Dietetics Update

15 January 2021

Welcome to the latest copy of the Dietetics Update. The aim of this publication is to bring together a range of recently-published research and guidance that will help you make evidence based decisions.

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Please contact Holly if you would like more information, or further evidence searches: holly.cook3@nhs.net.

Contents

Articles taken from Medline and CINAHL - published between January – December 2020

BAME

Fat and fat-free mass index references in children and young adults: assessments along racial and ethnic lines.

Author(s): Shypailo ; Wong, William W

Source: American Journal of Clinical Nutrition; Sep 2020; vol. 112 (no. 3); p. 566-575

Publication Date: Sep 2020

Publication Type(s): Academic Journal

Available at The American Journal of Clinical Nutrition - from EBSCO (MEDLINE Complete)

Abstract: Background Fat-free mass index (FFMI) and fat mass index (FMI) are superior to BMI and fat percentage in evaluating nutritional status. However, existing references fail to account for racial/ethnic differences in body composition among children. Objectives Our goal was to produce age-based normative references for FFMI and FMI in children for specific racial/ethnic groups. Methods Body composition, weight, and height were measured in 1122 normal healthy children aged 2–21 y. Bone mineral content measured by DXA, total body water by deuterium dilution, and total body potassium by whole-body γ counting were combined to calculate fat-free mass (FFM) and fat mass (FM) using equations based on the Reference Child and Adolescent models. FFMI and FMI were calculated by dividing FFM and FM by height squared, respectively. After outlier removal, the LMS (Lambda-Mu-Sigma) function within R's GAMLSS package was used to produce age-based FFMI and FMI growth curves for black (B), white (W), and Hispanic (H) children for each sex. Combined models were produced in cases where outcomes did not differ by race/ethnicity. Resulting models were compared with previously published FFMI and FMI models. Results FFMI and FMI models based on 1079 children, aged 2–21 y, were created for both sexes. FFMI models for B children showed higher values throughout. W and H children were combined to produce FFMI models for each sex. H boys were modeled individually for FMI, whereas W and B boys were combined. FMI models for girls were created for each race/ethnicity. Models agreed well with those based on children from the United Kingdom of comparable race/ethnicity. Conclusions Race/ethnicity-specific references for FFMI and FMI will increase the accuracy of health and nutrition status assessment in children over race/ethnicity-generic references. The models allow the calculation of SD scores to assess health and nutrition status in children.

Database: CINAHL

Healthy weight maintenance strategy in early childhood: The views of black African migrant parents and health visitors.

Author(s): Ochieng

Source: Health & Social Care in the Community; Sep 2020; vol. 28 (no. 5); p. 1551-1559

Publication Date: Sep 2020

Publication Type(s): Academic Journal

Available at Health & Social Care in the Community - from Wiley Online Library

Abstract: In Europe and the US, childhood obesity is found to be higher in migrant children from black African communities and other visible minority ethnic groups. However, very little is known about the factors that contribute to the significant rates of obesity in these groups. The material for this study is drawn from a community-based qualitative study that examined the sociocultural, familial and environmental factors that either facilitate or hinder healthy weight in black African children during early childhood. The participants for the study were black African parents (n = 30) and health visitors (n = 32), residing and working in the East Midlands, UK. The participants were purposively selected according to an inclusion/exclusion criterion and invited to participate in seven focus groups (FG-7) conducted for parents (FG-4) and health visitors (FG-3) at a time and place convenient to the participants, between March and June 2018. The focus groups examined a number of issues, including the participants' views on the barriers and facilitators to achieving and maintaining a healthy weight. Thematic analysis was used to identify themes within the data. Although participants were knowledgeable about the need for a healthy weight in early childhood, the parents discussed how immigration status and experiences of discrimination had an impact on their children's diet and well-being, also discussing how structural factors influenced the decisions they made regarding healthy weight in early childhood. While the health visitors in general felt they did not have the

skills to advise black African parents about the cultural influences on diet during early childhood, findings highlighted a need for a system-based approach in meeting the nutritional needs of black African children. This study concludes by suggesting the need for broad social-environment and economic changes that address factors such as migration status, deprivation and discrimination, coupled with culturally specific healthy diet messages.

Database: CINAHL

Barriers to diabetes awareness and self-help are influenced by people's demographics: perspectives of South Asians with type 2 diabetes.

Author(s): Pardhan ; Nakafero, Georgina; Raman, Rajiv; Sapkota, Raju

Source: Ethnicity & Health; Aug 2020; vol. 25 (no. 6); p. 843-861

Publication Date: Aug 2020

Publication Type(s): Academic Journal

Available at Ethnicity & Health - from Unpaywall

Abstract: Aim: To determine whether barriers to diabetes awareness and self-help differ in South Asian participants of different demographic characteristics (age, gender, and literacy) with type 2 diabetes living in the United Kingdom. Methods: Six focus group discussions (FGDs) were carried out in patients who were categorized according to age (30–60 years, ≥60 years), gender (male, female) and literacy status (literate, illiterate). Data were analysed following the iterative process of thematic analysis techniques. Results: Barriers were demographic-specific. The illiterate groups reported language as the major barrier to improved diabetes awareness and self-help. The literate groups reported that information provided by healthcare providers was general, and not specific to their diet/culture. Major barriers to adherence to the recommended diet for diabetes included: insufficient knowledge/awareness about nutritional content of food (all groups); lack of self-will to resist eating sweets, especially during weddings/festivals (literate older groups/literate younger females/illiterate older males); difficulty cooking separate meals for diabetic and non-diabetic family members (illiterate/literate older females). Other barriers to seeking advice/help ranged from not wanting to disclose their diabetes as it may affect employment/work (literate groups) to fear of being singled out at social gatherings (illiterate groups). General lack of motivation to exercise was reported by all groups. Time constraints and not knowing what/how to exercise was reported by literate younger groups whilst the illiterate older groups reported to not having suitable exercising facilities at local communities. Different barriers were also reported when accessing healthcare; language barriers (illiterate groups), restricted access to doctors' appointments/difficulty attending specific appointment slots offered by General Practitioners (literate females). Conclusion: Different barriers exist to improved awareness about diabetes and self-help in different patient demographics. Lack of culturally appropriate diabetes educational/awareness programs in the community appeared to be a major barrier in most older and illiterate participants while younger participants reported time constraint.

Database: CINAHL

Vitamin D deficiency in western dwelling South Asian populations: an unrecognised epidemic.

Author(s): Darling

Source: Proceedings of the Nutrition Society; Aug 2020; vol. 79 (no. 3); p. 259-271

Publication Date: Aug 2020

Publication Type(s): Academic Journal

PubMedID: NLM32046797

Available at The Proceedings of the Nutrition Society - from Unpaywall

Abstract: Vitamin D deficiency (25-hydroxyvitamin D; 25(OH)D) is at epidemic proportions in western dwelling South Asian populations, including severe deficiency (<12·5 nmol/l) in 27-60% of individuals, depending on season. The paper aimed to review the literature concerning vitamin D concentrations in this population group. Research from the UK and Europe suggests a high prevalence of South Asians with 25(OH)D concentration <25 nmol/l, with most

having a 25(OH)D concentration of <50 nmol/l. In Canada, South Asians appear to have a slightly higher 25(OH)D concentration. There are few studies from the United States, South Africa and Australasia. Reasons for vitamin D deficiency include low vitamin D intake, relatively high adiposity, sun exposure avoidance and wearing of a covered dress style for cultural reasons. Possible health effects of deficiency include bone diseases such as rickets and hypocalcaemia in children and osteomalacia in adults. Vitamin D deficiency may also increase the risk of other chronic diseases. Increased fortification of food items relevant to South Asian groups (e.g. chapatti flour), as well as increased use of vitamin D supplements may help reduce this epidemic. Introducing culturally acceptable ways of increasing skin exposure to the sun in South Asian women may also be beneficial but further research is needed to assess the effectiveness of different approaches. There may be a need for a South Asian specific vitamin D dietary intake guideline in western countries. To conclude, vitamin D deficiency is epidemic in South Asians living in western countries and there is a clear need for urgent public health action.

Database: CINAHL

Social networks and their influences on nutrient intake, nutritional status and physical function in community-dwelling ethnically diverse older adults: a mixed-methods longitudinal study.

Author(s): Asamane ; Greig, Carolyn A; Thompson, Janice L

Source: BMC Public Health; Jun 2020; vol. 20 (no. 1); p. 1011-1011

Publication Date: Jun 2020

Publication Type(s): Academic Journal

PubMedID: NLM32590967

Available at BMC public health - from BioMed Central

Available at BMC public health - from Europe PubMed Central - Open Access

Available at BMC public health - from ProQuest (Health Research Premium) - NHS Version

Available at BMC public health - from EBSCO (MEDLINE Complete)

Abstract: Background: The United Kingdom population is ageing and becoming increasingly diverse; thus, it is vital to develop and implement interventions supporting this population shift. Social networks (SN) significantly impact health outcomes in later life, however relatively little is known about SN of community-dwelling ethnically diverse older adults. This study aimed to: 1) profile SN and changes in SN in this population over 8 months; 2) examine associations between SN, dietary intake, nutritional status, and physical function.Methods: SN were assessed using the Wenger Practitioner Assessment of Network Type. Energy and nutrient intakes were measured using multiple-pass 24-h recalls. The Mini Nutritional Assessment-Short Form (MNA-SF) assessed nutritional status. Physical function was measured using the Short Physical Performance Battery (SPPB) and handgrip strength. Data were collected at baseline and 8-months. Correlation and regression analyses examined relationships between SN, physical function, nutrient intake and nutritional status. Semi-structured interviews were conducted at baseline (n = 92) and follow-up (n = 81) to identify potential influences of SN. Interviews were transcribed verbatim and analysed using directed content analysis.Results: Quantitative data were obtained from 100 participants at baseline and 81 at follow-up. Mean (SD) age was 70.8 (8.1) years (59% male), comprising African/Caribbean (60%), South Asian (34%), and other ethnicities (6%). Five SN typologies were identified under two broad areas: integrated-SN consisting of locally integrated (44%) and wider community (8%); and non-integrated-SN consisting of family dependent (25%), local self-contained (17%), and private restricted (6%). At follow-up, 37% remained in non-integrated networks, 19% transitioned to non-integrated networks, 11% transitioned to, and 33% remained in, integrated networks. Participants within integrated networks at baseline had higher SPPB scores at follow-up. Compared to the private restricted, local self-contained SN significantly predicted zinc, riboflavin and vitamin B6 intakes. Participants remaining in, or transitioning to, non-integrated networks had low MNA-SF scores. Qualitative findings indicate that participants with reductions in SN perceived it as causing poorer physical function and eating behaviours.Conclusion: In the present study, integrated SN were associated with higher physical function and nutritional status at 8-month's follow-up. These results can inform the design of interventions to improve social networks, physical function and healthy nutrition within this population.

Database: CINAHL

The South Asian Health Foundation (UK) guidelines for managing diabetes during Ramadan.

Author(s): Hanif ; Patel, V.; Ali, S.N.; Karamat, A.; Saeed, M.; Hassanein, M.; Syed, A.; Chowdhury, T.A.; Farooqi, A.; Khunti, K.

Source: Diabetes Research & Clinical Practice; Jun 2020; vol. 164

Publication Date: Jun 2020

Publication Type(s): Academic Journal

PubMedID: NLM32335096

Abstract: Background: Fasting in the holy month of Ramadan is among the five pillars of Islam and is considered as a religious obligation by the Muslim population. People with diabetes observing the practice of fasts are at a higher risk of complications such as hypoglycaemia, hyperglycaemia and ketoacidosis due to changes in eating patterns and circadian rhythms. With the objective of mitigating these complications, the South Asian Health Foundation (UK) has developed the present guidelines based on robust evidence derived from epidemiological studies and clinical trials.Methods: We have highlighted the role of pre-Ramadan risk stratification and counselling by healthcare professionals with emphasis on the need for advice on adequate dietary and fluid intake, blood glucose monitoring and awareness of when to break the fast.Results: We reviewed the current literature and have given clinically-relevant recommendations on lifestyle modifications and glucose-lowering therapies such as metformin, sulphonylureas, dipeptidyl peptidase-4 inhibitors, sodium glucose co-transporter-2 inhibitors, thiazolidinediones, glucagon-like peptide-1 receptor agonists and insulin.Conclusions: An individualised patient-centric treatment plan is essential to not only achieve optimal glycaemic outcomes but also enable people with diabetes to observe a risk-free month of fasting during Ramadan.

Database: CINAHL

A nutrigenetics approach to study the impact of genetic and lifestyle factors on cardiometabolic traits in various ethnic groups: findings from the GeNuIne Collaboration.

Author(s): Vimaleswaran

Source: Proceedings of the Nutrition Society; May 2020; vol. 79 (no. 2); p. 194-204

Publication Date: May 2020

Publication Type(s): Academic Journal

PubMedID: NLM32000867

Abstract: Several studies on gene-diet interactions (nutrigenetics) have been performed in western populations; however, there are only a few studies to date in lower middle-income countries (LMIC). A large-scale collaborative project called gene-nutrient interactions (GeNuIne) Collaboration, the main objective of which is to investigate the effect of GeNuIne on cardiometabolic traits using population-based studies from various ethnic groups, has been initiated at the University of Reading, UK. While South Asians with higher genetic risk score (GRS) showed a higher risk of obesity in response to a high-carbohydrate diet, South East and Western Asian populations with higher GRS showed an increased risk of central obesity in response to a high-protein diet. The paper also provides a summary of other gene-diet interaction analyses that were performed in LMIC as part of this collaborative project and gives an overview of how these nutrigenetic findings can be translated to personalised and public health approaches for the prevention of cardiometabolic diseases such as obesity, type 2 diabetes and CVD.

Database: CINAHL

'Diabetes doesn't matter as long as we're keeping traditions alive': a qualitative study exploring the knowledge and awareness of Type 2 diabetes and related risk factors amongst the young Punjabi Sikh population in the UK.

Author(s): Sidhu, Tarnjit; Lemetyinen, Henna; Edge, Dawn

Source: Ethnicity & health; Oct 2020 ; p. 1-19

Publication Date: Oct 2020

Publication Type(s): Journal Article

PubMedID: 33021828

Available at Ethnicity & health - from Unpaywall

Abstract: Objectives: It is well known that Sikhs are at an increased risk of Type 2 Diabetes (T2DM) due to a genetic predisposition. High level of education is associated with lower incidence of T2DM. Young Sikhs are well educated compared to other South Asian sub-groups. Despite this, T2DM rates remain high in Sikhs. The uptake of preventative services is also low within Sikhs. At present, no research has been conducted with the young Punjabi Sikh population on diabetes awareness in the UK. To address this gap, this study explores the knowledge and awareness of T2DM and related modifiable risk factors in the UK Punjabi Sikh community. Views surrounding T2DM health-seeking behaviours are also explored. Design: A qualitative design comprising of 1-to-1 semi-structured interviews was adopted. Thirteen Punjabi Sikh participants between the ages of 18-30 took part. Participants were recruited through a Sikh temple and University of Manchester Sikh Society using purposive and snowball sampling in West Yorkshire and North West England. Data were analysed using inductive thematic analysis taking a critical realist stance. Results: Three themes were identified: (1) Perceptions of the causes of T2DM, (2) Perceptions of factors impacting physical activity and diet, and (3) Attitudes towards health-seeking behaviours. Conclusions: The findings show that although well educated, participants overlooked physical activity as contributing factor towards T2DM onset. Additionally, gender and cultural norms influenced physical activity and diet, as these are passed through generations to preserve the collectivist Sikh culture. Exploration of health seeking behaviours also found young Punjabi Sikhs perceived the internet to be the preferred tool to seek T2DM information. These findings hold implications for health professionals, as the information and preventative services provided to Sikhs can be tailored to be culturally appropriate and in line with cultural and gender norms, such as bhangra dancing for physical activity.

Database: Medline

Ramadan and Diabetes: A Narrative Review and Practice Update.

Author(s): Ahmed, Syed H; Chowdhury, Tahseen A; Hussain, Sufyan; Syed, Ateeq; Karamat, Ali; Helmy, Ahmed; Waqar, Salman; Ali, Samina; Dabhad, Ammarah; Seal, Susan T; Hodgkinson, Anna; Azmi, Shazli; Ghouri, Nazim

Source: Diabetes therapy : research, treatment and education of diabetes and related disorders; Nov 2020; vol. 11 (no. 11); p. 2477-2520

Publication Date: Nov 2020

Publication Type(s): Journal Article Review

PubMedID: 32909192

Available at Diabetes therapy : research, treatment and education of diabetes and related disorders - from Europe PubMed Central - Open Access

Available at Diabetes therapy : research, treatment and education of diabetes and related disorders - from ProQuest (Health Research Premium) - NHS Version

Abstract: Fasting in the Islamic month of Ramadan is obligatory for all sane, healthy adult Muslims. The length of the day varies significantly in temperate regions-typically lasting ≥ 18 h during peak summer in the UK. The synodic nature of the Islamic calendar means that Ramadan migrates across all four seasons over an approximately 33-year cycle. Despite valid exemptions, there is an intense desire to fast during this month, even among those who are considered to be at high risk, including many individuals with diabetes mellitus. In this review we explore the current scientific and clinical evidence on fasting in patients with diabetes mellitus, focussing on type 2 diabetes mellitus and type 1 diabetes mellitus, with brief reviews on pregnancy, pancreatic diabetes, bariatric surgery, the elderly population and current practice guidelines. We also make recommendations on the management of diabetes patients during the month of Ramadan. Many patients admit to a do-it-yourself approach to diabetes mellitus management during Ramadan, largely due to an under-appreciation of the risks and implications of the rigors of fasting on their health. Part of the issue may also lie with a healthcare professional's perceived inability to grasp the

religious sensitivities of Muslims in relation to disease management. Thus, the pre-Ramadan assessment is crucial to ensure a safe Ramadan experience. Diabetes patients can be risk-stratified from low, medium to high or very high risk during the pre-Ramadan assessment and counselled accordingly. Those who are assessed to be at high to very high risk are advised not to fast. The current COVID-19 pandemic upgrades those in the high-risk category to very high risk; hence a significant number of diabetes patients may fall under the penumbra of the 'not to fast' advisory. We recognize that fasting is a personal choice and if a person chooses to fast despite advice to the contrary, he/she should be adequately supported and monitored closely during Ramadan and for a brief period thereafter. Current advancements in insulin delivery and glucose monitoring technologies are useful adjuncts to strategies for supporting type 1 diabetes patients considered to be high risk as well as 'high-risk' type 2 patients manage their diabetes during Ramadan. Although there is a lack of formal trial data, there is sufficient evidence across the different classes of therapeutic hypoglycaemic agents in terms of safety and efficacy to enable informed decision-making and provide a breadth of therapeutic options for the patient and the healthcare professional, even if the professional advice is to abstain. Thus, Ramadan provides an excellent opportunity for patient engagement to discuss important aspects of management, to improve control in the short term during Ramadan and to help the observants understand that the metabolic gains achieved during Ramadan are also sustainable in the other months of the year by maintaining a dietary and behavioural discipline. The application of this understanding can potentially prevent long-term complications.

