi.org/10.3390/nu14051072> - 3 Mar 2022

Cited by 25 | Viewed by 7155

**Abstract** This study aimed to examine the risk of macrosomia and large for gestational age (LGA) births in relation to maternal pre-pregnancy body mass index (BMI) status mediated through gestational diabetes mellitus (GDM). This prospective study included 34,104 singleton pregnancies at 8–14 weeks of [...] [Read more](#).

(This article belongs to the Special Issue **Diet, Exercise and Gestational Diabetes Mellitus**)

► [Show Figures](#)

Open Access

Article

12 pages, 490 KiB



### Atherogenic Index of Plasma and Its Association with Risk Factors of Coronary Artery Disease and Nutrient Intake in Korean Adult Men: The 2013–2014 KNHANES

by Hye Ran Shin, SuJin Song, Jin Ah Cho and Sun Yung Ly

*Nutrients* 2022, 14(5), 1071; <https://doi.org/10.3390/nu14051071> - 3 Mar 2022

Cited by 31 | Viewed by 6422

**Abstract** Coronary artery disease (CAD) has been linked to one of the highest death rates globally. The atherogenic index of plasma (AIP) may be an important predictor of atherosclerosis and cardiovascular disease, superior to the standard atherosclerotic lipid profile. This study investigated the relationship [...] [Read more](#).

(This article belongs to the Special Issue **Nutrition, Obesity, and Cardiovascular Disease: Pathogenesis and Solution**)

► [Show Figures](#)

Open Access

Article

13 pages, 1593 KiB



### Milk and Fermented Milk Consumption and Risk of Stroke: Longitudinal Study

by Erika Olsson, Susanna C. Larsson, Jonas Höljer, Lena Kilander and Lilsa Byberg

*Nutrients* 2022, 14(5), 1070; <https://doi.org/10.3390/nu14051070> - 3 Mar 2022

Cited by 5 | Viewed by 3289

**Abstract** The role of milk and fermented milk consumption in stroke risk is unclear. We investigated associations of time-updated information on milk and fermented milk consumption (1997 and 2009) with total stroke, cerebral infarction, and hemorrhagic stroke risk among 79,618 Swedish women and men [...] [Read more](#).

(This article belongs to the Section **Nutritional Epidemiology**)

► [Show Figures](#)

## Taxifolin Alleviates DSS-Induced Ulcerative Colitis by Acting on Gut Microbiome to Produce Butyric Acid

by Wei Li, Le Zhang, Qingbiao Xu, Wenbo Yang, Jianan Zhao, Ying Ren, Zhendong Yu and Libao Ma

Nutrients 2022, 14(5), 1069; <https://doi.org/10.3390/nu14051069> - 3 Mar 2022

Cited by 61 | Viewed by 6572

**Abstract** Taxifolin is a bioflavonoid which has been used to treat Inflammatory Bowel Disease. However, taxifolin on DSS-induced colitis and gut health is still unclear. Here, we studied the effect of taxifolin on DSS-induced intestinal mucositis in mice. We measured the degree of intestinal [...] [Read more](#).

(This article belongs to the Special Issue Use of “Omics”-Based Technologies for Exploring the Potential Health Benefits of Polyphenols)

► [Show Figures](#)

## How Do We Assess Energy Availability and RED-S Risk Factors in Para Athletes?

by Kristin L. Jonvik, Birna Vardardottir and Elizabeth Broad

Nutrients 2022, 14(5), 1068; <https://doi.org/10.3390/nu14051068> - 3 Mar 2022

Cited by 13 | Viewed by 6099

**Abstract** Low energy availability (LEA) is considered to be the underlying cause of a number of maladaptations in athletes, including impaired physiological function, low bone mineral density (BMD), and hormonal dysfunction. This is collectively referred to as ‘Relative Energy Deficiency in Sport’ (RED-S). LEA [...] [Read more](#).

(This article belongs to the Special Issue Sport Nutrition Knowledge of Athletes and Implications for Dietary Habits, Nutrient Status and Energy Availability)

► [Show Figures](#)

## A Survey to Identify the Current Management of Cow's Milk Disorders and the Role of Goat Milk-Based Formulas in the Middle East and North Africa Region

by Wael A. Bahbah, Mostafa ElHodhod, Mohamed Salah, Fawaz AlRefaee, Muath AlTuraiiki, Samira Mousa, Ali Al Mehaidib, Wafaa Helmi Ayesh, Ahmed N. El-Bazzar, Joseph El Haddad, Heba Y. El Khashab, Amr El Zawahry, Mohammed Hasosah, Sanaa Youssef Shaaban and Yvan Vandenplas

Nutrients 2022, 14(5), 1067; <https://doi.org/10.3390/nu14051067> - 3 Mar 2022

Cited by 4 | Viewed by 3711

**Abstract** Background: Cow's milk allergy (CMA) and cow's milk intolerance (CMI) are the major cow's milk disorders observed in infants and young children. This study investigates, for the first time, physician knowledge regarding CMA and CMI prevalence, diagnosis, and management in the Middle East [...] [Read more](#).

(This article belongs to the Special Issue Dietary Intake and Nutrition for Pediatric Allergic Diseases)

## Reducing Metabolic Syndrome through a Group Educational Intervention Program in Adults with Obesity: IGOBE Program

by Cristina Tejera, Cristina Porca, Gemma Rodriguez-Carnero, Paula Andújar, Felipe F. Casanueva, Diego Bellido and Ana B. Crujeiras

Nutrients 2022, 14(5), 1066; <https://doi.org/10.3390/nu14051066> - 3 Mar 2022

Cited by 5 | Viewed by 3329

**Abstract** Metabolic syndrome (MetS) increases the risk of cardiovascular disease, type 2 diabetes mellitus, and cancer. Despite the higher prevalence of MetS in obese adults, little is known about the effectiveness of intensive and group interventions in improving MetS prevalence. This study aimed to [...] [Read more](#).

(This article belongs to the Special Issue The Role of Diet and Nutrition in Preventing Abdominal Obesity)

► [Show Figures](#)

## Health Behaviors of Austrian Secondary School Teachers and Principals at a Glance: First Results of the *From Science 2 School* Study Focusing on Sports Linked to Mixed, Vegetarian, and Vegan Diets

by Katharina C. Wirnitzer, Clemens Drenowatz, Armando Cocca, Derrick R. Tanous, Mohamad Motevalli, Gerold Wirnitzer, Manuel Schätzer, Gerhard Ruedl and Werner Kirschner

Nutrients 2022, 14(5), 1065; <https://doi.org/10.3390/nu14051065> - 3 Mar 2022

Cited by 10 | Viewed by 4186

**Abstract** Lifestyle behaviors are key contributors to sustainable health and well-being over the lifespan. The analysis of health-related behaviors is crucial for understanding the state of health in different populations, especially teachers who play a critical role in establishing the lifelong health behaviors of [...] [Read more](#).

(This article belongs to the Special Issue Physical Activity, Sedentary Behaviors, Diet and Cardiometabolic Risk Factors in Adolescents)

► [Show Figures](#)

## The Glycemic Response to Infant Formulas: A Randomized Clinical Trial

by Adi Anafy, Hadar Moran-Lev, Niva Shapira, Meital Priel, Asaf Oren, Laurence Mangel, Dror Mandel and Ronit Lubetzky

Nutrients 2022, 14(5), 1064; <https://doi.org/10.3390/nu14051064> - 3 Mar 2022

Cited by 5 | Viewed by 2770

**Abstract** Background: Commercial infant formulas attempt to imitate human milk's unique composition. However, lactose-free and milk protein-free formulas are often chosen due to medical reasons or personal preferences. The aim of this study was to determine the glycemic and insulinemic indices of a variety [...] [Read more](#).

(This article belongs to the Special Issue Cow's Milk and Human Health)

► [Show Figures](#)



Open Access Article

12 pages, 480 KIB

## Association between Physical Activity and Non-Alcoholic Fatty Liver Disease in Adults with Metabolic Syndrome: The FLIPAN Study

by Catalina M. Mascaró, Cristina Bouzas, Sofia Montemayor, Miguel Casares, Cristina Gómez, Lucía Ugarriza, Pere-Antoni Borràs, José Alfredo Martínez and Josep A. Tur

*Nutrients* 2022, 14(5), 1063; <https://doi.org/10.3390/nu14051063> - 3 Mar 2022

Cited by 6 | Viewed by 3408

**Abstract** Background: A lifestyle with regular PA (physical activity) and Mediterranean diet has benefits on NAFLD (non-alcoholic fatty liver disease) and MetS (metabolic syndrome). Objectives: To assess the association between physical activity and NAFLD in adults with MetS. Design: Cross-sectional study in 155 participants [...] [Read more](#).

(This article belongs to the Special Issue Management of Non-alcoholic Fatty Liver Disease from Primary Care: Prevention and Intervention through Nutrition and Physical Exercise)

► [Show Figures](#)

Open Access Article

9 pages, 620 KIB

## Dietetic-Led Nutrition Interventions in Patients with COVID-19 during Intensive Care and Ward-Based Rehabilitation: A Single-Center Observational Study

by Ella Terblanche, Jessica Hills, Edie Russell, Rhiannon Lewis and Louise Rose

*Nutrients* 2022, 14(5), 1062; <https://doi.org/10.3390/nu14051062> - 3 Mar 2022

Cited by 5 | Viewed by 2666

**Abstract** Background: In this study, a report of dietitian-led nutrition interventions for patients with COVID-19 during ICU and ward-based rehabilitation is provided. As knowledge of COVID-19 and its medical treatments evolved through the course of the pandemic, dietetic-led interventions were compared between surge 1 [...] [Read more](#).

(This article belongs to the Section Clinical Nutrition)

► [Show Figures](#)

Open Access Feature Paper Review

25 pages, 2037 KIB

## Food-Related Carbonyl Stress in Cardiometabolic and Cancer Risk Linked to Unhealthy Modern Diet

by Carla Iacobini, Martina Vitale, Jonida Haxhi, Carlo Pesce, Giuseppe Pugliese and Stefano Menini

*Nutrients* 2022, 14(5), 1061; <https://doi.org/10.3390/nu14051061> - 3 Mar 2022

Cited by 20 | Viewed by 5389

**Abstract** Carbonyl stress is a condition characterized by an increase in the steady-state levels of reactive carbonyl species (RCS) that leads to accumulation of their irreversible covalent adducts with biological molecules. RCS are generated by the oxidative cleavage and cellular metabolism of lipids and [...] [Read more](#).

(This article belongs to the Special Issue Impact of Nutrients, Food Components, and Food Processing on Cardio-metabolic and Cancer Risk)

► [Show Figures](#)

Open Access Article

11 pages, 824 KIB

## Exposure to Chinese Famine during Early Life Increases the Risk of Fracture during Adulthood

by Zumin Shi, Xinyu Shi and Alice F. Yan

*Nutrients* 2022, 14(5), 1060; <https://doi.org/10.3390/nu14051060> - 3 Mar 2022

Cited by 6 | Viewed by 2263

**Abstract** This study focused on identifying whether exposure to the Chinese Great Famine (1959–1961) in early life amplified the potential for fractures in adulthood. The survey was conducted using data from the 1997–2015 China Health and Nutrition Survey (CHNS)—5235 adults born between 1954 and [...] [Read more](#).

(This article belongs to the Section Nutritional Epidemiology)

► [Show Figures](#)

Open Access Article

12 pages, 1039 KIB

## Feasibility of Food FARMacia: Mobile Food Pantry to Reduce Household Food Insecurity in Pediatric Primary Care

by Jennifer A. Woo Baidal, Dodi Meyer, Ivette Partida, Ngoc Duong, Alyson Rosenthal, Emma Hulse, Andres Nieto and on behalf of the HERALD Collaborative

*Nutrients* 2022, 14(5), 1059; <https://doi.org/10.3390/nu14051059> - 3 Mar 2022

Cited by 10 | Viewed by 4792

**Abstract** Despite recommendations for systematic food insecurity screening in pediatric primary care, feasible interventions in clinical settings are lacking. The goal of this study was to examine reach, feasibility, and retention in Food FARMacia, a pilot clinically based food insecurity intervention among children aged [...] [Read more](#).

(This article belongs to the Section Nutrition and Obesity)

► [Show Figures](#)

Open Access Article

11 pages, 657 KIB

## Improvements in Body Composition after a Proposed Anti-Inflammatory Diet Are Modified by Employment Status in Weight-Stable Patients with Rheumatoid Arthritis, a Randomized Controlled Crossover Trial

by Erik Hulander, Helen M. Lindqvist, Anna Turesson Wadell, Inger Gjørtsson, Anna Winkvist and Linnea Bärebring

*Nutrients* 2022, 14(5), 1058; <https://doi.org/10.3390/nu14051058> - 2 Mar 2022

Cited by 6 | Viewed by 3671

**Abstract** Rheumatoid Arthritis (RA) is an autoimmune disease affecting peripheral joints. Chronic activation of inflammatory pathways results in decreased function and the development of comorbidities, such as loss of lean mass while retaining total body mass. The objective of this report was to assess [...] [Read more](#).

► **Show Figures**

Open Access Article

19 pages, 357 KiB

## Social Factors of Dietary Risk Behavior in Older German Adults: Results of a Multivariable Analysis

by **Christoph Geigl, Julika Loss, Michael Leitzmann and Christian Janssen**

*Nutrients* 2022, 14(5), 1057; <https://doi.org/10.3390/nu14051057> - 2 Mar 2022

Cited by 9 | Viewed by 3230

**Abstract** With this analysis, we aimed to examine the associations between social factors and dietary risk behavior in older adults. Data were collected through a full-population postal survey of German adults aged 65 years or older ( $n = 1687$ , 33% response proportion, 52% [...]) [Read more](#).

(This article belongs to the Section **Nutrition and Public Health**)

Open Access Article

13 pages, 956 KiB

## FADS1 and FADS2 Gene Polymorphisms Modulate the Relationship of Omega-3 and Omega-6 Fatty Acid Plasma Concentrations in Gestational Weight Gain: A NISAMI Cohort Study

by **Jerusa da Mota Santana, Marcos Pereira, Gisele Queiroz Carvalho, Maria do Carmo Gouveia Peluzio, Iúri Drumond Louro, Djanilson Barbosa dos Santos and Ana MarluCIA Oliveira**

*Nutrients* 2022, 14(5), 1056; <https://doi.org/10.3390/nu14051056> - 2 Mar 2022

Cited by 13 | Viewed by 4010

**Abstract** The polymorphisms of fatty acid desaturase genes FADS1 and FADS2 have been associated with an increase in weight gain. We investigated FADS1 and FADS2 gene polymorphisms and the relation between  $\omega$ -3 and  $\omega$ -6 fatty acid plasma concentrations and gestational weight gain. A prospective [...] [Read more](#).

(This article belongs to the Section **Lipids**)

► **Show Figures**

Open Access Article

13 pages, 960 KiB

## Maternal Zinc, Copper, and Selenium Intakes during Pregnancy and Congenital Heart Defects

by **Jiaomei Yang, Yijun Kang, Qianqian Chang, Binyan Zhang, Xin Liu, Lingxia Zeng, Hong Yan and Shaonong Dang**

*Nutrients* 2022, 14(5), 1055; <https://doi.org/10.3390/nu14051055> - 2 Mar 2022

Cited by 19 | Viewed by 4456

**Abstract** The effects of zinc, copper, and selenium on human congenital heart defects (CHDs) remain unclear. This study aimed to investigate the associations of the maternal total, dietary, and supplemental intakes of zinc, copper, and selenium during pregnancy with CHDs. A hospital-based case-control study [...] [Read more](#).

(This article belongs to the Special Issue **Micronutrients in Maternal and Infant Health: Where We Are and Where We Should Go**)

► **Show Figures**

Open Access Article

17 pages, 1401 KiB

## Reduced Kidney Function Is Associated with Increasing Red Blood Cell Folate Concentration and Changes in Folate Form Distributions (NHANES 2011–2018)

by **Arick Wang, Lorraine F. Yeung, Nilka Rios Burrows, Charles E. Rose, Zia Fazili, Christine M. Pfeiffer and Krista S. Crider**

*Nutrients* 2022, 14(5), 1054; <https://doi.org/10.3390/nu14051054> - 2 Mar 2022

Cited by 11 | Viewed by 4699

**Abstract** Background: Current studies examining the effects of high concentrations of red blood cell (RBC) or serum folates assume that high folate concentrations are an indicator of high folic acid intakes, often ignoring the contributions of other homeostatic and biological processes, such as kidney [...] [Read more](#).

(This article belongs to the Section **Nutritional Epidemiology**)

► **Show Figures**

Open Access Article

15 pages, 3942 KiB

## The Effects of Commonly Consumed Dietary Fibres on the Gut Microbiome and Its Fibre Fermentative Capacity in Adults with Inflammatory Bowel Disease in Remission

by **Konstantinos Gerasimidis, Ben Nichols, Mhairi McGowan, Vaios Svolos, Rodanthi Papadopoulou, Margarita Kokkorou, Martina Rebull, Teresita Bello Gonzalez, Richard Hansen, Richard Kay Russell and Daniel Richard Gaya**

*Nutrients* 2022, 14(5), 1053; <https://doi.org/10.3390/nu14051053> - 2 Mar 2022

Cited by 16 | Viewed by 5539

**Abstract** Introduction: It has been suggested that the gut microbiome of patients with inflammatory bowel disease (IBD) is unable to ferment dietary fibre. This project explored the in vitro effect of fibre fermentation on production of short-chain fatty acids (SCFA) and on microbiome composition. [...] [Read more](#).

(This article belongs to the Special Issue **Advances in Nutrition in Pediatric Gastroenterology**)

► **Show Figures**

Open Access Article

14 pages, 1258 KiB

## Incremental Doses of Nitrate-Rich Beetroot Juice Do Not Modify Cognitive Function and Cerebral Blood Flow in Overweight and Obese Older Adults: A 13-Week Pilot Randomised Clinical Trial

by **Abrar M. Babateen, Oliver M. Shannon, Gerard M. O'Brien, Edward Okello, Ellen Smith, Dilara Olgacer, Christina Koehl, William Fostier, Emma Wightman, David Kennedy, John C. Mathers and Mario Siervo**

*Nutrients* 2022, 14(5), 1052; <https://doi.org/10.3390/nu14051052> - 2 Mar 2022

Cited by 10 | Viewed by 3230

Cited by 11 | Viewed by 48/0

**Abstract** Nitrate-rich food increases nitric oxide (NO) production and may have beneficial effects on vascular, metabolic, and brain function. This pilot study tested the effects of prolonged consumption of a range of doses of dietary nitrate ( $\text{NO}_3^-$ ), provided as beetroot juice, [...] [Read more](#).

(This article belongs to the Section Nutrition and Obesity)

► [Show Figures](#)

[Open Access](#)

[Article](#)

19 pages, 4743 KiB [Download](#) [Share](#)

### Moderate Folic Acid Supplementation in Pregnant Mice Results in Altered Sex-Specific Gene Expression in Brain of Young Mice and Embryos

by Yan Luan, Marta Cosín-Tomás, Daniel Leclerc, Olga V. Malysheva, Marie A. Caudill and Rima Rozen

*Nutrients* 2022, 14(5), 1051; <https://doi.org/10.3390/nu14051051> - 2 Mar 2022

Cited by 10 | Viewed by 3506

**Abstract** Food fortification and increased vitamin intake have led to higher folic acid (FA) consumption by many pregnant women. We showed that FA-supplemented diet in pregnant mice (fivefold higher FA than the recommended level (5x $\text{FASD}$ )) led to hyperactivity-like behavior and memory impairment in pups. [...] [Read more](#).

(This article belongs to the Special Issue Folate and Other B Vitamins in Brain Health and Disease)

► [Show Figures](#)

[Open Access](#)

[Article](#)

17 pages, 481 KiB [Download](#) [Share](#)

### FTO and ADRB2 Genetic Polymorphisms Are Risk Factors for Earlier Excessive Gestational Weight Gain in Pregnant Women with Pregestational Diabetes Mellitus: Results of a Randomized Nutrigenetic Trial

by Karina dos Santos, Eliane Lopes Rosado, Ana Carolina Proença da Fonseca, Gabriella Pinto Belfort, Leticia Barbosa Gabriel da Silva, Marcelo Ribeiro-Alves, Verônica Marques Zembrzski, J. Alfredo Martínez and Cláudia Saunders

*Nutrients* 2022, 14(5), 1050; <https://doi.org/10.3390/nu14051050> - 1 Mar 2022

Cited by 10 | Viewed by 4634

**Abstract** Excessive gestational weight gain (GWG) is associated with increased risk of maternal and neonatal complications. We investigated obesity-related polymorphisms in the FTO gene (rs9839609, rs17817449) and ADRB2 (rs1042713, rs1042714) as candidate risk factors concerning excessive GWG in pregnant women with pregestational diabetes. This [...] [Read more](#).

(This article belongs to the Special Issue Gene Polymorphism and Nutrition: Relationships with Chronic Disease)

► [Show Figures](#)

[Open Access](#)

[Article](#)

19 pages, 3440 KiB [Download](#) [Share](#)

### Gut Microbiota Modulation of Moderate Undernutrition in Infants through Gummy *Lactobacillus plantarum* Dad-13 Consumption: A Randomized Double-Blind Controlled Trial

by Rafli Zulfa Kamil, Agnes Murdiati, Mohammad Juffrie and Endang Sutriswati Rahayu

*Nutrients* 2022, 14(5), 1049; <https://doi.org/10.3390/nu14051049> - 1 Mar 2022

Cited by 30 | Viewed by 4812

**Abstract** Undernutrition is associated with gut microbiota imbalance, and probiotics are believed to restore it and improve gut integrity. A randomized double-blind controlled trial was conducted to evaluate the efficacy of gummy *L. plantarum* Dad-13 ( $10^{9-9}$  CFU/3 g) to prevent the progression of [...] [Read more](#).

