IRR 1 Bibliography

Shaurya Singh

October 29, 2021

Contents

0.1 Group Question (WIP)

Does the caffeine in coffee present health risks for middle aged people in America?

0.2 Lens/Individual Question

What is the influence of adolescent coffee consumption and coffee culture on future risk of type 2 diabetes mellitus in middle aged men and women?

1 Article 1: Adolescent dairy product consumption and risk of type 2 diabetes in middle-aged women

1.1 PDF

Adolescent dairy product consumption and risk of type 2 diabetes in middle-aged women[1–3]

Vasanti S Malik, Qi Sun, Rob M van Dam, Eric B Rimm, Walter C Willett, Bernard Rosner, and Frank B Hu

ABSTRACT

Background: Type 2 diabetes (T2D) prevention has generally focused on the identification of risk factors in adulthood. Dairy product consumption in adults has been associated with a lower risk of T2D.

Objective: The objective was to evaluate the relation between dairy product consumption during adolescence and risk of T2D in adulthood.

Design: We examined the incidence of T2D in relation to high school dairy product consumption within the Nurses' Health Study II cohort. A total of 37,038 women who completed a food-frequency questionnaire about their diet during high school were followed from the time of return of the questionnaire in 1998–2005. Cox proportional hazards regression was used to estimate RRs and 95% CIs.

Results: Compared with women in the lowest quintile of high school dairy product intake, those in the highest quintile (2 servings/d) had a 38% lower risk of T2D (RR: 0.62; 95% CI: 0.47, 0.83; *P*-trend = 0.0006), after adjustment for high school risk factors. After adjustment for adult risk factors, the association persisted (RR: 0.73; 95% CI: 0.54, 0.97; *P*-trend = 0.02) but was attenuated after adjustment for adult dairy product consumption. In a multivariate joint comparison of dairy product consumption by adults and high school adolescents, compared with women with consistently low intakes, those with consistently high intakes had the lowest risk of T2D (RR: 0.57; 95% CI: 0.39, 0.82).

Conclusions: Our data suggest that higher dairy product intake during adolescence is associated with a lower risk of T2D. Some of the benefits of dairy product intake during high school may be due to the persistence of the consumption pattern during adulthood. *Am J Clin Nutr* 2011;94:854–61.

INTRODUCTION

Over recent decades, the prevalence of T2D[4] has increased at an alarming rate in the United States and across the globe. Prevention efforts, which are paramount to abating this epidemic, have generally focused on the identification of risk factors that operate in adulthood. However, evidence is accumulating for a role of early-life exposures in chronic disease etiology, including maternal diet during pregnancy, postnatal growth, and childhood and adolescent diet (1). Such a life-course approach could enhance our understanding of disease etiology and make a significant contribution to primary prevention. There is some indication that risk of T2D may begin in early life. Low birth weight has been associated with an increased risk of T2D, CVD, and hypertension (1). In addition, greater adult height, which may represent adequate childhood nutrition, has been associated with a decreased risk of insulin resistance and T2D (2–4). Whether dietary habits during childhood or adolescence can affect risk of T2D in adulthood is unknown.

Many studies in adults have shown that dairy product intake is inversely associated with the metabolic syndrome and T2D (5, 6). It is of interest to know whether consuming greater amounts of dairy products at earlier points in the life course can influence T2D risk in later life. Therefore, we prospectively evaluated the relation between dairy consumption during adolescence and incident T2D in a large cohort of US women. We further evaluated the joint effect of current and adolescent dairy consumption on the risk of developing T2D.

SUBJECTS AND METHODS

Study population

The NHS II is a prospective cohort of 116,671 female registered nurses aged 24–42 y at study initiation in 1989. This cohort is followed by using biennial mailed questionnaires on lifestyle, diet, and medical history (7). In 1997, participants were asked whether they would complete a questionnaire about their diet during high school (HS-FFQ) at which time they were 34–53

[1] From the Departments of Nutrition (VSM, QS, RMvD, EBR, WCW, and FBH) and Epidemiology (RMvD, EBR, WCW, and FBH), Harvard School of Public Health, Boston, MA; the Channing Laboratory, Department of Medicine, Brigham and Women's Hospital and Harvard Medical School, Boston, MA (QS, EBR, WCW, BR, and FBH); and the Departments of Epidemiology and Public Health and Medicine, Faculty of Medicine, National University of Singapore, Singapore, Singapore (RMvD).

[2] The Nurses' Health Study II is supported by National Institutes of Health grant R01 CA50385 and DK58845. QS was supported by a career development award (K99HL098459) from the National Heart, Lung, and Blood Institute.