Database: Medline

The association between nutrient intake, nutritional status and physical function of community-dwelling ethnically diverse older adults.

Author(s): Asamane, Evans A; Greig, Carolyn A; Thompson, Janice L

Source: BMC nutrition; 2020; vol. 6 ; p. 36

Publication Date: 2020

Publication Type(s): Journal Article

PubMedID: 32864152

Available at BMC nutrition - from BioMed Central

Available at BMC nutrition - from ProQuest (Health Research Premium) - NHS Version

Abstract: BackgroundThere are limited longitudinal data regarding nutrient intake, nutritional status and physical function in community-dwelling ethnically diverse older adults. This study explored these variables and their relationship at baseline (n = 100) and 8-months' follow-up (n = 81) among community-dwelling ethnically diverse older adults (≥60 years) in Birmingham, United Kingdom.MethodsMultiple-pass 24-h dietary recalls and the Mini Nutritional Assessment-Short Form assessed nutritional intake and status, respectively. Short Physical Performance Battery (SPPB) and handgrip strength measured physical function. Linear and multinomial regressions were used to predict relationships between physical function, nutritional status and nutrient intake.ResultsComplete data were collected at baseline (n = 100) and 8-months' follow-up (n = 81). Mean (SD) age was 70 (8.1) years (60% male), with 62% being obese. Statistically significant decreases in intakes of vitamin B6, vitamin B1, iron, folate, and magnesium occurred over time. Daily intake of all micronutrients except vitamin B12, phosphorus and manganese were below the Recommended Nutrient Intakes (RNI). SPPB ($Z = -4.01$, $p < 0.001$) and nutritional status ($Z = -2.37$, $p = 0.018$) declined over time. Higher SPPB scores at baseline (OR = 0.54 95% CI 0.35, 0.81) were associated with a slower decline in nutritional status.ConclusionThe observed declines and inadequate nutrient intakes in the absence of weight loss in just 8 months may pose serious challenges to healthy ageing, identifying an urgent need to re-evaluate and tailor appropriate dietary advice for this population. Additionally, the associations of nutrition and physical function observed in this study serves as an essential resource to design and implement community/faith-based interventions targeting early screening of nutritional status and physical function to ensure most older adults are assessed and treated accordingly.

Database: Medline

CARDIOVASCULAR DISEASE

Impact of the common MTHFR 677C→T polymorphism on blood pressure in adulthood and role of riboflavin in modifying the genetic risk of hypertension: evidence from the JINGO project.

Author(s): Ward ; Hughes, Catherine F.; Strain, J. J.; Reilly, Rosie; Cunningham, Conal; Molloy, Anne M.; Horigan, Geraldine; Casey, Miriam; McCarroll, Kevin; O'Kane, Maurice; Gibney, Michael J.; Flynn, Albert; Walton, Janette; McNulty, Breige A.; McCann, Adrian; Kirwan, Laura; Scott, John M.; McNulty, Helene

Source: BMC Medicine; Nov 2020; vol. 18 (no. 1)

Publication Date: Nov 2020

Publication Type(s): Academic Journal

PubMedID: NLM33172445

Abstract: Background: Genome-wide and clinical studies have linked the 677C→T polymorphism in the gene encoding methylenetetrahydrofolate reductase (MTHFR) with hypertension, whilst limited evidence shows that intervention with riboflavin (i.e. the MTHFR co-factor) can lower blood pressure (BP) in hypertensive patients with the variant MTHFR 677TT genotype. We investigated the impact of this common polymorphism on BP throughout adulthood and hypothesised that riboflavin status would modulate the genetic risk of hypertension.Methods: Observational data on 6076 adults of 18-102 years were drawn from the Joint Irish Nutrigenomics Organisation project, comprising the Trinity-Ulster Department of Agriculture (TUDA; volunteer sample) and the National Adult Nutrition Survey (NANS; population-based sample) cohorts. Participants were recruited from the Republic of Ireland and Northern Ireland (UK) in 2008-2012 using standardised methods.Results: The variant MTHFR 677TT genotype was identified in 12% of adults. From 18 to 70 years, this genotype was associated with an increased risk of hypertension (i.e. systolic BP ≥ 140 and/or a diastolic BP ≥ 90 mmHg): odds ratio (OR) 1.42, 95% confidence interval (CI) 1.07 to 1.90; P = 0.016, after adjustment for antihypertensive drug use and other significant factors, namely, age, male sex, BMI, alcohol and total cholesterol. Low or deficient biomarker status of riboflavin (observed in 30.2% and 30.0% of participants, respectively) exacerbated the genetic risk of hypertension, with a 3-fold increased risk for the TT genotype in combination with deficient riboflavin status (OR 3.00, 95% CI, 1.34-6.68; P = 0.007) relative to the CC genotype combined with normal riboflavin status. Up to 65 years, we observed poorer BP control rates on antihypertensive treatment in participants with the TT genotype (30%) compared to those without this variant, CT (37%) and CC (45%) genotypes (P < 0.027).Conclusions: The MTHFR 677TT genotype is associated with higher BP independently of homocysteine and predisposes adults to an increased risk of hypertension and poorer BP control with antihypertensive treatment, whilst better riboflavin status is associated with a reduced genetic risk. Riboflavin intervention may thus offer a personalised approach to prevent the onset of hypertension in adults with the TT genotype; however, this requires confirmation in a randomised trial in non-hypertensive adults.

Database: CINAHL

Dietary Inflammatory Potential and Risk of Cardiovascular Disease Among Men and Women in the U.S.

Author(s): Li ; Lee, Dong Hoon; Hu, Jie; Tabung, Fred K.; Li, Yanping; Bhupathiraju, Shilpa N.; Rimm, Eric B.; Rexrode, Kathryn M.; Manson, JoAnn E.; Willett, Walter C.; Giovannucci, Edward L.; Hu, Frank B.

Source: Journal of the American College of Cardiology (JACC); Nov 2020; vol. 76 (no. 19); p. 2181-2193

Publication Date: Nov 2020

Publication Type(s): Academic Journal

PubMedID: NLM33153576

Abstract: Background: Inflammation plays an important role in cardiovascular disease (CVD) development. Diet modulates inflammation; however, it remains unknown whether dietary patterns with higher inflammatory potential are associated with long-term CVD risk.Objectives: This study sought to examine whether proinflammatory diets are associated with increased CVD risk.Methods: We prospectively followed 74,578 women from the Nurses' Health Study (NHS) (1984-2016), 91,656 women from the NHSII (1991-2015), and 43,911 men from the Health Professionals Follow-up Study (1986-2016) who were free of CVD and cancer at baseline. Diet was assessed by food frequency questionnaires every 4 years. The inflammatory potential of diet was evaluated using a food-based empirical dietary inflammatory pattern (EDIP) score that was pre-defined based on levels of 3 systemic inflammatory biomarkers.Results: During 5,291,518 person-years of follow-up, we documented 15,837 incident CVD cases, including 9,794 coronary heart disease (CHD) cases and 6,174 strokes. In pooled analyses of the 3 cohorts, after adjustment for use of anti-inflammatory medications and CVD risk factors including body mass index, a higher dietary inflammatory potential, as indicated by higher EDIP scores, was associated with an increased risk of CVD (hazard ratio [HR] comparing the highest to lowest quintiles: 1.38; 95% confidence interval [CI]: 1.31 to 1.46; p for trend <0.001), CHD (HR: 1.46; 95% CI: 1.36 to 1.56; p for trend <0.001), and stroke (HR: 1.28; 95% CI: 1.17- to 1.39; p for trend <0.001). These associations were consistent across cohorts and between sexes, and they remained significant after further adjustment for other dietary quality indices. In a subset of study participants (n = 33,719), a higher EDIP was associated with a higher circulating profile of proinflammatory biomarkers, lower levels of adiponectin, and an unfavorable blood lipid profile (p < 0.001).Conclusions: Dietary patterns with a higher proinflammatory potential were associated with higher CVD risk. Reducing the inflammatory potential of the diet may potentially provide an effective strategy for CVD prevention.

Database: CINAHL

Evaluation of an intervention to provide brief support and personalized feedback on food shopping to reduce saturated fat intake (PC-SHOP): A randomized controlled trial.

Author(s): Piernas ; Aveyard, Paul; Lee, Charlotte; Tsiountsioura, Melina; Noreik, Michaela; Astbury, Nerys M.; Oke, Jason; Madigan, Claire; Jebb, Susan A.

Source: PLoS Medicine; Nov 2020; vol. 17 (no. 11); p. 1-20

Publication Date: Nov 2020

Publication Type(s): Academic Journal

PubMedID: NLM33151934

Available at PLoS medicine - from Europe PubMed Central - Open Access

Available at PLoS medicine - from Public Library of Science (PLoS)

Available at PLoS medicine - from EBSCO (MEDLINE Complete)

Available at PLoS medicine - from ProQuest (Health Research Premium) - NHS Version

Abstract: Background: Guidelines recommend reducing saturated fat (SFA) intake to decrease cardiovascular disease (CVD) risk, but there is limited evidence on scalable and effective approaches to change dietary intake, given the large proportion of the population exceeding SFA recommendations. We aimed to develop a system to provide monthly personalized feedback and healthier swaps based on nutritional analysis of loyalty card data from the largest United Kingdom grocery store together with brief advice and support from a healthcare professional (HCP) in the primary care practice. Following a hybrid effectiveness-feasibility design, we tested the effects of the intervention on SFA intake and low-density lipoprotein (LDL) cholesterol as well as the feasibility and acceptability of providing nutritional advice using loyalty card data.Methods and Findings: The Primary Care Shopping Intervention for Cardiovascular Disease Prevention (PC-SHOP) study is a parallel randomized controlled trial with a 3 month follow-up conducted between 21 March 2018 to 16 January2019. Adults ≥18 years with LDL cholesterol >3 mmol/L (n = 113) were recruited from general practitioner (GP) practices in Oxfordshire and randomly allocated to "Brief Support" (BS, n = 48), "Brief Support + Shopping Feedback" (SF, n = 48) or "Control" (n = 17). BS consisted of a 10-minute consultation with an HCP to motivate participants to reduce their SFA intake. Shopping feedback comprised a personalized report on the SFA content of grocery purchases and suggestions for lower SFA swaps. The primary

outcome was the between-group difference in change in SFA intake (% total energy intake) at 3 months adjusted for baseline SFA and GP practice using intention-to-treat analysis. Secondary outcomes included %SFA in purchases, LDL cholesterol, and feasibility outcomes. The trial was powered to detect an absolute reduction in SFA of 3% (SD3). Neither participants nor the study team were blinded to group allocation. A total of 106 (94%) participants completed the study: 68% women, 95% white ethnicity, average age 62.4 years (SD 10.8), body mass index (BMI) 27.1 kg/m2 (SD 4.7). There were small decreases in SFA intake at 3 months: control = -0.1% (95% CI -1.8 to 1.7), BS = -0.7% (95% CI -1.8 to 0.3), SF = -0.9% (95% CI -2.0 to 0.2); but no evidence of a significant effect of either intervention compared with control (difference adjusted for GP practice and baseline: BS versus control = -0.33% [95% CI -2.11 to 1.44], p = 0.709; SF versus control = -0.11% [95% CI -1.92 to 1.69], p = 0.901). There were similar trends in %SFA based on supermarket purchases: control = -0.5% (95% CI -2.3 to 1.2), BS = -1.3% (95% CI -2.3 to -0.3), SF = -1.5% (95% CI -2.5 to -0.5) from baseline to follow-up, but these were not significantly different: BS versus control p = 0.379; SF versus control p = 0.411. There were small reductions in LDL from baseline to follow-up (control = -0.14 mmol/L [95% CI -0.48, 0.19), BS: -0.39 mmol/L [95% CI -0.59, -0.19], SF: -0.14 mmol/L [95% CI -0.34, 0.07]), but these were not significantly different: BS versus control p = 0.338; SF versus control p = 0.790. Limitations of this study include the small sample of participants recruited, which limits the power to detect smaller differences, and the low response rate (3%), which may limit the generalisability of these findings.Conclusions: In this study, we have shown it is feasible to deliver brief advice in primary care to encourage reductions in SFA intake and to provide personalized advice to encourage healthier choices using supermarket loyalty card data. There was no evidence of large reductions in SFA, but we are unable to exclude more modest benefits. The feasibility, acceptability, and scalability of these interventions suggest they have potential to encourage small changes in diet, which could be beneficial at the population level.Trial Registration: ISRCTN14279335.

Database: CINAHL

Dietary education provision within a cardiac rehabilitation programme in the UK: a pilot study.

Author(s): Moore ; Tsakirides, Costas; Rutherford, Zoe; Swainson, Michelle G; Birch, Karen M; Ibeggazene, Said; Ispoglou, Theocharis

Source: British Journal of Cardiac Nursing; Aug 2020; vol. 15 (no. 8); p. 1-12

Publication Date: Aug 2020

Publication Type(s): Academic Journal

Abstract: Background/aims: The primary aim of this study was to evaluate the effectiveness of two 30-minute dietary education sessions, within cardiac rehabilitation, as a means to optimise nutrient and energy intakes. A secondary aim was to evaluate patients' habitual physical activity levels. Methods: Thirty patients (males: n=24, 61.8±11.2 years; females: n=6, 66.7±8.5 years) attended a 6-week early outpatient cardiac rehabilitation programme in the UK and received two 30-minute dietary education sessions emphasising Mediterranean diet principles. Energy intakes and nutrient intakes were measured through completion of 3-day food diaries in weeks one and six (before and after the dietary education sessions) to assess the impact of these sessions on nutrient intakes. At the same time-points, a sub-group (n=13) of patients had their physical activity levels assessed via accelerometery to assess the impact of the cardiac rehabilitation programme on physical activity. Results: Estimated energy requirements at week one (1988±366 kcal d−1) were not matched by actual energy intakes (1785±561 kcal d−1) (P=0.047, d=−0.36). Energy intakes reduced to 1655±470 kcal d−1 at week six (P=0.66, d=−0.33) whereas estimated energy requirements increased as a function of increased activity (cardiac rehabilitation sessions). Nutrient intakes remained suboptimal, while no significant increases were observed in healthy fats and fibre, which are core elements of a Mediterranean diet. Statistically significant increases were not observed in physical activity; however, patients decreased sedentary time by 11±12% in week six compared with week one (P=0.009; d=−0.54). Conclusions: The present study findings suggest that two 30-minute dietary education sessions did not positively influence energy intakes and nutrient intakes, while habitual physical activity levels were not significantly increased as a result of the cardiac rehabilitation programme. Future research should explore means of optimising nutrition and habitual physical activity within UK cardiac rehabilitation.

Database: CINAHL

Circulating phylloquinone, inactive Matrix Gla protein and coronary heart disease risk: A two-sample Mendelian Randomization study.

Author(s): Zwakenberg ; Burgess, Stephen; Sluijs, Ivonne; Weiderpass, Elisabete; Beulens, Joline W.J.; van der Schouw, Yvonne T.

Source: Clinical Nutrition; Apr 2020; vol. 39 (no. 4); p. 1131-1136

Publication Date: Apr 2020

Publication Type(s): Academic Journal

Available at Clinical nutrition (Edinburgh, Scotland) - from Unpaywall

Abstract: Multiple observational studies and small-scale intervention studies suggest that high vitamin K intake is associated with improved markers for cardiovascular health. Circulating phylloquinone solely represents phylloquinone (vitamin K1) intake, while dephosphorylated uncarboxylated Matrix Gla Protein (dp-ucMGP) represents both phylloquinone and menaquinone (vitamin K2) intake. This study aims to investigate the causal relationship between genetically predicted vitamin K concentrations and the risk of CHD via a two-sample Mendelian Randomization approach. We used data from three studies: the European Prospective Investigation into Cancer and Nutrition (EPIC)-CVD case-cohort study, CARDIOGRAMplusC4D and the UK Biobank, resulting in 103,097 CHD cases. Genetically predicted vitamin K concentrations were measured using SNPs related to circulating phylloquinone and dp-ucMGP. We calculated a genetic risk score (GRS) including four SNPs (rs2108622, rs2192574, rs4645543 and rs6862071) related to circulating phylloquinone levels from a genome wide association study. Rs4236 was used as an instrumental variable for dp-ucMGP. Inverse-variance weighted (IVW) analysis was used to obtain Risk Ratios (RRs) for the causal relationship between phylloquinone and dp-ucMGP concentrations and CHD risk. Using the genetic score for circulating phylloquinone, we found that circulating phylloquinone was not causally related to CHD risk (RR 1.00 (95%-CI: 0.98; 1.04)). Lower genetically predicted dp-ucMGP concentration was associated with a lower CHD risk with a RR of 0.96 (95%-CI: 0.93; 0.99) for every 10 µg/L decrease in dp-ucMGP. This study did not confirm a causal relationship between circulating phylloquinone and lower CHD risk. However, lower dp-ucMGP levels may be causally related with a decreased CHD risk. This inconsistent result may reflect the influence of menaquinones in the association with CHD.

Database: CINAHL

Optimal diet and lifestyle strategies for the management of cardio-metabolic risk.

Author(s): Griffin

Source: Proceedings of the Nutrition Society; Feb 2020; vol. 79 (no. 1); p. 1-3

Publication Date: Feb 2020

Publication Type(s): Academic Journal

PubMedID: NLM31985390

Available at The Proceedings of the Nutrition Society - from Unpaywall

Abstract: Cardio-metabolic risk (CMR) embodies a clustering of metabolic abnormalities that increase the likelihood of developing CVD in the large arteries of the heart, peripheral tissues and brain. These abnormalities share a common origin of insulin resistance, which manifests typically as excess visceral adipose tissue in the abdominal cavity, and within cells of key metabolic tissues (ectopic fat), including the liver, pancreas, heart and skeletal muscle. As expected, the increased risk of CVD that can be attributed to CMR factors is alarmingly high in overweight and obese populations, but this risk can be reduced by reversing many of the inappropriate diet and lifestyle behaviours that underlie its development. The Nutrition Society's 2018 Winter Meeting at the Royal Society of Medicine addressed the topic of the 'Optimal diet and lifestyle for managing cardio-metabolic risk', with the aim of providing mechanistic insights into the impact of macronutrients, dietary patterns and meal timing in key metabolic tissues. The 2-d programme concluded with a summary of its main outcomes, and an overview of their implications for dietary policy in the UK.

Database: CINAHL

Dietary fibre and cardiovascular health: a review of current evidence and policy.