(This article belongs to the Special Issue Diet and Nutritional Intervention for the Infant Gut Microbiome)

► [Show Figures](#)

[Open Access](#)

[Article](#)

15 pages, 1113 KiB [Download](#) [Share](#)

### Longer Participation in the Special Supplemental Nutrition Program for Women, Infants, and Children Is Not Associated with Reduced Sugar-Sweetened Beverage Intake among Black Participants

by Christopher E. Anderson, Catherine E. Martinez, Keelia O'Malley, Lorrene D. Ritchie and Shannon E. Whaley

*Nutrients* 2022, 14(5), 1048; <https://doi.org/10.3390/nu14051048> - 28 Feb 2022

Cited by 1 | Viewed by 2912

**Abstract** This study assessed relationships of duration of family Special Supplemental Nutrition Program for Women, Infants and Children (WIC) participation with racial/ethnic disparities in child sugar-sweetened beverage (SSB) and water intake. Child beverage intake and family duration on WIC were collected during three cross-sectional [...] [Read more](#).

(This article belongs to the Special Issue The Influence of Social Determinants, Nutrition Policy on Healthy Eating Lifestyle)

► [Show Figures](#)

[Open Access](#)

[Article](#)

23 pages, 1717 KiB [Download](#) [Share](#)

### Red-Fleshed Apples Rich in Anthocyanins and White-Fleshed Apples Modulate the Aorta and Heart Proteome in Hypercholesterolaemic Rats: The AppleCOR Study

by Úrsula Catalán, Anna Pedret, Silvia Yuste, Laura Rubió, Carme Piñol, Berner Andrée Sandoval-Ramírez,

Judit Companys, Elisabet Foguet, Pol Herrero, Núria Canela, Maria-Jose Motilva and Rosa Solà

*Nutrients* 2022, 14(5), 1047; <https://doi.org/10.3390/nu14051047> - 28 Feb 2022

Cited by 5 | Viewed by 3869

**Abstract** The impact of a red-fleshed apple (RFA) rich in anthocyanins (ACNs), a white-fleshed apple (WFA) without ACNs, and an extract infusion from *Aronia* fruit (AI) equivalent in dose of cyanidin-3-O-galactoside (main ACN) as RFA was determined by the proteome profile of aorta and [...] [Read more](#).

(This article belongs to the Special Issue Bioactive Compounds in the Prevention of Hypertension)

► [Show Figures](#)

[Open Access](#)

[Article](#)

19 pages, 2494 KiB [Download](#) [Share](#)

### Effect of the Consumption of Alcohol-Free Beers with Different Carbohydrate Composition





## on Postprandial Metabolic Response

by Itziar Lamiquiz-Moneo, Sofia Pérez-Calahorra, Irene Gracia-Rubio, Alberto Cebollada, Ana M. Bea, Antonio Fumanal, Ana Ferrer-Mairal, Ascensión Prieto-Martín, María Luisa Sanz-Fernández, Ana Cenarro, Fernando Civeira and Rocio Mateo-Gallego

*Nutrients* 2022, 14(5), 1046; <https://doi.org/10.3390/nu14051046> - 28 Feb 2022

Cited by 8 | Viewed by 3562

**Abstract** Background: We investigated the postprandial effects of an alcohol-free beer with modified carbohydrate (CH) composition compared to regular alcohol-free beer. Methods: Two randomized crossover studies were conducted. In the first study, 10 healthy volunteers received 25 g of CH in four different periods, [...] [Read more](#).

(This article belongs to the Section Carbohydrates)

► [Show Figures](#)

[Open Access](#) [Editor's Choice](#) [Article](#)

21 pages, 548 KiB

## Gender Differences in the Relationships between Perceived Stress, Eating Behaviors, Sleep, Dietary Risk, and Body Mass Index

by Chen Du, Mary Adjepong, Megan Chong Hueh Zan, Min Jung Cho, Jenifer I. Fenton, Pao Ying Hsiao, Laura Keaver, Heesoon Lee, Mary-Jon Ludy, Wan Shen, Winnie Chee Siew Swee, Jyothi Thrivikraman, Felicity Amoah-Agyei, Emilie de Kanter, Wenyan Wang and Robin M. Tucker

*Nutrients* 2022, 14(5), 1045; <https://doi.org/10.3390/nu14051045> - 28 Feb 2022

Cited by 35 | Viewed by 8572

**Abstract** Background: Obesity is a growing epidemic among university students, and the high levels of stress reported by this population could contribute to this issue. Singular relationships between perceived stress; engagement in restrained, uncontrolled, and emotional eating; sleep; dietary risk; and body mass index [...] [Read more](#).

(This article belongs to the Section Nutrition and Public Health)

► [Show Figures](#)

[Open Access](#) [Article](#)

14 pages, 2927 KiB

## Korean Red Ginseng Extract Inhibits IL-8 Expression via Nrf2 Activation in *Helicobacter pylori*-Infected Gastric Epithelial Cells

by Hae Sou Kim, Joo Weon Lim and Hyeyoung Kim

*Nutrients* 2022, 14(5), 1044; <https://doi.org/10.3390/nu14051044> - 28 Feb 2022

Cited by 17 | Viewed by 4405

**Abstract** *Helicobacter pylori* (*H. pylori*) causes gastric diseases by increasing reactive oxygen species (ROS) and interleukin (IL)-8 expression in gastric epithelial cells. ROS and inflammatory responses are regulated by the activation of nuclear factor erythroid-2-related factor 2 (Nrf2) and the expression of [...] [Read more](#).

(This article belongs to the Special Issue Bioactive Natural and Synthetic Products in Human Health and Diseases: Basic, Preclinical and Clinical Studies)

► [Show Figures](#)

[Open Access](#) [Article](#)

12 pages, 1359 KiB

## A Randomized Controlled Trial Examining the Effects of Mindful Eating and Eating without Distractions on Food Intake over a Three-Day Period

by Lana Seguias and Katy Tapper

*Nutrients* 2022, 14(5), 1043; <https://doi.org/10.3390/nu14051043> - 28 Feb 2022

Cited by 9 | Viewed by 5067

**Abstract** This study compared the effects of mindful eating and eating without distractions on energy intake and diet over a 3-day period among healthy-weight females. Mindful eating was defined as attending to the sensory properties of one's food as one eats. Participants (*n* [...]) [Read more](#).

(This article belongs to the Section Nutrition and Public Health)

► [Show Figures](#)

[Open Access](#) [Article](#)

13 pages, 1720 KiB

## Sweet, Salty, and Umami Taste Sensitivity and the Hedonic Perception of Taste Sensations in Adolescent Females with Anorexia Nervosa

by Magdalena Hartman-Petrycka, Ewa Klimacka-Nawrot, Katarzyna Ziora, Wanda Suchecka, Piotr Gorczyca, Katarzyna Rojewska and Barbara Błońska-Fajfrowska

*Nutrients* 2022, 14(5), 1042; <https://doi.org/10.3390/nu14051042> - 28 Feb 2022

Cited by 7 | Viewed by 3456

**Abstract** Objective: The aim of this study was to perform analysis of sensitivity to sweet, salty, and umami tastes based on three measurement methods and of the hedonic perception of taste sensations in adolescent females with anorexia nervosa (AN). The aim of the research [...] [Read more](#).

(This article belongs to the Section Nutrition in Women)

► [Show Figures](#)

[Open Access](#) [Article](#)

14 pages, 13096 KiB

## Oral Acid Load Down-Regulates Fibroblast Growth Factor 23

by Angela Vidal, Carmen Pineda, Ana I. Raya, Rafael Rios, Azahara Espartero, Juan R. Muñoz-Castañeda, Mariano Rodríguez, Escolástico Agullera-Tejero and Ignacio Lopez

*Nutrients* 2022, 14(5), 1041; <https://doi.org/10.3390/nu14051041> - 28 Feb 2022

Viewed by 2509

**Abstract** Increased dietary acid load has a negative impact on health, particularly when renal function is compromised. Fibroblast growth factor 23 (FGF23) is a bone-derived hormone that is elevated during renal failure. The relationship between metabolic acidosis and FGF23 remains unclear. To investigate the [...] [Read more](#).

(This article belongs to the Section Nutrition and Public Health)

► [Show Figures](#)



## Early Feeding Practices and Celiac Disease Prevention: Protocol for an Updated and Revised Systematic Review and Meta-Analysis

by Hania Szajewska, Raanan Shamir, Anna Chmielewska, Agata Stróżyk, Bartłomiej M. Zalewski, Renata Auricchio, Sibylle Koletzko, Ilma R. Korponay-Szabo, Luisa Mearin, Caroline Meijer, Carmen Ribes-Koninckx, Riccardo Troncone and on behalf of the PREVENTCD Study Group

*Nutrients* 2022, 14(5), 1040; <https://doi.org/10.3390/nu14051040> - 28 Feb 2022

Cited by 3 | Viewed by 3432

**Abstract** Uncertainty remains in regard to when, how, and in what form gluten should be introduced into the diet, particularly of infants genetically predisposed to developing celiac disease (CD). MEDLINE (PubMed), EMBASE, and Cochrane Central Register of Controlled Trials databases will be searched from [...] [Read more](#).

(This article belongs to the Section Pediatric Nutrition)

## Towards a Common Definition for the Diagnosis of Iron Deficiency in Chronic Inflammatory Diseases

by Patrice Cacoub, Gabriel Choukroun, Alain Cohen-Solal, Elisabeth Luporsi, Laurent Peyrin-Biroulet, Katell Peoc'h, Valérie Andrieu, Sigismond Lasocki, Hervé Puy and Jean-Noël Trochu

*Nutrients* 2022, 14(5), 1039; <https://doi.org/10.3390/nu14051039> - 28 Feb 2022

Cited by 18 | Viewed by 3960

**Abstract** Iron deficiency (ID) in patients with chronic inflammatory diseases is frequent. However, under-diagnosis is also frequent due to the heterogeneity between guidelines from different medical societies. We applied a common definition for the diagnosis of ID to a large panel of patients with [...] [Read more](#).

(This article belongs to the Section Nutritional Epidemiology)

► Show Figures

## Mental and Behavioural Responses to Bahá'í Fasting: Looking behind the Scenes of a Religiously Motivated Intermittent Fast Using a Mixed Methods Approach

by Raphaela M. Ring, Clemens Eisenmann, Farid I. Kandil, Nico Steckhan, Sarah Demmrich, Caroline Klatte, Christian S. Kessler, Michael Jeitler, Michael Boschmann, Andreas Michalsen, Sarah B. Blakeslee, Barbara Stöckigt, Wiebke Stritter and Daniela A. Koppold-Liebscher

*Nutrients* 2022, 14(5), 1038; <https://doi.org/10.3390/nu14051038> - 28 Feb 2022

Cited by 13 | Viewed by 4950

**Abstract** Background/Objective: Historically, fasting has been practiced not only for medical but also for religious reasons. Bahá'ís follow an annual religious intermittent dry fast of 19 days. We inquired into motivation behind and subjective health impacts of Bahá'í fasting. Methods: A convergent parallel mixed [...] [Read more](#).

(This article belongs to the Special Issue The Implication of Intermittent Fasting on Health and Diseases)

► Show Figures

## Barriers and Enablers to Delegating Malnutrition Care Activities to Dietitian Assistants

by Alita Rushton, Judith Bauer, Adrienne Young, Heather Keller and Jack Bell

*Nutrients* 2022, 14(5), 1037; <https://doi.org/10.3390/nu14051037> - 28 Feb 2022

Cited by 5 | Viewed by 5821

**Abstract** Delegation of malnutrition care to dietitian assistants can positively influence patient, healthcare, and workforce outcomes. However, nutrition care for hospital inpatients with or at risk of malnutrition remains primarily individually delivered by dietitians—an approach that is not considered sustainable. This study aimed to [...] [Read more](#).

(This article belongs to the Section Nutrition and Public Health)

► Show Figures

## The Clinical, Microbiological, and Immunological Effects of Probiotic Supplementation on Prevention and Treatment of Periodontal Diseases: A Systematic Review and Meta-Analysis

by Zohre Gheisary, Razi Mahmood, Aparna Harri shivanantham, Juxin Liu, Jessica R. L. Liefers, Petros Papagerakis and Silvana Papagerakis

*Nutrients* 2022, 14(5), 1036; <https://doi.org/10.3390/nu14051036> - 28 Feb 2022

Cited by 40 | Viewed by 10059

**Abstract** (1) Background: Periodontal diseases are a global health concern. They are multi-stage, progressive inflammatory diseases triggered by the inflammation of the gums in response to periodontopathogens and may lead to the destruction of tooth-supporting structures, tooth loss, and systemic health problems. This systematic [...] [Read more](#).

(This article belongs to the Special Issue Nutrition and Human Oral Health)

► Show Figures

## Bioavailability, Efficacy, Safety, and Regulatory Status of Creatine and Related Compounds: A Critical Review

by Richard B. Kreider, Ralf Jäger and Martin Purpura

*Nutrients* 2022, 14(5), 1035; <https://doi.org/10.3390/nu14051035> - 28 Feb 2022

Cited by 55 | Viewed by 34272

**Abstract** In 2011, we published a paper providing an overview about the bioavailability, efficacy, and regulatory status of creatine monohydrate (CrM), as well as other "novel forms" of creatine that were being marketed at the time. This paper concluded that no other purported form [...] [Read more](#).

(This article belongs to the Special Issue Creatine Supplementation for Health and Clinical Diseases)

► Show Figures

## Impact of Lifestyle Modifications on Alterations in Lipid and Glycemic Profiles and Uric Acid Values in a Pediatric Population

by Marco Giussani, Antonina Orlando, Elena Tassistro, Giulia Lieti, Ilenia Patti, Laura Antolini, Gianfranco Parati and Simonetta Genovesi

*Nutrients* 2022, 14(5), 1034; <https://doi.org/10.3390/nu14051034> - 28 Feb 2022

Cited by 11 | Viewed by 3451

**Abstract** Cardiometabolic risk factors are frequent in children and adolescents with excess weight. The aim of this study was to evaluate the effects of lifestyle modifications on alterations in lipid and glycemic profiles and uric acid values in a pediatric population at increased cardiovascular [...]. [Read more.](#)

(This article belongs to the Special Issue Nutritional Habits and Interventions in Childhood)

[► Show Figures](#)

## Vitamin Supplementation and Dementia: A Systematic Review

by Victoria Gil Martínez, Ana Avedillo Salas and Sonia Santander Ballestín

*Nutrients* 2022, 14(5), 1033; <https://doi.org/10.3390/nu14051033> - 28 Feb 2022

Cited by 63 | Viewed by 18736

**Abstract** Background: Dementia is a syndrome characterized by progressive cognitive impairment that interferes with independent function in daily activities. Symptoms of dementia depend on its cause and vary greatly between individuals. There is extensive evidence supporting a relationship between diet and cognitive functions. This [...]. [Read more.](#)

(This article belongs to the Special Issue Vitamins and Human Health)

[► Show Figures](#)

## Gestational Age-Related Associations between Early-Life Feeding Trajectories and Growth Outcomes at Term Equivalent Age in Very Preterm Infants

by Yung-Chieh Lin, Chi-Hsiang Chu, Yen-Ju Chen, Ray-Bing Chen and Chao-Ching Huang

*Nutrients* 2022, 14(5), 1032; <https://doi.org/10.3390/nu14051032> - 28 Feb 2022

Cited by 2 | Viewed by 2650

**Abstract** Establishing the different feeding trajectories based on daily enteral feeding data in preterm infants at different gestational ages (GAs), may help to identify the risks and extrauterine growth restriction (EUGR) outcomes associated with the adverse feeding pattern. In a single center, we retrospectively [...]. [Read more.](#)

(This article belongs to the Special Issue Feeding in Preterm Infants)

[► Show Figures](#)

## The Impact of Gut Microbiome on Maternal Fructose Intake-Induced Developmental Programming of Adult Disease

by Chien-Ning Hsu, Hong-Ren Yu, Julie Y. H. Chan, Kay L. H. Wu, Wei-Chia Lee and You-Lin Tain

*Nutrients* 2022, 14(5), 1031; <https://doi.org/10.3390/nu14051031> - 28 Feb 2022

Cited by 16 | Viewed by 4207

**Abstract** Excessive or insufficient maternal nutrition can influence fetal development and the susceptibility of offspring to adult disease. As eating a fructose-rich diet is becoming more common, the effects of maternal fructose intake on offspring health is of increasing relevance. The gut is required [...]. [Read more.](#)

(This article belongs to the Special Issue Fructose Metabolism and Metabolic Health Effects)

[► Show Figures](#)

## The Relationship between Fatty Acids and the Development, Course and Treatment of Rheumatoid Arthritis

by Wojciech Tański, Natalia Świątoniowska-Lonc, Mateusz Tabin and Beata Jankowska-Polańska

*Nutrients* 2022, 14(5), 1030; <https://doi.org/10.3390/nu14051030> - 28 Feb 2022

Cited by 22 | Viewed by 6091

**Abstract** For this systematic review, a search of the relevant literature was conducted in the EMBASE and PubMed databases. We used the following terms: 'rheumatoid arthritis' in conjunction with 'fatty acid'. The following inclusion criteria had to be satisfied for the studies to be [...]. [Read more.](#)

(This article belongs to the Special Issue Rheumatology: Nutritional Status and Treatment)

[► Show Figures](#)

## Diet, Sun, Physical Activity and Vitamin D Status in Children with Inflammatory Bowel Disease

by Karolina Śiedzińska, Piotr Landowski, Michał A. Żmijewski, Barbara Kamińska, Konrad Kowalski and Anna Liberek

*Nutrients* 2022, 14(5), 1029; <https://doi.org/10.3390/nu14051029> - 28 Feb 2022

Cited by 13 | Viewed by 3636

**Abstract** In the course of inflammatory bowel disease (IBD) malabsorption may lead to a vitamin D deficiency and calcium–phosphate imbalance. However, the reports on the vitamin D status in children with IBD are few and ambiguous. Here, we are presenting complex analyses of multiple [...]. [Read more.](#)

(This article belongs to the Special Issue Benefits of Vitamin D in Health and Diseases)

[► Show Figures](#)



## Understanding Cystic Fibrosis Comorbidities and Their Impact on Nutritional Management

by **Dhiren Patel, Albert Shan, Stacy Mathews and Meghana Sathe**

*Nutrients* 2022, 14(5), 1028; <https://doi.org/10.3390/nu14051028> - 28 Feb 2022

Cited by 10 | Viewed by 5317

**Abstract** Cystic fibrosis (CF) is a chronic, multisystem disease with multiple comorbidities that can significantly affect nutrition and quality of life. Maintaining nutritional adequacy can be challenging in people with cystic fibrosis and has been directly associated with suboptimal clinical outcomes. Comorbidities of CF [...] [Read more](#).

(This article belongs to the Special Issue Nutritional Management of Cystic Fibrosis)

Open Access

Article

16 pages, 627 KIB



## Burden of Disease Associated with Dietary Exposure to Aflatoxins in China in 2020

by **Tingting Chen, Jialin Liu, Yiling Li and Sheng Wei**

*Nutrients* 2022, 14(5), 1027; <https://doi.org/10.3390/nu14051027> - 28 Feb 2022

Cited by 29 | Viewed by 3644

**Abstract** Aflatoxins (AFTs), as a group 1 carcinogen, could lead to hepatocellular carcinoma (HCC). Dietary intake is the primary way of AFT exposure in humans. However, the contribution of foodborne AFT intake to the HCC burden remains unknown in recent years in China. Hence, [...] [Read more](#).

(This article belongs to the Section Nutrition and Public Health)

► Show Figures

Open Access

Article

15 pages, 3327 KIB



## Dietary Flavonoids Alleviate Inflammation and Vascular Endothelial Barrier Dysfunction Induced by Advanced Glycation End Products In Vitro

by **Yishan Fu, Yijia Jia, Yilin Sun, Xiaojing Liu, Junjie Yi and Shengbao Cai**

*Nutrients* 2022, 14(5), 1026; <https://doi.org/10.3390/nu14051026> - 28 Feb 2022

Cited by 20 | Viewed by 2973

**Abstract** The aim of this study was to compare the protective effects of three dietary flavonoids (apigenin-7-O-glucoside (A7G), isorhamnetin-3-O-rutinoside (I3R), and cyanidin-3-O-glucoside (C3G)) on advanced glycation end products (AGEs)-induced inflammation and vascular endothelial dysfunction. Furthermore, the potential mechanisms [...] [Read more](#).

(This article belongs to the Section Phytochemicals and Human Health)

► Show Figures

Open Access

Article

17 pages, 1744 KIB



## Methanolic *Phoenix dactylifera* L. Extract Ameliorates Cisplatin-Induced Hepatic Injury in Male Rats

by **Heba Nageh Gad El-Hak, Hany Salah Mahmoud, Eman A. Ahmed, Heba M. Elnegris, Tahany Saleh Aldayel,**

**Heba M. A. Abdelrazek, Mohamed T. A. Soliman and Menna Allah I. El-Menyawy**

*Nutrients* 2022, 14(5), 1025; <https://doi.org/10.3390/nu14051025> - 28 Feb 2022

Cited by 26 | Viewed by 3239

**Abstract** This study investigated the ameliorative potential of methanolic date flesh extract (MDFE) against cisplatin-induced hepatic injury. Twenty male rats (weighing 180–200 g) were allocated into four groups: control; date flesh (DF) group (oral 600 mg/kg MDFE for 21 days); Cis group (7.5 mg/kg [...] [Read more](#).