[3] Address correspondence to FB Hu, Department of Nutrition, Harvard School of Public Health, 665 Huntington Avenue, Boston, MA 02115. E-mail: frank.hu@channing.harvard.edu.

[4] Abbreviations used: ADA, American Diabetes Association; CVD, cardiovascular disease; FFQ, food-frequency questionnaire; GL, glycemic load; HS-FFQ, food-frequency questionnaire on diet during high school; IGF-I, insulin-like growth factor I; MET-h, metabolic equivalent task hours; NHS, Nurses' Health Study; T2D, type 2 diabetes.

Received December 2, 2010. Accepted for publication May 25, 2011.
First published online July 13, 2011; doi: 10.3945/ajcn.110.009621.

Am J Clin Nutr 2011;94:854–61. Printed in USA.

1.2 MLA Citation

Malik, V. S., et al. "Adolescent Dairy Product Consumption and Risk of Type 2 Diabetes in Middle-Aged Women." American Journal of Clinical Nutrition, vol. 94, no. 3, Sept. 2011, pp. 854–61. DOI.org (Crossref), https://doi.org/10.3945/ajcn.110.009621.

1.3 A brief summary of the text

The text examines the effect of adolescent dairy consumption on the future risk of type 2 diabetes, specifically on women. It does this on a global scale, providing statistics on the effect of dairy on adult height growth, insulin resistance, and resulting CI's at later ages. The study concludes that higher diary reduces the chances of T2D in adulthood.

1.4 Comment on the authority or credibility of the author;

All the authors are credible. They are experts in their various fields. The article itself is published on pubmed NCBI, a non-profit and well known peer reviewed journal.

1.5 Comment on strengths and weaknesses of their argument;

The study is very in depth, has taken care of any external factors they needed to control, and presents their data in a well thought out way. However, the sample size could be more descriptive (the research only gives the number of women, not where they were from etc.)

1.6 The author's point of view; and

The author is a neutral writer, in that this is a purely informative piece

1.7 How the text relates to your question or thesis.

The text identifies dairy intake in adolescence and relates it risk of diabetes in elder women. Since coffee is a subset of dairy, the benefits of dairy apply to coffee as well

2 Article 2: Influence of Adolescent and Maternal Coffee Consumption on Risk of Obesity and Type 2 Diabetes Mellitus in Middle-Aged Women and Their Offspring: Results from Two Prospective Cohort Studies in the United States

2.1 PDF ATTACH

Coffee, caffeine, and risk of type 2 diabetes: a prospective cohort study in younger and middle-aged U.S. women.

Authors: van Dam RM (AUTHOR)
Willett WC (AUTHOR)
Manson JE (AUTHOR)
Hu FB (AUTHOR)
van Dam, Rob M[1] (AUTHOR)
Willett, Walter C (AUTHOR)
Manson, Joann E (AUTHOR)
Hu, Frank B (AUTHOR)

Source: Diabetes Care. Feb2006, Vol. 29 Issue 2, p398-403. 6p.

Document Type: journal article

Abstract: <bold>Objective: </bold>High habitual coffee consumption has been associated with a lower risk of type 2 diabetes, but data on lower levels of consumption and on different types of coffee are sparse.<bold>Research Design and Methods: </bold>This is a prospective cohort study including 88,259 U.S. women of the Nurses' Health Study II aged 26-46 years without history of diabetes at baseline. Consumption of coffee and other caffeine-containing foods and drinks was assessed in 1991, 1995, and 1999. We documented 1,263 incident cases of confirmed type 2 diabetes between 1991 and 2001.<bold>Results: </bold>After adjustment for potential confounders, the relative risk of type 2 diabetes was 0.87 (95% CI 0.73-1.03) for one cup per day, 0.58 (0.49-0.68) for two to three cups per day, and 0.53 (0.41-0.68) for four or more cups per day compared with nondrinkers (P for trend <0.0001). Associations were similar for caffeinated (0.87 [0.83-0.91] for a one-cup increment per day) and decaffeinated (0.81 [0.73-0.90]) coffee and for filtered (0.86 [0.82-0.90]) and instant (0.83 [0.74-0.93]) coffee. Tea consumption was not substantially associated with risk of type 2 diabetes (0.88 [0.64-1.23] for four or more versus no cups per day; P for trend = 0.81).<bold>Conclusions: </bold>These results suggest that moderate consumption of both caffeinated and decaffeinated coffee may lower risk of type 2 diabetes in younger and middle-aged women. Coffee constituents other than caffeine may affect the development of type 2 diabetes. [ABSTRACT FROM AUTHOR]

Author Affiliations: [1]Department of Nutrition, Harvard School of Public Health, 665 Huntington Ave., Boston, MA 02115, USA

ISSN: 0149-5992

2.2 MLA Citation

Alperet, Derrick, et al. "1575-P: Influence of Adolescent and Maternal Coffee Consumption on Risk of Obesity and Type 2 Diabetes Mellitus in Middle-Aged Women and Their Offspring: Results from Two Prospective Cohort Studies in the United States." Diabetes, vol. 68, no. Supplement 1, June 2019, pp. 1575-P. DOI.org (Crossref), https://doi.org/10.2337/db19-1575-P.