Author(s): Evans

Source: Proceedings of the Nutrition Society; Feb 2020; vol. 79 (no. 1); p. 61-67

Publication Date: Feb 2020

Publication Type(s): Academic Journal

PubMedID: NLM31266545

Available at The Proceedings of the Nutrition Society - from Unpaywall

Abstract: Dietary fibre comprises many different, mainly plant-based, compounds that are not fully digested in the human gut. Insoluble fibres include cellulose, hemi-celluloses and lignin and soluble fibres include pectins, β-glucan and hydro-colloids. In the UK, the daily recommended amount has increased to 30 g but only 13 % of men and 4 % of women meet this recommendation. Currently the mean intake for adults is 21 g for men and 17 g for women. There is a wealth of epidemiological evidence based on systematic reviews of trials and cohorts to support the higher fibre recommendation. This includes evidence of reductions in the risk for CVD (both heart disease and stroke) and lower risk of type 2 diabetes, lower blood pressure, lower LDL-cholesterol, as well as some cancers. Beneficial effects of fibre operate via a diverse range of mechanisms throughout the digestive system including the mouth, stomach and small and large intestine; some of which are still not completely understood. The updated recommendation for fibre is a long way from a typical British diet and requires several daily portions of fruit and vegetables and wholegrain foods. Improving dietary fibre intakes will require a variety of actions and policies from stakeholders; however, there is currently more of a focus on reducing sugar than increasing fibre. In order to increase the number of adults meeting the fibre recommendation, social marketing and labelling of high-fibre foods are warranted as well as reformulation and wider availability of wholegrain versions of popular foods.

Database: CINAHL

Dietary health and CVD: implications for dietary policy in England.

Author(s): Tedstone ; Duval, D.; Peacock, E.

Source: Proceedings of the Nutrition Society; Feb 2020; vol. 79 (no. 1); p. 95-102

Publication Date: Feb 2020

Publication Type(s): Academic Journal

PubMedID: NLM31036099

Available at The Proceedings of the Nutrition Society - from Unpaywall

Abstract:CVD is a major burden on the health system in the UK. On average, diets are not aligned with current dietary recommendations, including those for salt, saturated fat, fibre, fruit and vegetables. Obesity prevalence is high and the majority of the population is consuming more energy than required. Addressing these issues would reduce the burden of CVD and help reduce inequalities in health. There is currently a range of policy interventions in place in England designed to help improve diets and reduce obesity, which in turn should help reduce the risk of CVD. Further actions may be needed in the long term to deliver sustained improvements to diet and health.

Database: CINAHL

Comparison of dietary macronutrient patterns of 14 popular named dietary programmes for weight and cardiovascular risk factor reduction in adults: systematic review and network meta-analysis of randomised trials.

Author(s): Ge, Long; Sadeghirad, Behnam; Ball, Geoff D C; da Costa, Bruno R; Hitchcock, Christine L; Svendrovski, Anton; Kiflen, Ruhi; Quadri, Kalimullah; Kwon, Henry Y; Karamouzian, Mohammad; Adams-Webber, Thomasin; Ahmed, Waleed; Damanhoury, Samah; Zeraatkar, Dena; Nikolakopoulou, Adriani; Tsuyuki, Ross T; Tian, Jinhui; Yang, Kehu; Guyatt, Gordon H; Johnston, Bradley C

Source: BMJ (Clinical research ed.); Apr 2020; vol. 369 ; p. m696

Publication Date: Apr 2020

Publication Type(s): Research Support, Non-u.s. Gov't Meta-analysis Journal Article Systematic Review

PubMedID: 32238384

Available at BMJ (Clinical research ed.) - from BMJ Journals

Abstract:OBJECTIVETo determine the relative effectiveness of dietary macronutrient patterns and popular named diet programmes for weight loss and cardiovascular risk factor improvement among adults who are overweight or obese.DESIGNSystematic review and network meta-analysis of randomised trials.DATA SOURCESMedline, Embase, CINAHL, AMED, and CENTRAL from database inception until September 2018, reference lists of eligible trials, and related reviews.STUDY SELECTIONRandomised trials that enrolled adults (≥18 years) who were overweight (body mass index 25-29) or obese (≥30) to a popular named diet or an alternative diet.OUTCOMES AND MEASURESChange in body weight, low density lipoprotein (LDL) cholesterol, high density lipoprotein (HDL) cholesterol, systolic blood pressure, diastolic blood pressure, and C reactive protein at the six and 12 month follow-up.REVIEW METHODSTwo reviewers independently extracted data on study participants, interventions, and outcomes and assessed risk of bias, and the certainty of evidence using the GRADE (grading of recommendations, assessment, development, and evaluation) approach. A bayesian framework informed a series of random effects network meta-analyses to estimate the relative effectiveness of the diets.RESULTS121 eligible trials with 21 942 patients were included and reported on 14 named diets and three control diets. Compared with usual diet, low carbohydrate and low fat diets had a similar effect at six months on weight loss (4.63 v 4.37 kg, both moderate certainty) and reduction in systolic blood pressure (5.14 mm Hg, moderate certainty v 5.05 mm Hg, low certainty) and diastolic blood pressure (3.21 v 2.85 mm Hg, both low certainty). Moderate macronutrient diets resulted in slightly less weight loss and blood pressure reductions. Low carbohydrate diets had less effect than low fat diets and moderate macronutrient diets on reduction in LDL cholesterol (1.01 mg/dL, low certainty v 7.08 mg/dL, moderate certainty v 5.22 mg/dL, moderate certainty, respectively) but an increase in HDL cholesterol (2.31 mg/dL, low certainty), whereas low fat (-1.88 mg/dL, moderate certainty) and moderate macronutrient (-0.89 mg/dL, moderate certainty) did not. Among popular named diets, those with the largest effect on weight reduction and blood pressure in comparison with usual diet were Atkins (weight 5.5 kg, systolic blood pressure 5.1 mm Hg, diastolic blood pressure 3.3 mm Hg), DASH (3.6 kg, 4.7 mm Hg, 2.9 mm Hg, respectively), and Zone (4.1 kg, 3.5 mm Hg, 2.3 mm Hg, respectively) at six months (all moderate certainty). No diets significantly improved levels of HDL cholesterol or C reactive protein at six months. Overall, weight loss diminished at 12 months among all macronutrient patterns and popular named diets, while the benefits for cardiovascular risk factors of all interventions, except the Mediterranean diet, essentially disappeared.CONCLUSIONSModerate certainty evidence shows that most macronutrient diets, over six months, result in modest weight loss and substantial improvements in cardiovascular risk factors, particularly blood pressure. At 12 months the effects on weight reduction and improvements in cardiovascular risk factors largely disappear.SYSTEMATIC REVIEW REGISTRATIONPROSPERO CRD42015027929.

Database: Medline

Estimated population wide benefits and risks in China of lowering sodium through potassium enriched salt substitution: modelling study.

Author(s): Marklund, Matti; Singh, Gitanjali; Greer, Raquel; Cudhea, Frederick; Matsushita, Kunihiro; Micha, Renata; Brady, Tammy; Zhao, Di; Huang, Liping; Tian, Maoyi; Cobb, Laura; Neal, Bruce; Appel, Lawrence J; Mozaffarian, Dariush; Wu, Jason H Y

Source: BMJ (Clinical research ed.); Apr 2020; vol. 369 ; p. m824

Publication Date: Apr 2020

Publication Type(s): Research Support, Non-u.s. Gov't Journal Article

PubMedID: 32321724

Available at BMJ (Clinical research ed.) - from BMJ Journals

Abstract:OBJECTIVESTo estimate the effects of nationwide replacement of discretionary salt (used at table or during cooking) with potassium enriched salt substitute on morbidity and death from cardiovascular disease in China.DESIGNModelling study.SETTINGChina.POPULATIONAdult population in China, and specifically individuals with

chronic kidney disease (about 17 million people).INTERVENTIONSComparative risk assessment models were used to estimate the effects of a nationwide intervention to replace discretionary dietary salt with potassium enriched salt substitutes (20-30% potassium chloride). The models incorporated existing data and corresponding uncertainties from randomised trials, the China National Survey of Chronic Kidney Disease, the Global Burden of Disease Study, and the Chronic Kidney Disease Prognosis Consortium.MAIN OUTCOME MEASURESAverted deaths from cardiovascular disease, non-fatal events, and disability adjusted life years from a reduction in blood pressure were estimated after implementation of potassium enriched salt substitution. In individuals with chronic kidney disease, additional deaths from cardiovascular disease related to hyperkalaemia from increased intake of potassium were calculated. The net effects on deaths from cardiovascular disease were estimated as the difference and ratio of averted and additional deaths from cardiovascular disease.RESULTSNationwide implementation of potassium enriched salt substitution could prevent about 461 000 (95% uncertainty interval 196 339 to 704 438) deaths annually from cardiovascular disease, corresponding to 11.0% (4.7% to 16.8%) of annual deaths from cardiovascular disease in China; 743 000 (305 803 to 1 273 098) non-fatal cardiovascular events annually; and 7.9 (3.3 to 12.9) million disability adjusted life years related to cardiovascular disease annually. The intervention could potentially produce an estimated 11 000 (6422 to 16 562) additional deaths related to hyperkalaemia in individuals with chronic kidney disease. The net effect would be about 450 000 (183 699 to 697 084) fewer deaths annually from cardiovascular disease in the overall population and 21 000 (1928 to 42 926) fewer deaths in individuals with chronic kidney disease. In deterministic sensitivity analyses, with changes to key model inputs and assumptions, net benefits were consistent in the total population and in individuals with chronic kidney disease, with averted deaths outweighing additional deaths.CONCLUSIONSNationwide potassium enriched salt substitution in China was estimated to result in a substantial net benefit, preventing around one in nine deaths from cardiovascular disease overall. Taking account of the risks of hyperkalaemia, a substantial net benefit was also estimated for individuals with chronic kidney disease.

Database: Medline

ENDOCRINOLOGY & DIABETES

A Habit-Based Randomised Controlled Trial to Reduce Sugar-Sweetened Beverage Consumption: the Impact of the Substituted Beverage on Behaviour and Habit Strength.

Author(s): Judah ; Mullan, Barbara; Yee, Monica; Johansson, Lina; Allom, Vanessa; Liddelow, Caitlin

Source: International Journal of Behavioral Medicine; Dec 2020; vol. 27 (no. 6); p. 623-635

Publication Date: Dec 2020

Publication Type(s): Academic Journal

Abstract: Background: Excess sugar consumption has been linked to numerous negative health outcomes, such as obesity and type II diabetes. Reducing sugar-sweetened beverage (SSB) consumption may reduce sugar intake and thus improve health. The aim of the study was to test the impact of the potentially different rewarding nature of water or diet drinks as replacements for SSB, using a habit and implementation intention–based intervention. Method: An online randomised, two-arm parallel design was used. One hundred and fifty-eight participants (mainly from the UK and USA) who regularly consumed SSBs (Mage = 31.5, 51% female) were advised to create implementation intentions to substitute their SSB with either water or a diet drink. Measures of SSB consumption, habit strength and hedonic liking were taken at baseline and at 2 months. Water or diet drink consumption was only measured at 2 months. Results: There was a large and significant reduction in SSB consumption and self-reported SSB habits for both the water and diet drink groups, but no difference between groups. There were no differences in hedonic liking for the alternative drink, alternative drink consumption and alternative drink habit between the two groups. Reduction in SSB hedonic liking was associated with reduced SSB consumption and habit. Conclusion: This study demonstrates that an implementation intention–based intervention achieved substantial reductions in SSB consumption and habits. It also indicates that hedonic liking for SSBs and alternative drinks are associated with changes in consumption behaviour. Substituting SSBs with water or diet drinks was equally as effective in reducing SSB consumption.

Database: CINAHL

Dietary intakes of women with Type 1 diabetes before and during pregnancy: a pre-specified secondary subgroup analysis among CONCEPTT participants.

Author(s): Neoh ; Grisoni, J. A.; Feig, D. S.; Murphy, H. R.

Source: Diabetic Medicine; Nov 2020; vol. 37 (no. 11); p. 1841-1848

Publication Date: Nov 2020

Publication Type(s): Academic Journal

Available at Diabetic Medicine - from Wiley Online Library

Abstract: Aim: To describe the dietary intakes of women with Type 1 diabetes before and during pregnancy. Methods: This was a pre-specified subgroup analysis of CONCEPTT involving 63 women planning pregnancy and 93 pregnant women from 14 sites in England, Scotland and Ireland. Two hundred and forty-six 3-day food diaries (104 planning pregnancy, 142 pregnant) were matched to data source and food reference codes, and analysed using dietary software. Participants were informed that food diaries would be de-identified and used only for research purposes. Results: Mean (sd) daily energy intake was 1588 (346) kcal and 1673 (384) kcal in women planning pregnancy and pregnant women respectively. Total carbohydrate intake was consistent with dietary guideline recommendations [180 (52) g planning pregnancy, 198 (54) g pregnant], but non-recommended sources (e.g. sugars, preserves, confectionery, biscuits, cakes) contributed to 46% of total daily carbohydrate intake. Fat consumption exceeded guideline recommendations [70 (21) g planning pregnancy, 72 (21) g pregnant]. Fibre [15.5 (5.3) g planning pregnancy, 15.4 (5.1) g pregnant], fruit and vegetable intakes [3.5 (2.2) and 3.1 (1.8) serves/day] were inadequate. Twelve women planning pregnancy (19%) and 24 pregnant women (26%) did not meet micronutrient requirements. Conclusions: The diets of pregnant women from England, Scotland and Ireland are characterized by high fat, low fibre and poor-quality carbohydrate intakes. Fruit and vegetable consumption is inadequate, with one in four women at risk of micronutrient deficiencies. Further research is needed to optimize maternal nutrition for glycaemic control and for maternal and offspring health. What's new?: Maternal glycaemic control is the main modifiable determinant of pregnancy outcomes in Type 1 diabetes. Maternal diet influences insulin dosing and glycaemia; and contributes to the overall health of the mother, yet this has not been described previously.This study demonstrates that pregnant women with Type 1 diabetes have higher than recommended intakes of fat and inadequate intakes of fibre, fruit and vegetables.One in four women are at risk of micronutrient deficiencies suggesting substantial scope for improvement.Further research is required to understand how to optimize maternal nutrition both for achieving glucose control targets and for improving overall maternal and infant health.

Database: CINAHL

Risk of Anemia With Metformin Use in Type 2 Diabetes: A MASTERMIND Study.

Author(s): Donnelly ; Dennis, John M.; Coleman, Ruth L.; Sattar, Naveed; Hattersley, Andrew T.; Holman, Rury R.; Pearson, Ewan R.

Source: Diabetes Care; Oct 2020; vol. 43 (no. 10); p. 2493-2499

Publication Date: Oct 2020

Publication Type(s): Academic Journal

PubMedID: NLM32801130

Available at Diabetes care - from EBSCO (MEDLINE Complete)

Abstract: Objective: To evaluate the association between metformin use and anemia risk in type 2 diabetes, and the time-course for this, in a randomized controlled trial (RCT) and real-world population data.Research Design and Methods: Anemia was defined as a hemoglobin measure of <11 g/dL. In the RCTs A Diabetes Outcome Progression Trial (ADOPT; n = 3,967) and UK Prospective Diabetes Study (UKPDS; n = 1,473), logistic regression was used to model anemia risk and nonlinear mixed models for change in hematological parameters. In the observational Genetics of Diabetes Audit and Research in Tayside Scotland (GoDARTS) population (n = 3,485), discrete-time failure analysis was used to model the effect of cumulative metformin exposure on anemia risk.Results: In ADOPT,

compared with sulfonylureas, the odds ratio (OR) (95% CI) for anemia was 1.93 (1.10, 3.38) for metformin and 4.18 (2.50, 7.00) for thiazolidinediones. In UKPDS, compared with diet, the OR (95% CI) was 3.40 (1.98, 5.83) for metformin, 0.96 (0.57, 1.62) for sulfonylureas, and 1.08 (0.62, 1.87) for insulin. In ADOPT, hemoglobin and hematocrit dropped after metformin initiation by 6 months, with no further decrease after 3 years. In UKPDS, hemoglobin fell by 3 years in the metformin group compared with other treatments. At years 6 and 9, hemoglobin was reduced in all treatment groups, with no greater difference seen in the metformin group. In GoDARTS, each 1 g/day of metformin use was associated with a 2% higher annual risk of anemia.Conclusions: Metformin use is associated with early risk of anemia in individuals with type 2 diabetes, a finding consistent across two RCTs and replicated in one real-world study. The mechanism for this early fall in hemoglobin is uncertain, but given the time course, is unlikely to be due to vitamin B12 deficiency alone.

Database: CINAHL

Metabolomic Signatures of Long-term Coffee Consumption and Risk of Type 2 Diabetes in Women.

Author(s): Hang ; Zeleznik, Oana A.; He, Xiaosheng; Guasch-Ferre, Marta; Jiang, Xia; Li, Jun; Liang, Liming; Eliassen, A. Heather; Clish, Clary B.; Chan, Andrew T.; Hu, Zhibin; Shen, Hongbing; Wilson, Kathryn M.; Mucci, Lorelei A.; Sun, Qi; Hu, Frank B.; Willett, Walter C.; Giovannucci, Edward L.; Song, Mingyang

Source: Diabetes Care; Oct 2020; vol. 43 (no. 10); p. 2588-2596

Publication Date: Oct 2020

Publication Type(s): Academic Journal

PubMedID: NLM32788283

Available at Diabetes care - from EBSCO (MEDLINE Complete)

Abstract: Objective: Coffee may protect against multiple chronic diseases, particularly type 2 diabetes, but the mechanisms remain unclear.Research Design and Methods: Leveraging dietary and metabolomic data in two large cohorts of women (the Nurses' Health Study [NHS] and NHSII), we identified and validated plasma metabolites associated with coffee intake in 1,595 women. We then evaluated the prospective association of coffee-related metabolites with diabetes risk and the added predictivity of these metabolites for diabetes in two nested case-control studies (n = 457 case and 1,371 control subjects).Results: Of 461 metabolites, 34 were identified and validated to be associated with total coffee intake, including 13 positive associations (primarily trigonelline, polyphenol metabolites, and caffeine metabolites) and 21 inverse associations (primarily triacylglycerols [TAGs] and diacylglycerols [DAGs]). These associations were generally consistent for caffeinated and decaffeinated coffee, except for caffeine and its metabolites that were only associated with caffeinated coffee intake. The three cholesteryl esters positively associated with coffee intake showed inverse associations with diabetes risk, whereas the 12 metabolites negatively associated with coffee (5 DAGs and 7 TAGs) showed positive associations with diabetes. Adding the 15 diabetes-associated metabolites to a classical risk factor-based prediction model increased the C-statistic from 0.79 (95% CI 0.76, 0.83) to 0.83 (95% CI 0.80, 0.86) (P < 0.001). Similar improvement was observed in the validation set.Conclusions: Coffee consumption is associated with widespread metabolic changes, among which lipid metabolites may be critical for the antidiabetes benefit of coffee. Coffee-related metabolites might help improve prediction of diabetes, but further validation studies are needed.

Database: CINAHL

Egg consumption and risk of type 2 diabetes: findings from 3 large US cohort studies of men and women and a systematic review and meta-analysis of prospective cohort studies.