(This article belongs to the Section Phytochemicals and Human Health)

► Show Figures

Open Access

Article

20 pages, 742 KIB



## Early Nutritional Intervention to Promote Healthy Eating Habits in Pediatric Oncology: A Feasibility Study

by **Véronique Bélanger, Josianne Delorme, Mélanie Napartuk, Isabelle Bouchard, Caroline Meloche, Daniel Curnier,**

**Serge Sultan, Caroline Laverdière, Daniel Sinnett and Valérie Marcil**

*Nutrients* 2022, 14(5), 1024; <https://doi.org/10.3390/nu14051024> - 28 Feb 2022

Cited by 20 | Viewed by 4188

**Abstract** This study aims to describe the feasibility of a nutritional intervention that promotes healthy eating habits early after cancer pediatric diagnosis in patients and their parents. Participants were recruited 4 to 12 weeks after cancer diagnosis as part of the VIE study. The [...] [Read more](#).

(This article belongs to the Special Issue Diet and Nutrition during Chemotherapy and Radiotherapy)

► Show Figures

Open Access

Article

14 pages, 3493 KIB



## The Steroidal Alkaloid Tomatidine and Tomatidine-Rich Tomato Leaf Extract Suppress the Human Gastric Cancer-Derived 85As2 Cells In Vitro and In Vivo via Modulation of Interferon-Stimulated Genes

by **Junya Fujimaki, Neo Sayama, Shigenobu Shiotani, Takanori Suzuki, Milki Nonaka, Yasuhito Uezono, Mamoru Oyabu,**

**Yasutomi Kamei, Haruo Nukaya, Keiji Wakabayashi, Akihito Morita, Tomoki Sato and Shinji Miura**

*Nutrients* 2022, 14(5), 1023; <https://doi.org/10.3390/nu14051023> - 28 Feb 2022

Cited by 17 | Viewed by 4364

**Abstract** The steroidal alkaloid tomatidine is an aglycone of  $\alpha$ -tomatine, which is abundant in tomato leaves and has several biological activities. Tomatidine has been reported to inhibit the growth of cultured cancer cells in vitro, but its anti-cancer activity in vivo and inhibitory effect [...] [Read more](#).

(This article belongs to the Section Phytochemicals and Human Health)

► Show Figures

Open Access

Article

16 pages, 8199 KIB



## Effectiveness of Written Dietary Advice for Improving Blood Lipids in Primary Care Adults —A Pragmatic Randomized Controlled Trial (MYDICLIN)

by **Andreas Rydell, Mikael Hellsten, Martin Lindow and David Iggman**  
*Nutrients* 2022, 14(5), 1022; <https://doi.org/10.3390/nu14051022> - 28 Feb 2022  
Cited by 2 | Viewed by 3045

**Abstract** Lifestyle management is the first line of treatment for moderately elevated blood lipids in healthy individuals. We investigated the effectiveness of providing food-based written advice for lowering low-density lipoprotein (LDL) cholesterol (intervention) or triglycerides (control) in a pragmatic randomized controlled trial with two [...] [Read more](#).  
(This article belongs to the Special Issue Diet and Cardiovascular Prevention)

► [Show Figures](#)

[Open Access](#) [Review](#)

15 pages, 1583 KiB 

## The Impact of the Quality of Nutrition and Lifestyle in the Reproductive Years of Women with PKU on the Long-Term Health of Their Children

by **Maria Inês Gama, Alex Pinto, Anne Daly, Júlio César Rocha and Anita MacDonald**  
*Nutrients* 2022, 14(5), 1021; <https://doi.org/10.3390/nu14051021> - 28 Feb 2022  
Cited by 8 | Viewed by 4716

**Abstract** A woman's nutritional status before and during pregnancy can affect the health of her progeny. Phenylketonuria (PKU), a rare disorder causing high blood and brain phenylalanine (Phe) concentrations, is associated with neurocognitive disability. Lifelong treatment is mainly dietetic with a Phe-restricted diet, supplemented [...] [Read more](#).  
(This article belongs to the Special Issue Diet Therapy and Nutritional Management of Phenylketonuria)

► [Show Figures](#)

[Open Access](#) [Article](#)

19 pages, 4045 KiB 

## Effects and Mechanisms of *Rhus chinensis* Mill. Fruits on Suppressing RANKL-Induced Osteoclastogenesis by Network Pharmacology and Validation in RAW264.7 Cells

by **Yue Zheng, Lei Zhao, Junjie Yi and Shengbao Cai**  
*Nutrients* 2022, 14(5), 1020; <https://doi.org/10.3390/nu14051020> - 28 Feb 2022  
Cited by 10 | Viewed by 3217

**Abstract** *Rhus chinensis* Mill. fruits are a kind of widely distributed edible seasoning, which have been documented to possess a variety of biological activities. However, its inhibitory effect on osteoclast formation has not been determined. The objective of this study was to evaluate the [...] [Read more](#).  
(This article belongs to the Section Phytochemicals and Human Health)

► [Show Figures](#)

[Open Access](#) [Article](#)

8 pages, 605 KiB 

## Maternal Amino Acid Status in Severe Preeclampsia: A Cross-Sectional Study

by **Natasya Prameswari, Rima Irwinda, Noroyono Wibowo and Yudianto Budi Saroyo**  
*Nutrients* 2022, 14(5), 1019; <https://doi.org/10.3390/nu14051019> - 28 Feb 2022  
Cited by 12 | Viewed by 2921

**Abstract** Introduction: Preeclampsia has been one of the leading causes of maternal death in Indonesia. It is postulated that its relationship with oxidative stress may be the underlying pathology of the disease. Nutrients and amino acids have been suggested as a scavenger for oxygen-free [...] [Read more](#).  
(This article belongs to the Section Clinical Nutrition)

► [Show Figures](#)

[Open Access](#) [Article](#)

14 pages, 631 KiB  

## Betel Nut Chewing Increases the Risk of Metabolic Syndrome and Its Components in a Large Taiwanese Population Follow-Up Study Category: Original Investigation

by **Ya-Chin Huang, Jiun-Hung Geng, Pei-Yu Wu, Jiun-Chi Huang, Szu-Chia Chen, Jer-Ming Chang and Hung-Chun Chen**  
*Nutrients* 2022, 14(5), 1018; <https://doi.org/10.3390/nu14051018> - 28 Feb 2022  
Cited by 11 | Viewed by 4390

**Abstract** Betel nut chewing is a popular habit in Taiwan, and it is associated with adverse metabolic effects. The aim of this study was to investigate correlations between betel nut chewing with metabolic syndrome (MetS) and its components in a longitudinal study using data [...] [Read more](#).  
(This article belongs to the Section Nutrition and Metabolism)

► [Show Figures](#)

[Open Access](#) [Feature Paper](#) [Article](#)



12 pages, 287 KiB 

## Food and Nutrient Displacement by Walnut Supplementation in a Randomized Crossover Study

by **Zuhair S. Natto, Gina Siapco, Karen Jaceldo-Siegl, Ella H. Haddad and Joan Sabaté**  
*Nutrients* 2022, 14(5), 1017; <https://doi.org/10.3390/nu14051017> - 28 Feb 2022  
Cited by 8 | Viewed by 3133

**Abstract** The aim of this article is to evaluate the effect of a daily supplement of walnuts on the overall daily diet and nutrient profile of healthy adults. A randomized controlled trial with crossover design was conducted for two 6-month diet periods in southeast [...] [Read more](#).  
(This article belongs to the Section Phytochemicals and Human Health)

[Open Access](#) [Article](#)

14 pages, 1318 KiB  

## High-Fat Diet Augments the Effect of Alcohol on Skeletal Muscle Mitochondrial Dysfunction in Mice

by **Ahmed Ismaeel, Joseph A. Laudato, Emma Fletcher, Evlampia Papoutsis, Abigail Tice, Lara S. Hwa, Dimitrios Miserlis, Athanasios Z. Jamurtas, Jennifer Steiner and Panagiotis Koutakis**  
*Nutrients* 2022, 14(5), 1016; <https://doi.org/10.3390/nu14051016> - 28 Feb 2022  
Cited by 17 | Viewed by 4172

**Abstract** Previous studies have shown that chronic heavy alcohol consumption and consumption of a high-fat (HF) diet can independently contribute to skeletal muscle oxidative stress and mitochondrial dysfunction. yet the concurrent effect of these risk

independently contribute to cerebral metabolic structure stress and mitochondrial dysfunction, yet the contribution effect of these risk factors remains unclear. We aimed to assess the effect [...] [Read more](#).  
(This article belongs to the Special Issue **Nutritional Status in Alcohol Use Disorders**)

► [Show Figures](#)

[Open Access](#) [Article](#)

13 pages, 871 KiB [📄](#) [🔍](#)

## Impact of Genetic Risk Score and Dietary Protein Intake on Vitamin D Status in Young Adults from Brazil

by **Buthaina E. Alathari**, **Nathália Teixeira Cruvinel**, **Nara Rubia da Silva**, **Mathurra Chandrabose**, **Julie A. Lovegrove**, **Maria A. Horst** and **Karani S. Vimalaswaran**

*Nutrients* 2022, 14(5), 1015; <https://doi.org/10.3390/nu14051015> - 28 Feb 2022

Cited by 7 | Viewed by 3411

**Abstract** Given the relationship between vitamin D deficiency (VDD) and adverse outcomes of metabolic diseases, we investigated the interplay of dietary and genetic components on vitamin D levels and metabolic traits in young adults from Brazil. Genetic analysis, dietary intake, and anthropometric and biochemical [...] [Read more](#).  
(This article belongs to the Special Issue **Vitamin D: A Global Perspective for Health**)

► [Show Figures](#)

[Open Access](#) [Article](#)

15 pages, 1883 KiB [📄](#) [🔍](#)

## Variations in the Composition of Human Milk Oligosaccharides Correlates with Effects on Both the Intestinal Epithelial Barrier and Host Inflammation: A Pilot Study

by **Richard Y. Wu**, **Steven R. Botts**, **Kathene C. Johnson-Henry**, **Eva Landberg**, **Thomas R. Abrahamsson** and **Philip M. Sherman**

*Nutrients* 2022, 14(5), 1014; <https://doi.org/10.3390/nu14051014> - 28 Feb 2022

Cited by 12 | Viewed by 4106

**Abstract** Background: Human milk oligosaccharides are complex, non-digestible carbohydrates that directly interact with intestinal epithelial cells to alter barrier function and host inflammation. Oligosaccharide composition varies widely between individual mothers, but it is unclear if this inter-individual variation has any impact on intestinal epithelial [...] [Read more](#).  
(This article belongs to the Topic **Probiotics, Prebiotics and Postbiotics in Human Health**)

► [Show Figures](#)

[Open Access](#) [Article](#)

10 pages, 1814 KiB [📄](#) [🔍](#)

## Gut Microbiota Composition in Relation to the Metabolism of Oral Administrated Resveratrol

by **Mingfei Yao**, **Yiqiu Fei**, **Shuobo Zhang**, **Bo Qiu**, **Lian Zhu**, **Fang Li**, **Björn Berglund**, **Hang Xiao** and **Lanjuan Li**

*Nutrients* 2022, 14(5), 1013; <https://doi.org/10.3390/nu14051013> - 28 Feb 2022

Cited by 20 | Viewed by 3510

**Abstract** Resveratrol (RSV) has been confirmed to confer multiple health benefits, and the majority of RSV tends to be metabolized in the gut microbiota after oral administration. In this study, the metabolism of RSV was investigated by using mouse models with distinct gut microbiota [...] [Read more](#).  
(This article belongs to the Section **Nutrition and Metabolism**)

► [Show Figures](#)

[Open Access](#) [Systematic Review](#)

13 pages, 1943 KiB [📄](#) [🔍](#)

## Vitamin D Levels in Early and Middle Pregnancy and Preeclampsia, a Systematic Review and Meta-Analysis

by **Kai-Lun Hu**, **Chun-Xi Zhang**, **Panpan Chen**, **Dan Zhang** and **Sarah Hunt**

*Nutrients* 2022, 14(5), 999; <https://doi.org/10.3390/nu14050999> - 27 Feb 2022

Cited by 22 | Viewed by 5768

**Abstract** Vitamin D (VitD) shows a beneficial role in placenta, the immune system, and angiogenesis, and thus, VitD status may link to the risk of preeclampsia. A meta-analysis was conducted to investigate the association between VitD status in early and middle pregnancy and the [...] [Read more](#).  
(This article belongs to the Special Issue **Micronutrients in Maternal and Infant Health: Where We Are and Where We Should Go**)

► [Show Figures](#)

[Open Access](#) [Article](#)

15 pages, 811 KiB [📄](#) [🔍](#)

## Evaluation of Dietary Quality Based on Intelligent Ordering System and Chinese Healthy Eating Index in College Students from a Medical School in Shanghai, China

by **Shaojie Liu**, **Jiangqi Wang**, **Gengsheng He**, **Bo Chen** and **Yingnan Jia**

*Nutrients* 2022, 14(5), 1012; <https://doi.org/10.3390/nu14051012> - 27 Feb 2022

Cited by 9 | Viewed by 8352

**Abstract** We intended to precisely evaluate the dietary quality of male and female medical college students using canteen data from the “Intelligent Ordering System” (IOS), combined with the supplemental food frequency questionnaire (SFFQ) and the Chinese Healthy Eating Index (CHEI) in Shanghai, China, to [...] [Read more](#).  
(This article belongs to the Special Issue **Dietary Assessment and Self-Monitoring Using Technology**)

► [Show Figures](#)

[Open Access](#) [Article](#)

11 pages, 2085 KiB [📄](#) [🔍](#)

## Anti-Fatigue and Exercise Performance Improvement Effect of *Glossogyne tenuifolia* Extract in Mice

by **Yi-Ju Chen**, **Rathinasamy Baskaran**, **Marthandam Asokan Shibu** and **Wan-Teng Lin**

*Nutrients* 2022, 14(5), 1011; <https://doi.org/10.3390/nu14051011> - 27 Feb 2022

Cited by 21 | Viewed by 4744

**Abstract** *Glossogyne tenuifolia* (GT) is a native perennial plant growing across the coastline areas in Taiwan. The current study aimed to examine the efficacy of GT extract in ameliorating physical fatigue during exercise and increasing exercise performance



aimed to examine the efficacy of CR extract in attenuating physical fatigue during exercise and increasing exercise performance. Fifty male Institute of Cancer Research (ICR) [...] Read more.  
(This article belongs to the Collection Food Supplements and Functional Foods Assessment for Health and Nutrition)

► Show Figures

Open Access

Article

12 pages, 1419 KIB  

## Variants in the *VDR* Gene May Influence 25(OH)D Levels in Type 1 Diabetes Mellitus in a Brazilian Population

by **Rafaela S. Ferraz, Caio S. Silva, Giovanna C. Cavalcante, Natércia N. M. de Queiroz, Karem M. Felício, João S. Felício and Ândrea Ribeiro-dos-Santos**

*Nutrients* 2022, 14(5), 1010; <https://doi.org/10.3390/nu14051010> - 27 Feb 2022

Cited by 11 | Viewed by 2917

**Abstract** Vitamin D has been considered a strong contributing factor to type 1 diabetes mellitus (T1DM). Many studies have investigated polymorphisms in the *VDR* gene in association with T1DM in different populations, but there are still conflicting findings. This study aimed to evaluate the [...] Read more.

(This article belongs to the Special Issue Vitamin D Receptor in Human Health and Disease)

► Show Figures

Open Access

Systematic Review

14 pages, 926 KIB  

## The Comparative Effects of Different Types of Oral Vitamin Supplements on Arterial Stiffness: A Network Meta-Analysis

by **Alicia Saz-Lara, Iván Caveno-Redondo, Vicente Martínez-Vizcaino, Isabel Antonia Martínez-Ortega, Blanca Notario-Pacheco and Carlos Pascual-Morena**

*Nutrients* 2022, 14(5), 1009; <https://doi.org/10.3390/nu14051009> - 27 Feb 2022

Cited by 7 | Viewed by 5752

**Abstract** Arterial stiffness, a significant prognostic factor of cardiovascular disease, may be affected by dietary factors. Research on the effects of oral vitamin supplements on arterial stiffness and/or endothelial function has produced controversial results. Therefore, the aim of this network meta-analysis was to comparatively [...] Read more.

(This article belongs to the Special Issue The Impact of Diet on Vascular Function and Vascular Aging: Multivariate Approach)

► Show Figures

Open Access

Article

16 pages, 2103 KIB  

## Physical and Dietary Intervention with *Opuntia ficus-indica* (Nopal) in Women with Obesity Improves Health Condition through Gut Microbiota Adjustment

by **Karina Corona-Cervantes, Alicia Parra-Carriedo, Fernando Hernández-Quiroz, Noemi Martínez-Castro, Juan Manuel Vélez-Ixta, Diana Guajardo-López, Jaime García-Mena and César Hernández-Guerrero**

*Nutrients* 2022, 14(5), 1008; <https://doi.org/10.3390/nu14051008> - 27 Feb 2022

Cited by 13 | Viewed by 5082

**Abstract** Obesity is a multifactorial disease resulting in excessive accumulation of fat. Worldwide, obesity is an important public health problem, affecting a large proportion of the world population. The tender cactus *Opuntia ficus-indica*, commonly known in Mexico as “nopal”, is widely distributed in [...] Read more.

(This article belongs to the Section Nutrition and Obesity)

► Show Figures

Open Access

Systematic Review

17 pages, 2177 KIB 

## Effects of the Ketogenic Diet in the Treatment of Gliomas: A Systematic Review

by **Beatriz Sargaço, Patrícia Almeida Oliveira, Maria Luz Antunes and Ana Catarina Moreira**

*Nutrients* 2022, 14(5), 1007; <https://doi.org/10.3390/nu14051007> - 27 Feb 2022

Cited by 25 | Viewed by 6338

**Abstract** The ketogenic diet (KD) is a restrictive therapeutic diet, distinguished by being hyperlipidic, normoproteic, and hypoglycemic. This diet simulates biochemical changes related to fasting periods to achieve systemic ketosis. The metabolic particularities of glioma tumors motivated the rise in investigations and nutritional strategies, [...] Read more.

(This article belongs to the Special Issue The Ketogenic Diet for Cancer)

► Show Figures

Open Access

Article

11 pages, 455 KIB 

## Association of Infants Small for Gestational Age with Anemia under Five Years Old in Two Large Longitudinal Chinese Birth Cohorts

by **Nan Li, Hang An, Ming Jin, Zhiwen Li, Yali Zhang, Le Zhang, Jianmeng Liu and Rongwei Ye**

*Nutrients* 2022, 14(5), 1006; <https://doi.org/10.3390/nu14051006> - 27 Feb 2022

Cited by 5 | Viewed by 2413


**Abstract** Babies who are born small for their gestational age (SGA) have low iron reserves, thus probably increasing the risk of offspring anemia. We studied two longitudinal birth cohorts to evaluate the association of SGA with the risk of anemia during early childhood. Cohort [...] Read more.

(This article belongs to the Section Pediatric Nutrition)

► Show Figures

Open Access

Article

12 pages, 257 KIB 

## Development and Validation of Nutrition Literacy Questionnaire for the Chinese Elderly

by **Sumiya Aihemaitijiang, Chen Ye, Mairepaiti Halimulati, Xiaojie Huang, Ruoyu Wang and Zhaofeng Zhang**

*Nutrients* 2022, 14(5), 1005; <https://doi.org/10.3390/nu14051005> - 27 Feb 2022

Cited by 12 | Viewed by 3621

**Abstract** (1) Background: Improving nutrition literacy is crucial for maintaining a healthier state of the elderly to achieve healthy ageing. Therefore, it is necessary to develop a Nutrition Literacy Questionnaire for the Chinese Elderly (NLQ-E). (2) Methods: an NLQ-E was developed according to the [...] Read more.