2.3 A brief summary of the text

In a double-blind randomized trial, coffee intake was shown to decrease fat mass in healthy overweight adults. This suggests that coffee could be modulating lower type 2 diabetes mellitus (T2DM) risk among adults through pathways involving adiposity. It is not known if earlier-life exposure to coffee intake could modulate risk of developing childhood obesity and, ultimately, T2DM later in life. Adolescent caffeinated coffee intake was associated with 17% lower T2DM risk

2.4 Comment on the authority or credibility of the author;

The authors are graduate students from reputable institutions (such as harvard) and years of experience in their respective fields. The journal itself is reputable, as it is the American Diabetes Association, one of the largest diabetic organizations and journals worldwide. Therefore, the source is trustworthy.

2.5 Comment on strengths and weaknesses of their argument;

While they did a good job of keeping the experiment controlled and reporting results, even they mentioned there are/were possible factors that could play into this, one of the main issues being exposure to coffee in earlier life (pre-utero/pre-teen).

2.6 The author's point of view; and

The author is a neutral writer, in that this is a purely informative piece

2.7 How the text relates to your question or thesis.

The text identifies Adolescent as well as Maternal Coffee intake and relates it risk with a risk of diabetes in elder women. While my research focuses on adolescents, the research paper provides insight and data that will be useful.

3 Article 3: Role of coffee in modulation of diabetes risk

3.1 PDF

NUTRITION REVIEWS 70 YEARS 1942-2012

Lead Article

Role of coffee in modulation of diabetes risk

Fausta Natella and Cristina Scaccini

Coffee consumption has been associated with a lower risk of type 2 diabetes. This association does not depend on race, gender, geographic distribution of the study populations, or the type of coffee consumed (i.e., caffeinated or decaffeinated). This review discusses the strength of this relationship, examines the possibility that the pattern of coffee consumption could influence the association, and evaluates the possible relationship between coffee consumption and other risk factors associated with diabetes. Particular attention is paid to the identification, on the basis of the scientific evidence, of the possible mechanisms by which coffee components might affect diabetes development, especially in light of the paradoxical effect of caffeine on glucose metabolism. In addition to the role of coffee in reducing the risk of developing type 2 diabetes, the possible role of coffee in the course of the illness is explored. Finally, the possibility that coffee can also affect the risk of other forms of diabetes (e.g., type 1 diabetes and gestational diabetes) is examined.

INTRODUCTION

Brewed coffee is among the most widely consumed beverages in the world. Due to the broad consumption of coffee worldwide, several studies have examined the possibility of an association between coffee intake and health. Although coffee consumption has been correlated with a reduced risk of colon cancer[1] and Alzheimer's disease,[2] most of the evidence indicates a strong and clear inverse association between coffee consumption and diabetes.

As a brewed drink prepared from roasted seeds, coffee contains a number of bioactive molecules that are characteristic of fruits and vegetables. Generally, the principal health effects of coffee have been associated with its caffeine content. Caffeine, in fact, induces several pharmacological effects, mostly at the level of the central nervous system. A single cup of coffee can contain from 45 mg to 180 mg of caffeine, depending on the variety of coffee and the brewing method. Coffee, however, is not synonymous with caffeine; in fact, it contains several bioactive molecules (over 1,000 chemicals have been identified in roasted coffee), such as lipids, polysaccharides, phenolic compounds, melanoidins, soluble dietary fiber, and minerals, with caffeine representing only 2% of coffee's chemical profile.

Coffee is a very rich source of phenolic compounds, with the total content ranging from 200 mg to 550 mg per cup.[3] The main phenolic compound in coffee is chlorogenic acid.

Diabetes is recognized to be a syndrome, i.e., a collection of disorders sharing hyperglycemia and glucose intolerance as typical features. Insulin deficiency, impaired action of insulin, or a combination of these is responsible for the high blood glucose level that, if prolonged over time, can result in retinopathy, neuropathy, nephropathy, and atherosclerosis.