Author(s): Drouin-Chartier ; Schwab, Amanda L; Chen, Siyu; Li, Yanping; Sacks, Frank M; Rosner, Bernard; Manson, JoAnn E; Willett, Walter C; Stampfer, Meir J; Hu, Frank B; Bhupathiraju, Shilpa N

Source: American Journal of Clinical Nutrition; Sep 2020; vol. 112 (no. 3); p. 619-630

Publication Date: Sep 2020

Publication Type(s): Academic Journal

Available at The American Journal of Clinical Nutrition - from EBSCO (MEDLINE Complete)

Abstract: Background Whether egg consumption is associated with the risk of type 2 diabetes (T2D) remains unsettled. Objectives We evaluated the association between egg consumption and T2D risk in 3 large US prospective cohorts, and performed a systematic review and meta-analysis of prospective cohort studies. Methods We followed 82,750 women from the Nurses' Health Study (NHS; 1980–2012), 89,636 women from the NHS II (1991–2017), and 41,412 men from the Health Professionals Follow-up Study (HPFS; 1986–2016) who were free of T2D, cardiovascular disease, and cancer at baseline. Egg consumption was assessed every 2–4 y using a validated FFQ. We used Cox proportional hazard models to estimate HRs and 95% CIs. Results During a total of 5,529,959 person-years of follow-up, we documented 20,514 incident cases of T2D in the NHS, NHS II, and HPFS. In the pooled multivariable model adjusted for updated BMI, lifestyle, and dietary confounders, a 1-egg/d increase was associated with a 14% (95% CI: 7%, 20%) higher T2D risk. In random-effects meta-analysis of 16 prospective cohort studies (589,559 participants; 41,248 incident T2D cases), for each 1 egg/d, the pooled RR of T2D was 1.07 (95% CI: 0.99, 1.15; I 2 = 69.8%). There were, however, significant differences by geographic region (P for interaction = 0.01). Each 1 egg/d was associated with higher T2D risk among US studies (RR: 1.18; 95% CI: 1.10, 1.27; I 2 = 51.3%), but not among European (RR: 0.99; 95% CI: 0.85, 1.15; I 2 = 73.5%) or Asian (RR: 0.82; 95% CI: 0.62, 1.09; I 2 = 59.1%) studies. Conclusions Results from the updated meta-analysis show no overall association between moderate egg consumption and risk of T2D. Whether the heterogeneity of the associations among US, European, and Asian cohorts reflects differences in egg consumption habits warrants further investigation. This systematic review was registered at www.crd.york.ac.uk/prospero as CRD42019127860.

Database: CINAHL

Nutrition in older adults living with diabetes.

Author(s): Flynn ; Dhatariya, Ketan

Source: Practical Diabetes; Jul 2020; vol. 37 (no. 4); p. 138-142

Publication Date: Jul 2020

Publication Type(s): Academic Journal

Available at Practical Diabetes - from Wiley Online Library

Abstract: People in the UK are living longer, consequently an increasing number of adults are living with type 1 and type 2 diabetes to an older age. Diabetes is a complex condition to manage, requiring consideration of several different dietary recommendations. In addition, there are many nutritional issues and social barriers associated with older age, which may make following these recommendations more difficult. Older adults represent a diverse age group with varying needs. In order to give the most appropriate advice, clinicians need to consider the functional status of the older adult. Some older adults will continue to manage their diabetes and nutrition in the same manner as their younger peers. Others may have increased needs due to disease or social circumstance, which may affect how they should be advised to manage their diabetes. Both obesity and malnutrition are prevalent in older adults. They impact both nutritional status and diabetes management and are important to consider. Sarcopenia, the loss of muscle mass, increases frailty in older adults which may exacerbate hypoglycaemic episodes. Nutrition support and tailored dietary interventions by a registered dietitian to help manage these conditions are essential. This, in addition to consideration of the many social, financial and physical barriers to nutrition, is key management of diabetes in older adults. This review aims to explore the complex challenges in nutrition for older adults with diabetes. Copyright © 2020 John Wiley & Sons.

Database: CINAHL

Exploring the provision of diabetes nutrition education by practice nurses in primary care settings.

Author(s): Gianfrancesco ; Johnson, M.

Source: Journal of Human Nutrition & Dietetics; Apr 2020; vol. 33 (no. 2); p. 263-273

Publication Date: Apr 2020

Publication Type(s): Academic Journal

Available at Journal of human nutrition and dietetics : the official journal of the British Dietetic Association - from Wiley Online Library

Abstract: Background: High-quality nutrition education is recommended as an essential component of diabetes care. In the UK, there has been a gradual shift of inter-professional boundaries with respect to providing nutritional care for people with type 2 diabetes. Only a minority now regularly receive advice from a dietitian. Instead, increased demands for nutrition education are being absorbed by practice nurses. The present study seeks to explore this situation through the views of practice nurses on the services that they provide and the issues they face. Methods: A qualitative approach using semi-structured interviews was employed. Practice nurses were recruited using purposive sampling, and nine were interviewed. Data were analysed using the Framework Method. The Theoretical Domains Framework from the COM-B ('capability', 'opportunity', 'motivation' and 'behaviour') model of behaviour change, as increasingly employed to explore the behaviour of healthcare professionals, was used to further frame the findings. Results: Practice nurses reported that ongoing diabetes nutrition education only took place at annual review appointments and was limited to 5–10 min. They described how they are expected to take on a more advanced role in diabetes nutrition education than they can provide and are becoming increasingly isolated in this role as a result of a lack of time, practical and informational support, and training standards and provision. Conclusions: A range of service improvements led by dietitians, which focus on strengthening the working environment and enhancing professional support available for practice nurses who provide diabetes nutrition education, could improve quality of care and health outcomes in people with diabetes within current time restraints.

Database: CINAHL

Dietary Intervention in Pregnant Women with Gestational Diabetes; Protocol for the DiGest Randomised Controlled Trial.

Author(s): Kusinski ; Murphy, Helen R.; De Lucia Rolfe, Emanuella; Rennie, Kirsten L.; Oude Griep, Linda M.; Hughes, Deborah; Taylor, Roy; Meek, Claire L.

Source: Nutrients; Apr 2020; vol. 12 (no. 4); p. 1165-1165

Publication Date: Apr 2020

Publication Type(s): Academic Journal

Available at Nutrients - from Europe PubMed Central - Open Access

Available at Nutrients - from ProQuest (Health Research Premium) - NHS Version

Abstract: Gestational diabetes mellitus (GDM) annually affects 35,000 pregnancies in the United Kingdom, causing suboptimal health outcomes to the mother and child. Obesity and excessive gestational weight gain are risk factors for GDM. The Institute of Medicine recommends weight targets for women that are overweight and obese, however, there are no clear guidelines for women with GDM. Observational data suggest that modest weight loss (0.6–2 kg) after 28 weeks may reduce risk of caesarean section, large-for-gestational-age (LGA), and maternal postnatal glycaemia. This protocol for a multicentre randomised double-blind controlled trial aims to identify if a fully controlled reduced energy diet in GDM pregnancy improves infant birthweight and reduces maternal weight gain (primary outcomes). A total of 500 women with GDM (National Institute of Health and Care Excellence (NICE) 2015 criteria) and body mass index (BMI) ≥25 kg/m2 will be randomised to receive a standard (2000 kcal/day) or reduced energy (1200 kcal/day) diet box containing all meals and snacks from 28 weeks to delivery. Women and caregivers will be blinded to the allocations. Food diaries, continuous glucose monitoring, and anthropometry will measure dietary compliance, glucose levels, and weight changes. Women will receive standard antenatal GDM management (insulin/metformin) according to NICE guidelines. The secondary endpoints include caesarean section rates, LGA, and maternal postnatal glucose concentrations.

Database: CINAHL

Association of plasma biomarkers of fruit and vegetable intake with incident type 2 diabetes: EPIC-InterAct case-cohort study in eight European countries.

Author(s): Zheng, Ju-Sheng; Sharp, Stephen J; Imamura, Fumiaki; Chowdhury, Rajiv; Gundersen, Thomas E; Steur, Marinka; Sluijs, Ivonne; van der Schouw, Yvonne T; Agudo, Antonio; Aune, Dagfinn; Barricarte, Aurelio; Boeing, Heiner; Chirlaque, María-Dolores; Dorronsoro, Miren; Freisling, Heinz; El-Fatouhi, Douae; Franks, Paul W; Fagherazzi, Guy; Grioni, Sara; Gunter, Marc J; Kyrø, Cecilie; Katzke, Verena; Kühn, Tilman; Khaw, Kay-Tee; Laouali, Nasser; Masala, Giovanna; Nilsson, Peter M; Overvad, Kim; Panico, Salvatore; Papier, Keren; Quirós, J Ramón; Rolandsson, Olov; Redondo-Sánchez, Daniel; Ricceri, Fulvio; Schulze, Matthias B; Spijkerman, Annemieke M W; Tjønneland, Anne; Tong, Tammy Y N; Tumino, Rosario; Weiderpass, Elisabete; Danesh, John; Butterworth, Adam S; Riboli, Elio; Forouhi, Nita G; Wareham, Nicholas J

Source: BMJ (Clinical research ed.); Jul 2020; vol. 370 ; p. m2194

Publication Date: Jul 2020

Publication Type(s): Research Support, Non-u.s. Gov't Multicenter Study Journal Article

PubMedID: 32641421

Available at BMJ (Clinical research ed.) - from BMJ Journals

Abstract:OBJECTIVETo investigate the association of plasma vitamin C and carotenoids, as indicators of fruit and vegetable intake, with the risk of type 2 diabetes.DESIGNProspective case-cohort study.SETTINGPopulations from eight European countries.PARTICIPANTS9754 participants with incident type 2 diabetes, and a subcohort of 13 662 individuals from the European Prospective Investigation into Cancer and Nutrition (EPIC) cohort of 340 234 participants: EPIC-InterAct case-cohort study.MAIN OUTCOME MEASUREIncident type 2 diabetes.RESULTSIn a multivariable adjusted model, higher plasma vitamin C was associated with a lower risk of developing type 2 diabetes (hazard ratio per standard deviation 0.82, 95% confidence interval 0.76 to 0.89). A similar inverse association was shown for total carotenoids (hazard ratio per standard deviation 0.75, 0.68 to 0.82). A composite biomarker score (split into five equal groups), comprising vitamin C and individual carotenoids, was inversely associated with type 2 diabetes with hazard ratios 0.77, 0.66, 0.59, and 0.50 for groups 2-5 compared with group 1 (the lowest group). Self-reported median fruit and vegetable intake was 274 g/day, 396 g/day, and 508 g/day for participants in categories defined by groups 1, 3, and 5 of the composite biomarker score, respectively. One standard deviation difference in the composite biomarker score, equivalent to a 66 (95% confidence interval 61 to 71) g/day difference in total fruit and vegetable intake, was associated with a hazard ratio of 0.75 (0.67 to 0.83). This would be equivalent to an absolute risk reduction of 0.95 per 1000 person years of follow up if achieved across an entire population with the characteristics of the eight European countries included in this analysis.CONCLUSIONSThese findings indicate an inverse association between plasma vitamin C, carotenoids, and their composite biomarker score, and incident type 2 diabetes in different European countries. These biomarkers are objective indicators of fruit and vegetable consumption, and suggest that diets rich in even modestly higher fruit and vegetable consumption could help to prevent development of type 2 diabetes.

Database: Medline

Intake of whole grain foods and risk of type 2 diabetes: results from three prospective cohort studies.

Author(s): Hu, Yang; Ding, Ming; Sampson, Laura; Willett, Walter C; Manson, JoAnn E; Wang, Molin; Rosner, Bernard; Hu, Frank B; Sun, Qi

Source: BMJ (Clinical research ed.); Jul 2020; vol. 370 ; p. m2206

Publication Date: Jul 2020

Publication Type(s): Journal Article

PubMedID: 32641435

Available at BMJ (Clinical research ed.) - from BMJ Journals

Abstract:OBJECTIVETo examine the associations between the intake of total and individual whole grain foods and the risk of type 2 diabetes.DESIGNProspective cohort studies.SETTINGNurses' Health Study (1984-2014), Nurses' Health Study II (1991-2017), and Health Professionals Follow-Up Study (1986-2016), United States.PARTICIPANTS158 259 women and 36 525 men who did not have type 2 diabetes, cardiovascular disease, or cancer at baseline.MAIN OUTCOME MEASURESSelf-reports of incident type 2 diabetes by participants identified

through follow-up questionnaires and confirmed by a validated supplementary questionnaire.RESULTSDuring 4 618 796 person years of follow-up, 18 629 participants with type 2 diabetes were identified. Total whole grain consumption was categorized into five equal groups of servings a day for the three cohorts. After adjusting for lifestyle and dietary risk factors for diabetes, participants in the highest category for total whole grain consumption had a 29% (95% confidence interval 26% to 33%) lower rate of type 2 diabetes compared with those in the lowest category. For individual whole grain foods, pooled hazard ratios (95% confidence intervals) for type 2 diabetes in participants consuming one or more servings a day compared with those consuming less than one serving a month were 0.81 (0.77 to 0.86) for whole grain cold breakfast cereal, 0.79 (0.75 to 0.83) for dark bread, and 1.08 (1.00 to 1.17) for popcorn. For other individual whole grains with lower average intake levels, comparing consumption of two or more servings a week with less than one serving a month, the pooled hazard ratios (95% confidence intervals) were 0.79 (0.75 to 0.83) for oatmeal, 0.88 (0.82 to 0.94) for brown rice, 0.85 (0.80 to 0.90) for added bran, and 0.88 (0.78 to 0.98) for wheat germ. Spline regression showed a non-linear dose-response association between total whole grain intake and the risk of type 2 diabetes where the rate reduction slightly plateaued at more than two servings a day (P<0.001 for curvature). For whole grain cold breakfast cereal and dark bread, the rate reduction plateaued at about 0.5 servings a day. For consumption of popcorn, a J shaped association was found where the rate of type 2 diabetes was not significantly raised until consumption exceeded about one serving a day. The association between higher total whole grain intake and lower risk of type 2 diabetes was stronger in individuals who were lean than in those who were overweight or obese (P=0.003 for interaction), and the associations did not vary significantly across levels of physical activity, family history of diabetes, or smoking status.CONCLUSIONHigher consumption of total whole grains and several commonly eaten whole grain foods, including whole grain breakfast cereal, oatmeal, dark bread, brown rice, added bran, and wheat germ, was significantly associated with a lower risk of type 2 diabetes. These findings provide further support for the current recommendations of increasing whole grain consumption as part of a healthy diet for the prevention of type 2 diabetes.

Database: Medline

Limited Evidence for the Health Effects and Safety of Intermittent Fasting Among Patients With Type 2 Diabetes.

Author(s): Horne, Benjamin D; Grajower, Martin M; Anderson, Jeffrey L

Source: JAMA; Jul 2020; vol. 324 (no. 4); p. 341-342

Publication Date: Jul 2020

Publication Type(s): Journal Article

PubMedID: 32614382

Available at JAMA - from EBSCO (MEDLINE Complete)

Database: Medline

Association of British Clinical Diabetologists (ABCD) and Diabetes UK joint position statement and recommendations on the use of sodium-glucose cotransporter inhibitors with insulin for treatment of type 1 diabetes (Updated October 2020).

Author(s): Dashora, Umesh; Patel, Dipesh C; Gregory, Robert; Winocour, Peter; Dhatariya, Ketan; Rowles, Susannah; Macklin, Andrew; Rayman, Gerry; Nagi, Dinesh; ABCD executive committee, supported by Diabetes UK

Source: Diabetic medicine : a journal of the British Diabetic Association; Nov 2020 ; p. e14458

Publication Date: Nov 2020

Publication Type(s): Journal Article

PubMedID: 33179277

Available at Diabetic medicine : a journal of the British Diabetic Association - from Wiley Online Library

Abstract: Dapagliflozin (SGLT-2 inhibitor) and sotagliflozin (SGLT1/2 inhibitor) are two of the drugs of SGLT inhibitor class which have been recommended by the National Institute for Health and Care Excellence (NICE) in people with type 1 diabetes with BMI ≥27 kg/m2 . Dapagliflozin is licensed in the UK for use in the NHS while sotagliflozin may be

available in future. These and possibly other SGLT inhibitors may be increasingly used in people with type 1 diabetes as new licences are obtained. These drugs have the potential to improve glycaemic control in people with type 1 diabetes with the added benefit of weight loss, better control of blood pressure and more time in optimal glucose range. However, SGLT inhibitors are associated with a higher incidence of diabetic ketoacidosis without significant hyperglycaemia. The present ABCD/Diabetes UK joint updated position statement is to guide people with type 1 diabetes and clinicians using these drugs help mitigate this risk and other potential complications. Particularly, caution needs to be exercised in people who are at risk of diabetic ketoacidosis due to low calorie diets, illnesses, injuries, starvation, excessive exercise, excessive alcohol consumption and reduced insulin administration among other precipitating factors for diabetic ketoacidosis.

Database: Medline

A pragmatic and scalable strategy using mobile technology to promote sustained lifestyle changes to prevent type 2 diabetes in India and the UK: a randomised controlled trial.

Author(s): Nanditha, Arun; Thomson, Hazel; Susairaj, Priscilla; Srivanichakorn, Weerachai; Oliver, Nick; Godsland, Ian F; Majeed, Azeem; Darzi, Ara; Satheesh, Krishnamoorthy; Simon, Mary; Raghavan, Arun; Vinitha, Ramachandran; Snehalatha, Chamukuttan; Westgate, Kate; Brage, Soren; Sharp, Stephen J; Wareham, Nicholas J; Johnston, Desmond G; Ramachandran, Ambady

Source: Diabetologia; Mar 2020; vol. 63 (no. 3); p. 486-496

Publication Date: Mar 2020

Publication Type(s): Research Support, Non-u.s. Gov't Journal Article

PubMedID: 31919539

Available at Diabetologia - from Unpaywall

Abstract:AIMS/HYPOTHESISThis randomised controlled trial was performed in India and the UK in people with prediabetes to study whether mobile phone short message service (SMS) text messages can be used to motivate and educate people to follow lifestyle modifications, to prevent type 2 diabetes.METHODSThe study was performed in people with prediabetes (n = 2062; control: n = 1031; intervention: n = 1031) defined by HbA1c ≥42 and ≤47 mmol/mol (≥6.0% and ≤6.4%). Participants were recruited from public and private sector organisations in India (men and women aged 35-55 years) and by the National Health Service (NHS) Health Checks programme in the UK (aged 40-74 years without pre-existing diabetes, cardiovascular disease or kidney disease). Allocation to the study groups was performed using a computer-generated sequence (1:1) in India and by stratified randomisation in permuted blocks in the UK. Investigators in both countries remained blinded throughout the study period. All participants received advice on a healthy lifestyle at baseline. The intervention group in addition received supportive text messages using mobile phone SMS messages 2-3 times per week. Participants were assessed at baseline and at 6, 12 and 24 months. The primary outcome was conversion to type 2 diabetes and secondary outcomes included anthropometry, biochemistry, dietary and physical activity changes, blood pressure and quality of life.RESULTSAt the 2 year follow-up (n = 2062; control: n = 1031; intervention: n = 1031), in the intention-to-treat population the HR for development of type 2 diabetes calculated using a discrete-time proportional hazards model was 0.89 (95% CI 0.74, 1.07; p = 0.22). There were no significant differences in the secondary outcomes.CONCLUSIONS/INTERPRETATIONThis trial in two countries with varied ethnic and cultural backgrounds showed no significant reduction in the progression to diabetes in 2 years by lifestyle modification using SMS messaging.TRIAL REGISTRATIONThe primary study was registered on www.ClinicalTrials.gov (India, NCT01570946; UK, NCT01795833).FUNDINGThe study was funded jointly by the Indian Council for Medical Research and the UK Medical Research Council.