Open Access Review

21 pages, 1523 KiB

## Healthy Immunity on Preventive Medicine for Combating COVID-19

by Pulak R. Manna, Zackery C. Gray and P. Hemachandra Reddy

*Nutrients* 2022, 14(5), 1004; <https://doi.org/10.3390/nu14051004> - 27 Feb 2022

Cited by 16 | Viewed by 16153

**Abstract** Immunomodulation is influenced by the consumption of nutrients, and healthy immunity is pivotal to defending an individual from a variety of pathogens. The immune system is a network of intricately regulated biological processes that is comprised of many organs, cellular structures, and signaling [...] [Read more.](#)

(This article belongs to the Special Issue The Role of Immunonutrition: Immune Development and Disease Prevention)

► Show Figures

Open Access Article

15 pages, 798 KiB

## Habitual Dietary Fiber Intake, Fecal Microbiota, and Hemoglobin A1c Level in Chinese Patients with Type 2 Diabetes

by Jiongxing Fu, Kelin Xu, Xumin Ni, Xiaoqiang Li, Xiaofeng Zhu and Wanghong Xu

*Nutrients* 2022, 14(5), 1003; <https://doi.org/10.3390/nu14051003> - 27 Feb 2022

Cited by 17 | Viewed by 3904

**Abstract** High-fiber diet interventions have been proven to be beneficial for gut microbiota and glycemic control in diabetes patients. However, the effect of a low level of fiber in habitual diets remains unclear. This study aims to examine the associations of habitual dietary fiber [...] [Read more.](#)

(This article belongs to the Section Nutritional Epidemiology)

► Show Figures

Open Access Review

14 pages, 352 KiB

## Malnutrition and Biomarkers: A Journey through Extracellular Vesicles

by Herminia Mendivil-Alvarado, Leopoldo Alberto Sosa-León, Elizabeth Carvajal-Millan and Humberto Astiazaran-Garcia

*Nutrients* 2022, 14(5), 1002; <https://doi.org/10.3390/nu14051002> - 27 Feb 2022

Cited by 7 | Viewed by 3121

**Abstract** Extracellular vesicles (EVs) have been identified as active components in cellular communication, which are easily altered both morphologically and chemically by the cellular environment and metabolic state of the body. Due to this sensitivity to the conditions of the cellular microenvironment, EVs have [...] [Read more.](#)

(This article belongs to the Section Nutrition and Metabolism)

Open Access Article

9 pages, 254 KiB

## The Prevalence of Overweight Status among Early Adolescents from Private Schools in Indonesia: Sex-Specific Patterns Determined by School Urbanization Level

by Eveline Sarintohe, Junilla K. Larsen, William J. Burk and Jacqueline M. Vink

*Nutrients* 2022, 14(5), 1001; <https://doi.org/10.3390/nu14051001> - 27 Feb 2022

Cited by 5 | Viewed by 2889

**Abstract** (1) Background: Few studies have investigated (demographic) correlates of (prevalent) overweight rates among early adolescents, especially from higher socioeconomic positions (SEP) in developing countries, such as Indonesia. The current study aims to fill this gap. (2) Methods: Participants included 411 adolescents from five [...] [Read more.](#)

(This article belongs to the Special Issue Determinants, Screening, Prevention and Management of Obesity in Youth)

Open Access Review

14 pages, 458 KiB

## Phenotypes and Endotypes of Peach Allergy: What Is New?

by Simona Barni, Davide Caimmi, Fernanda Chiera, Pasquale Comberiati, Carla Mastrorilli, Umberto Pelosi, Francesco Paravati, Gian Luigi Marseglia and Stefania Arasi

*Nutrients* 2022, 14(5), 998; <https://doi.org/10.3390/nu14050998> - 26 Feb 2022

Cited by 16 | Viewed by 6124

**Abstract** Peach allergy is emerging as a common type of fresh-fruit allergy in Europe, especially in the Mediterranean area. The clinical manifestations of peach allergy tend to have a peculiar geographical distribution and can range from mild oral symptoms to anaphylaxis, depending on the [...] [Read more.](#)

(This article belongs to the Special Issue Nutrition, Diet and Food Allergy)

► Show Figures

Open Access Article

10 pages, 749 KiB

## Impact of Parenteral Glutamine Supplement on Oncologic Outcomes in Patients with Nasopharyngeal Cancer Treated with Concurrent Chemoradiotherapy

by Chih-Chun Wang, Tzer-Zen Hwang, Chuan-Chien Yang, Ching-Feng Lien, Chien-Chung Wang, Yu-Chen Shih, Shyh-An Yeh and Meng-Che Hsieh

*Nutrients* 2022, 14(5), 997; <https://doi.org/10.3390/nu14050997> - 26 Feb 2022

Cited by 7 | Viewed by 3974

**Abstract** Background: Oral mucositis (OM) is a common toxic side effect in nasopharyngeal carcinoma (NPC) patients receiving concurrent chemoradiotherapy (CCRT) that has a negative impact on treatment outcomes and patients' survival. Our study aimed to evaluate the impact of parenteral glutamine supplement (dipeptiven) on [...] [Read more.](#)

(This article belongs to the Topic Novel Therapeutic Nutrient Molecules)

► Show Figures

Open Access Article

12 pages, 539 KiB

## Dietary Patterns and Risk of Chronic Obstructive Pulmonary Disease among Chinese Adults: An 11-Year Prospective Study


by Ming-Mei Li, Yan-Ping Wang, Xue-Mei Chen, Yan-Mei Chen, Rui-Pei Chen, Li-Min Chen, Hui-Dong Shi, Ming-Shan Chen, Yan-Mei Chen

by Wei Tu, Lang Fan, Weinua Cao, Jun Lv, Tu Guo, Fei Fei, Qingmei Xia, Huaidong Du, Tiping Chen, Ling Tang, Junshi Chen, Canqing Yu, Zhengming Chen, Liming Li and on behalf of China Kadoorie Biobank Collaborative Group  
*Nutrients* 2022, 14(5), 996; <https://doi.org/10.3390/nu14050996> - 26 Feb 2022  
Cited by 15 | Viewed by 3789

**Abstract** The evidence about the association between dietary patterns and the incidence of chronic obstructive pulmonary disease (COPD) among Chinese adults is limited. In the present study, we analyzed the prospective data of 421,426 participants aged 30–79 years from the China Kadoorie Biobank. Factor [...] [Read more](#).  
(This article belongs to the Special Issue Dietary Patterns and Cardiovascular Disease Risk in Asia)

► [Show Figures](#)

[Open Access](#) [Systematic Review](#)

27 pages, 640 KiB 

## Metabolic Bone Disease in Children with Intestinal Failure and Long-Term Parenteral Nutrition: A Systematic Review

by Simona Gatti, Sara Quattrini, Alessandra Palpacelli, Giulia N. Catassi, Maria Elena Lionetti and Carlo Catassi  
*Nutrients* 2022, 14(5), 995; <https://doi.org/10.3390/nu14050995> - 26 Feb 2022  
Cited by 16 | Viewed by 4176

**Abstract** Metabolic bone disease (MBD) is a possible complication of intestinal failure (IF), with a multi-factorial pathogenesis. The reduction of bone density (BMD) may be radiologically evident before manifestation of clinical signs (bone pain, vertebral compression, and fractures). Diagnosis relies on dual-energy X-ray absorptiometry [...] [Read more](#).  
(This article belongs to the Special Issue Macronutrients and Micronutrients in Parenteral Nutrition)

► [Show Figures](#)

[Open Access](#) [Article](#)

21 pages, 1762 KiB 

## An Evaluation of Probability of Adequate Nutrient Intake (PANDiet) Scores as a Diet Quality Metric in Irish National Food Consumption Data

by Laura B. Kirwan, Janette Walton, Albert Flynn, Anne P. Nugent and Breige A. McNulty  
*Nutrients* 2022, 14(5), 994; <https://doi.org/10.3390/nu14050994> - 26 Feb 2022  
Cited by 1 | Viewed by 4002

**Abstract** Identifying reliable metrics which measure the quality of a diet to promote nutrient adequacy and long-term health is an important step in the development of a sustainable food system. The Probability of Adequate Nutrient Intake (PANDiet) scoring system has been used as a [...] [Read more](#).  
(This article belongs to the Section Nutrition Methodology & Assessment)

► [Show Figures](#)

[Open Access](#) [Article](#)

12 pages, 418 KiB  

## Impacts of the Seattle Sweetened Beverage Tax on the Perceived Healthfulness of Sweetened Beverages

by Lauren Sawyer, Vanessa M. Oddo, Amanda Fretts, Melissa A. Knox, Nadine Chan, Brian E. Saelens and Jessica C. Jones-Smith  
*Nutrients* 2022, 14(5), 993; <https://doi.org/10.3390/nu14050993> - 26 Feb 2022  
Cited by 3 | Viewed by 2924

**Abstract** Sweetened beverage taxes are associated with significant reductions in the purchase of sweetened beverages. However, it is unclear whether these taxes play a role in shifting perceptions about sweetened beverages and their health impacts. We utilized pre- and post-tax survey data collected from [...] [Read more](#).  
(This article belongs to the Section Nutritional Policies and Education for Health Promotion)

► [Show Figures](#)

[Open Access](#) [Article](#)

12 pages, 2509 KiB 


## Targeting the Gut Microbiota of Vertically HIV-Infected Children to Decrease Inflammation and Immunoactivation: A Pilot Clinical Trial

by Talía Sainz, Laura Díaz, David Rojo, María Isabel Clemente, Coral Barbas, María José Gosalbes, Nuria Jimenez-Hernandez, Luis Escosa, Sara Guillen, José Tomás Ramos, María Ángeles Muñoz-Fernández, María Luisa Navarro, María José Mellado and Sergio Serrano-Villar  
*Nutrients* 2022, 14(5), 992; <https://doi.org/10.3390/nu14050992> - 26 Feb 2022  
Cited by 12 | Viewed by 3361

**Abstract** Aims: Children with HIV exhibit chronic inflammation and immune dysfunction despite antiretroviral therapy (ART). Strategies targeting persistent inflammation are needed to improve health in people living with HIV. The gut microbiota likely interacts with the immune system, but the clinical implications of modulating [...] [Read more](#).  
(This article belongs to the Special Issue Nutritional Supplementation in People with HIV)

► [Show Figures](#)

[Open Access](#) [Review](#)

14 pages, 968 KiB 



## Preparations from Various Organs of Sea Buckthorn (*Elaeagnus rhamnoides* (L.) A. Nelson) as Important Regulators of Hemostasis and Their Role in the Treatment and Prevention of Cardiovascular Diseases

by Beata Olas and Bartosz Skalski  
*Nutrients* 2022, 14(5), 991; <https://doi.org/10.3390/nu14050991> - 26 Feb 2022  
Cited by 13 | Viewed by 3003

**Abstract** Numerous studies on the chemical composition of various organs of sea buckthorn (*Elaeagnus rhamnoides* (L.) A. Nelson) have found the plant to be a rich source of vitamins, phenolic compounds, amino acids, fatty acids, and micro- and macro-elements. Furthermore, other studies on [...] [Read more](#).  
(This article belongs to the Section Nutrition and Public Health)

► [Show Figures](#)

[Open Access](#) [Article](#)

11 pages, 1815 KiB  

## The Association between Accumulation of Toxic Advanced Glycation End-Products and



## Cytotoxic Effect in MC3T3-E1 Cells

by **Akiko Sakasai-Sakai, Takanobu Takata and Masayoshi Takeuchi**

*Nutrients* 2022, 14(5), 990; <https://doi.org/10.3390/nu14050990> - 26 Feb 2022

Cited by 13 | Viewed by 3770

**Abstract** In diabetic patients, the metabolism of excess glucose increases the toxicity of the aldehyde group of sugar. Aldehydes, including glyceraldehyde (GA), react with intracellular proteins to form advanced glycation end-products (AGEs), which deteriorate bone quality and cause osteoporosis. One of the causes of [...] [Read more](#).

(This article belongs to the Special Issue **Nutrition and Bone Health**)

► [Show Figures](#)

Open Access

Article

13 pages, 853 KIB [B](#)

## The Role of Multiply-Fortified Table Salt and Bouillon in Food Systems Transformation

by **Dipika Matthias, Christine M. McDonald, Nicholas Archer and Reina Engle-Stone**

*Nutrients* 2022, 14(5), 989; <https://doi.org/10.3390/nu14050989> - 26 Feb 2022

Cited by 17 | Viewed by 4066

**Abstract** Our global food system lacks the critically needed micronutrients to meet the daily requirements of the most at-risk populations. Diets also continue to shift toward unhealthy foods, including the increased intake of salt. While most countries exceed the WHO's recommended levels, sodium does [...] [Read more](#).

(This article belongs to the Special Issue **Food Fortification: Trends and Strategies**)

► [Show Figures](#)

Open Access

Article

12 pages, 444 KIB [B](#)

## Patterns of Food Assistance Program Participation, Food Insecurity, and Pantry Use among U.S. Households with Children during the COVID-19 Pandemic

by **Kaitlyn Harper, Emily H. Belarmino, Francesco Acciai, Farryl Bertmann and Punam Ohri-Vachaspati**

*Nutrients* 2022, 14(5), 988; <https://doi.org/10.3390/nu14050988> - 26 Feb 2022

Cited by 33 | Viewed by 5159

**Abstract** This study aims to describe differences in participation in the Supplemental Nutrition Assistance Program (SNAP), Special Supplemental Nutrition Program for Women and Children (WIC), and school meal programs by household characteristics prior to and during the pandemic, and to examine the association of [...] [Read more](#).

(This article belongs to the Section **Nutritional Epidemiology**)

► [Show Figures](#)

Open Access

Review

16 pages, 1103 KIB [B](#)

## The Role of Nutrients in Prevention, Treatment and Post-Coronavirus Disease-2019 (COVID-19)

by **Maria Letizia Motti, Domenico Tafuri, Lorenzo Donini, Maria Teresa Masucci, Valentina De Falco and Filomena Mazzeo**

*Nutrients* 2022, 14(5), 1000; <https://doi.org/10.3390/nu14051000> - 26 Feb 2022

Cited by 21 | Viewed by 8181

**Abstract** SARS-CoV-2 virus, infecting human cells via its spike protein, causes Coronavirus disease 2019 (COVID-19). COVID-19 is characterized by shortness of breath, fever, and pneumonia and is sometimes fatal. Unfortunately, to date, there is still no definite therapy to treat COVID-19. Therefore, the World [...] [Read more](#).

(This article belongs to the Section **Nutritional Immunology**)

► [Show Figures](#)

Open Access

Article

14 pages, 528 KIB [B](#)

## Food Patterns of Hospitalized Patients with Heart Failure and Their Relationship with Demographic, Economic and Clinical Factors in Sergipe, Brazil

by **Jamille Oliveira Costa, Juliana Santos Barbosa, Luciana Vieira Sousa Alves, Rebeca Rocha de Almeida,**

**Victor Batista Oliveira, Larissa Monteiro Costa Pereira, Larissa Marina Santana Mendonça de Oliveira,**

**Raysa Manuelle Santos Rocha, Diva Aliete dos Santos Vieira, Kiriaque Barra Ferreira Barbosa,**

**Ingrid Maria Novais Barros de Carvalho Costa, Felipe J. Aida, Márcia Ferreira Cândido de Souza,**

**Joselina Luzia Menezes Oliveira, Leonardo Baumworcel, Eduardo Borba Neves, Alfonso López Díaz-de-Durana,**

**Marcos Antonio Almeida-Santos and Antônio Carlos Sobral Sousa**

*Nutrients* 2022, 14(5), 987; <https://doi.org/10.3390/nu14050987> - 25 Feb 2022

Viewed by 3170

**Abstract** Background: The high rates of hospitalization and mortality caused by Heart Failure (HF) have attracted the attention of health sectors around the world. Dietary patterns that involve food combinations and preparations with synergistic or antagonistic effects of different dietary components can influence the [...] [Read more](#).

(This article belongs to the Special Issue **Nutrition, Obesity, and Cardiovascular Disease: Pathogenesis and Solution**)

► [Show Figures](#)

Open Access

Editor's Choice

Review

26 pages, 1516 KIB [B](#)

## Contributing Factors to Low Energy Availability in Female Athletes: A Narrative Review of Energy Availability, Training Demands, Nutrition Barriers, Body Image, and Disordered Eating

by **Andrew R. Jagim, Jennifer Fields, Meghan K. Magee, Chad M. Kerksick and Margaret T. Jones**

*Nutrients* 2022, 14(5), 986; <https://doi.org/10.3390/nu14050986> - 25 Feb 2022

Cited by 33 | Viewed by 16447

**Abstract** Relative Energy Deficiency in sport is experiencing remarkable popularity of late, particularly among female athletes. This condition is underpinned by low energy availability, which is a byproduct of high energy expenditure, inadequate energy intake, or a combination of the two. Several contributing factors [...] [Read more](#).

(This article belongs to the Special Issue **Sport Nutrition Knowledge of Athletes and Implications for Dietary Habits, Nutrient Status and Energy Availability**)

► [Show Figures](#)



Open Access Review

38 pages, 7312 KiB

## The Role of Medicinal and Aromatic Plants against Obesity and Arthritis: A Review

by Alok K. Paul, Rowan Jahan, Anita Paul, Tooba Mahboob, Tohmina A. Bondhon, Khoshnour Jannat, Anamul Hasan, Veeranoot Nissaporn, Polrat Wilairatana, Maria de Lourdes Pereira, Christophe Wiart and Mohammed Rahmatullah  
*Nutrients* 2022, 14(5), 985; <https://doi.org/10.3390/nu14050985> - 25 Feb 2022  
Cited by 32 | Viewed by 9295

**Abstract** Obesity is a significant health concern, as it causes a massive cascade of chronic inflammations and multiple morbidities. Rheumatoid arthritis and osteoarthritis are chronic inflammatory conditions and often manifest as comorbidities of obesity. Adipose tissues serve as a reservoir of energy as well [...] [Read more](#).  
(This article belongs to the Section Nutrition and Obesity)

► Show Figures

Open Access Article

16 pages, 22642 KiB

## Cyanidin-3-O-Glucoside Supplement Improves Sperm Quality and Spermatogenesis in a Mice Model of Ulcerative Colitis

by Yuhang Xiao, Baojun Xu, Matteo Bordiga, Haiwei Li, Fabiano Travaglia, Shun Bai, Jiali Chen and Weibin Bai  
*Nutrients* 2022, 14(5), 984; <https://doi.org/10.3390/nu14050984> - 25 Feb 2022  
Cited by 16 | Viewed by 3775

**Abstract** Impaired fertility and low sperm quality are the global health problem with high attention. It has been noted that inflammation may impact fertility by affecting testicular spermatogenesis. Cyanidin-3-O-glucoside is a natural functional pigment with various health benefits. Nevertheless, studies on the [...] [Read more](#).  
(This article belongs to the Special Issue Anthocyanins and Human Health)

► Show Figures

Open Access Article

16 pages, 1104 KiB

## Circulating SIRT1 and Sclerostin Correlates with Bone Status in Young Women with Different Degrees of Adiposity

by Rossella Tozzi, Davide Masi, Fiammetta Cipriani, Savina Contini, Elena Gangitano, Maria Elena Spoltore, Ilaria Barchetta, Sabrina Basciani, Mikiko Watanabe, Enke Baldini, Salvatore Ullisse, Carla Lubrano, Lucio Gnassi and Stefania Mariani  
*Nutrients* 2022, 14(5), 983; <https://doi.org/10.3390/nu14050983> - 25 Feb 2022  
Cited by 7 | Viewed by 2903

**Abstract** Sirtuin1 (SIRT1) and sclerostin play important roles in adipose tissue and bone metabolism. We evaluated the circulating SIRT1 and sclerostin relationship with mass and quality of bone while considering the degree of adiposity. Sixty-six premenopausal women (16 underweight, 25 normal weight and 25 [...] [Read more](#).  
(This article belongs to the Section Proteins and Amino Acids)

► Show Figures

Open Access Editor's Choice Review

23 pages, 1816 KiB

## Sarcopenic Dysphagia, Malnutrition, and Oral Frailty in Elderly: A Comprehensive Review

by Alessandro de Sire, Martina Ferrillo, Lorenzo Lippi, Francesco Agostini, Roberto de Sire, Paola Emilia Ferrara, Giuseppe Raguso, Sergio Riso, Andrea Rocuzzo, Gianpaolo Ronconi, Marco Invernizzi and Mario Migliario  
*Nutrients* 2022, 14(5), 982; <https://doi.org/10.3390/nu14050982> - 25 Feb 2022  
Cited by 150 | Viewed by 25646

**Abstract** Frailty is a highly prevalent condition in the elderly that has been increasingly considered as a crucial public health issue, due to the strict correlation with a higher risk of fragility fractures, hospitalization, and mortality. Among the age-related diseases, sarcopenia and dysphagia are [...] [Read more](#).  
(This article belongs to the Special Issue Nutrition and Human Oral Health)

► Show Figures

Open Access Review

21 pages, 1452 KiB

## Intermittent Fasting: Potential Bridge of Obesity and Diabetes to Health?

by Bo-Ying Zang, Li-Xia He and Ling Xue  
*Nutrients* 2022, 14(5), 981; <https://doi.org/10.3390/nu14050981> - 25 Feb 2022  
Cited by 31 | Viewed by 20464

**Abstract** Obesity has been an escalating worldwide health problem for decades, and it is likely a risk factor of prediabetes and diabetes. Correlated with obesity, the number of diabetic patients is also remarkable. A modest weight loss (5–10%) is critical to alleviate the risk [...] [Read more](#).  
(This article belongs to the Section Nutrition and Public Health)

► Show Figures

Open Access Article

12 pages, 597 KiB

## The Prospective Associations of Lipid Metabolism-Related Dietary Patterns with the Risk of Diabetes in Chinese Adults

by Qi Liu, Qiaorui Wen, Jun Lv, Zumin Shi, Yu Guo, Pei Pei, Huidong Du, Ling Yang, Yiping Chen, Xiaofang Zhang, Dan Schmidt, Sam Sansome, Junshi Chen, Canqing Yu, Zhengming Chen, Liming Li and on behalf of the China Kadoorie Biobank (CKB) Collaborative Group  
*Nutrients* 2022, 14(5), 980; <https://doi.org/10.3390/nu14050980> - 25 Feb 2022  
Cited by 4 | Viewed by 3211

**Abstract** Background: This study aimed to identify lipid metabolism-related dietary patterns with reduced rank regression (RRR) among Chinese adults and examine their associations with incident diabetes. Methods: We derived lipid metabolism-related dietary patterns using an RRR with 21 food groups as predictors as well [...] [Read more](#).  
(This article belongs to the Special Issue Dietary Patterns and Cardiovascular Disease Risk in Asia)

► Show Figures

## High-Dose Vitamin C Supplementation as a Legitimate Anti-SARS-CoV-2 Prophylaxis in Healthy Subjects—Yes or No?

by Beata M. Gruber-Bzura

*Nutrients* 2022, 14(5), 979; <https://doi.org/10.3390/nu14050979> - 25 Feb 2022

Cited by 8 | Viewed by 4833

**Abstract** Vitamin C has a number of activities that could contribute to its immune-modulating effects. The only question is whether we should provide ourselves with only the right level of it, or do we need much more during a pandemic? The possibility of reducing [...] [Read more](#).

(This article belongs to the Section Micronutrients and Human Health)

► Show Figures

## Plasma Metabolite Profiles of Red Meat, Poultry, and Fish Consumption, and Their Associations with Colorectal Cancer Risk

by Fenglei Wang, Paulette D. Chandler, Oana A. Zeleznik, Kana Wu, You Wu, Kanhua Yin, Rui Song, Julian Avila-Pacheco, Clary B. Clish, Jeffrey A. Meyerhardt, Xuehong Zhang, Mingyang Song, Shuji Ogino, I-Min Lee, A. Heather Eliassen, Liming Liang, Stephanie A. Smith-Warner, Walter C. Willett and Edward L. Giovannucci

*Nutrients* 2022, 14(5), 978; <https://doi.org/10.3390/nu14050978> - 25 Feb 2022

Cited by 11 | Viewed by 4376

**Abstract** Background: Red and processed meat consumption has been consistently associated with increased risk of colorectal cancer (CRC), but the association for fish intake is unclear. Evidence using objective dietary assessment approaches to evaluate these associations is sparse. Objectives: We aim to investigate the [...] [Read more](#).