Diabetes has been classified as type 1 diabetes (T1D) (formerly known as juvenile diabetes), type 2 diabetes (T2D), and gestational diabetes. T1D results from an absolute deficiency in insulin secretion due to cell-mediated autoimmune destruction of pancreatic β-cells. T2D results from a combination of insulin resistance and inadequate insulin secretion. Finally, gestational diabetes is characterized by glucose intolerance during pregnancy.

Diabetes is the fourth leading cause of death in industrialized countries. About 177 million people in the

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Correspondence: *F Natella*, National Research Institute on Food and Nutrition, Via Ardeatina 546, 00178 Rome, Italy. E-mail: natella@inran.it. Phone: +39-6-51494447. Fax: +39-6-51494550.

Key words: bioactive molecules, coffee, diabetes

doi:10.1111/j.1753-4887.2012.00470.x

3.2 MLA Citation

Natella, Fausta, and Cristina Scaccini. "Role of Coffee in Modulation of Diabetes Risk." Nutrition Reviews, vol. 70, no. 4, Apr. 2012, pp. 207–17. DOI.org (Crossref), https://doi.org/10.1111/j.1753-4887.2012.00470.x.

3.3 A brief summary of the text

Coffee consumption has been associated with a lower risk of type 2 diabetes. This review examines the strength of this relationship, examines the possibility that the pattern of coffee consumption could influence the association, and evaluates the possible relationship between coffee consumption and other risk factors associated with diabetes. Particular attention is paid to the identification of the possible mechanisms by which coffee components might affect diabetes development.

3.4 Comment on the authority or credibility of the author;

The author has previous experience in the topic but not as much as some of the other articles. The publisher is also not the most reputable, and the writing is informal at times.

3.5 Comment on strengths and weaknesses of their argument;

The author provides a good background as to why coffee is an issue and what are the effects of coffee. However, the author does not visualize data very well, and doesn't provide much original information. The article may be used as a reference for statistics on coffee, but should be used as a reputable source.

3.6 The author's point of view; and

The author is a neutral writer, in that this is a purely informative piece

3.7 How the text relates to your question or thesis.

My research relates to coffee consumption and the risk of Diabetes. While this article doesn't focus on any age groups, it provides accurate data on the results of coffee on diabetes risk

4 Article 4: Coffee Consumption and Risk of Type 2 Diabetes Mellitus Among Middle-aged Finnish Men and Women.

4.1 PDF

ATTACH

ORIGINAL CONTRIBUTION

Coffee Consumption and Risk of Type 2 Diabetes Mellitus Among Middle-aged Finnish Men and Women

Jaakko Tuomilehto, MD, PhD
Gang Hu, MD, PhD
Siamak Bidel, MD
Jaana Lindström, MSc
Pekka Jousilahti, MD, PhD

Context Only a few studies of coffee consumption and diabetes mellitus (DM) have been reported, even though coffee is the most consumed beverage in the world.

Objective To determine the relationship between coffee consumption and the incidence of type 2 DM among Finnish individuals, who have the highest coffee consumption in the world.

Design, Setting, and Participants A prospective study from combined surveys conducted in 1982, 1987, and 1992 of 6974 Finnish men and 7655 women aged 35 to 64 years without history of stroke, coronary heart disease, or DM at baseline, with 175 682 person-years of follow-up. Coffee consumption and other study parameters were determined at baseline using standardized measurements.

Main Outcome Measures Hazard ratios (HRs) for the incidence of type 2 DM were estimated for different levels of daily coffee consumption.

Results During a mean follow-up of 12 years, there were 381 incident cases of type 2 DM. After adjustment for confounding factors (age, study year, body mass index, systolic blood pressure, education, occupational, commuting and leisure-time physical activity, alcohol and tea consumption, and smoking), the HRs of DM associated with the amount of coffee consumed daily (0-2, 3-4, 5-6, 7-9, ≥10 cups) were 1.00, 0.71 (95% confidence interval [CI], 0.48-1.05), 0.39 (95% CI, 0.25-0.60), 0.39 (95% CI, 0.20-0.74), and 0.21 (95% CI, 0.06-0.69) (*P* for trend<.001) in women, and 1.00, 0.73 (95% CI, 0.47-1.13), 0.70 (95% CI, 0.45-1.05), 0.67 (95% CI, 0.40-1.12), and 0.45 (95% CI, 0.25-0.81) (*P* for trend=.12) in men, respectively. In both sexes combined, the multivariate-adjusted inverse association was significant (*P* for trend <.001) and persisted when stratified by younger and older than 50 years; smokers and never smokers; healthy weight, overweight, and obese participants; alcohol drinker and nondrinker; and participants drinking filtered and nonfiltered coffee.