Database: Medline

Long-term use of antibiotics and risk of type 2 diabetes in women: a prospective cohort study.

Author(s): Yuan, Jinqiu; Hu, Yanhong Jessika; Zheng, Jie; Kim, Jean Hee; Sumerlin, Tim; Chen, Youpeng; He, Yulong; Zhang, Changhua; Tang, Jinling; Pan, Yihang; Moore, Michael

Source: International journal of epidemiology; Sep 2020

Publication Date: Sep 2020

Publication Type(s): Journal Article

PubMedID: 32893302

Abstract:BACKGROUNDAccumulating evidence suggested that long-term antibiotic use may alter the gut microbiome, which has, in turn, been linked to type 2 diabetes. We undertook this study to investigate whether antibiotic use was associated with increased risk of type 2 diabetes.METHODSThis prospective cohort study included women free of diabetes, cardiovascular disease and cancer in the Nurses' Health Study (NHS 2008-2014) and NHS II (2009-2017). We evaluated the overall duration of antibiotics use in the past 4 years and subsequent diabetes risk with Cox proportional-hazards regression adjusting for demography, family history of diabetes and lifestyle factors.RESULTSPooled analyses of NHS and NHS II (2837 cases, 703 934 person-years) revealed that a longer duration of antibiotic use in the past 4 years was associated with higher risk of diabetes [Trend-coefficient = 0.09, 95% confidence interval (CI) 0.04 to 0.13]. Participants who received antibiotics treatment for a medium duration of 15 days to 2 months [hazard ratio (HR) 1.23, 95% CI 1.10 to 1.39] or long duration of >2 months (HR 1.20, 95% CI 1.02 to 1.38) had higher risk of type 2 diabetes as compared with non-users. Subgroup analyses suggested that the associations were unlikely to be modified by age, family history of diabetes, obesity, smoking, alcohol drinking, physical activity and overall diet quality.CONCLUSIONSA longer duration of antibiotic use in recent years was associated with increased risk of type 2 diabetes in women. Physicians should exercise caution when prescribing antibiotics, particularly for long-term use.

Database: Medline

The role of overweight in the association between the Mediterranean diet and the risk of type 2 diabetes mellitus: a mediation analysis among 21 585 UK biobank participants.

Author(s): André, Perrine; Proctor, Gordon; Driollet, Bénédicte; Garcia-Esquinas, Esther; Lopez-Garcia, Esther; Gomez-Cabrero, David; Neyraud, Eric; Rodriguez-Artalejo, Fernando; Morzel, Martine; Féart, Catherine

Source: International journal of epidemiology; Aug 2020

Publication Date: Aug 2020

Publication Type(s): Journal Article

PubMedID: 32754745

Available at International journal of epidemiology - from Unpaywall

Abstract:BACKGROUNDThere is growing evidence that the Mediterranean (Medi) diet may lower the risk of type 2 diabetes mellitus (T2DM). Whether this association is due to the Medi diet by itself or is mediated by a diet - associated lower rate of overweight is uncertain. Our aim was to disentangle these relationships among UK adults.METHODSBased on 21 585 participants from the UK Biobank cohort, the adherence to the Medi diet (high fruits, vegetables, legumes, cereals, fish, olive oil; low meat, dairy products; and intermediate alcohol intakes) was assessed (range 0-18). Data on diabetes were self-reported, and overweight was defined as a body mass index (BMI) ≥ 25 kg/m². A mediation analysis was implemented to disentangle the role of overweight in the Medi diet-T2DM relationship.RESULTSThe average baseline Medi diet score was 8.8 [standard deviation (SD) 2.6]. During a mean follow-up of 6.1 years, 473 individuals developed T2DM. A higher adherence to a Medi diet (+1 point) was associated with 14% decreased risk of T2DM [hazard ratio (HR): 0.86, 95% confidence interval (CI): 0.82-0.90]. This association split into an indirect effect of 10%, mediated by lower odds of overweight (HR: 0.90, 95% CI: 0.87-0.92), and a direct effect of the Medi diet of 4% (HR: 0.96, 95% CI: 0.93-0.99), regardless of the effect mediated by overweight.CONCLUSIONSConsidered as a single mediator, reduced overweight mainly contributes to the association between greater Medi diet adherence and lower risk of T2DM on this British subsample. However, the direct effect of the diet on the risk of T2DM, even weaker, should not be overlooked.

Database: Medline

Primary care experience and remission of Type 2 diabetes: a population-based prospective cohort study.

Author(s): Dambha-Miller, Hajira; Day, Alexander; Kinmonth, Ann Louise; Griffin, Simon J

Source: Family practice; Sep 2020

Publication Date: Sep 2020

Publication Type(s): Journal Article

PubMedID: 32918549

Available at Family practice - from Unpaywall

Abstract:BACKGROUNDRemission of Type 2 diabetes is achievable through dietary change and weight loss. In the UK, lifestyle advice and referrals to weight loss programmes predominantly occur in primary care where most Type 2 diabetes is managed.OBJECTIVETo quantify the association between primary care experience and remission of Type 2 diabetes over 5-year follow-up.METHODSA prospective cohort study of adults with Type 2 diabetes registered to 49 general practices in the East of England, UK. Participants were followed-up for 5 years and completed the Consultation and Relational Empathy measure (CARE) on diabetes-specific primary care experiences over the first year after diagnosis of the disease. Remission at 5-year follow-up was measured with HbA1c levels. Univariable and multivariable logistic regression models were constructed to quantify the association between primary care experience and remission of diabetes.RESULTSOf 867 participants, 30% (257) achieved remission of Type 2 diabetes at 5 years. Six hundred twenty-eight had complete data at follow-up and were included in the analysis. Participants who reported higher CARE scores in the 12 months following diagnosis were more likely to achieve remission at 5 years in multivariable models; odds ratio = 1.03 (95% confidence interval = 1.01-1.05, P = 0.01).CONCLUSIONPrimary care practitioners should pay greater attention to delivering optimal patient experiences alongside clinical management of the disease as this may contribute towards remission of Type 2 diabetes. Further work is needed to examine which aspects of the primary care experience might be optimized and how these could be operationalized.

Database: Medline

Effects of the Ketogenic Diet on Glycemic Control in Diabetic Patients: Meta-Analysis of Clinical Trials.

Author(s): Alarim, Raghad A; Alasmre, Faris A; Alotaibi, Hammam A; Alshehri, Mohammed A; Hussain, Sara A

Source: Cureus; Oct 2020; vol. 12 (no. 10); p. e10796

Publication Date: Oct 2020

Publication Type(s): Journal Article

PubMedID: 33163300

Available at Cureus - from Europe PubMed Central - Open Access

Available at Cureus - from ProQuest (Health Research Premium) - NHS Version

Abstract: Introduction The ketogenic diet is a diet that relies on reducing carbohydrate intake to a minimum while increasing fat intake. This induces a state of ketosis where it is hypothesized to favor fat metabolism for energy instead of carbohydrates. The diet is used to treat pediatric patients with seizures to control their symptoms. Today, it is used by many to help in weight loss. Extensive research is being conducted on the benefits of the diet, as it gains popularity among patients with diabetes and obesity, to evaluate its effects on glycemic control. Methods This review looks at the published literature and summarizes the interventional trials that use the ketogenic diet for glycemic control. Emphasis was on pooling the results of selected variables such as weight, glycemic control, and lipid profile. The meta-analysis was conducted by a trained statistician using the Cochrane software review manager (Revman version 5.4; Cochrane, London, UK). Results were reviewed by an independent reviewer adhering to the Cochrane Collaboration's guidelines. Results The findings of this review show a significant effect of the ketogenic diet as compared to controls in terms of weight reduction, glycemic control, and improved lipid profile. A noticeable improvement was seen in glycated hemoglobin (HbA1c) and in high-density lipoprotein (HDL), favoring the ketogenic diet as compared to control. Conclusion This review concludes that the ketogenic diet is superior to controls in terms of glycemic control and lipid profile improvements, and the results are significant enough to recommend it as an adjunctive treatment for type two diabetes.

Database: Medline

Legume and soy intake and risk of type 2 diabetes: a systematic review and meta-analysis of prospective cohort studies.

Author(s): Tang, Jun; Wan, Yi; Zhao, Minjie; Zhong, Hao; Zheng, Ju-Sheng; Feng, Fengqin

Source: The American journal of clinical nutrition; Mar 2020; vol. 111 (no. 3); p. 677-688

Publication Date: Mar 2020

Publication Type(s): Research Support, Non-u.s. Gov't Meta-analysis Journal Article Systematic Review

PubMedID: 31915830

Available at The American journal of clinical nutrition - from EBSCO (MEDLINE Complete)

Abstract:BACKGROUNDPrevious findings on the associations of legume and soy intake with the risk of type 2 diabetes are conflicting.OBJECTIVEWe aimed to summarize the longitudinal associations between legume and soy intake and risk of type 2 diabetes.METHODSWe searched for relevant prospective cohort studies in PubMed, EMBASE, and Ovid up to August 2019. Study-specific, multivariable-adjusted RRs and 95% CIs were pooled by random-effects models.RESULTSWe identified 15 unique cohorts including 565,810 individuals and 32,093 incident cases. The summary RRs (95% CIs) of incident type 2 diabetes were 0.95 (0.79, 1.14; NS) for total legumes, 0.83 (0.68, 1.01; NS) for total soy, 0.89 (0.71, 1.11; NS) for soy milk, 0.92 (0.84, 0.99) for tofu, 0.84 (0.75, 0.95) for soy protein, and 0.88 (0.81, 0.96) for soy isoflavones, respectively. High heterogeneity was found for total legumes ($I2 = 84.8\%$), total soy ($I2 = 90.8\%$), and soy milk ($I2 = 91.7\%$). Potential sources of heterogeneity were not evident for total legumes or soy milk, whereas for total soy, geographic location (Asia, United States; $P = 0.04$) and study quality (high, moderate, or low; $P = 0.02$) significantly predicted heterogeneity. In dose-response analysis, significant linear inverse associations were observed for tofu, soy protein, and soy isoflavones (all $P < 0.05$). Overall quality of evidence was rated as moderate for total legumes and low for total soy and soy subtypes.CONCLUSIONSDietary intakes of tofu, soy protein, and soy isoflavones, but not total legumes or total soy, are inversely associated with incident type 2 diabetes. Our findings support recommendations to increase intakes of certain soy products for the prevention of type 2 diabetes. However, the overall quality of evidence was low and more high-quality evidence from prospective studies is needed. This trial was registered as PROSPERO CRD42019126403 (https://www.crd.york.ac.uk/PROSPERO).

Database: Medline

GERIATRICS

Sweetened beverages and risk of frailty among older women in the Nurses' Health Study: A cohort study.

Author(s): Struijk ; Rodríguez-Artalejo, Fernando; Fung, Teresa T.; Willett, Walter C.; Hu, Frank B.; Lopez-Garcia, Esther

Source: PLoS Medicine; Dec 2020; vol. 17 (no. 12); p. 1-18

Publication Date: Dec 2020

Publication Type(s): Academic Journal

PubMedID: NLM33290392

Available at PLoS Medicine - from Europe PubMed Central - Open Access

Available at PLoS Medicine - from Public Library of Science (PLoS)

Available at PLoS Medicine - from EBSCO (MEDLINE Complete)

Available at PLoS Medicine - from ProQuest (Health Research Premium) - NHS Version

Abstract: Background: Consumption of sugar-sweetened beverages (SSBs) has been consistently associated with a higher risk of obesity, type 2 diabetes, cardiovascular disease, and premature mortality, whereas evidence for artificially sweetened beverages (ASBs) and fruit juices on health is less solid. The aim of this study was to evaluate the consumption of SSBs, ASBs, and fruit juices in association with frailty risk among older women.Methods and Findings: We analyzed data from 71,935 women aged ≥60 (average baseline age was 63) participating in the Nurses'

Health Study (NHS), an ongoing cohort study initiated in 1976 among female registered nurses in the United States. Consumption of beverages was derived from 6 repeated food frequency questionnaires (FFQs) administered between 1990 and 2010. Frailty was defined as having at least 3 of the following 5 criteria from the FRAIL scale: fatigue, poor strength, reduced aerobic capacity, having ≥5 chronic illnesses, and weight loss ≥5%. The occurrence of frailty was assessed every 4 years from 1992 to 2014. During 22 years of follow-up, we identified 11,559 incident cases of frailty. Consumption of SSBs was associated with higher risk of frailty after adjustment for diet quality, body mass index (BMI), smoking status, and medication use, specifically, the relative risks (RRs) and 95% confidence interval (95% CI) for ≥2 serving/day versus no SSB consumption was 1.32 (1.10, 1.57); p-value <0.001. ASBs were also associated with frailty [RR ≥2 serving/day versus no consumption: 1.28 (1.17, 1.39); p-value <0.001]. Orange juice was associated with lower risk of frailty [RR ≥1 serving/day versus no consumption: 0.82 (0.76, 0.87); p-value <0.001], whereas other juices were associated with a slightly higher risk [RR ≥1 serving/day versus no consumption: 1.15 (1.03, 1.28); p-value <0.001]. A limitation of this study is that, due to self-reporting of diet and frailty, certain misclassification bias cannot be ruled out; also, some residual confounding may persist.Conclusions: In this study, we observed that consumption of SSBs and ASBs was associated with a higher risk of frailty. However, orange juice intake showed an inverse association with frailty. These results need to be confirmed in further studies using other frailty definitions.

Database: CINAHL

Dairy consumption and risk of falls in 2 European cohorts of older adults.

Author(s): Machado-Fragua ; Struijk, Ellen A.; Caballero, Francisco Félix; Ortolá, Rosario; Lana, Alberto; Banegas, José R.; Rodríguez-Artalejo, Fernando; Lopez-Garcia, Esther

Source: Clinical Nutrition; Oct 2020; vol. 39 (no. 10); p. 3140-3146

Publication Date: Oct 2020

Publication Type(s): Academic Journal

Abstract: Some previous evidence have linked dairy products with greater muscle mass, bone mineral density and lower risk of osteoporosis. However, there is also evidence of a detrimental effect of milk on the risk of hip fracture. The aim of this study was to assess the prospective association between dairy consumption and risk of falls in older adults. We used data from 2 cohorts of community-dwellers aged ≥60y: the Seniors-ENRICA cohort with 2981 individuals, and the UK Biobank cohort with 8927 participants. In the Seniors-ENRICA, dairy consumption was assessed with a validated diet history in 2008–10, and falls were ascertained up to 2015. In the UK Biobank study, dairy consumption was obtained with 3–5 multiple-pass 24-h food records in 2006–10, and falls were assessed up to 2016. A total of 801 individuals in the Seniors-ENRICA and 201 in the UK Biobank experienced ≥1 fall. After adjustment for potential confounders, dairy products were not associated with risk of falls in the Seniors-ENRICA [hazard ratio (95% confidence interval) per 1-serving increment in total dairy consumption: 1.02 (0.93–1.11), milk: 0.93 (0.85–1.01), yogurt: 1.05 (0.96–1.15), and cheese: 0.96 (0.88–1.05)]. Corresponding figures in the UK Biobank were: total dairy: 1.19 (1.00–1.41), milk: 1.53 (1.13–2.08), yogurt: 1.10 (0.90–1.31), and cheese: 1.02 (0.87–1.22). These results suggest a null association between habitual dairy consumption and the risk of falling in older adults. Whether milk consumption may increase the risk of falls, as observed in the UK Biobank cohort, merits further study.

Database: CINAHL

Healthy behaviors at age 50 years and frailty at older ages in a 20-year follow-up of the UK Whitehall II cohort: A longitudinal study.

Author(s): Gil-Salcedo ; Dugravot, Aline; Fayosse, Aurore; Dumurgier, Julien; Bouillon, Kim; Schnitzler, Alexis; Kivimäki, Mika; Singh-Manoux, Archana; Sabia, Séverine

Source: PLoS Medicine; Jul 2020; vol. 17 (no. 7); p. 1-19

Publication Date: Jul 2020

Publication Type(s): Academic Journal

PubMedID: NLM32628661

Available at PLoS medicine - from Europe PubMed Central - Open Access

Available at PLoS medicine - from Public Library of Science (PLoS)

Available at PLoS medicine - from EBSCO (MEDLINE Complete)

Available at PLoS medicine - from ProQuest (Health Research Premium) - NHS Version

Abstract: Background: Frailty is associated with increased risk of various health conditions, disability, and death. Health behaviors are thought to be a potential target for frailty prevention, but the evidence from previous studies is based on older populations with short follow-ups, making results susceptible to reverse causation bias. We examined the associations of healthy behaviors at age 50, singly and in combination, as well as 10-year change in the number of healthy behaviors over midlife with future risk of frailty.Methods and Findings: In this prospective cohort study of 6,357 (29.2% women; 91.7% white) participants from the British Whitehall II cohort, healthy behaviors-nonsmoking, moderate alcohol consumption, ≥2.5 hours per week of moderate to vigorous physical activity, and consumption of fruits or vegetables at least twice a day-were measured at age 50, and change in behaviors was measured between 1985 (mean age = 44.4) and 1997 (mean age = 54.8). Fried's frailty phenotype was assessed in clinical examinations in 2002, 2007, 2012, and 2015. Participants were classified as frail if they had ≥3 of the following criteria: slow walking speed, low grip strength, weight loss, exhaustion, and low physical activity. An illness-death model accounting for both competing risk of death and interval censoring was used to examine the association between healthy behaviors and risk of frailty. Over an average follow-up of 20.4 years (standard deviation, 5.9), 445 participants developed frailty. Each healthy behavior at age 50 was associated with lower risk of incident frailty: hazard ratio (HR) after adjustment for other health behaviors and baseline characteristics 0.56 (95% confidence interval [CI] 0.44-0.71; p < 0.001) in nonsmokers, 0.73 (95% CI 0.61-0.88; p < 0.001) for moderate alcohol consumption, 0.66 (95% CI 0.54-0.81; p < 0.001) for ≥2.5 hours of physical activity per week, and 0.76 (95% CI 0.59-0.98; p = 0.03) for consumption of fruits or vegetables at least twice a day. A greater number of healthy behaviors was associated with reduced risk of frailty, with the HR for each additional healthy behavior being 0.69 (95% CI 0.62-0.76; p < 0.001) and the HR for having all versus no healthy behaviors at age 50 being 0.28 (95% CI 0.15-0.52; p < 0.001). Among participants with no or 1 healthy behavior in 1985, those who increased the number of healthy behaviors by 1997 were at a lower risk of frailty (mean follow-up = 16 years) compared with those with no such increase: the HR was 0.64 (95% CI 0.44-0.94; p = 0.02) for change to 2 healthy behaviors and 0.57 (95% CI 0.38-0.87; p < 0.001) for change to 3-4 healthy behaviors in 1997. The primary limitation of this study is potential selection bias during the follow-up due to missing data on frailty components.Conclusions: Our findings suggest that healthy behaviors at age 50, as well as improvements in behaviors over midlife, are associated with a lower risk of frailty later in life. Their benefit accumulates so that risk of frailty decreases with greater number of healthy behaviors. These results suggest that healthy behaviors in midlife are a good target for frailty prevention.