(This article belongs to the Special Issue Nutritional Metabolomics in Cancer Epidemiology)

► Show Figures

## *Lactobacillus acidophilus* DDS-1 Modulates the Gut Microbial Co-Occurrence Networks in Aging Mice

by Ravichandra Vemuri, Christopher J. Martoni, Kylie Kavanagh and Rajaraman Eri

*Nutrients* 2022, 14(5), 977; <https://doi.org/10.3390/nu14050977> - 25 Feb 2022

Cited by 7 | Viewed by 4120

**Abstract** Age-related alterations in the gut microbiome composition and its impacts on the host's health have been well-described; however, detailed analyses of the gut microbial structure defining ecological microbe–microbe interactions are limited. One of the ways to determine these interactions is by understanding microbial [...] [Read more](#).

(This article belongs to the Section Prebiotics and Probiotics)

► Show Figures

## Home Food Environment Changes and Dietary Intake during an Adolescent Behavioral Weight Loss Intervention Differ by Food Security Status

by Elizabeth L. Adams, Laura J. Caccavale, Jessica Gokee LaRose, Hollie A. Raynor and Melanie K. Bean

*Nutrients* 2022, 14(5), 976; <https://doi.org/10.3390/nu14050976> - 25 Feb 2022

Cited by 4 | Viewed by 3075

**Abstract** Behavioral weight loss (BWL) for pediatric obesity includes guidance on improving the home food environment and dietary quality; yet food insecurity presents barriers to making these changes. This study examined if home food environment, dietary quality, energy intake, and body weight changes during [...] [Read more](#).

(This article belongs to the Special Issue Food Insecurity, Nutrition and Obesity Outcomes in Adolescents and Young Adults)

► Show Figures

## High Protein Diet Feeding Aggravates Hyperaminoacidemia in Mice Deficient in Proglucagon-Derived Peptides

by Shinji Ueno, Yusuke Seino, Shihomi Hidaka, Ryuya Maekawa, Yuko Takano, Michiyo Yamamoto, Mika Hori, Kana Yokota, Atsushi Masuda, Tatsuhito Himeno, Shin Tsunekawa, Hideki Kamiya, Jiro Nakamura, Hitoshi Kuwata, Haruki Fujisawa, Megumi Shibata, Takeshi Takayanagi, Yoshihisa Sugimura, Daisuke Yabe, Yoshitaka Hayashi and +  
[Show full author list](#)

*Nutrients* 2022, 14(5), 975; <https://doi.org/10.3390/nu14050975> - 25 Feb 2022

Cited by 8 | Viewed by 4587

**Abstract** (1) Background: Protein stimulates the secretion of glucagon (GCG), which can affect glucose metabolism. This study aimed to analyze the metabolic effect of a high-protein diet (HPD) in the presence or absence of proglucagon-derived peptides, including GCG and GLP-1. (2) Methods: The response [...] [Read more](#).

(This article belongs to the Section Proteins and Amino Acids)

► Show Figures

## Faecal Microbiota in Infants and Young Children with Functional Gastrointestinal Disorders: A Systematic Review

by Denise Hofman, Urszula Kudla, Mohamad Miqdady, Thi Viet Ha Nguyen, Sofia Morán-Ramos and Yvan Vandenplas

*Nutrients* 2022, 14(5), 974; <https://doi.org/10.3390/nu14050974> - 25 Feb 2022

Cited by 22 | Viewed by 4718

**Abstract** Functional gastrointestinal disorders (FGIDs) refer to gastrointestinal tract issues that lack clear structural or biochemical causes. Their pathophysiology is still unclear, but gut microbiota alterations are thought to play an important role. This systematic review aimed to provide a comprehensive overview of the [...] [Read more](#).

(This article belongs to the Section Pediatric Nutrition)



► Show Figures

Open Access Article

10 pages, 789 KiB

### Vitamin D Deficiency in Cushing's Disease: Before and After Its Supplementation

by Valentina Guarnotta, Francesca Di Gaudio and Carla Giordano

Nutrients 2022, 14(5), 973; <https://doi.org/10.3390/nu14050973> - 25 Feb 2022

Cited by 12 | Viewed by 4440

**Abstract** Background: The primary objective of the study was to assess serum 25-hydroxyvitamin D [25(OH)D] values in patients with Cushing's disease (CD), compared to controls. The secondary objective was to assess the response to a load of 150,000 U of cholecalciferol. Methods: In 50 [...] Read more.

(This article belongs to the Section Nutrition and Metabolism)

► Show Figures

Open Access Feature Paper Article

14 pages, 2864 KiB

### Body Composition Assessment in Mexican Children and Adolescents. Part 2: Cross-Validation of Three Bio-Electrical Impedance Methods against Dual X-ray Absorptiometry for Total-Body and Regional Body Composition

by Desiree Lopez-Gonzalez, Jonathan C. K. Wells and Patricia Clark

Nutrients 2022, 14(5), 965; <https://doi.org/10.3390/nu14050965> - 25 Feb 2022

Cited by 11 | Viewed by 3054

**Abstract** The aim of our study was to validate three different bioelectrical impedance analysis (BIA) methods for estimating body composition (BC). First, we generated BIA prediction equations based on the 4-C model as the reference method for fat mass (FM) and fat-free mass (FFM), [...] Read more.

(This article belongs to the Section Nutrition and Public Health)

► Show Figures

Open Access Article

14 pages, 5420 KiB

### Chinese Tea Alleviates CCl<sub>4</sub>-Induced Liver Injury through the NF-κB/Nrf2 Signaling Pathway in C57BL-6J Mice

by Zhaoyu Wu, Lingli Sun, Ruohong Chen, Shuai Wen, Qiuhua Li, Xingfei Lai, Zhenbiao Zhang, Fanrong Cao and Shili Sun

Nutrients 2022, 14(5), 972; <https://doi.org/10.3390/nu14050972> - 24 Feb 2022

Cited by 22 | Viewed by 3285

**Abstract** Liver injury is a life-threatening condition that is usually caused by excessive alcohol consumption, improper diet, and stressful lifestyle and can even progress to liver cancer. Tea is a popular beverage with proven health benefits and is known to exert a protective effect on [...] Read more.

(This article belongs to the Section Nutrigenetics and Nutrigenomics)

► Show Figures

Open Access Article

11 pages, 976 KiB

### Obesity Risk-Factor Variation Based on Island Clusters: A Secondary Analysis of Indonesian Basic Health Research 2018

by Sri Astuti Thamrin, Dian Sidik Arsyad, Hedi Kuswanto, Armin Lawi and Andi Imam Arundhana

Nutrients 2022, 14(5), 971; <https://doi.org/10.3390/nu14050971> - 24 Feb 2022

Cited by 5 | Viewed by 4349

**Abstract** Obesity has become a rising global health problem affecting quality of life for adults. The objective of this study is to describe the prevalence of obesity in Indonesian adults based on the cluster of islands. The study also aims to identify the risk [...] Read more.

(This article belongs to the Special Issue Determinants, Screening, Prevention and Management of Obesity in Youth)

► Show Figures

Open Access Article

11 pages, 1835 KiB

### Effect of Probiotic *Bifidobacterium bifidum* TMC3115 Supplementation on Psychosocial Stress Using a Sub-Chronic and Mild Social Defeat Stress in Mice

by Kazutoyo Yoda, Gaku Harata, Mizuho Sato, Kenji Miyazawa, Natsuki Ohsawa, Fang He and Atsushi Toyoda

Nutrients 2022, 14(5), 970; <https://doi.org/10.3390/nu14050970> - 24 Feb 2022

Cited by 4 | Viewed by 3530

**Abstract** With the accumulation of knowledge on the relation between psychological stress and gut microbiota, there is growing interest in controlling stress and/or mood disorders via probiotic supplementation. We aimed to examine the effect of probiotic *Bifidobacterium bifidum* TMC3115 (TMC3115) supplementation using a sub-chronic [...] Read more.

(This article belongs to the Section Prebiotics and Probiotics)

► Show Figures

Open Access Article

22 pages, 9420 KiB

### Cranberry Polyphenols in Esophageal Cancer Inhibition: New Insights

by Katherine M. Weh, Yun Zhang, Connor L. Howard, Amy B. Howell, Jennifer L. Clarke and Laura A. Kresty

Nutrients 2022, 14(5), 969; <https://doi.org/10.3390/nu14050969> - 24 Feb 2022

Cited by 12 | Viewed by 4348

**Abstract** Esophageal adenocarcinoma (EAC) is a cancer characterized by rapidly rising incidence and poor survival, resulting in the need for new prevention and treatment options. We utilized two cranberry polyphenol extracts, one proanthocyanidin enriched (C-PAC) and a combination of anthocyanins, flavonoids, and glycosides (AFG) [...] Read more.

(This article belongs to the Special Issue Plant-Based Foods in Cancer Prevention and Treatment)

► Show Figures

### Anti-Obesity Effect of *Nostoc commune* Ethanol Extract In Vitro and In Vivo

by Sheng-Chieh Tsai, Yu-Wen Huang, Chih-Chung Wu, Jyh-Jye Wang, Ya-Ting Chen, Reeta Rani Singhania, Chiu-Wen Chen, Cheng-Di Dong and Shu-Ling Hsieh

*Nutrients* 2022, 14(5), 968; <https://doi.org/10.3390/nu14050968> - 24 Feb 2022

Cited by 11 | Viewed by 4473

**Abstract** *Nostoc commune* is an edible terrestrial blue-green alga. It has shown many beneficial effects on human health. This study aimed to investigate the phytochemical assay of *N. commune* ethanol extract (NEE) and its anti-obesity effects. The effect of a high-calorie diet on lipid [...] [Read more](#).  
(This article belongs to the Section Nutrition and Obesity)

[► Show Figures](#)

### Clinical Use of the Edmonton Obesity Staging System for the Assessment of Weight Management Outcomes in People with Class 3 Obesity

by Raymond Kodsi, Ritesh Chimoriya, David Medveczky, Kathy Grudzinskas, Evan Atlantis, Abd A. Tahrani, Nic Kormas and Milan K. Piya

*Nutrients* 2022, 14(5), 967; <https://doi.org/10.3390/nu14050967> - 24 Feb 2022

Cited by 10 | Viewed by 6740

**Abstract** We aimed to assess weight loss and metabolic outcomes by severity of weight-related complications following an intensive non-surgical weight management program (WMP) in an Australian public hospital. A retrospective cohort study of all patients aged ≥18 years with body mass index (BMI) ≥ [...] [Read more](#).

(This article belongs to the Special Issue Weight Management Interventions: Predictors and Outcomes)

[► Show Figures](#)

### Impact of Dietary Advanced Glycation End Products on Female Reproduction: Review of Potential Mechanistic Pathways

by Marco Mouanness and Zaher Merhi

*Nutrients* 2022, 14(5), 966; <https://doi.org/10.3390/nu14050966> - 24 Feb 2022

Cited by 20 | Viewed by 4642

**Abstract** Advanced glycation end products (AGEs), a heterogenous group of products formed by the reaction between protein and reducing sugars, can form endogenously due to non-enzymatic reactions or by exogenous sources such as diet where considerable increase in AGEs is observed due to the [...] [Read more](#).

(This article belongs to the Special Issue Advanced Glycation End Products (AGEs): Link between Modern Health and Disease)

[► Show Figures](#)

### Black Sea Mussels Qualitative and Quantitative Chemical Analysis: Nutritional Benefits and Possible Risks through Consumption

by Magdalena Mititelu, Sorinel Marius Neacșu, Eliza Oprea, Denisa-Elena Dumitrescu, Mirela Nedelescu, Doina Drăgănescu, Teodor Octavian Nicolescu, Adrian Cosmin Roșca and Manuela Ghica

*Nutrients* 2022, 14(5), 964; <https://doi.org/10.3390/nu14050964> - 24 Feb 2022

Cited by 30 | Viewed by 4832

**Abstract** Mussels have a particular nutritional value, representing a highly valued food source and thus sought after worldwide. Their meat is a real culinary delicacy, rich in proteins, lipids, carbohydrates, trace elements, enzymes, and vitamins. The seasonal variation of mussels' biochemical composition has been [...] [Read more](#).

(This article belongs to the Section Nutrition and Public Health)

[► Show Figures](#)

### The CO-VID D-Lemma: A Call for Action

by Michael F. Holick

*Nutrients* 2022, 14(5), 963; <https://doi.org/10.3390/nu14050963> - 24 Feb 2022

Cited by 3 | Viewed by 3699

**Abstract** It is remarkable how an invisible, inanimate particle—severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2, COVID-19)—that is hell-bent on reproducing itself was able to bring our modern civilization to its knees [...] [Full article](#)  
(This article belongs to the Section Nutritional Epidemiology)

### Astaxanthin Attenuates the Changes in the Expression of MicroRNAs Involved in the Activation of Hepatic Stellate Cells

by Minkyung Bae, Mi-Bo Kim and Ji-Young Lee

*Nutrients* 2022, 14(5), 962; <https://doi.org/10.3390/nu14050962> - 24 Feb 2022

Cited by 8 | Viewed by 2626

**Abstract** We previously demonstrated that astaxanthin (ASTX), a xanthophyll carotenoid, has an antifibrogenic effect in hepatic stellate cells (HSC), primarily responsible for the accumulation of extracellular matrix protein during the development of liver fibrosis. Studies have shown that microRNAs (miRNAs) are involved in HSC [...] [Read more](#).

(This article belongs to the Section Nutrigenetics and Nutrigenomics)

[► Show Figures](#)

### The Potential of L-Arginine in Prevention and Treatment of Disturbed Carbohydrate and Lipid Metabolism—A Review

by Aleksandra Szlas, Jakub Michał Kurek and Zbigniew Krejpcio  
*Nutrients* 2022, 14(5), 961; <https://doi.org/10.3390/nu14050961> - 24 Feb 2022  
Cited by 59 | Viewed by 13055

**Abstract** L-arginine, an endogenous amino acid, is a safe substance that can be found in food. The compound is involved in synthesis of various products responsible for regulatory functions in the body. Particularly noteworthy is, among others, nitric oxide, a signaling molecule regulating carbohydrate [...] [Read more](#).

(This article belongs to the Special Issue Amino Acid Metabolism in Human Health and Disease)

► [Show Figures](#)

Open Access Article

14 pages, 408 KiB

## Changes in Physical Activity, Healthy Diet, and Sleeping Time during the COVID-19 Pandemic in South Korea

by Hyukjin Mun and Eun Sun So

*Nutrients* 2022, 14(5), 960; <https://doi.org/10.3390/nu14050960> - 24 Feb 2022  
Cited by 19 | Viewed by 4018

**Abstract** The coronavirus disease 2019 (COVID-19) pandemic and subsequent social distancing orders may have changed health behaviors adversely. This study aims to examine changes in physical activity, diet, and sleep patterns during the pandemic in South Korea and to identify the factors influencing adverse [...] [Read more](#).

(This article belongs to the Section Nutrition and Public Health)

► [Show Figures](#)

Open Access Article

15 pages, 839 KiB

## Dietary Intake and Sources of Added Sugars in Various Food Environments in Costa Rican Adolescents

by Rafael Monge-Rojas, Rulamán Vargas-Quesada, Uriyoán Colón-Ramos and Anne Chinnoek

*Nutrients* 2022, 14(5), 959; <https://doi.org/10.3390/nu14050959> - 24 Feb 2022  
Cited by 10 | Viewed by 3391

**Abstract** Consumption of added sugars, especially from sugar-sweetened beverages (SSBs), has been associated with several negative health outcomes during adolescence. This study aimed to identify dietary intake and food sources of added sugars in the home, school, and neighborhood environments of Costa Rican adolescents. [...] [Read more](#).

(This article belongs to the Section Carbohydrates)

► [Show Figures](#)

Open Access Article

10 pages, 280 KiB

## An Assessment of Serum Selenium Concentration in Women with Endometrial Cancer

by Magdalena Janowska, Natalia Potocka, Sylwia Paszek, Marzena Skrzypa, Andrzej Wróbel, Marta Kluz, Piotr Baszuk, Wojciech Marciniak, Jacek Gronwald, Jan Lubiński, Izabela Zawlik and Tomasz Kluz

*Nutrients* 2022, 14(5), 958; <https://doi.org/10.3390/nu14050958> - 24 Feb 2022  
Cited by 10 | Viewed by 2960

**Abstract** Background: Numerous studies have shown a relationship between low serum selenium levels and an increased risk of developing cancer. Methods: A total of 306 women participated in the study: 153 patients diagnosed with endometrial cancer and 153 healthy women who were matched, in [...] [Read more](#).

(This article belongs to the Special Issue Dietary Selenium Intake and Human Health)

Open Access Article

25 pages, 4013 KiB

## Chicory: Understanding the Effects and Effectors of This Functional Food

by Céline L. Pouille, Souad Ouaza, Elise Roels, Josette Behra, Melissa Tourret, Roland Molinié, Jean-Xavier Fontaine, David Mathiron, David Gagneul, Bernard Taminiau, Georges Daube, Rozenn Ravallec, Caroline Rambaud, Jean-Louis Hilbert, Benoit Cudennec and Anca Lucau-Danila

*Nutrients* 2022, 14(5), 957; <https://doi.org/10.3390/nu14050957> - 23 Feb 2022  
Cited by 28 | Viewed by 9805

**Abstract** Industrial chicory has been the subject of numerous studies, most of which provide clinical observations on its health effects. Whether it is the roasted root, the flour obtained from the roots or the different classes of molecules that enter into the composition of [...] [Read more](#).

(This article belongs to the Topic Applied Sciences in Functional Foods)

► [Show Figures](#)

Open Access Article

15 pages, 895 KiB

## The Serial Mediation of the Association between Breakfast Skipping and Suicidality by Weight Status and Depressive Symptoms: Findings from the National Youth Risk Behavior Surveys of the United States

by Bao-Peng Liu, Hui-Juan Fang and Cun-Xian Jia

*Nutrients* 2022, 14(5), 956; <https://doi.org/10.3390/nu14050956> - 23 Feb 2022  
Cited by 13 | Viewed by 3051

**Abstract** Background: The evidence is limited for the dose–response association between breakfast skipping and suicidality. The underlying pathway from breakfast skipping to suicidality has also rarely been explored in previous studies. Methods: The data of Youth Risk Behavior Surveys (YRBSs) of the United States [...] [Read more](#).

(This article belongs to the Special Issue Definition of Healthy Diet for Healthy People: Data from Epidemiological Studies)

► [Show Figures](#)

Open Access Article

15 pages, 654 KiB

## Chronotype: A Tool to Screen Eating Habits in Polycystic Ovary Syndrome?

by Luigi Barrea, Ludovica Verde, Claudia Vetrani, Silvia Savastano, Annamaria Colao and Giovanna Muscogiuri

*Nutrients* 2022, 14(5), 955; <https://doi.org/10.3390/nu14050955> - 23 Feb 2022  
Cited by 16 | Viewed by 6031

**Abstract** Background: Polycystic ovary syndrome (PCOS) is a common endocrine disorder in women of reproductive age. It is characterized by hyperandrogenism, oligo- or anovulation, and/or polycystic ovaries. The aim of this study was to investigate the relationship between chronotype and eating habits in PCOS. [...] [Read more](#).