Conclusion Coffee drinking has a graded inverse association with the risk of type 2 DM; however, the reasons for this risk reduction associated with coffee remain unclear.

JAMA. 2004;291:1213-1219 www.jama.com

CENTURIES OF COFFEE DRINKing has made it the most consumed beverage in the world. During the last decade, research has attempted to make clear health benefits or detriments received from coffee drinking. Effects of coffee and caffeine on cardiovascular disease,[1] hypertension,[2] neurological diseases,[3] different types of cancer,[4] hormonal changes,[5-7] gallstones,[8] renal stones,[9] as well as diabetes mellitus (DM)[10-12] have been studied through epidemiological, clinical, or experimental research. Type 2 DM is one of the diseases that is largely determined by lifestyle factors.[13,14]

The role of coffee in relation to DM has not been investigated thoroughly. A large Dutch cohort study[12] recently showed an inverse association between coffee consumption and the risk of DM. It is well known that caffeine stimulates insulin secretion of the pancreatic beta cells in vivo. However, coffee with its complex compounds may influence many other processes that may take part in the development of DM.

According to international statistics, the Finnish population has the highest per capita coffee consumption in the world with 11.3 kg in 2000.[15] Therefore, research into potential health effects of coffee in this population is of particular interest. Our large prospective study aimed at determining whether the suggested inverse relationship between coffee and type 2 DM exists among the Finnish population. In

See also p 1199.

Author Affiliations: Department of Epidemiology and Health Promotion, National Public Health Institute (Drs Tuomilehto, Hu, and Bidel, and Ms Lindström), Department of Public Health, University of Helsinki (Drs Tuomilehto, Hu, and Jousilahti), and Institute of Biomedicine (Dr Bidel), Helsinki, Finland.
Corresponding Author: Jaakko Tuomilehto, MD, PhD, Diabetes and Genetic Epidemiology Unit, Department of Epidemiology and Health Promotion, National Public Health Institute, Mannerheimintie 166, Helsinki, Finland FIN-00300 (jaakko.tuomilehto@ktl.fi).

4.2 MLA Citation

Tuomilehto, Jaakko, et al. "Coffee Consumption and Risk of Type 2 Diabetes Mellitus Among Middle-Aged Finnish Men and Women." JAMA: Journal of the American Medical Association, vol. 291, no. 10, Mar. 2004, pp. 1213–1219. EBSCOhost, doi:10.1001/jama.291.10.1213.

4.3 A brief summary of the text

Finnish individuals have the highest coffee consumption in the world. Coffee consumption and other study parameters were determined at baseline using standardized measurements. After adjustment for confounding factors (age, study year, body mass index, systolic blood pressure, education, occupational, commuting and leisure-time physical activity, alcohol and tea consumption, and smoking), the HRs of DM associated with the amount of coffee consumed daily (0-2, 3-4, 5-6, 7-9, 10 cups) were 1.00, 0.71 (95% confidence interval [CI], 0.48-1.05) (P for trend=.001). In both sexes, the multivariate-adjusted inverse association was significant. The author concluded Coffee drinking has a graded inverse association with the risk of type 2 DM; however, the reasons for this risk reduction associated with coffee remain unclear.

4.4 Comment on the authority or credibility of the author;

Professor Jaakko Tuomilehto qualified as MD in 1973 and MA in sociology in 1975 and PhD in Epidemiology and Public Health in 1975. He is currently working as the Chief Scientific Officer at Dasman Diabetes Institute in Kuwait. He is well known for his expertise in the subject.

4.5 The author's point of view; and

The author is a neutral writer, in that this is a purely informative piece

4.6 How the text relates to your question or thesis.

Once again, my research relates to coffee consumption and the risk of Diabetes. While this article doesn't focus on any age groups, it provides accurate data on the results of coffee on diabetes risk. Finland, a country very dependant on coffee, can also show us how socioconomic factors play into coffee consumption.