Database: CINAHL

Malnutrition in community-dwelling older people: lessons learnt using a new procedure.

Author(s): Murphy ; Bracher, Michael; Tkacz, Daria; Aburrow, Annemarie; Allmark, Grace; Steward, Kathy; Wallis, Kathy; May, Carl

Source: British Journal of Community Nursing; Apr 2020; vol. 25 (no. 4); p. 193-195

Publication Date: Apr 2020

Publication Type(s): Academic Journal

Available at British journal of community nursing - from Unpaywall

Abstract: This article reports the implementation of a new procedure for screening and treatment of malnutrition in a community NHS trust in England. The barriers and facilitators to implementation were assessed with staff from Integrated Community and Older People's Mental Health teams. Data from interviews and surveys were collected at baseline, 2 months after initial training and 16 months after initial training as well as following deployment of a nutrition lead to embed new developments for nutritional care. The adoption of the procedure made screening and treatment of malnutrition simpler and more likely to be actioned. The benefit of a nutrition lead and local nutrition champions to support and empower staff (avoiding reliance on training alone) was shown to drive change for

nutritional care across the community. Prioritisation and commitment of leadership at the organisational level are needed to embed and sustain malnutrition screening and treatment in routine practice.

Database: CINAHL

Comparison of the eating behaviour and dietary consumption in older adults with and without visual impairment.

Author(s): Jones ; Bartlett, Hannah Elizabeth

Source: British Journal of Nutrition; Mar 2020; vol. 123 (no. 6); p. 712-720

Publication Date: Mar 2020

Publication Type(s): Academic Journal

Available at The British journal of nutrition - from Unpaywall

Abstract: Globally, a high prevalence of obesity and undernutrition has been reported in people with visual impairment (VI) who have reported multi-factorial obstacles that prevent them from achieving a healthy diet, such as having restricted shopping and cooking abilities. The present study is the first to investigate the relationship between VI and dietary consumption using a representative sample size, standardised methods to categorise VI and a detailed analysis of dietary consumption. Ninety-six participants with VI and an age-matched control group of fifty participants were recruited from across the UK. All participants were aged 50 years or over. The participants completed a 24-h food recall for a period of 3 d. The participants also answered questions about their abilities to shop for and cook food as well as their knowledge of healthy eating. The participants with VI in this sample consumed significantly fewer energy content and other nutrients than is recommended for their age group and when compared with an age-matched control group. The participants with VI mainly made food choices irrespective of nutritional value. The results of the present study highlight for the first time that a large proportion of older adults with VI in the UK are undernourished. These results suggest local and government-led initiatives should be implemented to support the diets of older adults in the UK, and these initiatives could include healthy eating workshops, café clubs or skills training and rehabilitation.

Database: CINAHL

IMPROVING MORTALITY WITH AN INTEGRATED MODEL OF CARE FOR CERVICAL SPINE FRACTURE IN PATIENTS OVER 75 YEARS OLD...British Geriatrics Society Autumn meeting, November 6-8, 2019, Leicester, England.

Author(s): Mahmood ; Negasan, C.; Manzoor, A.; Enwere, P.; Arnada-Martinez, A.; Walters, H.; Yeong, K.; Lisk, R.

Source: Age & Ageing; Feb 2020; vol. 49

Publication Date: Feb 2020

Publication Type(s): Academic Journal

Abstract: Introduction Cervical spine injury is a potentially life threatening trauma. Given the increase in the number of patients presenting to the emergency department (ED) who are elderly and who have fallen and sustained trauma, it has become ever so challenging to manage this cohort of patients. In addition to diagnostic challenges in the elderly population, a robust, integrated care pathway and comprehensive geriatric assessment with involvement of a geriatrician is essential to provide effective care to these patients who require cervical collar after cervical spine injury to prevent morbidity and mortality. Intervention Data was gathered about the patient's demographics, nature of cervical spine injury, care required from January 2013 till November 2016 (pre intervention) and from November 2016 till October 2017 (post intervention). Current practice was reviewed which showed significant variability in care provision to patients with cervical spine injury including collar care. An integrated care pathway was designed with involvement of multidisciplinary team (MDT) members to standardise the care of this cohort of patients in our hospital. This included early identification of patients with cervical spine injury, co locating all patients, developing nursing expertise for cervical collar care, sitting up early to prevent complications like aspiration, pressure area care, early nutritional support, training staff in post discharge collar care with developing interface with primary care team. Outcome measures in patients over 75 years including length of stay (LOS) inpatient mortality and at 6 and 12 months were recorded respectively. Results Total: 54 patients, average age: 86.6 years Pre-intervention: Jan 2013-

Nov 2016 Post-intervention: Nov 2016-Oct 2017 Total: 35 Average age: 87.29 years Female: male ratio: 22:13 LOS: 17 days Inpatient mortality: 8/35 = 22.85%, 6 month mortality: 13/35 = 37.14% Mortality at 1 year: 16/35 = 45.71% Total: 19 Average age: 85.26 years Female: male ratio: 12:7 LOS: 10.89 days Inpatient mortality: 0/19 = 0% 6 month mortality: 3/19 = 15.78% Overall mortality at 1 year: 4/19 = 21.05 % Conclusions Cervical spine injuries are common in older patients, who are at greater risk of falls and thus sustaining injuries. Early identification and management of these patients in a clinical area with multidisciplinary approach with appropriate expertise is key to reducing LOS and adverse outcome including mortality.

Database: CINAHL

Supporting nutrition in frail older people: a qualitative study exploring views of primary care and community health professionals.

Author(s): Avgerinou ; Bhanu, Cini; Walters, Kate; Croker, Helen; Tuijt, Remco; Rea, Jennifer; Hopkins, Jane; Kirby-Barr, Maggie; Kharicha, Kalpa

Source: British Journal of General Practice; Feb 2020; vol. 70 (no. 691)

Publication Date: Feb 2020

Publication Type(s): Academic Journal

PubMedID: NLM31932297

Available at The British journal of general practice : the journal of the Royal College of General Practitioners - from EBSCO (MEDLINE Complete)

Abstract: Background: Malnutrition is associated with increased morbidity and mortality, and is very common in frail older people. However, little is known about how weight loss in frail older people can be managed in primary care.Aims: To explore the views and practices of primary care and community professionals on the management of malnutrition in frail older people; identify components of potential primary care-based interventions for this group; and identify training and support required to deliver such interventions.Design and Setting: Qualitative study in primary care and community settings.Method: Seven focus groups and an additional interview were conducted with general practice teams, frailty multidisciplinary teams (MDTs), and community dietitians in London and Hertfordshire, UK (n = 60 participants). Data were analysed using thematic analysis.Results: Primary care and community health professionals perceived malnutrition as a multifaceted problem. There was an agreement that there is a gap in care provided for malnutrition in the community. However, there were conflicting views regarding professional accountability. Challenges commonly reported by primary care professionals included overwhelming workload and lack of training in nutrition. Community MDT professionals and dietitians thought that an intervention to tackle malnutrition would be best placed in primary care and suggested opportunistic screening interventions. Education was an essential part of any intervention, complemented by social, emotional, and/or practical support for frailer or socially isolated older people.Conclusions: Future interventions should include a multifaceted approach. Education tailored to the needs of older people, carers, and healthcare professionals is a necessary component of any intervention.

Database: CINAHL

Identifying older people at risk of malnutrition and treatment in the community: prevalence and concurrent validation of the Patients Association Nutrition Checklist with 'MUST'.

Author(s): Murphy ; Aburrow, A.; Guestini, A.; Brown, R.; Parsons, E.; Wallis, K.

Source: Journal of Human Nutrition & Dietetics; Feb 2020; vol. 33 (no. 1); p. 31-37

Publication Date: Feb 2020

Publication Type(s): Academic Journal

Available at Journal of Human Nutrition and Dietetics - from Wiley Online Library

Abstract: The article discusses a cross-sectional study focusing on the validity of the malnutrition risk screening tools Patients Association Nutrition Checklist and Malnutrition Universal Screening Tool (MUST). According to the article,

MUST consists of several categories including body mass index (BMI), weight loss, and acute disease effect score. 312 individuals (ages 65-84) from lunch clubs in Dorset and Hampshire, Southern England, participated in the study.

Database: CINAHL

Malnutrition in the elderly: a public health concern.

Author(s): Holder

Source: British Journal of Nursing; Jan 2020; vol. 29 (no. 2); p. 118-119

Publication Date: Jan 2020

Publication Type(s): Academic Journal

Abstract: The article focuses on malnutrition, a public health concern in the elderly in Great Britain. It mentions the European Nutrition for Health Alliance highlighted the causes of malnutrition in the elderly, which included underlying disease, decreased mobility, limited transport to local shops, social isolation and poverty; and also mentions there is a risk of further decline in the health of the Great Britain's growing elderly population, including an increase in malnutrition-related morbidity.

Database: CINAHL

Body mass index, diet, physical inactivity, and the incidence of dementia in 1 million UK women.

Author(s): Floud ; Simpson, Rachel F.; Balkwill, Angela; Brown, Anna; Goodill, Adrian; Gallacher, John; Sudlow, Cathie; Harris, Phillip; Hofman, Albert; Parish, Sarah; Reeves, Gillian K.; Green, Jane; Peto, Richard; Beral, Valerie

Source: Neurology; Jan 2020; vol. 94 (no. 2)

Publication Date: Jan 2020

Publication Type(s): Academic Journal

PubMedID: NLM31852815

Available at Neurology - from Ovid (Journals @ Ovid)

Abstract: Objective: To help determine whether midlife obesity is a cause of dementia and whether low body mass index (BMI), low caloric intake, and physical inactivity are causes or merely consequences of the gradual onset of dementia by recording these factors early in a large 20-year prospective study and relating them to dementia detection rates separately during follow-up periods of <5, 5 to 9, 10 to 14, and 15+ years.Methods: A total of 1,136,846 UK women, mean age 56 (SD 5) years, were recruited in 1996 to 2001 and asked about height, weight, caloric intake, and inactivity. They were followed up until 2017 by electronic linkage to National Health Service records, detecting hospital admissions with mention of dementia. Cox regression yielded adjusted rate ratios (RRs) for first dementia detection during particular follow-up periods.Results: Fifteen years after the baseline survey, only 1% were lost to follow-up, and 89% remained alive with no detected dementia, of whom 18,695 had dementia detected later, at a mean age of 77 (SD 4) years. Dementia detection during years 15+ was associated with baseline obesity (BMI 30+ vs 20-24 kg/m2: RR 1.21, 95% confidence interval 1.16-1.26, $p < 0.0001$) but not clearly with low BMI, low caloric intake, or inactivity at baseline. The latter 3 factors were associated with increased dementia rates during the first decade, but these associations weakened substantially over time, approaching null after 15 years.Conclusions: Midlife obesity may well be a cause of dementia. In contrast, behavioral changes due to preclinical disease could largely or wholly account for associations of low BMI, low caloric intake, and inactivity with dementia detection during the first decade of follow-up.

Database: CINAHL

Changing from a Western to a Mediterranean-style diet does not affect iron or selenium status: results of the New Dietary Strategies Addressing the Specific Needs of the Elderly Population for Healthy Aging in Europe (NU-AGE) 1-year randomized clinical trial in elderly Europeans

Author(s): Jennings ; Tang, Jonathan; Gillings, Rachel; Perfecto, Antonio; Dutton, John; Speakman, Jim; Fraser, William D; Nicoletti, Claudio; Berendsen, Agnes A M; de Groot, Lisette C P G M; Pietruszka, Barbara; Jeruszka-Bielak, Marta; Caumon, Elodie; Caille, Aurélie; Ostan, Rita; Franceschi, Claudio; Santoro, Aurelia; Fairweather-Tait, Susan J

Source: American Journal of Clinical Nutrition; Jan 2020; vol. 111 (no. 1); p. 98-109

Publication Date: Jan 2020

Publication Type(s): Academic Journal

Available at The American journal of clinical nutrition - from EBSCO (MEDLINE Complete)

Abstract: Background Mediterranean diets limit red meat consumption and increase intakes of high-phytate foods, a combination that could reduce iron status. Conversely, higher intakes of fish, a good source of selenium, could increase selenium status. Objectives A 1-y randomized controlled trial [New Dietary Strategies Addressing the Specific Needs of the Elderly Population for Healthy Aging in Europe (NU-AGE)] was carried out in older Europeans to investigate the effects of consuming a Mediterranean-style diet on indices of inflammation and changes in nutritional status. Methods Selenium and iron intakes and status biomarkers were measured at baseline and after 1 y in 1294 people aged 65–79 y from 5 European countries (France, Italy, the Netherlands, Poland, and the United Kingdom) who had been randomly allocated either to a Mediterranean-style diet or to remain on their habitual, Western diet. Results Estimated selenium intakes increased significantly with the intervention group ($P < 0.01$), but were not accompanied by changes in serum selenium concentrations. Iron intakes also increased ($P < 0.001$), but there was no change in iron status. However, when stratified by study center, there were positive effects of the intervention on iron status for serum ferritin for participants in Italy ($P = 0.04$) and France ($P = 0.04$) and on soluble transferrin receptor (sTfR) for participants in Poland ($P < 0.01$). Meat intake decreased and fish intake increased to a greater degree in the intervention group, relative to the controls ($P < 0.01$ for both), but the overall effects of the intervention on meat and fish intakes were mainly driven by data from Poland and France. Changes in serum selenium in the intervention group were associated with greater changes in serum ferritin ($P = 0.01$) and body iron ($P = 0.01$), but not sTfR ($P = 0.73$); there were no study center × selenium status interactions for the iron biomarkers. Conclusions Consuming a Mediterranean-style diet for 1 y had no overall effect on iron or selenium status, although there were positive effects on biomarkers of iron status in some countries. The NU-AGE trial was registered at clinicaltrials.gov as NCT01754012.

Database: CINAHL

Diagnosing coeliac disease in the elderly: a United Kingdom cohort study.

Author(s): Shiha ; Marks, Lauren J.; Sanders, David S.

Source: Gastroenterology & Hepatology from Bed to Bench; Jan 2020; vol. 13 (no. 1); p. 37-43

Publication Date: Jan 2020

Publication Type(s): Academic Journal

Available at Gastroenterology and hepatology from bed to bench - from PubMed

Available at Gastroenterology and hepatology from bed to bench - from PubMed Central

Abstract: Aim: To assess the outcomes for an elderly population with coeliac disease and to compare with younger adults with CD. Background: Coeliac disease in the elderly has been underdiagnosed due to the heterogeneity of presentation as well as lack of physicians' awareness of CD in this population. However, the benefits of diagnosing CD in the elderly may be contentious. Methods: Newly diagnosed CD patients were prospectively recruited from the Coeliac Specialist Clinic at the Royal Hallamshire Hospital, Sheffield, between 2008 and 2017. All patients had villous atrophy (VA) on biopsy with positive coeliac serology. Additionally, the patients were retrospectively recruited from 1990 to 2008 to determine the trend in elderly CD diagnostic frequency over time. Results: A total of 1605 patients with CD were recruited (n=644 prospectively, n=961 retrospectively). Of these, 208 patients (13.0%) were diagnosed over the age of 65 years between 1990 and 2017. The proportion of elderly CD diagnoses increased from 0% in 1990-1991 to 18.7% in 2016-2017 ($p<0.001$). Younger patients more commonly presented with fatigue ($p<0.001$) and gastrointestinal symptoms including diarrhoea ($p=0.005$), abdominal pain ($p=0.019$), and IBS-type symptoms ($p=0.008$), while older people more frequently presented with B12 deficiency ($p=0.037$). Conclusion: The prevalence

of CD in the elderly has significantly increased over the last two decades, but elderly patients tend to present with fewer symptoms. Further research is required to determine whether a strict gluten-free diet in these patients is a necessity or a burden.

Database: CINAHL

Prevalence of protein intake below recommended in community-dwelling older adults: a meta-analysis across cohorts from the PROMISS consortium.

Author(s): Hengeveld, Linda M; Boer, Jolanda M A; Gaudreau, Pierrette; Heymans, Martijn W; Jagger, Carol; Mendonça, Nuno; Ocké, Marga C; Presse, Nancy; Sette, Stefania; Simonsick, Eleanor M; Tapanainen, Heli; Turrini, Aida; Virtanen, Suvi M; Wijnhoven, Hanneke A H; Visser, Marjolein

Source: Journal of cachexia, sarcopenia and muscle; Oct 2020; vol. 11 (no. 5); p. 1212-1222

Publication Date: Oct 2020

Publication Type(s): Journal Article

PubMedID: 32548960

Available at Journal of cachexia, sarcopenia and muscle - from Europe PubMed Central - Open Access

Available at Journal of cachexia, sarcopenia and muscle - from ProQuest (Health Research Premium) - NHS Version

Abstract:BACKGROUNDLower protein intake in older adults is associated with loss of muscle mass and strength. The present study aimed to provide a pooled estimate of the overall prevalence of protein intake below recommended (according to different cut-off values) among community-dwelling older adults, both within the general older population and within specific subgroups.METHODSAs part of the PRevention Of Malnutrition In Senior Subjects in the EU (PROMISS) project, a meta-analysis was performed using data from four cohorts (from the Netherlands, UK, Canada, and USA) and four national surveys [from the Netherlands, Finland (two), and Italy]. Within those studies, data on protein and energy intake of community-dwelling men and women aged ≥55 years were obtained by either a food frequency questionnaire, 24 h recalls administered on 2 or 3 days, or food diaries administered on 3 days. Protein intake below recommended was based on the recommended dietary allowance of 0.8 g/kg body weight (BW)/d, by using adjusted BW (aBW) instead of actual BW. Cut-off values of 1.0 and 1.2 were applied in additional analyses. Prevalences were also examined for subgroups according to sex, age, body mass index (BMI), education level, appetite, living status, and recent weight loss.RESULTSThe study sample comprised 8107 older persons. Mean ± standard deviation protein intake ranged from 64.3 ± 22.3 (UK) to 80.6 ± 23.7 g/d [the Netherlands (cohort)] or from 0.94 ± 0.38 (USA) to 1.17z ± 0.30 g/kg aBW/d (Italy) when related to BW. The overall pooled prevalence of protein intake below recommended was 21.5% (95% confidence interval: 14.0-30.1), 46.7% (38.3-55.3), and 70.8% (65.1-76.3) using the 0.8, 1.0, and 1.2 cut-off value, respectively. A higher prevalence was observed among women, individuals with higher BMI, and individuals with poor appetite. The prevalence differed only marginally by age, education level, living status, and recent weight loss.CONCLUSIONSIn community-dwelling older adults, the prevalence of protein intake below the current recommendation of 0.8 g/kg aBW/d is substantial (14-30%) and increases to 65-76% according to a cut-off value of 1.2 g/kg aBW/d. To what extent the protein intakes are below the requirements of these older people warrants further investigation.