**Abstract** Polycystic ovary syndrome (PCOS) is the most common endocrine disorders in women of reproductive age, whose lifestyle approach is an essential part of the treatment. Recently, chronotype, i.e., a trait that determines individual's circadian preference in behavioral and biological rhythms, has been reported [...] [Read more](#).  
(This article belongs to the Special Issue Chrononutrition and Chronic Diseases)

► [Show Figures](#)

Open Access

Article

19 pages, 4477 KiB  

## Mechanism of *Astragalus membranaceus* Alleviating Acquired Hyperlipidemia Induced by High-Fat Diet through Regulating Lipid Metabolism

by **Ling Wang, Wenya Zheng, Jinxin Yang, Anwar Ali and Hong Qin**

*Nutrients* 2022, 14(5), 954; <https://doi.org/10.3390/nu14050954> - 23 Feb 2022

Cited by 41 | Viewed by 5442

**Abstract** *Astragalus membranaceus* (AM) is a food and medicinal homologous plant. The current research is aimed to investigate the beneficial effects and mechanisms of AM in treating acquired hyperlipidemia. The network pharmacology and bioinformatics analysis results showed 481 AM-related targets and 474 acquired hyperlipidemia-associated [...] [Read more](#).  
(This article belongs to the Special Issue Medicine and Food Homologous Plants and Human Health)

► [Show Figures](#)

Open Access

Editor's Choice

Article

16 pages, 3071 KiB  

## Auditing the Representation of Female Versus Male Athletes in Sports Science and Sports Medicine Research: Evidence-Based Performance Supplements

by **Ella S. Smith, Alannah K. A. McKay, Megan Kuikman, Kathryn E. Ackerman, Rachel Harris, Kirsty J. Elliott-Sale, Trent Stellingwerff and Louise M. Burke**

*Nutrients* 2022, 14(5), 953; <https://doi.org/10.3390/nu14050953> - 23 Feb 2022


Cited by 60 | Viewed by 12753

**Abstract** Although sports nutrition guidelines promote evidence-based practice, it is unclear whether women have been adequately included in the underpinning research. In view of the high usage rates of performance supplements by female athletes, we conducted a standardised audit of the literature supporting evidence-based [...] [Read more](#).  
(This article belongs to the Special Issue Ringing the Changes in Sports Nutrition and Exercise Metabolism)

► [Show Figures](#)

Open Access

Review

18 pages, 1828 KiB  

## Selenium Status in Patients with Chronic Liver Disease: A Systematic Review and Meta-Analysis

by **Yaduan Lin, Fanchen He, Shaoyan Lian, Binbin Xie, Ting Liu, Jiang He and Chaoqun Liu**

*Nutrients* 2022, 14(5), 952; <https://doi.org/10.3390/nu14050952> - 23 Feb 2022


Cited by 27 | Viewed by 6257

**Abstract** Background: The potential role of selenium in preventing chronic liver diseases remains controversial. This meta-analysis aimed to summarize the available evidence from observational studies and intervention trials that had evaluated the associations between body selenium status and chronic liver diseases. Methods: We comprehensively [...] [Read more](#).  
(This article belongs to the Special Issue Nutrition and Liver Disease)

► [Show Figures](#)

Open Access

Article

16 pages, 593 KiB 

## Online Pre-Order Systems for School Lunches: Insights from a Cross-Sectional Study in Primary Schools

by **Nahlah Alkhunain, Jennifer Bernadette Moore and Hannah Ensaff**

*Nutrients* 2022, 14(5), 951; <https://doi.org/10.3390/nu14050951> - 23 Feb 2022

Cited by 3 | Viewed by 3598

**Abstract** Schools are increasingly using online pre-order systems for children to select school meals in advance. This study aimed to explore how children use and interact with these systems. Using a combination of direct observation and an online questionnaire, the operation of these systems [...] [Read more](#).  
(This article belongs to the Special Issue The Role of Obesogenic Dietary Behaviors in Children and Adolescents)

► [Show Figures](#)

Open Access

Article

15 pages, 1244 KiB  

## Global Burden of Vitamin A Deficiency in 204 Countries and Territories from 1990–2019

by **Tian Zhao, Shiwei Liu, Ruijie Zhang, Zhenping Zhao, Hu Yu, Liyuan Pu, Li Wang and Liyuan Han**

*Nutrients* 2022, 14(5), 950; <https://doi.org/10.3390/nu14050950> - 23 Feb 2022

Cited by 58 | Viewed by 10333

**Abstract** Vitamin A deficiency (VAD) is one of the important public health issues worldwide. However, a detailed understanding of the incidence and disability-adjusted life years (DALYs) due to VAD in recent years is lacking. We aimed to estimate the incidence and DALYs of VAD [...] [Read more](#).  
(This article belongs to the Section Micronutrients and Human Health)


► [Show Figures](#)

Open Access

Feature Paper

Editor's Choice

Review

20 pages, 832 KiB 

## The Intestinal Barrier Dysfunction as Driving Factor of Inflammaging

by **Eva Untersmayr, Annette Brandt, Larissa Koidl and Ina Bergheim**

*Nutrients* 2022, 14(5), 949; <https://doi.org/10.3390/nu14050949> - 23 Feb 2022

Cited by 54 | Viewed by 11208

**Abstract** The intestinal barrier, composed of the luminal microbiota, the mucus layer, and the physical barrier consisting of epithelial cells and immune cells, the latter residing underneath and within the epithelial cells, plays a special role in health and disease. While there is growing [...] [Read more](#).  
(This article belongs to the Collection Connection between Microbiome, Lifestyle and Diet)

► Show Figures

Open Access Editor's Choice Review

15 pages, 680 KiB

### Understanding Sex Differences in Childhood Undernutrition: A Narrative Review

by Susan Thurstans, Charles Opondo, Andrew Seal, Jonathan C. Wells, Tanya Khara, Carmel Dolan, André Briend, Mark Myatt, Michel Garenne, Andrew Mertens, Rebecca Sear and Marko Kerac

*Nutrients* 2022, 14(5), 948; <https://doi.org/10.3390/nu14050948> - 23 Feb 2022

Cited by 54 | Viewed by 8718

**Abstract** Complementing a recent systematic review and meta-analysis which showed that boys are more likely to be wasted, stunted, and underweight than girls, we conducted a narrative review to explore which early life mechanisms might underlie these sex differences. We addressed different themes, including [...] [Read more](#).  
(This article belongs to the Section Pediatric Nutrition)

► Show Figures

Open Access Editor's Choice Review

31 pages, 2817 KiB

### Protein Quality in Perspective: A Review of Protein Quality Metrics and Their Applications

by Shiksha Adhikari, Marijke Schop, Imke J. M. de Boer and Thom Huppertz

*Nutrients* 2022, 14(5), 947; <https://doi.org/10.3390/nu14050947> - 23 Feb 2022

Cited by 118 | Viewed by 21685

**Abstract** For design of healthy and sustainable diets and food systems, it is important to consider not only the quantity but also the quality of nutrients. This is particularly important for proteins, given the large variability in amino acid composition and digestibility between dietary [...] [Read more](#).  
(This article belongs to the Section Proteins and Amino Acids)

► Show Figures

Open Access Article

11 pages, 1565 KiB

### Identification of ICU Patients with High Nutritional Risk after Abdominal Surgery Using Modified NUTRIC Score and the Association of Energy Adequacy with 90-Day Mortality

by Kyoung Moo Im and Eun Young Kim

*Nutrients* 2022, 14(5), 946; <https://doi.org/10.3390/nu14050946> - 23 Feb 2022

Cited by 12 | Viewed by 2779

**Abstract** For patients undergoing abdominal surgery, malnutrition further increases the susceptibility to infection, surgical complications, and mortality. However, there is no standard tool for identifying high-risk groups of malnutrition or exact criteria for the optimal target of nutrition supply. We aimed to identify the [...] [Read more](#).  
(This article belongs to the Section Clinical Nutrition)

► Show Figures

Open Access Article

15 pages, 1268 KiB

### Sportsmen's Attitude towards Dietary Supplements and Nutrition Knowledge: An Investigation in Selected Roman Area Gyms

by Alberto Finamore, Luca Benvenuti, Alberto De Santis, Serena Cinti and Laura Rossi

*Nutrients* 2022, 14(5), 945; <https://doi.org/10.3390/nu14050945> - 23 Feb 2022

Cited by 24 | Viewed by 5545

**Abstract** The non-professional sport environment is a grey zone not as widely assessed as that of elite athletes. The purpose of this research was to investigate the dietary supplementation habits and the nutrition knowledge on sport (NKS) in a sample of gym users. The [...] [Read more](#).  
(This article belongs to the Section Sports Nutrition)

► Show Figures

Open Access Article

14 pages, 3340 KiB

### Implementing a Community-Based Initiative to Improve Nutritional Intake among Home-Delivered Meal Recipients

by Lisa A. Juckett, Govind Hariharan, Dimitri Camargo Dodonova, Jared Klaus, Melinda Rowe, Elana Burak, Benetta Mason and Leah Bunck

*Nutrients* 2022, 14(5), 944; <https://doi.org/10.3390/nu14050944> - 23 Feb 2022

Cited by 5 | Viewed by 3162

**Abstract** Home-delivered meal (HDM) recipients are a highly vulnerable group of older adults at risk for malnutrition and subsequent health decline. To help HDM recipients increase their nutritional intake, HDM agencies may provide expanded meal options that allow older adults to have greater autonomy [...] [Read more](#).  
(This article belongs to the Special Issue Public Health Nutrition and Healthy Aging)

► Show Figures

Open Access Article

10 pages, 827 KiB

### Development and Validation of Cutoff Value for Reduced Muscle Mass for GLIM Criteria in Patients with Gastrointestinal and Hepatobiliary–Pancreatic Cancers

by Mami Takimoto, Sonoko Yasui-Yamada, Nanami Nasu, Natsumi Kagiya, Nozomi Aotani, Yumiko Kurokawa, Yoshiko Tani-Suzuki, Hideya Kashiwara, Yu Saito, Masaaki Nishi, Mitsuo Shimada and Yasuhiro Hamada

*Nutrients* 2022, 14(5), 943; <https://doi.org/10.3390/nu14050943> - 23 Feb 2022

Cited by 15 | Viewed by 3061

**Abstract** The Global Leadership Initiative on Malnutrition (GLIM) criteria recommends using race- and sex-adjusted cutoff values for reduced muscle mass (RMM), but the only cutoff values available for Asians are the skeletal muscle mass index (SMI) established by the Asian Working Group for Sarcopenia [...] [Read more](#).  
(This article belongs to the Section Nutrition Methodology & Assessment)

► Show Figures

**New Insights into Potential Beneficial Effects of Bioactive Compounds of Bee Products in Boosting Immunity to Fight COVID-19 Pandemic: Focus on Zinc and Polyphenols**

by Meryem Bakour, Hassan Laaroussi, Driss Ousaïd, Asmae El Ghouzi, Imane Es-safi, Hamza Mechchate and Badiaa Lyoussi

*Nutrients* 2022, 14(5), 942; <https://doi.org/10.3390/nu14050942> - 23 Feb 2022

Cited by 11 | Viewed by 5106

**Abstract** The coronavirus disease 2019 (COVID-19) is an epidemic caused by SARS-CoV-2 (severe acute respiratory syndrome coronavirus 2). Populations at risk as well as those who can develop serious complications are people with chronic diseases such as diabetes, hypertension, and the elderly. Severe symptoms [...] [Read more](#).

(This article belongs to the Special Issue Impact of Food, Nutrition, Probiotics, Prebiotics, Synbiotics and Medicinal Plants in COVID-19)

[► Show Figures](#)**A Comparison of Dietary Patterns and Factors Influencing Food Choice among Ethnic Groups Living in One Locality: A Systematic Review**

by Grace Bennett, Laura A. Bardon and Eileen R. Gibney

*Nutrients* 2022, 14(5), 941; <https://doi.org/10.3390/nu14050941> - 23 Feb 2022

Cited by 58 | Viewed by 10194

**Abstract** Globally, the number of minority ethnic groups in high-income countries is increasing. However, despite this demographic change, most national food consumption surveys are not representative of ethnically diverse populations. In consequence, many ethnic minorities' dietary intakes are underreported, meaning that accurate analysis of [...] [Read more](#).

(This article belongs to the Section Nutrition and Public Health)

[► Show Figures](#)**Acknowledgment to Reviewers of *Nutrients* in 2021**by *Nutrients* Editorial Office*Nutrients* 2022, 14(5), 940; <https://doi.org/10.3390/nu14050940> - 23 Feb 2022

Viewed by 4605

**Abstract** Rigorous peer-reviews are the basis of high-quality academic publishing [...] [Full article](#)

**Feasibility and Effectiveness of a Preventive Care Program during the Compound Humanitarian Crisis and COVID-19 Pandemic in Venezuela**

by Juan P. González-Rivas, María M. Infante-García, Ramfis Nieto-Martínez, Jeffrey I. Mechanick and Goodarz Danaei

*Nutrients* 2022, 14(5), 939; <https://doi.org/10.3390/nu14050939> - 23 Feb 2022

Cited by 2 | Viewed by 2892

**Abstract** Effective preventive care programs are urgently needed during humanitarian crises, as has been especially obvious during the COVID-19 pandemic. A pragmatic trial was designed: hybridized intervention (Diabetes Prevention Program [DPP] + medical nutrition therapy + liquid diet [LD]; LD group) vs. DPP only [...] [Read more](#).

(This article belongs to the Section Nutrition and Diabetes)

[► Show Figures](#)**Suppressive Role of Lactoferrin in Overweight-Related Female Fertility Problems**

by Ban Sato, Seiya Kanai, Daiki Sakaguchi, Kodai Yajima, Yu Matsumoto, Kazunori Morohoshi, Shinji Kagaya, Nobuo Izumo, Minoru Ichinose, Woojin Kang, Mami Miyado, Kenji Miyado and Natsuko Kawano

*Nutrients* 2022, 14(5), 938; <https://doi.org/10.3390/nu14050938> - 22 Feb 2022

Cited by 4 | Viewed by 3635

**Abstract** The secretory glycoprotein lactoferrin (LF) is suggested to ameliorate overweight regardless of non-genetic or genetic mechanisms. Although maternal overweight represents a key predictor of offspring growth, the efficacy of LF on fertility problems in overweight and obese mothers remains unknown. To address this [...] [Read more](#).

(This article belongs to the Section Nutrition in Women)

[► Show Figures](#)**Effects of Whole Brown Bean and Its Isolated Fiber Fraction on Plasma Lipid Profile, Atherosclerosis, Gut Microbiota, and Microbiota-Dependent Metabolites in *Apoe*<sup>−/−</sup> Mice**

by Jiyun Liu, Mohammed E. Hefni, Cornelia M. Witthöft, Maria Bergström, Stephen Burleigh, Margareta Nyman and Frida Hållénius

*Nutrients* 2022, 14(5), 937; <https://doi.org/10.3390/nu14050937> - 22 Feb 2022

Cited by 11 | Viewed by 3003

**Abstract** The health benefits of bean consumption are widely recognized and are largely attributed to the dietary fiber content. This study investigated and compared the effects of whole brown beans and an isolated bean dietary fiber fraction on the plasma lipid profile, atherosclerotic plaque [...] [Read more](#).

(This article belongs to the Special Issue Effect of a Nutritional Intervention on the Intestinal Microbiota)

[► Show Figures](#)**Effects of the Mediterranean Diet on Morbidity from Inflammatory and Recurrent Diseases with Special Reference to Childhood Asthma**

by Fernando M. Calatayud-Sáez, Blanca Calatayud and Ana Calatayud

**Abstract Objective:** For 15 years, we have been working with a nutritional programme based on the traditional Mediterranean diet (TMD) to complete the treatment of inflammatory and recurrent diseases (IRD), such as childhood asthma. The objective of this study is to verify the effects [...] [Read more](#).

(This article belongs to the Section Nutritional Immunology)

► [Show Figures](#)

[Open Access](#) [Article](#)

16 pages, 1231 KIB [Download](#)

### Cognitive Performance Before and Following Habituation to Exercise-Induced Hypohydration of 2 and 4% Body Mass in Physically Active Individuals

by Thomas A. Deshayes, Nicolas Daigle, David Jeker, Martin Lamontagne-Lacasse, Maxime Perreault-Briere, Pascale Claveau, Ivan L. Simoneau, Estelle Chamoux and Eric D. B. Goulet

Nutrients 2022, 14(5), 935; <https://doi.org/10.3390/nu14050935> - 22 Feb 2022

Cited by 4 | Viewed by 3135

**Abstract** We investigated the effect of repeated exposures to hypohydration upon cognitive performance. In a randomized crossover design, ten physically active adults completed two 4-week training blocks, one where they maintained euhydration (EUH) and the other where they were water-restricted (DEH) during walking/running at [...] [Read more](#).

(This article belongs to the Special Issue Habituation to Dehydration during Exercise: Impact on Health, Physical and Cognitive Performance)

► [Show Figures](#)

[Open Access](#) [Article](#)

11 pages, 1321 KIB [Download](#) [Comments](#)

### Anthropometric Measures and Risk of Rheumatoid Arthritis in the French E3N Cohort Study

by Carine Salliot, Yann Nguyen, Xavier Mariette, Marie-Christine Boutron-Ruault and Raphaële Seror

Nutrients 2022, 14(5), 934; <https://doi.org/10.3390/nu14050934> - 22 Feb 2022

Cited by 3 | Viewed by 2274

**Abstract** We aimed to assess the relationships between anthropometric measures and risk of rheumatoid arthritis (RA). The E3N cohort included 98,995 women (aged 40–65 years at the recruitment) who completed mailed questionnaires on reproductive factors, lifestyle, and health-related information, including anthropometric measures, every 2–3 [...] [Read more](#).

(This article belongs to the Special Issue New Insight in Inflammatory Rheumatic Diseases and Nutrition)

► [Show Figures](#)

[Open Access](#) [Systematic Review](#)

14 pages, 1300 KIB [Download](#) [Comments](#)

### Effects of Exercise on Nutritional Status in People with Cystic Fibrosis: A Systematic Review

by William B. Nicolson, Julianna Bailey, Najlaa Z. Alotaibi, Stefanie Krick and John D. Lowman

Nutrients 2022, 14(5), 933; <https://doi.org/10.3390/nu14050933> - 22 Feb 2022

Cited by 5 | Viewed by 3680

**Abstract** Background: Physical exercise is an important part of regular care for people with cystic fibrosis (CF). It is unknown whether such exercise has beneficial or detrimental effects on nutritional status (body composition). Thus, the objective of this review was to evaluate the effect [...] [Read more](#).

(This article belongs to the Special Issue Nutritional Management of Cystic Fibrosis)

► [Show Figures](#)

[Open Access](#) [Article](#)

10 pages, 1372 KIB [Download](#)

### Simple Clinical Screening Underestimates Malnutrition in Surgical Patients with Inflammatory Bowel Disease—An ACS NSQIP Analysis

by Mohamed A. Abd-El-Aziz, Martin Hübner, Nicolas Demartines, David W. Larson and Fabian Grass

Nutrients 2022, 14(5), 932; <https://doi.org/10.3390/nu14050932> - 22 Feb 2022

Cited by 7 | Viewed by 2624

**Abstract** The present large scale study aimed to assess the prevalence and consequences of malnutrition, based on clinical assessment (body mass index and preoperative weight loss) and severe hypoalbuminemia (<3.1 g/L), in a representative US cohort undergoing IBD surgery. The American College of Surgeons [...] [Read more](#).

(This article belongs to the Special Issue Nutritional Management for Inflammatory Bowel Diseases)

► [Show Figures](#)

[Open Access](#) [Article](#)

14 pages, 4688 KIB [Download](#) [Comments](#)

### Evolving Patterns of Nutritional Deficiencies Burden in Low- and Middle-Income Countries: Findings from the 2019 Global Burden of Disease Study

by Jingjing Liu, Xinye Qi, Xing Wang, Yinghua Qin, Shengchao Jiang, Liyuan Han, Zheng Kang, Linghan Shan, Libo Liang and Qunhong Wu

Nutrients 2022, 14(5), 931; <https://doi.org/10.3390/nu14050931> - 22 Feb 2022

Cited by 12 | Viewed by 4441

**Abstract** Low- and middle-income countries (LMICs) suffered the most from nutritional deficiencies (NDs). Although decades of efforts have reduced it, little is known about the changing trajectory of ND burden in LMICs. By extracting data of the Global Burden of Diseases, Injuries, and Risk [...] [Read more](#).

(This article belongs to the Section Nutrition and Public Health)

► [Show Figures](#)

[Open Access](#) [Review](#)

21 pages, 13554 KIB [Download](#)

### Methodological Aspects of Indirect Calorimetry in Patients with Sepsis—Possibilities and Limitations

by Weronika Wasyluk, Agnieszka Zwolak, Joop Jonckheer, Elisabeth De Waele and Wojciech Dąbrowski



**Abstract** The aim of the review was to analyse the challenges of using indirect calorimetry in patients with sepsis, including the limitations of this method. A systematic review of the literature was carried out. The analysis concerned the methodology and presentation of research results. [...] [Read more](#).

(This article belongs to the Section **Clinical Nutrition**)

► [Show Figures](#)

Open Access **Article**

12 pages, 1199 KIB [Download](#) [Printer](#)

## Timing of Adiposity Rebound and Determinants of Early Adiposity Rebound in Korean Infants and Children Based on Data from the National Health Insurance Service

by Eun Kyoung Goh, Oh Yoen Kim, So Ra Yoon and Hyo Jeong Jeon

Nutrients 2022, 14(5), 929; <https://doi.org/10.3390/nu14050929> - 22 Feb 2022

Cited by 6 | Viewed by 3075

**Abstract** Adiposity rebound (AR) is defined as the second rise in the body mass index (BMI) usually occurring in early childhood. This study aimed to investigate the timing of AR and the factors determining early AR (EAR) by tracking BMI patterns using large-scale longitudinal [...] [Read more](#).

(This article belongs to the Special Issue **Early-Life Nutrition and Metabolic Disorders in Later Life**)

► [Show Figures](#)

Open Access **Systematic Review**

17 pages, 862 KIB [Download](#) [Printer](#)

## Sustainable Diets as Tools to Harmonize the Health of Individuals, Communities and the Planet: A Systematic Review

by Tatianna Oliva Kowalsky, Rubén Morilla Romero de la Osa and Isabel Cerrillo

Nutrients 2022, 14(5), 928; <https://doi.org/10.3390/nu14050928> - 22 Feb 2022

Cited by 18 | Viewed by 5904

**Abstract** Background. Climate change and global health are inextricably linked. Thus, health systems and their professionals must adapt and evolve without losing quality of care. Aim(s). To identify health and environmental co-benefits derived from a sustainable diet and promotion strategies that favor its implementation. [...] [Read more](#).

(This article belongs to the Special Issue **Examining Linkages among Food Insecurity, Food Systems, and Public Health**)

► [Show Figures](#)

Open Access **Article**

14 pages, 1717 KiB [Download](#) [Printer](#)

## Ultrasonic-Assisted Extraction of *Codonopsis pilosula* Glucofructan: Optimization, Structure, and Immunoregulatory Activity

by Hai-Yu Ji, Juan Yu, Jian-Shuang Jiao, Xiao-Dan Dong, Sha-Sha Yu and An-Jun Liu

Nutrients 2022, 14(5), 927; <https://doi.org/10.3390/nu14050927> - 22 Feb 2022

Cited by 30 | Viewed by 2829

**Abstract** In recent years, multiple edible polysaccharides from *Codonopsis pilosula* were mainly isolated with high average molecular weights and exhibited various bioactivities, but it was proven that low-molecular-weight polysaccharides could exert stronger activities due to the superior water solubility and permeability. In the present [...] [Read more](#).