5 Article 5: Coffee consumption is inversely associated with type 2 diabetes in Chinese.

5.1 PDF

DOI: 10.1111/j.1365-2362.2010.02455.x

ORIGINAL ARTICLE

Coffee consumption is inversely associated with type 2 diabetes in Chinese

Wen-Yuan Lin[*,†,‡], F. Xaiver Pi-Sunyer[§], Ching-Chu Chen[¶], Lance E. Davidson[**], Chiu-Shong Liu[*,†,‡], Tsai-Chung Li[††,‡‡§§], Mei-Fong Wu[¶¶], Chia-Ing Li[††], Walter Chen[***,†] and Cheng-Chieh Lin[*,†,‡,§§]

[*]Department of Family Medicine, China Medical University Hospital, Taichung, Taiwan, [†]Graduate Institute of Clinical Medical Science, China Medical University, Taichung, Taiwan, [‡]School of Medicine, China Medical University, Taichung, Taiwan, [§]Obesity Research Center, St Luke's-Roosevelt Hospital, Columbia University, New York, NY, USA, [¶]Department of Internal Medicine, China Medical University Hospital, Taichung, Taiwan, [**]Department of Internal Medicine, University of Utah, UT, USA, [††]Department of Medical Research, China Medical University Hospital, Taichung, Taiwan, [‡‡]Graduate Institute of Biostatistics, China Medical University, Taichung, Taiwan, [§§]Institute of Health Care Administration, College of Health Science, Asia University, Taichung, Taiwan, [¶¶]Department of Family Medicine, Changhua Christian Hospital, Changhua, Taiwan, [***]Department of Pediatrics, China Medical University Hospital, Taichung, Taiwan

ABSTRACT

Background Coffee consumption has been shown to be inversely associated to type 2 diabetes mellitus (T2DM), but evidence in Chinese populations is limited. We investigated the relationship between coffee consumption and T2DM in a population-based cohort of middle-aged Chinese.

Materials and methods We studied 2332 subjects who participated in the Taichung Community Health Study in Taiwan in 2004. The relationships between coffee consumption, T2DM and fasting glucose were assessed.

Results The prevalence of T2DM was 14·0% and 10·4% in men and women. After adjustment for age, body mass index, blood pressure, smoking, alcohol drinking, betel nut chewing, physical activity, income, education level, fat%, protein%, carbohydrate% and magnesium, coffee intake was inversely associated with T2DM. Habitual coffee drinkers had 38–46% lower risk of T2DM than nondrinkers. Compared to nondrinkers, the adjusted odds ratios (ORs) for T2DM according to subjects with habitual coffee consumption (< 1, 1–6, ≥ 7 times per week) were 0·77 (0·52–1·13), 0·46 (0·28–0·76) and 0·37 (0·16–0·83), respectively. The decreasing ORs indicate a dose–response effect of coffee consumption on the likelihood of having T2DM ($P < 0·001$). A similar relationship was also evident in newly diagnosed T2DM ($P < 0·05$). The adjusted mean fasting glucose levels gradually decreased as the frequency of coffee consumption increased ($P < 0·05$).

Conclusions Coffee intake is inversely associated with T2DM in Chinese. Coffee may be a protective agent for T2DM in Chinese.

Keywords Chinese, coffee, dose–response, glucose, type 2 diabetes.

Eur J Clin Invest 2011; 41 (6): 659–666

Introduction

Type 2 diabetes mellitus (T2DM) is one of the leading causes of death in the world [1,2]. The number of patients with type 2 diabetes has dramatically increased, especially in the developing countries. It has been estimated that 60 million new cases of T2DM will occur worldwide from 2000 to 2010 [3]. The International Diabetes Federation [2] estimated that the diabetes population will reach 380 million globally by 2025. Perhaps as a result of increasing westernized diet habits and physical inactivity, the prevalence of obesity as well as T2DM in Taiwan had increased in past decades. The prevalence of T2DM in middle-aged adults increased steadily from 5·1% to 8·2% to 12·8% in 1970, 1986 and 1993, respectively [4,5]. By 1999, the prevalence of diabetes reached 13·0% in men and 16·1% in women for those aged above 53 [6]. Among men aged 65 years and above, in National Nutrition Survey in Taiwan, it increased dramatically from 13·1% to 17·6% to 28·5% in 1993–1996, 2002 and 2005–2008, respectively [7]. The International Diabetes Federation [2] proposed that the causes of increase in diabetes prevalence were because of population ageing, unhealthy diet, obesity and a sedentary lifestyle. Evidences also found that psychosocial

5.2 MLA Citation

Lin, Wen-Yuan, et al. "Coffee Consumption Is Inversely Associated with Type 2 Diabetes in Chinese." European Journal of Clinical Investigation, vol. 41, no. 6, June 2011, pp. 659–666. EBSCOhost, doi:10.1111/j.1365-2362.2010.02455.x.

5.3 A brief summary of the text

Coffee consumption has been shown to be inversely associated to type 2 diabetes mellitus (T2DM), but evidence in Chinese populations is limited. They investigated the relationship between coffee consumption and T2DM in a population-based cohort of middle-aged Chinese. After adjustment for age, body mass index, blood pressure, smoking and other factors, coffee intake was inversely associated with t2DM. Habitual coffee drinkers had 38-46% lower risk of T2 DM than nondrinkers.