Database: Medline

OBESITY

A Habit-Based Randomised Controlled Trial to Reduce Sugar-Sweetened Beverage Consumption: the Impact of the Substituted Beverage on Behaviour and Habit Strength.

Author(s): Judah ; Mullan, Barbara; Yee, Monica; Johansson, Lina; Allom, Vanessa; Liddelow, Caitlin

Source: International Journal of Behavioral Medicine; Dec 2020; vol. 27 (no. 6); p. 623-635

Publication Date: Dec 2020

Publication Type(s): Academic Journal

Abstract: Background: Excess sugar consumption has been linked to numerous negative health outcomes, such as obesity and type II diabetes. Reducing sugar-sweetened beverage (SSB) consumption may reduce sugar intake and thus improve health. The aim of the study was to test the impact of the potentially different rewarding nature of water or diet drinks as replacements for SSB, using a habit and implementation intention–based intervention. Method: An online randomised, two-arm parallel design was used. One hundred and fifty-eight participants (mainly from the UK and USA) who regularly consumed SSBs (Mage = 31.5, 51% female) were advised to create implementation intentions to substitute their SSB with either water or a diet drink. Measures of SSB consumption, habit strength and hedonic liking were taken at baseline and at 2 months. Water or diet drink consumption was only measured at 2 months. Results: There was a large and significant reduction in SSB consumption and self-reported SSB habits for both the water and diet drink groups, but no difference between groups. There were no differences in hedonic liking for the alternative drink, alternative drink consumption and alternative drink habit between the two groups. Reduction in SSB hedonic liking was associated with reduced SSB consumption and habit. Conclusion: This study demonstrates that an implementation intention–based intervention achieved substantial reductions in SSB consumption and habits. It also indicates that hedonic liking for SSBs and alternative drinks are associated with changes in consumption behaviour. Substituting SSBs with water or diet drinks was equally as effective in reducing SSB consumption.

Database: CINAHL

Dietary intakes of women with Type 1 diabetes before and during pregnancy: a pre-specified secondary subgroup analysis among CONCEPTT participants.

Author(s): Neoh ; Grisoni, J. A.; Feig, D. S.; Murphy, H. R.

Source: Diabetic Medicine; Nov 2020; vol. 37 (no. 11); p. 1841-1848

Publication Date: Nov 2020

Publication Type(s): Academic Journal

Available at Diabetic Medicine - from Wiley Online Library

Abstract: Aim: To describe the dietary intakes of women with Type 1 diabetes before and during pregnancy. Methods: This was a pre-specified subgroup analysis of CONCEPTT involving 63 women planning pregnancy and 93 pregnant women from 14 sites in England, Scotland and Ireland. Two hundred and forty-six 3-day food diaries (104 planning pregnancy, 142 pregnant) were matched to data source and food reference codes, and analysed using dietary software. Participants were informed that food diaries would be de-identified and used only for research purposes. Results: Mean (sd) daily energy intake was 1588 (346) kcal and 1673 (384) kcal in women planning pregnancy and pregnant women respectively. Total carbohydrate intake was consistent with dietary guideline recommendations [180 (52) g planning pregnancy, 198 (54) g pregnant], but non-recommended sources (e.g. sugars, preserves, confectionery, biscuits, cakes) contributed to 46% of total daily carbohydrate intake. Fat consumption exceeded guideline recommendations [70 (21) g planning pregnancy, 72 (21) g pregnant]. Fibre [15.5 (5.3) g planning pregnancy, 15.4 (5.1) g pregnant], fruit and vegetable intakes [3.5 (2.2) and 3.1 (1.8) serves/day] were inadequate. Twelve women planning pregnancy (19%) and 24 pregnant women (26%) did not meet micronutrient requirements. Conclusions: The diets of pregnant women from England, Scotland and Ireland are characterized by high fat, low fibre and poor-quality carbohydrate intakes. Fruit and vegetable consumption is inadequate, with one in four women at risk of micronutrient deficiencies. Further research is needed to optimize maternal nutrition for glycaemic control and for maternal and offspring health. What's new?: Maternal glycaemic control is the main modifiable determinant of pregnancy outcomes in Type 1 diabetes. Maternal diet influences insulin dosing and glycaemia; and contributes to the overall health of the mother, yet this has not been described previously.This study demonstrates that pregnant women with Type 1 diabetes have higher than recommended intakes of fat and inadequate intakes of fibre, fruit and vegetables.One in four women are at risk of micronutrient deficiencies suggesting substantial scope for improvement.Further research is required to understand how to optimize maternal nutrition both for achieving glucose control targets and for improving overall maternal and infant health.

Database: CINAHL

Very low calorie diet on NHS for overweight T2D patients.

Author(s):

Source: Practice Nurse; Aug 2020; vol. 50 (no. 7); p. 8-8

Publication Date: Aug 2020

Publication Type(s): Academic Journal

Abstract: The article discusses the NHS has expanded a programme to provide a low calorie diet treatment for people who are overweight and have type 2 diabetes.

Database: CINAHL

Obesity, stigma and reflexive embodiment: Feeling the 'weight' of expectation.

Author(s): Williams ; Annandale, Ellen

Source: Health: An Interdisciplinary Journal for the Social Study of Health, Illness & Medicine; Jul 2020; vol. 24 (no. 4); p. 421-441

Publication Date: Jul 2020

Publication Type(s): Academic Journal

Available at Health (London, England : 1997) - from Unpaywall

Abstract: The dominant obesity discourse which emphasises individual moral responsibility and lifestyle modification encourages weight-based stigma. Existing research overwhelmingly demonstrates that obesity stigma is an ineffective means by which to reduce the incidence of obesity and that it promotes weight-gain. However, the sensate experiences associated with the subjective experience of obesity stigma as a reflexively embodied phenomenon have been largely unexamined. This article addresses this knowledge gap by providing a phenomenological account. Data are derived from 11 months of ethnographic participant observation and semi-structured interviews with three single-sex weight-loss groups in England. Group members were predominantly overweight/obese and of low-socio-economic status. The analysis triangulates these two data sources to investigate what/how obesity stigma made group members feel. We find that obesity stigma confused participant's objective and subjective experiences of their bodies. This was primarily evident on occasions when group members felt heavier after engaging in behaviours associated with weight-gain but this 'weight' did not register on the weighing scales. We conceptualise this as the weight of expectation which is taken as illustrative of the perpetual uncertainty and morality that characterises weight-management. In addition, we show that respondents ascribed their sensate experiences of physiological responses to exercise with moral and social significance. These carnal cues provided a sense of certainty and played an important role in attempts to negotiate obesity stigma. These findings deepen the understanding of how and why obesity stigma is an inappropriate and ineffective means of promoting weight-loss.

Database: CINAHL

A systematic review of UK-based long-term nonsurgical interventions for people with severe obesity (BMI ≥35 kg m−2).

Author(s): Aceves-Martins ; Robertson, C.; Cooper, D.; Avenell, A.; Stewart, F.; Aveyard, P.; Bruin, M.

Source: Journal of Human Nutrition & Dietetics; Jun 2020; vol. 33 (no. 3); p. 351-372

Publication Date: Jun 2020

Publication Type(s): Academic Journal

Available at Journal of human nutrition and dietetics : the official journal of the British Dietetic Association - from Wiley Online Library

Abstract: Introduction: The aim of this project was to systematically review UK evidence on the effectiveness of long-term (≥12 months) weight management services (WMSs) for weight loss and weight maintenance for adults (≥16 years) with severe obesity (body mass index ≥35 kg m−2), who would generally be eligible for Tier 3 services.

Methods: Four data sources were searched from 1999 to October 2018. Results: Our searches identified 20 studies, mostly noncomparative studies: 10 primary care interventions, nine in secondary care specialist weight management clinics and one commercial setting intervention. A programme including a phase of low energy formula diet (810–833 kcal day−1) showed the largest mean (SD) weight change at 12 months of –12.4 (11.4) kg for complete cases, with 25.3% dropout. Limitations or differences in evaluation and reporting (particularly for denominators), unclear dropout rates, and differences between participant groups in terms of comorbidities and psychological characteristics, made comparisons between WMSs and inferences challenging. Conclusions: There is a persistent and clear need for guidance on long-term weight data collection and reporting methods to allow comparisons across studies and services for participants with severe obesity. Data could also include quality of life, clinical outcomes, adverse events, costs and economic outcomes. A randomised trial comparison of National Health Service Tier 3 services with commercial WMSs would be of value.

Database: CINAHL

Consumption of Stilbenes and Flavonoids is Linked to Reduced Risk of Obesity Independently of Fiber Intake.

Author(s): Mompeo ; Spector, Tim D.; Matey Hernandez, Marisa; Le Roy, Caroline; Istas, Geoffrey; Le Sayec, Melanie; Mangino, Massimo; Jennings, Amy; Rodriguez-Mateos, Ana; Valdes, Ana M.; Menni, Cristina

Source: Nutrients; Jun 2020; vol. 12 (no. 6); p. 1871-1871

Publication Date: Jun 2020

Publication Type(s): Academic Journal

Available at Nutrients - from Europe PubMed Central - Open Access

Available at Nutrients - from ProQuest (Health Research Premium) - NHS Version

Abstract: Background: Polyphenol consumption is implicated in gut microbiome composition and improved metabolic outcomes, but it is unclear whether the effect is independent of dietary fiber. Methods: We investigated the links between (poly)phenol intake, gut microbiome composition (16s RNA) and obesity independently of fiber intake in UK women (n = 1810) and in a small group of UK men (n = 64). Results: (Poly)phenol intakes correlated with microbiome alpha diversity (Shannon Index) after adjusting for confounders and fiber intake. Moreover, flavonoid intake was significantly correlated with the abundance of Veillonella, (a genus known to improve physical performance), and stilbene intake with that of butyrate-producing bacteria (Lachnospira and Faecalibacterium). Stilbene and flavonoid intake also correlated with lower odds of prevalent obesity (Stilbenes: Odds Ratio (95% Confidence Interval) (OR(95%CI)) = 0.80 (0.73, 0.87), p = 4.90 × 10−7; Flavonoids: OR(95%CI) = 0.77 (0.65, 0.91), p = 0.002). Formal mediation analyses revealed that gut microbiome mediates ~11% of the total effect of flavonoid and stilbene intake on prevalent obesity. Conclusions: Our findings highlight the importance of (poly)phenol consumption for optimal human health.

Database: CINAHL

Lifestyle information and commercial weight management groups to support maternal postnatal weight management and positive lifestyle behaviour: the SWAN feasibility randomised controlled trial.

Author(s): Bick ; Taylor, C; Bhavnani, V; Healey, A; Seed, P; Roberts, S; Zasada, M; Avery, A; Craig, V; Khazaezadah, N; McMullen, S; O'Connor, S; Oki, B; Ntim, EO; Poston, L; Ussher, M; Ntim, E O

Source: BJOG: An International Journal of Obstetrics & Gynaecology; Apr 2020; vol. 127 (no. 5); p. 636-645

Publication Date: Apr 2020

Publication Type(s): Academic Journal

PubMedID: NLM31808248

Available at BJOG : an international journal of obstetrics and gynaecology - from Wiley Online Library

Abstract: Objectives: To assess feasibility of a future randomised controlled trial (RCT) of clinical and cost-effectiveness of lifestyle information and commercial weight management groups to support postnatal weight

management to 12 months post-birth.Design: Two-arm feasibility trial, with nested mixed-methods process evaluation.Setting: Inner-city unit, south England.Population: Women with body mass indices (BMIs) ≥25 kg/m2 at pregnancy booking or normal BMIs (18.5-24.9 kg/m2) identified with excessive gestational weight gain at 36 weeks of gestation.Methods: Randomised to standard care plus commercial weight management sessions commencing 8-16 weeks postnatally or standard care only.Main Outcomes: Feasibility outcomes included assessment of recruitment, retention, acceptability and economic data collation. Primary and secondary end points included difference between groups in weight 12 months postnatally compared with booking (proposed primary outcome for a future trial), diet, physical activity, smoking, alcohol, mental health, infant feeding, NHS resource use.Results: In all, 193 women were randomised: 98 intervention and 95 control; only four women had excessive gestational weight gain. A slightly greater weight change was found among intervention women at 12 months, with greatest benefit. Among women attending ten or more weight management sessions. There was >80% follow up to 12 months, low risk of contamination and no group differences in trial completion.Conclusion: It was feasible to recruit and retain women with BMIs ≥25 kg/m2 to an intervention to support postnatal weight management; identification of excessive gestational weight gain requires consideration. Economic modelling could inform out-of-trial costs and benefits in a future trial. A definitive trial is an important next step.Tweetable Abstract: A feasibility RCT of postnatal weight support showed women with BMIs ≥25 kg/m2 can be recruited and followed to 12 months postnatally.

Database: CINAHL

Are Lifestyle Interventions to Reduce Excessive Gestational Weight Gain Cost Effective? A Systematic Review.

Author(s): Bailey ; Skouteris, Helen; Teede, Helena; Hill, Briony; De Courten, Barbora; Walker, Ruth; Liew, Danny; Thangaratinam, Shakila; Ademi, Zanfina

Source: Current Diabetes Reports; Feb 2020; vol. 20 (no. 2); p. 1-16

Publication Date: Feb 2020

Publication Type(s): Academic Journal

PubMedID: NLM32008111

Abstract: Purpose Of Review: Lifestyle interventions (such as diet and physical activity) successfully limit excessive gestational weight gain and can reduce some adverse maternal events; however, benefit is variable and cost-effectiveness remains unclear. We aimed to review published cost-effectiveness analyses of lifestyle interventions compared with usual care on clinically relevant outcome measures. Five international and six grey-literature databases were searched from 2007 to 2018. Articles were assessed for quality of reporting. Data were extracted from healthcare and societal perspectives. Costs were adapted to the common currencies of Australia and the United Kingdom by adjusting for resource utilization, healthcare purchase price and changes in costs over time. Included studies were economic analyses of lifestyle interventions aiming to limit weight-gain during pregnancy and/or reduce risk of gestational diabetes, for women with a BMI of 25 or greater in pre- or early-pregnancy.Recent Findings: Of the 538 articles identified, six were retained for review: one modelling study and five studies in which an economic analysis was performed alongside a randomized-controlled trial. Outcome measures included infant birth-weight, fasting glucose, insulin resistance, gestational weight-gain, infant respiratory distress syndrome, perceived health, cost per case of adverse outcome avoided and quality-adjusted life years (QALYs). Interventions were cost-effective in only one study. Although many studies have investigated the efficacy of lifestyle interventions in pregnancy, few have included cost-effectiveness analyses. Where cost-effectiveness studies were undertaken, results were inconsistent. Secondary meta-analysis, taxonomy and framework research is now required to determine the effective components of lifestyle interventions and to guide future cost-effectiveness analyses.

Database: CINAHL

British Dietetic Association's Obesity Specialist Group dietetic obesity management interventions in children and young people: review & clinical application.

Author(s): Stewart, L; Easter, S; BDA's Obesity Specialist Group

Source: Journal of human nutrition and dietetics : the official journal of the British Dietetic Association; Nov 2020

Publication Date: Nov 2020

Publication Type(s): Journal Article Review

PubMedID: 33170552

Available at Journal of human nutrition and dietetics : the official journal of the British Dietetic Association - from Wiley Online Library

Abstract:BACKGROUNDDietitians play a vital role in the management of childhood obesity. To support that role the Obesity Specialist Group of the British Dietetic Association commissioned a review and clinical application paper. This current paper is a summary of that review document, which is available on the BDA's website.METHODSThe initial sources of evidence were guidelines, published reviews and government guidance. Best practice advice was sought from networks including the BDA's Obesity and Paediatric Specialists groups. The original document was reviewed by a review group and members of the Obesity and Paediatric Specialist group's committees.RESULTSThe overall aim of dietetic interventions in childhood weight management should be to deliver evidence based dietetic weight management care, which helps maintain positive lifestyle changes. To support this aim the review recommends the UK BMI cut off points in setting service referral and triaging criteria. Ensuring the whole child's world is taken into account when undertaking assessment and throughout the programme process is essential. Dietitians working in this field require behavioural change skills, motivational techniques and the ability to communicate to children of differing ages and their parents. Knowledge of local child safe guarding procedures are necessary for all working in this field. Recommendations on basic and advanced skills required are specified.CONCLUSIONSThis paper was written to compliment a full review document. The complexities around case management, child protection issues and competing family motivations require dietitians trained at undergraduate and postgraduate level to deliver high quality weight management and behavioural change.

Database: Medline

Intensive nutrition counseling as part of a multi-component weight loss intervention improves diet quality and anthropometrics in older adults with obesity.

Author(s): Al-Nimr, Rima Itani; Wright, K C S; Aquila, Christina L; Petersen, Curtis L; Gooding, Tyler L; Batsis, John A

Source: Clinical nutrition ESPEN; Dec 2020; vol. 40 ; p. 293-299

Publication Date: Dec 2020

Publication Type(s): Journal Article

PubMedID: 33183553

Abstract:BACKGROUND AND AIMSObesity significantly impacts older adults. Intensive nutrition counseling can aid in weight reduction and improve diet quality, but data are sparse in this population. The objective of this intervention is to determine how intensive nutrition counseling affects diet quality and anthropometric measures during a multi-component weight loss intervention in rural older adults with obesity.METHODSA series of 12-week, single-arm feasibility pilots were conducted in fall 2017 and winter/spring 2018 in a community aging center in rural Northern New England. Adults were eligible if ≥ 65 years old with a Body Mass Index (BMI) ≥30 kg/m2. Exclusion criteria included dementia/cognitive impairment, uncontrolled psychiatric illness, weight-loss surgery, weight loss >5% in previous 6-months, life-threatening illness, palliative/hospice services, current participation in another weight-loss study/program, obesogenic medications, or presence of major chronic conditions. Participants received once-weekly nutrition counseling by a registered dietitian nutritionist (RDN), and twice-weekly exercise sessions by a physical therapist (PT). Primary outcomes were diet quality changes measured by total Rapid Eating and Activity Assessment for Patients-Short Version (REAP-S) and Automated Self-Administered 24-h dietary recall (ASA-24). Secondary outcome measures were changes in weight (kilograms) and waist circumference (centimeters). McNemar test was conducted for all paired categorical data while paired t-tests were conducted for all paired continuous data. All analyses were conducted in R; p-value<0.05 was significant.RESULTSTotal n = 23. Mean age was 72.2 (5.8) years (73.9% female); mean BMI was 35.9 ± 5.0 kg/m2. At 12 weeks, diet quality significantly improved. REAP-S scores increased by 3.53 ± 3.13 points (p < 0.001). Kilocalories, grams fat, grams saturated fat, milligrams sodium, grams added sugar, and grams alcohol via ASA-24 significantly decreased (all p < 0.05). Significant reductions in weight (-

5.22 ± 3.13 kg) and waist circumference (-6.88 ± 5.67 cm) were observed (both p < 0.001).CONCLUSIONIntensive nutrition counseling significantly enhances diet quality and reduces weight and waist circumference in rural older adults with obesity.