(This article belongs to the Section **Nutritional Immunology**)

► [Show Figures](#)

Open Access **Article**

16 pages, 14589 KiB [Download](#) [Printer](#)

## Chronic Intermittent Sucrose Consumption Facilitates the Ability to Discriminate Opioid Receptor Blockade with Naltrexone in Rats

by David C. Jewett, Donisha S. N. K. Liyanagamage, Mark A. Vanden Avond, Molly A. B. Anderson, Kyleigh A. Twaroski, Morgan A. Marek, Kimberly F. James, Tapasya Pal, Anica Klockars, Pawel K. Olszewski and Allen S. Levine

Nutrients 2022, 14(5), 926; <https://doi.org/10.3390/nu14050926> - 22 Feb 2022

Cited by 3 | Viewed by 2822

**Abstract** The opioid antagonist naltrexone (NTX) decreases intake of preferred diets in rats at very low doses relative to doses needed to decrease intake of “bland” laboratory chow. In the absence of an opioid agonist, NTX is not discriminable using operant techniques. In the [...] [Read more](#).

(This article belongs to the Special Issue **Dietary Impact on Neural and Endocrine Systems Relevant to Energy Balance**)

► [Show Figures](#)

Open Access **Review**

14 pages, 329 KIB [Download](#) [Printer](#)

## Vitamin K Supplementation for Prevention of Vascular Calcification in Chronic Kidney Disease Patients: Are We There Yet?

by Stefanos Roumeliotis, Anila Duni, Vasilios Valios, Athanasios Kitsos, Vassilios Liakopoulos and Evangelia Dounousi

Nutrients 2022, 14(5), 925; <https://doi.org/10.3390/nu14050925> - 22 Feb 2022

Cited by 23 | Viewed by 5431

**Abstract** Chronic Kidney Disease (CKD) patients are at high risk of presenting with arterial calcification or stiffness, which confers increased cardiovascular mortality and morbidity. In recent years, it has become evident that VC is an active process regulated by various molecules that may act [...] [Read more](#).

(This article belongs to the Special Issue **Vitamin K in Chronic Disease and Human Health**)

Open Access **Feature Paper** **Review**

25 pages, 3734 KIB [Download](#) [Printer](#)

## The Nutrition-Microbiota-Physical Activity Triad: An Inspiring New Concept for Health and Sports Performance

by Nathalie Boisseau, Nicolas Barnich and Christelle Koechlin-Ramonatxo

Nutrients 2022, 14(5), 924; <https://doi.org/10.3390/nu14050924> - 22 Feb 2022

Cited by 22 | Viewed by 7867

**Abstract** The human gut microbiota is currently the focus of converging interest in many diseases and sports performance. This review expects not elaborate on a well “established” concept in the field’s history (patho-bacteria due to its resistance to many


review presents gut microbiota as a real orchestra conductor in the host's physiopathology due to its implications in many aspects of health and disease. Reciprocally, [...] [Read more](#).

(This article belongs to the Special Issue **Exercise, Microbiota, Health and Performance**)

► [Show Figures](#)

Open Access

Article

13 pages, 756 KiB  

### A Comparison of SARC-F, Calf Circumference, and Their Combination for Sarcopenia Screening among Patients Undergoing Peritoneal Dialysis

by Yu-Li Lin, Chih-Hsien Wang, Jen-Pi Tsai, Chih-Tsung Chen, Yi-Hsin Chen, Szu-Chun Hung and Bang-Gee Hsu

*Nutrients* 2022, 14(5), 923; <https://doi.org/10.3390/nu14050923> - 22 Feb 2022

Cited by 24 | Viewed by 6610

**Abstract** Sarcopenia is frequently encountered in patients undergoing peritoneal dialysis (PD). We evaluated and compared the diagnostic performance of a strength, assistance walking, rise from a chair, climb stairs, and falls (SARC-F) questionnaire, SARC-F combined with calf circumference (SARC-CalF), and calf circumference (CC) for [...] [Read more](#).

(This article belongs to the Special Issue **Nutritional Assessment and Nutrient Supplement in Patients with Chronic Kidney Disease**)

► [Show Figures](#)

Open Access

Article

10 pages, 266 KiB 

### The Impact of Sugar-Sweetened Beverage Taxes by Household Income: A Multi-City Comparison of Nielsen Purchasing Data

by Abigail R. Barker, Stephanie Mazzucca and Ruopeng An

*Nutrients* 2022, 14(5), 922; <https://doi.org/10.3390/nu14050922> - 22 Feb 2022

Cited by 10 | Viewed by 4350

**Abstract** Due to the role that sugar-sweetened beverages (SSBs) play in the obesity epidemic, SSB taxes have been enacted in the United States in the California cities of Albany, Berkeley, Oakland, and San Francisco, as well as in Boulder, Philadelphia, and Seattle. We pooled [...] [Read more](#).

(This article belongs to the Special Issue **The Impact of Policy and Food Environment on Food Purchase and Dietary Behavior**)

Open Access

Review

16 pages, 596 KiB 

### Effects of Creatine Supplementation on Brain Function and Health

by Scott C. Forbes, Dean M. Cordingley, Stephen M. Cornish, Bruno Gualano, Hamilton Roschel, Sergej M. Ostojic, Eric S. Rawson, Brian D. Roy, Konstantinos Prokopoulos, Panagiotis Giannos and Darren G. Candow

*Nutrients* 2022, 14(5), 921; <https://doi.org/10.3390/nu14050921> - 22 Feb 2022

Cited by 67 | Viewed by 99486

**Abstract** While the vast majority of research involving creatine supplementation has focused on skeletal muscle, there is a small body of accumulating research that has focused on creatine and the brain. Preliminary studies indicate that creatine supplementation (and guanidinoacetic acid; GAA) has the ability [...] [Read more](#).

(This article belongs to the Special Issue **Natural Products, Micronutrient and Nutraceuticals to Improve Mood Disorders and Enhance Cognitive Function**)

► [Show Figures](#)

Open Access

Article

16 pages, 1959 KiB  

### Dietary-Derived Essential Nutrients and Amyotrophic Lateral Sclerosis: A Two-Sample Mendelian Randomization Study

by Kailin Xia, Yajun Wang, Linjing Zhang, Lu Tang, Gan Zhang, Tao Huang, Ninghao Huang and Dongsheng Fan

*Nutrients* 2022, 14(5), 920; <https://doi.org/10.3390/nu14050920> - 22 Feb 2022

Cited by 20 | Viewed by 5537

**Abstract** Previous studies have suggested a close but inconsistent relationship between essential nutrients and the risk of amyotrophic lateral sclerosis (ALS), and whether this association is causal remains unknown. We aimed to investigate the potential causal relation between essential nutrients (essential amino acids, essential [...] [Read more](#).

(This article belongs to the Special Issue **Mendelian Randomization Studies on Nutritional Factors and Health Outcomes**)

► [Show Figures](#)

Open Access

Review

17 pages, 795 KiB 

### Providing the Best Parenteral Nutrition before and after Surgery for NEC: Macro and Micronutrients Intakes

by Silvia Guiducci, Miriam Duci, Laura Moschino, Marta Meneghelli, Francesco Fascetti Leon, Luca Bonadies, Maria Elena Cavicchiolo and Giovanna Verlatto

*Nutrients* 2022, 14(5), 919; <https://doi.org/10.3390/nu14050919> - 22 Feb 2022

Cited by 5 | Viewed by 5511


**Abstract** Necrotizing enterocolitis (NEC) is the main gastrointestinal emergency of preterm infants for whom bowel rest and parenteral nutrition (PN) is essential. Despite the improvements in neonatal care, the incidence of NEC remains high (11% in preterm newborns with a birth weight <1500 g) [...] [Read more](#).

(This article belongs to the Special Issue **Macronutrients and Micronutrients in Parenteral Nutrition**)

► [Show Figures](#)

Open Access

Article

19 pages, 312 KiB 

### Macronutrient Intake and Insulin Resistance in 5665 Randomly Selected, Non-Diabetic U.S. Adults

by Larry A. Tucker

*Nutrients* 2022, 14(5), 918; <https://doi.org/10.3390/nu14050918> - 22 Feb 2022

Cited by 10 | Viewed by 4026

**Abstract** The main goal of this investigation was to evaluate the relationships between several macronutrients and insulin resistance in 5665 non-diabetic U.S. adults. A secondary objective was to determine the extent to which the associations were

influenced by multiple potential confounding variables. A cross-sectional [...] Read more.  
(This article belongs to the Special Issue Impact of Diet Composition on Insulin Resistance)

Open Access Editor's Choice Review

27 pages, 2998 KiB

## Emerging Evidence for the Widespread Role of Glutamatergic Dysfunction in Neuropsychiatric Diseases

by Thomas McGrath, Richard Baskerville, Marcelo Rogero and Linda Castell

Nutrients 2022, 14(5), 917; <https://doi.org/10.3390/nu14050917> - 22 Feb 2022

Cited by 55 | Viewed by 6962

**Abstract** The monoamine model of depression has long formed the basis of drug development but fails to explain treatment resistance or associations with stress or inflammation. Recent animal research, clinical trials of ketamine (a glutamate receptor antagonist), neuroimaging research, and microbiome studies provide increasing [...] Read more.

(This article belongs to the Special Issue Nutritional Aspects of Immunometabolism in Health and Disease)

Show Figures

Open Access Article

19 pages, 3127 KiB

## Tapioca Resistant Maltodextrin as a Carbohydrate Source of Oral Nutrition Supplement (ONS) on Metabolic Indicators: A Clinical Trial

by Junaida Astina, Weeraya Saphyakhajorn, Chaleeda Borompichaichartkul and Suwimol Sapwarobol

Nutrients 2022, 14(5), 916; <https://doi.org/10.3390/nu14050916> - 22 Feb 2022

Cited by 10 | Viewed by 4771

**Abstract** Tapioca resistant maltodextrin (TRM) is a novel non-viscous soluble resistant starch that can be utilized in oral nutrition supplements (ONS). This study aims to evaluate acute and long-term metabolic responses and the safe use of ONS containing TRM. This study comprised of two [...] Read more.

(This article belongs to the Section Carbohydrates)

Show Figures

Open Access Article

13 pages, 4745 KiB

## Metabolically Healthy and Unhealthy Obese Phenotypes among Arabs and South Asians: Prevalence and Relationship with Cardiometabolic Indicators

by Victor M. Oguoma, Mohamed Abu-Farha, Neil T. Coffee, Saad Alsharrah, Faisal H. Al-Refaei, Jehad Abubaker, Mark Daniel and Fahd Al-Mulla

Nutrients 2022, 14(5), 915; <https://doi.org/10.3390/nu14050915> - 22 Feb 2022

Cited by 11 | Viewed by 3343

**Abstract** Obesity is a public health crisis in Kuwait. However, not all obese individuals are metabolically unhealthy (MuHO) given the link between obesity and future cardiovascular events. We assessed the prevalence of the metabolically healthy obese (MHO) phenotype and its relationship with high sensitivity [...] Read more.

(This article belongs to the Section Nutrition and Obesity)

Show Figures

Show export options

Displaying articles 1-212

 Nutrients, EISSN 2072-6643, Published by MDPI

RSS Content Alert



Subscribe to receive issue release notifications and newsletters from MDPI journals

Select options

Enter your email address...

Subscribe

### Further Information

Article Processing Charges

Pay an Invoice

Open Access Policy

Contact MDPI

Jobs at MDPI

### Guidelines

For Authors

For Reviewers

For Editors

For Librarians

For Publishers

For Societies

For Conference Organizers

### MDPI Initiatives

Sciforum

MDPI Books

Preprints.org

Scilit

SciProfiles

Encyclopedia

JAMS

Proceedings Series

### Follow MDPI

LinkedIn

Facebook

X



© 1996–2025 MDPI (Basel, Switzerland) unless otherwise stated


Disclaimer

Terms and Conditions

Privacy Policy

## Article

# The Prevalence of Overweight Status among Early Adolescents from Private Schools in Indonesia: Sex-Specific Patterns Determined by School Urbanization Level

Eveline Sarintohe <sup>1,2,\*</sup>, Junilla K. Larsen <sup>1</sup>, William J. Burk <sup>1</sup> and Jacqueline M. Vink <sup>1</sup> 

<sup>1</sup> Behavioural Science Institute, Radboud University, 6500 HE Nijmegen, The Netherlands; junilla.larsen@ru.nl (J.K.L.); william.burk@ru.nl (W.J.B.); Jacqueline.vink@ru.nl (J.M.V.)

<sup>2</sup> Psychology Faculty, Maranatha Christian University, Bandung 40164, West Java, Indonesia

\* Correspondence: eveline.sarintohe@ru.nl; Tel.: +31-88-4696514 or +31-88-4699096

**Abstract:** (1) Background: Few studies have investigated (demographic) correlates of (prevalent) overweight rates among early adolescents, especially from higher socioeconomic positions (SEP) in developing countries, such as Indonesia. The current study aims to fill this gap. (2) Methods: Participants included 411 adolescents from five private schools in Indonesia. Adolescents' weight and height were measured, and adolescents completed questionnaires on demographic factors (i.e., sex, school area, ethnicity, pocket money) and previous year dieting. (3) Results: Results showed that more than one-third of the sample was overweight, with higher rates among adolescent males (47%) than females (24%). Moreover, adolescents attending schools in urban areas (compared with suburban areas), and those reporting past dieting (compared with those reporting no dieting) had higher overweight rates. Ethnicity and the amount of pocket money were not related to overweight status. Finally, a clear sex-specific interaction was found involving school area, showing that males in urban areas had a significantly higher risk to be overweight, whereas this did not apply to females. (4) Conclusions: males from urban area private schools in Indonesia may be an important target group for future preventive overweight interventions.

**Keywords:** obesity; overweight; developing countries; Indonesia; adolescents; sex differences; demographic; high SEP



**Citation:** Sarintohe, E.; Larsen, J.K.; Burk, W.J.; Vink, J.M. The Prevalence of Overweight Status among Early Adolescents from Private Schools in Indonesia: Sex-Specific Patterns Determined by School Urbanization Level. *Nutrients* **2022**, *14*, 1001. <https://doi.org/10.3390/nu14051001>

Academic Editor: Roberto Iacone

Received: 11 February 2022

Accepted: 25 February 2022

Published: 27 February 2022

**Publisher's Note:** MDPI stays neutral with regard to jurisdictional claims in published maps and institutional affiliations.



**Copyright:** © 2022 by the authors. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).

## 1. Introduction

The prevalence of obese and overweight individuals has continued to increase over the past years, particularly in developing countries, such as Indonesia [1–3]. In contrast to Western countries, obesity is positively related to socioeconomic position (SEP) in many developing countries [4–6], meaning that being overweight is more prevalent among adults and adolescents with higher SEP. So far, studies have suggested that in developing nations, people with a higher SEP, compared with lower SEP, have easier access to junk food or calorie-dense foods, which may explain the higher overweight rates, particularly in these groups [5,6].

Adolescence is a particularly vulnerable period for the development of overweight, not only in Western countries but also among developing countries such as Indonesia [7,8]. Moreover, overweight prevalence seems to show sex-specific differences in Indonesia. Among adolescents, the prevalence of overweight was higher in females than in males [4,9]. The same has been found for adult populations in Indonesia (i.e., higher prevalence rates among women compared with men) [2,4,10]. However, among children, the prevalence of overweight was higher in boys compared with girls [4]. These (review) results suggest some shifting sex-specific patterns during early adolescence regarding the prevalence of overweight status. The current study has a specific focus on early adolescence, a critical



stage where (gender-specific) lifestyle choices change, for example, because of the availability of energy-dense (junk) food and increasing peer influences in (changing) school environments [9,11,12], with the highest possible impact among adolescents at private schools [4].

In general, school is an environment in which adolescents spend much of their time with peers, and where junk food is available. As such, school area (i.e., urban versus non-urban areas or less urban) might play an important role in obesogenic behaviors, including junk food consumption [9,13]. In line with this, some studies in Indonesia have shown that overweight patterns differ according to school area [11,14]. Adolescents living in urban (school) areas have higher prevalence rates of overweight status compared with those living in less urban or rural areas [11,14]. This might be explained by their greater access to more types of junk food or fast food compared with people living in less urban or rural areas [9,13–15]. Moreover, previous research has also found that overweight patterns differ according to ethnicity. To date, overweight status is more prevalent among people with Orang Asli Malaysian compared with Chinese Malaysians backgrounds [13]. Further research is needed to examine whether and how overweight status among early adolescents at private schools, with generally higher overweight risk, might differ according to school area and ethnic background in Indonesia.

Furthermore, given that the amount of pocket money may be an indication of the possibility to buy fast food, pocket money may also be related to overweight status among early adolescents from private schools and mostly higher SEP backgrounds. Finally, studies in industrialized countries (in Europe and America) have shown that dieting behavior is associated with greater weight gain over time among adolescents [16]. Due to the increasing impact of Western society on developing countries such as Indonesia, it is important to identify whether dieting behavior is similarly linked to overweight status among early adolescents at relatively high risk for being overweight from private schools in Indonesia.

Moreover, some previous studies among Indonesian populations have also shown sex-specific links regarding demographic factors explaining overweight status. Specifically, two previous Indonesian studies in adult samples showed that females from urban areas were at higher risk to be overweight compared with males [2,5]. In contrast, one recent large-scale study among children and adolescents (10–18 years old) has shown that, specifically, males living in urban areas were more likely to be overweight and obese than females living in urban areas [12]. Given these contrasting findings, it is important to further examine sex-specific links between school area and (over)weight status among early adolescents, particularly among those from private schools with higher overweight prevalence [4]. Another study suggested that overweight status may be more strongly linked to ethnicity among males compared with females [17]. Finally, some studies among Western countries also show sex-specific links between dieting and (over)weight status [14,16]. As such, we will also explore sex-specific demographic or dieting correlates of overweight status among early adolescents from private schools (higher SEP background).

To conclude, recent research on demographic correlates of overweight prevalence rates among early adolescents from private schools in Indonesia is limited. However, society, particularly around private schools (higher SEP backgrounds), might have changed rapidly with regard to eating behavior in Indonesia (more fast-food restaurants, larger influence from Western society [2,9]) making it urgent to explore correlates of overweight in early adolescents at private schools in Indonesia nowadays. As such, the aim of the current study is to examine (sex-specific) correlates of overweight status in a relatively large sample of early adolescents from private schools.

## 2. Materials and Methods

### 2.1. Participants and Procedure

The participants in this study were part of the baseline measurement (Wave 1) from an ongoing longitudinal study on adolescents' weight-related behavior in Indonesia. Wave 1 took place in October until December 2019. Adolescents were recruited through five private

junior high schools in four cities (Jakarta, Surabaya, Bandung, and Manado) in Indonesia. A total of 411 students (47.7% females) participated. All adolescents ( $M_{\text{age}} = 12.02$  years;  $SD_{\text{age}} = 0.45$ ; range = 11.02 to 14.11 years) were in 7th grade or in their first year of junior high school.

A letter describing the longitudinal project was initially sent to officials of school foundations (some private schools are organized by private foundations) or directly to school officials. If the school foundations provided approval, the agreement letter was then sent to the principal of the schools. School officials informed both the parents and students about the goals of the project. Parents were asked to return a signed consent form indicating they agreed to their child's participation. Students were also asked to return a signed consent form indicating whether they agreed to participate in the study. Of the five schools that agreed to participate, three schools obtained consent forms from parents and students. The remaining two schools informed the parents about this project (passive consent) based on the school policy and collected the signed consent forms from students only. The original and amended (passive consent) procedures were approved by the Ethics Committee Social Science of Radboud University, Nijmegen, The Netherlands (ECSS-2019-115).

Researcher informed students that their participation was voluntary, that answers would be processed confidentially and would be stored separately from personal data (with a key file to link the data), and that they could withdraw from the study at any time. Adolescents completed a paper self-report survey at school during one classroom hour (approximately 60 min). In addition, adolescents' weight and height measures were taken by the researcher with the assistance of the school nurse. Weight and height of participants were assessed using school equipment (stadiometer). Students were rewarded with a small gift when they completed the questionnaires.

## 2.2. Measurements

### 2.2.1. Anthropometric Measurements

Adolescents' height was measured to the nearest 0.1 cm with a validated stadiometer (Seca around 217), and their weight was measured to the nearest 0.1 kg with a weighing scale (Seca around 840). Based on the Center for Disease Control and Prevention (CDC) 2000 Body Mass Index for age growth charts for males and females, the cut-off for defining overweight was based on the sex and age in months and BMI (weight (kg)/height ( $\text{m}^2$ )).

### 2.2.2. Demographic Characteristics

Adolescent's sex was coded, with 0 = female and 1 = male. School area was coded as 0 = suburban (Bandung and Manado) and 1 = urban area (Jakarta and Surabaya). We divided the area based on modernization and levels of Westernization [8]. There were no exclusion criteria involved. All students from urban and suburban areas participated in this study. Moreover, ethnicity was coded as 1 = Javanese, 2 = Sundanese, 3 = Sulawesi, 4 = Tionghoa (Chinese Indonesian), 5 = other ethnic (Papua, Kalimantan, Sumatra, and Bali), and 6 = mixed ethnicity. The percentage of Chinese-Indonesian ethnic students was almost half of the sample (49.8%), so we decided to dichotomize ethnicity as 0 = Indonesian ethnic (Javanese, Sundanese, Sulawesi, etc.) and 1 = Chinese Indonesian. The amount of pocket money was coded as 1 = < IDR 500,000, 2 = IDR 500,000–IDR 1,000,000, 3 = IDR 1,100,000–IDR 1,500,000, 4 = IDR 1,600,000–IDR 2,000,000, 5 = IDR 2,100,000–IDR 2,500,000, and 6 = > IDR 2,500,000. The percentage of students with pocket money less than IDR 500,000 was more than half of the sample (63%), so we decided to dichotomize pocket money as 0 = < IDR 500,000 and 1 =  $\geq$  IDR 500,000.