5.4 Comment on the authority or credibility of the author;

Wen-yuan Lin is a Research Chemist at ToKai Carbon CB, and is experienced in the topic. He also has other reputable articles published to well known journals such as Nature.

5.5 Comment on strengths and weaknesses of their argument;

The author is purely alternative, and presents data in a well thought out manner. There is no argument, and the author summarises and analysis the data well.

5.6 The author's point of view; and

The author is a neutral writer, in that this is a purely informative piece

5.7 How the text relates to your question or thesis.

Similar to the previous 3, this supports my hypothesis that coffee consumption may be beneficial for middle aged men and women,

6 Article 6: Increased coffee, tea, or other sugar-sweetened beverage consumption in adolescents is associated with less satisfactory dietary quality, body fatness and serum uric acid profiles over the past 18 years in Taiwan.

6.1 PDF ATTACH

Increased coffee, tea, or other sugar-sweetened beverage consumption in adolescents is associated with less satisfactory dietary quality, body fatness and serum uric acid profiles over the past 18 years in Taiwan.

Authors: Ya-Hui Shih[1]
Hsin-Chuan Wu[2]
Wen-Harn Pan[1,3,4]
Hsing-Yi Chang[1,3] *hsingyi@nhri.org.tw*

Source: Asia Pacific Journal of Clinical Nutrition. 2019, Vol. 28 Issue 2, p371-382. 12p.

Document Type: Article

Subject Terms: *BEVERAGE consumption
*URIC acid
*ADOLESCENCE
*COFFEE
*TEA
*OBESITY

Geographic Terms: TAIWAN

Author-Supplied Keywords: 24-hour dietary recall
adolescents
serum uric acid
sugar-sweetened beverage

NAICS/Industry Codes: 111330 Non-citrus fruit and tree nut farming
111339 Other Noncitrus Fruit Farming
445299 All Other Specialty Food Stores
413190 Other specialty-line food merchant wholesalers
311920 Coffee and Tea Manufacturing
111998 All Other Miscellaneous Crop Farming
111999 All other miscellaneous crop farming

Abstract: Background and Objectives: **Taiwan** has a high density of convenience stores and **beverage** shops, which makes **sugar-sweetened beverages** (SSBs) very accessible to teenagers. This study examined the changes and the association between SSBs and biomarkers and nutrient intake, for teenagers **over** the course of **18 years** using a national representative sample. Methods and Study Design: This

6.2 MLA Citation

Ya-Hui Shih, et al. "Increased Coffee, Tea, or Other Sugar-Sweetened Beverage Consumption in Adolescents Is Associated with Less Satisfactory Dietary Quality, Body Fatness and Serum Uric Acid Profiles over the Past 18 Years in Taiwan." Asia Pacific Journal of Clinical Nutrition, vol. 28, no. 2, Apr. 2019, pp. 371–382. EBSCOhost, doi:10.6133/apjcn.201906_28(2).0020.

6.3 A brief summary of the text

Taiwan has a high density of convenience stores and beverage shops, which makes sugar-sweetened beverages (SSBs) very accessible to teenager. This study examined the changes and the association between SSBs and biomarkers and nutrient intake, for teenagers over the course of 18 years. Intake of coffee or tea increased significantly in the 18 years of this study ($p<0.01$), whereas intake of SSBs decreased significantly ($p=0.05$). Intake was significantly higher among second survey participants and those with high total energy intakes.

6.4 Comment on the authority or credibility of the author;

Ya-Hui Shih is a student at the National Health Research Institutes, Division of Preventive Medicine and Health Service Research. He has multiple other papers published to reputable journals, and is an expert in evidence-based-medicine.

6.5 Comment on strengths and weaknesses of their argument;

The article is slightly vague, and lacks proper control of the experiment. The methodology could be better, and the experiment could be fine tuned to further eliminate human error. I will likely use this source to write about the cultural aspect of coffee consumption in adolescents

6.6 The author's point of view; and

The author is a neutral writer, in that this is a purely informative piece

6.7 How the text relates to your question or thesis.

Once again, my research relates to coffee consumption and the risk of Diabetes. While this article doesn't focus on any age groups, it provides accurate data on the results of coffee on diabetes risk. Similar to Finland, the issue with Taiwan is that coffee is very accessible, similar to America. This raises issues with early onset coffee addiction in adolescents, something I want to study in my paper.