### 2.2.3. Dieting Behavior

To measure previous dieting behavior, participants were asked, "In the past year, how often did you diet in an attempt to have the same weight or lose weight?" The response categories for this item were: 1 = never, 2 = 1–2 times, 3 = 3–4 times, 4 = 5–6 times, and

5 = 7 times or more often. Initial inspection of the distribution of this item indicated a substantial group of adolescents who reported no past year dieting (50.68%), so this item was also dichotomized as 0 = no past year diet and 1 = did past year diet.

### 2.3. Statistical Analyses

Chi-square analyses were performed to examine univariate demographic and dieting differences between overweight and non-overweight groups. Moreover, a logistic regression analysis was performed to explain overweight status group membership (0 = not overweight; 1 = overweight) from several predictors. The independent variables included in this analysis were student's sex, school area (suburban vs. urban), ethnicity (Indonesian vs. Chinese Indonesian), pocket money (<500,000 vs. ≥500,000), and previous dieting behavior (never vs. did diet). Moreover, sex-specific interactions (i.e., sex by school area, sex by ethnicity, sex by pocket money, and sex by previous diet) were tested in four separate analyses (one interaction per analyses added to the main effects model). Statistically significant interactions were further probed using the PROCESS module in SPSS [18].

## 3. Results

### 3.1. Descriptive Statistics

Data from a total of 411 students were examined in this study. The sample was equally divided according to sex (53.3% boys). In total, 59.1% of the adolescents attended a school located in an urban area. The sample was also equally divided according to ethnic background (51.2% Indonesians and 48.8% Chinese Indonesians). Most of the respondents had less than IDR 500,000 per month (63%) and had not dieted (50.6%).

In the total sample, 36.3% of the adolescents were characterized as being overweight. Chi-square independence tests indicated that overweight status was more prevalent in males compared with females (see Table 1). Moreover, adolescents living in urban school areas had a higher overweight prevalence compared with those living in suburban areas. Finally, the adolescents reporting previous dieting were more likely to be overweight compared with those who did not report dieting. Overweight status did not differ according to ethnic background or amount of pocket money.

**Table 1.** Chi-square analyses examining adolescent's overweight status differences as a function of demographic and dieting characteristics.

	Not Overweight		Overweight		Chi Square	p Values
	n	%	n	%		
<b>Sex</b>						
Females	146	46	24.0	24.0	23.57	<0.001
Males	116	103	47.0	47.0		
<b>Ethnicity</b>						
Indonesian (Ethnicities)	135	65.5	71	34.5	0.63	0.428
Chinese Indonesian	126	61.8	78	38.2		
<b>School Area</b>						
Suburban	117	69.6	51	30.4	4.27	0.039
Urban	145	59.7	98	40.3		
<b>Pocket Money</b>						
<500,000	166	64.1	93	35.9	0.04	0.849
≥500,000	96	63.2	56	36.8		
<b>Diet</b>						
Never diet	160	76.9	48	23.1	31.64	<0.001
Diet (1—more than 5 times)	102	50.2	101	49.8		

### 3.2. Unique Contributions of Demographics and Dieting in Explaining Overweight Status

A binary logistic regression was performed to examine the unique contributions of the five predictors in explaining overweight status. Males were 3.28 times more likely to be

overweight compared with females (CI 95% (2.08, 5.18)). Adolescents from urban school areas were 1.84 times more likely to be overweight compared with those from suburban school areas (CI 95% (1.07, 3.14)). Adolescents reporting dieting were 3.84 times more likely to be overweight compared with their non-dieting counterparts (CI 95% (2.45, 6.03)). The main effects of ethnicity and pocket money were not statistically significant (see Table 2). All variables together explained 20.3% of the variance in overweight status.

**Table 2.** Logistic regression predicting overweight status by demographic and dieting correlates in the total group.

	B	SE	OR	CI 95%	Nagelkerke R <sup>2</sup>
Sex	1.19 **	0.23	3.28 **	2.08–5.18	20.3
School area	0.61 *	0.27	1.84 *	1.07–3.14	
Ethnicity	−0.11	0.26	0.90	0.54–1.51	
Pocket money	0.02	0.23	1.02	0.64–1.61	
Past year dieting	1.35 **	0.23	3.84 **	2.45–6.03	

Note: \*  $p \leq 0.05$ , \*\*  $p \leq 0.01$ . Sex: 0 = females, 1 = males; school area: 0 = suburban, 1 = urban; ethnicity: 0 = Indonesian, 1 = Chinese Indonesian; pocket money: 0 = <500,000 Rp, 1 = >500,000 Rp; and past year dieting: 0 = no dieting, 1 = dieting. B: Beta; SE: Standard Error; OR: Odds Ratio; CI: Confidence Interval.

### 3.3. Sex-Specific Interactions

Four separate sex-specific interaction analyses were performed, in which one interaction was added to the main regression model. Of these four interactions, only the interaction between sex and school area was statistically significant (see Table 3). The explained variance for the total model including the interaction was 21.5% ( $b = 0.99$ ,  $SE = 0.47$ , CI 95% (0.07, 1.89)). We further probed this interaction using Model 1 PROCESS module for SPSS. The results showed that males living in urban areas were more likely to be overweight compared with males living in suburban areas ( $b = 0.99$ ,  $SE = 0.48$ , and CI 95% (0.34, 1.65)), whereas this did not apply to females ( $b = 0.01$ ,  $SE = 0.39$ , and CI 95% (−0.75, 0.78)). The other sex-specific interactions were not statistically significant.

**Table 3.** Logistic regression predicting overweight status by demographic and dieting correlates in the total group including interaction effects with sex.

	B	SE	OR	CI 95%	Nagelkerke R <sup>2</sup>
Sex	1.19 **	0.23	3.28 **	2.08–5.18	20.3
School area	0.61 *	0.27	1.84 *	1.07–3.14	
Ethnicity	−0.11	0.26	0.90	0.54–1.51	
Pocket money	0.02	0.23	1.02	0.64–1.61	
Past year dieting	1.35 **	0.23	3.84 **	2.45–6.03	
Sex * school area	0.98 *	0.47	2.67	1.07–6.63	21.5
Sex * pocket money	−0.61	0.47	0.54	0.21–1.38	20.7
Sex * ethnicity	0.87	0.46	2.39	0.97–5.90	21.3
Sex * past year dieting	−0.46	0.49	0.63	0.24–1.66	20.5

Note: \*  $p \leq 0.05$ , \*\*  $p \leq 0.01$ . Two-way interactions were tested separately (one interaction per analyses added to the main model). Total model explained variance were reported per separately tested interaction. Sex: 0 = females, 1 = males; school area: 0 = suburban, 1 = urban; ethnicity: 0 = Indonesian ethnic, 1 = Chinese-Indonesian ethnic; pocket money: 0 = <500,000, 1 = >500,000; and past year dieting: 0 = never did diet, 1 = did diet. Sex-specific interactions (Sex X school area): girls =  $b = 0.01$  (CI95% (−0.75, −0.78)); boys =  $b = 0.99$  (CI95% (0.34–1.65)) using Model 1 PROCESS module for SPSS.

## 4. Discussion

The current study aimed to examine the (sex-specific) demographic and dieting factors that potentially explain overweight status among a relatively large group of Indonesian early adolescents attending private schools (i.e., higher SEP background). Children and adolescents from private schools are more likely to be obese [4] and early adolescents' weight is predictive of their weight status in adolescence and adulthood [11]. Finding correlates of overweight in this specific period might give insights for future prevention or intervention



and may have both direct and longer-term health benefits. Our findings showed that the general prevalence rate of overweight in this early adolescent sample at private schools was relatively high (i.e., 36.3%) compared with previous national prevalence rates (i.e., 16%) [11]. The seemingly higher percentage of overweight status among adolescents from higher SEP backgrounds may be environmentally driven [4]. As mentioned, higher SEP private schools, particularly those in urban environments, are often located in areas with more junk food outlets [3,9]. Food outlets usually sell fried products, that are highly preferred, and these kinds of products are highly energy dense. People from higher SEP backgrounds often opt to eat out rather than at home, and food served in restaurants or food outlets usually contains more calories [3,15,19]. In addition, most Indonesian parents from higher SEP are proud when their children look big or fat, reflecting a higher socioeconomic status [3]. Together, these factors may probably explain the relatively high overweight prevalence rate in our study sample.

The relatively high overweight prevalence in our sample makes further insights into (sex-specific) demographic correlates even more interesting, given the increased statistical power to detect effects. We found that males were almost four times more likely to be overweight than females. This result is consistent with most previous studies among Indonesian children [4,9]. However, these findings are in contrast with previous studies among adolescents and adults, where prevalence rates are mostly reported to be higher among females compared with males [2,4,10]. Our findings indicate that early adolescent males are (still) more likely to be overweight compared with early adolescent females, at least among adolescents attending private schools. Future longer-term studies following early adolescents to emerging adulthood are needed to further shed light on a potential sex-specific switch in terms of overweight vulnerability. Specifically, sex-specific parental perceptions of ideal body weight among children and early adolescents may explain the higher prevalence rate of overweight status among (early adolescent) males. Parents seem more supportive of higher body weights of males compared with females, possibly because of the male body ideal (big is more ideal for males than females, [20,21]). As such, these explanations may thus explain our sex-specific findings involving overweight status, given that parents may still have a considerable influence on what their children eat (potentially impacting their weight development) during early adolescence [22].

We also found a significantly higher prevalence of overweight status among Indonesian adolescents who attended schools in urbanized areas compared with those in suburban areas. This has similarly been reported before among children and adolescents [4,11,23]. However, this finding should be interpreted carefully in our case because we also found a clear sex-specific interaction with school area. We found that specifically male adolescents in urban school areas had higher overweight rates. This finding is in line with another recent study among children and adolescents in Indonesia [11], but in contrast with previous studies among adults showing that females from urban areas were the ones at highest risk [2,5]. We speculate that (early adolescent) males may be more vulnerable to these unhealthy urban environments with junk food cues from fast-food outlets, as they often show higher efforts to get food as a reward compared with females [22,24]. As such, males might be more likely to actively search for food rewards, which are more often satisfied in high junk food environments. This, in combination with parents possibly more often encouraging adolescent males to gain weight [21], might explain our sex-specific interaction among early adolescents.

In our study, ethnicity was not related to overweight status, which is in contrast with some previous studies [13,25]. However, our findings involving ethnic background are consistent with the results of a previous study investigating adolescents from other Indonesia regions (i.e., Surakarta). This study also found no significant differences between Javanese and Chinese Indonesian adolescents [17]. So it might be that ethnicity findings regarding overweight status are dependent upon the specific Indonesian region (and ethnicities) being examined.

A final result of our study is that adolescents who dieted in the previous year were more likely to be overweight. This finding is in line with well-known findings from Western countries, with recent dieting considered to be a potential proxy of the susceptibility to weight gain [26]. It might be that dieting is unsuccessful and interspersed with binge eating episodes, thus leading to weight gain. Dieting may also be the consequence of being overweight [16]. Further longitudinal research is needed to unravel the directionality of these associations. Importantly, the fact that the dieting findings in this study were rather similar to the ones reported in previous European and American studies, suggests overlap in terms of overweight correlates between higher SEP Indonesian adolescents and adolescents from Western countries.

One notable strength of our study is the inclusion of a relatively large sample of early adolescents from specifically private schools, who are at higher risk for obesity, as also supported by our study findings. Another strength is that we used objectively measured weight and height to determine overweight status. Nevertheless, a couple of limitations should also be mentioned. First, we did not include clear markers for determining “socioeconomic” differences (except pocket money) within our higher SEP group of adolescents from private schools. The amount of pocket money that adolescents received might not reflect socioeconomic position differences. The income of the family per year might have been a better indicator (i.e., [5,12]). Nevertheless, as our total sample was recruited from private schools only, we are rather confident that most adolescents were from mid-to-high SEP backgrounds. Second, as our data are limited by a cross sectional design, we, therefore, do not know the underlying mechanism explaining the observed associations. Future longitudinal studies could shed more light on (predictors of) weight development in specific subgroups, such as males from urban areas compared with suburban areas.

Despite these limitations, our study examining (sex-specific) demographic correlates of overweight status among early adolescents from private schools in Indonesia filled an important gap in the current literature. We have speculated about the most prominent (mostly nutrient-related) mechanisms explaining our findings. Nevertheless, future research should further unravel the underlying (energy intake and expenditure) mechanisms explaining why particularly early adolescent males from urban school areas are more likely to be overweight. This will provide further tools for future tailored preventive interventions. We suggest that this early adolescent phase is a promising period for timely preventive interventions, given that adolescent overweight and obese status in Indonesia is more rapidly increasing in older compared with younger adolescents [8]. To conclude, our findings suggest that males from urban area private schools in Indonesia may be an important target group for future preventive overweight interventions.

**Author Contributions:** J.M.V. and J.K.L. were responsible for the study design; J.M.V. and J.K.L. supervised the data collection; E.S. was responsible for the data collection, the statistical analyses and interpretation of the data in agreement with J.M.V., J.K.L. and W.J.B.; and E.S. wrote the first version of the manuscript, edited by J.M.V., J.K.L. and W.J.B. All authors participated in the revisions of the manuscript. All authors have read and agreed to the published version of the manuscript.

**Funding:** We received no specific grant from any funding agency in public, commercial, or non-profit sectors. This study was funded by Maranatha Christian University in Bandung, Indonesia. The study received no external funding. The analysis and interpretation of the data and the writing of this manuscript were funded by the Behavioural Science Institute of Radboud University in Nijmegen, The Netherlands.

**Institutional Review Board Statement:** All procedures performed were in accordance with the ethical standards of Ethics Committee Social Science of Radboud University, Nijmegen, The Netherlands. Of the five schools that agreed to participate, three schools obtained consent forms from parents and students. The remaining two schools informed the parents about this project (passive consent) based on the school policy and collected the signed consent forms from students only. The original (reference ECSS\_2019\_150) and amended (passive consent) procedures were approved by the Ethics Committee Social Science of Radboud University, Nijmegen, The Netherlands (ECSS-2019-115).

**Informed Consent Statement:** Informed consent was obtained from all subjects involved in the study.

**Data Availability Statement:** The datasets generated and analyzed during the current study are not publicly available due to agreements we have made concerning the exchange and use of our data but are available from the corresponding author (E.S.) on reasonable request.

**Acknowledgments:** We would like to thank all the participating schools and students for their contribution to this research project. Moreover, we would like to thank all the student assistants (head of the schools and class teachers) for their help during the data collection of this project.

**Conflicts of Interest:** The authors declare no conflict of interest.

## References

1. National Instituted of Health Research and Development. Riset Kesehatan Dasar (National Baseline Health Research), Jakarta, Indonesia. 2017. Badan Litbang Kesehatan. Available online: <https://pusdatin.kemkes.go.id> (accessed on 5 March 2021).
2. Roemling, C.; Qaim, M. Obesity trends and determinants in Indonesia. *Appetite* **2012**, *58*, 1005–1013. [CrossRef] [PubMed]
3. Syahrul, S.; Kimura, R.; Tsuda, A.; Susanto, T.; Saito, R.; Ahmad, F. Prevalence of underweight and overweight among school-aged children and it's association with children's sociodemographic and lifestyle in Indonesia. *Int. J. Nurs. Sci.* **2016**, *3*, 169–177. [CrossRef]
4. Rachmi, C.; Li, M.; Baur, L. Overweight and obesity in Indonesia: Prevalence and risk factors—A literature review. *Public Health* **2017**, *147*, 20–29. [CrossRef] [PubMed]
5. Popkin, B.M.; Adair, L.S.; Ng, S.W. Now and then: The global nutrition transition: The pandemic of obesity in developing countries. *Nutr. Rev.* **2012**, *70*, 13–21. [CrossRef] [PubMed]
6. Pengpid, S.; Peltzer, K. Underweight and overweight or obesity and associated factors among school-going adolescents in five ASEAN countries 2015. *Diabetes Metab. Syndr. Clin. Res. Rev.* **2019**, *13*, 3075–3080. [CrossRef]
7. Tsiros, M.D.; Sinn, N.; Coates, A.M.; Howe, P.R.C.; Buckley, J.D. Treatment of adolescent overweight and obesity. *Eur. J. Pediatr.* **2008**, *167*, 9–16. [CrossRef]
8. Agustina, R.; Meilianawati; Fenny; Atmarita; Suparmi; Susiloretni, K.A.; Lestari, W.; Pritasari, K.; Shankar, A.H. Psychosocial, Eating Behavior, and Lifestyle Factors Influencing Overweight and Obesity in Adolescents. *Food Nutr. Bull.* **2021**, *42* (Suppl. 1), S72–S91. [CrossRef]
9. Febriani, D.; Sudarti, T. Fast food as drivers for overweight and obesity among urban school children at Jakarta, Indonesia. *J. Gizi Dan Pangan* **2019**, *14*, 99–106. [CrossRef]
10. Nurwanti, E.; Uddin, M.; Chang, J.S.; Hadi, H.; Syed-Abdul, S.; Yu Su, E.C.; Nursetyo, A.A.; Masud, J.H.B.; Bai, C.H. Roles of sedentary behaviours and unhealthy foods in increasing the obesity risk in adult men and women: A cross sectional national study. *Nutrients* **2018**, *10*, 704. [CrossRef]
11. Nurwanti, E.; Hadi, H.; Chang, J.S.; Chao, J.C.J.; Paramashanti, B.A.; Gittelsohn, J.; Bai, C.H. Rural–urban differences in dietary behavior and obesity: Results of the riskesdas study in 10–18-year-old Indonesian children and adolescents. *Nutrients* **2019**, *11*, 2813. [CrossRef]
12. Sweeting, H. Sexed dimensions of obesity in childhood and adolescence. *Nutr. J.* **2008**, *7*, 1. [CrossRef]
13. Pell, C.; Allotey, P.; Evans, N.; Hardon, A.; Imelda, J.D.; Soyiri, I.; Reidpath, D.D.; The SEACO Team. Coming of age, becoming obese: A cross-sectional analysis of obesity among adolescents and young adults in Malaysia. *BMC Public Health* **2016**, *16*, 1082. [CrossRef] [PubMed]
14. Collins, A.E.; Pakiz, B.; Rock, C.L. Factors associated with obesity in Indonesian adolescent. *Int. J. Pediatr. Obes.* **2008**, *3*, 58–64. [CrossRef] [PubMed]
15. Pradeepa, R.; Anjana, R.M.; Joshi, S.R.; Bhansali, A.; Deepa, M.; Joshi, P.P.; Dhandania, V.K.; Madhu, S.V.; Rao, P.V.; Geetha, L.; et al. Prevalence of generalized and abdominal obesity in urban & rural India—the ICMR-INDIAB Study (Phase 1) [ICMR-INDIAB-3]. *Indian J. Med. Res.* **2015**, *142*, 139–150. [CrossRef] [PubMed]
16. Field, A.E.; Aneja, P.; Rosner, B. The validity of self-reported weight change among adolescents and young adults. *Obesity* **2007**, *5*, 2357–2364. [CrossRef] [PubMed]
17. Susanti, R.P.F.; Murti, B.; Indarto, D. Maternal employment status, ethnicity, food intake, and their effects on teenage obesity, in Surakarta. *J. Epidemic. Public Health* **2016**, *1*, 75–85. [CrossRef]
18. Hayes, A. *PROCESS: A Versatile Computational Tool for Observed Variable Mediation, Mod-Eration, and Conditionalprocess Modelling*; Guildford Press: New York, NY, USA, 2012; Available online: <http://www.afhayes.com/public/process2012.pdf> (accessed on 19 February 2020).
19. Mak, T.N.; Prynne, C.J.; Cole, D.; Fitt, E.; Bates, B.; Stephen, A.M. Patterns of sociodemographic and food practice characteristics in relation to fruit and vegetable consumption in children: Results from the UK National Diet and Nutrition Survey Rolling Programme (2008–2010). *Public Health Nutr.* **2013**, *16*, 1912–1923. [CrossRef] [PubMed]
20. Loth, K.A.; Machlehose, R.F.; Fulkerson, J.A.; Crow, S.; Neumark-Sztainer, D. Food-related practices and adolescent weight status: A population based study. *Pediatrics* **2013**, *131*, e1443–e1450. [CrossRef] [PubMed]

21. Ricciardelli, L.A.; McCabe, M. Children's body image concerns and eating disturbance: A review of the literature. *Clin. Psychol. Rev.* **2001**, *21*, 325–344. [[CrossRef](#)]
22. Kiefer, I.; Rathmanner, T.; Kunze, M. Eating and dieting differences in men and women. *J. Men's Health Sex.* **2005**, *2*, 194–201. [[CrossRef](#)]
23. Mistry, S.K.; Puthussery, S. Risk factors of overweight and obesity in childhood and adolescence in South Asian countries: A systematic review of the evidence. *Public Health* **2015**, *129*, 200–209. [[CrossRef](#)] [[PubMed](#)]
24. Neumark-Sztainer, D.; Wall, M.; Story, M.; Standish, A.R. Dieting and unhealthy weight control behaviours during adolescence: Association with 10-year changes in Body Mass Index. *J. Adolesc. Health* **2012**, *50*, 80–86. [[CrossRef](#)] [[PubMed](#)]
25. Neumark-Sztainer, D.; Croll, J.; Story, M.; Hannan, P.J.; French, S.A.; Perry, C. Ethnic/racial differences in weight-related concerns and behaviours among adolescent girls and boys. *J. Psychosom. Res.* **2002**, *53*, 963–974. [[CrossRef](#)]
26. Lowe, M.R.; Doshi, S.D.; Katterman, S.N.; Feig, E.H. Dieting in restrained eating as prospective predictors of weight gain. *Front. Psychol.* **2013**, *4*, 577. [[CrossRef](#)]