7 Article 7: Weight Gain in Older Adolescent Females: The Internet, Sleep, Coffee, and Alcohol

7.1 PDF

Weight Gain in Older Adolescent Females: The Internet, Sleep, Coffee, and Alcohol

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Objectives To examine whether excessive recreational Internet time, insufficient sleep, regular coffee consumption, or alcoholic beverages promote weight gain.

Study design A longitudinal cohort of >5000 girls (Growing Up Today Study), from all over the United States and aged 14 to 21 years, returned surveys in 2001 reporting typical past-year recreational Internet time, sleep, coffee (with caffeine), and alcohol consumption. We estimated correlations among these 4 exposures. Each girl also reported her height and weight in 2000 and again in 2001. Multivariate models investigated associations between 1-year change in body mass index and same-year exposures, adjusted for adolescent growth/development, activity, and inactivity.

Results The exposures were highly ($P < .0001$) correlated with each other, except for coffee with Internet time ($P > .50$). More Internet time, more alcohol, and less sleep were all associated ($P < .05$) with same-year increases in body mass index. Females, aged 18+ years, who slept ≤5 hours/night ($P < .01$) or who consumed alcohol 2+servings/week ($P < .07$) gained more body mass index from 2000 to 2001. For females in weight-promoting categories of all exposures, this translates to nearly 4 extra pounds gained over 1 year. We found no evidence that drinking coffee promotes weight gain.

Conclusions Older girls may benefit from replacing recreational Internet time with sleep and by avoiding alcohol. *(J Pediatr 2008;153:635-9)*

Increases in the prevalence of adolescent overweight during recent decades are extensively documented,[1] as are associated health and social consequences.[2-3] The rapid rise in prevalence suggests environmental factors are responsible.[4] Physical activity has declined, sedentary activities have increased, and widespread changes in dietary patterns have taken place. Admittedly, genes play an important role in the development of obesity,[5] but for any particular individual, his or her genes are not modifiable, whereas some environmental factors are, although with difficulty.

A review of longitudinal studies of weight gain and childhood inactivity included TV/video watching and playing videogames, not Internet time or sleep.[6] In a cross-sectional study of adolescent girls, those who spent more time on the computer for e-mail, writing, and surfing the Internet were more likely to be overweight.[7] Sleep may be displaced by Internet use; cross-sectional studies of children showed associations between less sleep and overweight.[8-9] A longitudinal study found that British 3-year-olds with short sleep duration were 45% more likely to be obese at age 7 years,[10] and short sleep duration among U.S. third graders was associated with being overweight in sixth grade.[11] Coffee may be partly responsible for reduced sleep time, and thus weight gain, although a study of adolescent girls found no significant association between coffee/tea intakes and body mass index (BMI).[12] Alcoholic beverage intakes rise greatly throughout adolescence, at the same time that coffee use is increasing. A cross-sectional study of 16-17 year old girls found significant correlation between high alcohol intake and percent body fat.[13]

We estimated the correlations among these exposures in adolescent girls and investigated jointly their associations with BMI change over time. To our knowledge, no longitudinal studies of adolescents have studied any of these exposures with regard to excessive weight gain.

METHODS

Established in 1996, the Growing Up Today Study includes 16 771 boys and girls from all 50 states who are children of Nurses' Health Study II (NHSII) participants. The study, approved by Human Subjects Committees at Harvard School of Public Health and

BMI	Body mass index	NHSII	Nurses' Health Study II

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7.2 MLA Citation

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7.3 A brief summary of the text

More Internet time, more alcohol, and less sleep were all associated with same-year increases in body mass index. The exposures were highly (P <.0001) correlated with each other, except for coffee with Internet time (P >.50). Older girls may benefit from replacing recreational Internet time with sleep and by avoiding alcohol. Younger girls may benefit from avoiding both alcohol and coffee.

7.4 Comment on the authority or credibility of the author;

Catherine S. Berkey, DSc is a Research Associate in Medicine at Brigham and Women's Hospital and Harvard Medical School. She is a well-known expert in her field, and has done similar studies in the past. She has multiple studies published to reputable peer-reviewed journals

7.5 Comment on strengths and weaknesses of their argument;

The information in the article is outdated, and internet usage has likely changed since then. Additionally, the data is not properly presented, with a lack of visuals. I would like to replace this source in the future, with one of a similar idea but with newer and better visualized data.

7.6 The author's point of view; and

The author is a neutral writer, in that this is a purely informative piece

7.7 How the text relates to your question or thesis.

Similar to Taiwan, the issue is that coffee is very accessible, similar to America. This raises issues with early onset coffee addiction in adolescents. Additionally, the internet can amplify this

behavior, sleeping late and drinking coffee is an unnoticed detrimental sideeffect of adolescent coffee culture, something I want to study in my paper.