Database: Medline

Evaluating a potential role for community pharmacists in post-bariatric patient nutritional support.

Author(s): Graham, Yitka N H; Earl-Sinha, Charlotte; Parkin, Lindsay; Callejas-Diaz, Lindes; Fox, Ann; Tierney, Callum; Mahawar, Kamal; Hayes, Catherine

Source: Clinical obesity; Aug 2020; vol. 10 (no. 4); p. e12364

Publication Date: Aug 2020

Publication Type(s): Journal Article

PubMedID: 32351027

Available at Clinical obesity - from Wiley Online Library

Abstract: Physiological changes to the body from bariatric surgery necessitate lifelong vitamin and mineral supplementation to prevent potential nutritional deficiencies. Presently, there is no consensus on appropriate long-term follow-up in community settings for people who have undergone bariatric surgery. Current UK guidelines recommend annual monitoring of nutritional status, but little else. Semi-structured interviews were carried out with members of a high volume bariatric surgical unit and community pharmacists working in a variety of settings and locations. Data were collected between June and August 2018 and analysed using a thematic analytic framework. Twenty-five participants were recruited. Bariatric staff (n = 9) reported negligible interaction with community pharmacists but felt establishing communication and developing a potential pathway to collaborate, would provide additional support and potentially improved levels of patient compliance. Community pharmacists (n = 16) reported poor knowledge of bariatric surgery, indicating they were unable to routinely identify people who had bariatric surgery, but understood issues with absorption of vitamins. There is evident potential to involve community pharmacists in post-bariatric patient care pathways. Pharmacists possess knowledge of absorption and metabolism of supplements which could be used to actively support people who have had bariatric surgery in their changed physiological status. Education ought to focus on the functional impact of bariatric surgical procedures and interventions and the consequent nutritional recommendations required. Communication between bariatric units and community pharmacies is needed to construct a clear and formalized infrastructure of support, with remuneration for pharmacy specialist expertise agreed to ensure both financial viability and sustainability.

Database: Medline

OBSTETRICS & GYNAECOLOGY

Maternal dysglycaemia, changes in the infant's epigenome modified with a diet and physical activity intervention in pregnancy: Secondary analysis of a randomised control trial.

Author(s): Antoun ; Kitaba, Negusse T.; Titcombe, Philip; Dalrymple, Kathryn V.; Garratt, Emma S.; Barton, Sheila J.; Murray, Robert; Seed, Paul T.; Holbrook, Joanna D.; Kobor, Michael S.; Lin, David TS; MacIsaac, Julia L.; Burdge, Graham C.; White, Sara L.; Poston, Lucilla; Godfrey, Keith M.; Lillycrop, Karen A.

Source: PLoS Medicine; Nov 2020; vol. 17 (no. 11); p. 1-29

Publication Date: Nov 2020

Publication Type(s): Academic Journal

PubMedID: NLM33151971

Available at PLoS medicine - from Europe PubMed Central - Open Access

Available at PLoS medicine - from Public Library of Science (PLoS)

Available at PLoS medicine - from EBSCO (MEDLINE Complete)

Available at PLoS medicine - from ProQuest (Health Research Premium) - NHS Version

Abstract: Background: Higher maternal plasma glucose (PG) concentrations, even below gestational diabetes mellitus (GDM) thresholds, are associated with adverse offspring outcomes, with DNA methylation proposed as a mediating mechanism. Here, we examined the relationships between maternal dysglycaemia at 24 to 28 weeks' gestation and DNA methylation in neonates and whether a dietary and physical activity intervention in pregnant women with obesity modified the methylation signatures associated with maternal dysglycaemia.Methods and Findings: We investigated 557 women, recruited between 2009 and 2014 from the UK Pregnancies Better Eating and Activity Trial (UPBEAT), a randomised controlled trial (RCT), of a lifestyle intervention (low glycaemic index (GI) diet plus physical activity) in pregnant women with obesity (294 contol, 263 intervention). Between 27 and 28 weeks of pregnancy, participants had an oral glucose (75 g) tolerance test (OGTT), and GDM diagnosis was based on diagnostic criteria recommended by the International Association of Diabetes and Pregnancy Study Groups (IADPSG), with 159 women having a diagnosis of GDM. Cord blood DNA samples from the infants were interrogated for genome-wide DNA methylation levels using the Infinium Human MethylationEPIC BeadChip array. Robust regression was carried out, adjusting for maternal age, smoking, parity, ethnicity, neonate sex, and predicted cell-type composition. Maternal GDM, fasting glucose, 1-h, and 2-h glucose concentrations following an OGTT were associated with 242, 1, 592, and 17 differentially methylated cytosine-phosphate-guanine (dmCpG) sites (false discovery rate (FDR) ≤ 0.05), respectively, in the infant's cord blood DNA. The most significantly GDM-associated CpG was cg03566881 located within the leucine-rich repeat-containing G-protein coupled receptor 6 (LGR6) (FDR = 0.0002). Moreover, we show that the GDM and 1-h glucose-associated methylation signatures in the cord blood of the infant appeared to be attenuated by the dietary and physical activity intervention during pregnancy; in the intervention arm, there were no GDM and two 1-h glucose-associated dmCpGs, whereas in the standard care arm, there were 41 GDM and 160 1-h glucose-associated dmCpGs. A total of 87% of the GDM and 77% of the 1-h glucose-associated dmCpGs had smaller effect sizes in the intervention compared to the standard care arm; the adjusted r2 for the association of LGR6 cg03566881 with GDM was 0.317 (95% confidence interval (CI) 0.012, 0.022) in the standard care and 0.240 (95% CI 0.001, 0.015) in the intervention arm. Limitations included measurement of DNA methylation in cord blood, where the functional significance of such changes are unclear, and because of the strong collinearity between treatment modality and severity of hyperglycaemia, we cannot exclude that treatment-related differences are potential confounders.Conclusions: Maternal dysglycaemia was associated with significant changes in the epigenome of the infants. Moreover, we found that the epigenetic impact of a dysglycaemic prenatal maternal environment appeared to be modified by a lifestyle intervention in pregnancy. Further research will be needed to investigate possible medical implications of the findings.Trial Registration: ISRCTN89971375.

Database: CINAHL

Dietary behaviours and weight management: A thematic analysis of pregnant women's perceptions.

Author(s): Flannery ; Mtshede, Mavis Nomsa; McHugh, Sheena; Anaba, Ann Ebere; Clifford, Emma; O'Riordan, Mairead; Kenny, Louise C.; McAuliffe, Fionnuala M.; Kearney, Patricia M.; Matvienko-Sikar, Karen

Source: Maternal & Child Nutrition; Oct 2020; vol. 16 (no. 4); p. 1-10

Publication Date: Oct 2020

Publication Type(s): Academic Journal

Available at Maternal & child nutrition - from Wiley Online Library Medicine and Nursing Collection 2019 - NHS

Available at Maternal & child nutrition - from EBSCO (MEDLINE Complete)

Abstract: Maternal obesity is associated with increased risk of gestational diabetes and other complications. Although antenatal interventions to help prevent these complications are ongoing, an understanding of overweight and obese pregnant women's opinions and attitudes is lacking. Therefore, this study aims to explore these women's experiences and perceptions of dietary behaviours and weight management during pregnancy. Secondary analysis of qualitative data originally collected to examine lifestyle behaviours in pregnant women was conducted. The data were from a purposive sample of overweight and obese pregnant women attending a public antenatal clinic in Cork, Ireland. The data were explored using thematic analysis. Interviews with 30 overweight and obese pregnant women

were analysed. Three themes were developed relating to overweight and obese women's dietary behaviours and weight management perceptions including 'pregnancy's influence on dietary behaviours', 'external influences on dietary behaviours' and 'perception of and preferences for weight related advice and resources'. Together these themes reveal women's experiences of diet and how pregnancy factors (physiological changes) and external factors (family and friends) can influence dietary behaviours. Furthermore, perceptions of weight management advice and lack thereof were highlighted with women drawing attention to potential resources for future use during pregnancy. This study provides important insights into overweight and obese pregnant women's dietary behaviours and perceptions of weight management. According to these findings, there is a need for clear and unambiguous information about weight management, acceptable weight gain, food safety and how to achieve a balanced diet.

Database: CINAHL

A Priori and a Posteriori Dietary Patterns in Women of Childbearing Age in the UK.

Author(s): Khaled ; Hundley, Vanora; Almilaji, Orouba; Koeppen, Mareike; Tsofliou, Fotini

Source: Nutrients; Oct 2020; vol. 12 (no. 10); p. 2921-2921

Publication Date: Oct 2020

Publication Type(s): Academic Journal

Available at Nutrients - from Europe PubMed Central - Open Access

Available at Nutrients - from ProQuest (Health Research Premium) - NHS Version

Abstract: Poor diet quality is a major cause of maternal obesity. We aimed to investigate a priori and a-posteriori derived dietary patterns in childbearing-aged women in UK. An online survey assessed food intake, physical activity (PA), anthropometry and socio-demographics. An a priori defined diet quality was determined via Mediterranean diet (MD) adherence score and Exploratory Factor Analysis (EFA) derived dietary patterns (DPs). Multiple linear regression explored associations between DPs with anthropometric measures, PA and socio-demographics. Participants (n = 123) had low-to-medium MD adherence (average MD-score: 4.0 (2.0)). Age was positively associated with higher MD adherence (X2 (2) = 13.14, p = 0.01). EFA revealed three DPs: 'fruits, nuts, vegetables and legumes' ("Vegetarian-style" DP); 'sweets, cereals, dairy products and potatoes' ("Dairy, sweets and starchy foods" DP); and 'eggs, seafood and meats' ("Protein-rich" DP). "Vegetarian-style" DP was positively associated with higher maternal educational level ($p < 0.01$) and PA ($p = 0.01$), but negatively with white ethnicity ($p < 0.01$). "Dairy, sweets and starchy foods" DP was positively associated with white ethnicity ($p = 0.03$) and negatively with age ($p = 0.03$). "Protein-rich" DP was positively associated with age ($p < 0.001$) and negatively with PA ($p = 0.01$). A poor diet quality was found among childbearing-aged women; notably in the younger age category, those of white ethnicity, that were more physically inactive and with a lower socioeconomic background.

Database: CINAHL

Nutritional and perinatal outcomes of pregnant women with a history of bariatric surgery: a case series from a UK centre.

Author(s): Maslin ; Douek, I.; Greenslade, B.; Shawe, J.

Source: Journal of Human Nutrition & Dietetics; Jun 2020; vol. 33 (no. 3); p. 386-395

Publication Date: Jun 2020

Publication Type(s): Academic Journal

Available at Journal of Human Nutrition & Dietetics - from Wiley Online Library

Abstract: Background: Women with obesity who become pregnant after bariatric surgery have a reduced risk of several obstetric complications; however, limited data exist from the UK population. The present study aimed to characterise a case series of women who attended a medical antenatal clinic for pregnancy following bariatric surgery. Methods: Routine clinical information was collected retrospectively from the medical notes of women who had bariatric surgery and subsequently delivered between January 2012 and November 2018. All were seen in the

medical antenatal clinic at Musgrove Park Hospital, Taunton. Results: Data were available for 46 pregnancies. Of these, 27.9% conceived in the first year after surgery. At 9 weeks of gestation, 13.3%, 28.9%, 33.3% and 24.4% were in the healthy, overweight, obese or severely obese category, respectively. Mean (SD) gestational weight gain was 11.9 (6.9) kg, with 54.1% gaining excess weight. Less than half (39.1%) of women were taking the recommended dose of 5 mg of folic acid when first seen. Some 56.1% and 64.6% had suboptimal iron or vitamin D statuses, respectively. Following advice from the clinic, a greater proportion of women took suitable micronutrient supplements. Subsequently, 93% of babies were born at full term, of whom 88% were of healthy weight. Conclusions: Despite the nutritional risks associated with bariatric surgery and the high prevalence of obesity during pregnancy, perinatal outcomes were generally positive, with low rates of infants born preterm or low birth weight. Nutritional supplementation practices and iron status improved with input from a specialist team, underlying the importance of individualised input in this population.

Database: CINAHL

Maternal Diet During Pregnancy and Blood Cadmium Concentrations in an Observational Cohort of British Women.

Author(s): Taylor ; Doerner, Rita; Northstone, Kate; Kordas, Katarzyna

Source: Nutrients; Apr 2020; vol. 12 (no. 4); p. 904-904

Publication Date: Apr 2020

Publication Type(s): Academic Journal

Available at Nutrients - from Europe PubMed Central - Open Access

Available at Nutrients - from ProQuest (Health Research Premium) - NHS Version

Abstract: Few studies have investigated the extent to which diet predicts body Cd concentrations among women of reproductive age, and pregnant women in particular. The aim of this study was to examine diet as a predictor of blood Cd concentrations in pregnant women participating in the UK Avon Longitudinal Study of Parents and Children (ALSPAC). Whole blood samples were analysed for Cd (median 0.26 (IQR 0.14–0.54) µg/L). Dietary pattern scores were derived from principal components analysis of data from a food frequency questionnaire. Associations between dietary pattern scores and foods/food groups with blood Cd ≥ median value were identified using adjusted logistic regression (n = 2169 complete cases). A health conscious dietary pattern was associated with a reduced likelihood of B-Cd ≥0.26 µg/l (OR 0.56 (95% CI 0.39–0.81)). There were similarly reduced likelihoods for all leafy green and green vegetables (0.72 (0.56–0.92) when consumed ≥4 times/week vs ≤1 to ≥3 times/week) and with all meats (0.66 (0.46–0.95) when consumed ≥4 times/week vs ≤ once in 2 weeks). Sensitivity analysis excluding smokers showed similar results. The evidence from this study provides continued support for a healthy and varied diet in pregnancy, incorporating foods from all food groups in accordance with national recommendations, without the need for specific guidance.

Database: CINAHL

Dietary Intervention in Pregnant Women with Gestational Diabetes; Protocol for the DiGest Randomised Controlled Trial.

Author(s): Kusinski ; Murphy, Helen R.; De Lucia Rolfe, Emanuella; Rennie, Kirsten L.; Oude Griep, Linda M.; Hughes, Deborah; Taylor, Roy; Meek, Claire L.

Source: Nutrients; Apr 2020; vol. 12 (no. 4); p. 1165-1165

Publication Date: Apr 2020

Publication Type(s): Academic Journal

Available at Nutrients - from Europe PubMed Central - Open Access

Available at Nutrients - from ProQuest (Health Research Premium) - NHS Version

Abstract: Gestational diabetes mellitus (GDM) annually affects 35,000 pregnancies in the United Kingdom, causing suboptimal health outcomes to the mother and child. Obesity and excessive gestational weight gain are risk factors for GDM. The Institute of Medicine recommends weight targets for women that are overweight and obese, however, there are no clear guidelines for women with GDM. Observational data suggest that modest weight loss (0.6–2 kg) after 28 weeks may reduce risk of caesarean section, large-for-gestational-age (LGA), and maternal postnatal glycaemia. This protocol for a multicentre randomised double-blind controlled trial aims to identify if a fully controlled reduced energy diet in GDM pregnancy improves infant birthweight and reduces maternal weight gain (primary outcomes). A total of 500 women with GDM (National Institute of Health and Care Excellence (NICE) 2015 criteria) and body mass index (BMI) ≥25 kg/m2 will be randomised to receive a standard (2000 kcal/day) or reduced energy (1200 kcal/day) diet box containing all meals and snacks from 28 weeks to delivery. Women and caregivers will be blinded to the allocations. Food diaries, continuous glucose monitoring, and anthropometry will measure dietary compliance, glucose levels, and weight changes. Women will receive standard antenatal GDM management (insulin/metformin) according to NICE guidelines. The secondary endpoints include caesarean section rates, LGA, and maternal postnatal glucose concentrations.

Database: CINAHL

Influence of GDM Diagnosis and Treatment on Weight Gain, Dietary Intake and Physical Activity in Pregnant Women with Obesity: Secondary Analysis of the UPBEAT Study.

Author(s): Atakora ; Poston, Lucilla; Hayes, Louise; Flynn, Angela C.; White, Sara L.

Source: Nutrients; Feb 2020; vol. 12 (no. 2); p. 359-359

Publication Date: Feb 2020

Publication Type(s): Academic Journal

Available at Nutrients - from Europe PubMed Central - Open Access

Available at Nutrients - from ProQuest (Health Research Premium) - NHS Version

Abstract: Obesity during pregnancy is associated with the development of gestational diabetes (GDM). This study aimed to assess if the result of an oral glucose tolerance test (OGTT) for GDM influences health (diet and physical activity) behaviours of pregnant women with obesity. In total, 1031 women who participated in the UK Pregnancies Better Eating and Activity Trial (UPBEAT) of a lifestyle intervention from early pregnancy were included. Changes in weight gain, dietary intake and physical activity following an OGTT undertaken between 27+0 and 28+6 weeks' and 34 and 36 weeks' gestation were examined using linear regression with appropriate adjustment for confounders. Obese women without GDM (IADPSG criteria) gained 1.9 kg (95% CI −2.2, −1.5, $p < 0.001$) more weight than women with GDM. Women with GDM demonstrated greater reductions in energy (–142kcal, 95%CI −242.2, −41.9, $p = 0.006$), carbohydrate intake (−1.5%E 95%CI –2.8, −0.3, $p = 0.016$) and glycaemic load (–15.2, 95%CI −23.6, –6.7, $p < 0.001$) and a greater increase in protein intake (2%E, 95%CI 1.3, 2.7, $p < 0.001$), compared to women without GDM. Trial intervention allocation did not influence any associations observed. The findings emphasise the need for strategies to optimise the health behaviours of pregnant women with obesity, following a negative OGTT for GDM.

Database: CINAHL

The UK Pregnancies Better Eating and Activity Trial (UPBEAT); Pregnancy Outcomes and Health Behaviours by Obesity Class.

Author(s): Peacock, Lucy; Seed, Paul T; Dalrymple, Kathryn V; White, Sara L; Poston, Lucilla; Flynn, Angela C

Source: International journal of environmental research and public health; Jun 2020; vol. 17 (no. 13)

Publication Date: Jun 2020

Publication Type(s): Research Support, Non-u.s. Gov't Journal Article

PubMedID: 32629997

Available at International journal of environmental research and public health - from Europe PubMed Central - Open Access

Available at International journal of environmental research and public health - from EBSCO (MEDLINE Complete)

Available at International journal of environmental research and public health - from ProQuest (Health Research Premium) - NHS Version

Abstract: The effectiveness of antenatal intervention in women with increasing obesity is unknown. This study investigated whether there was a differential effect of antenatal intervention on diet, physical activity and pregnancy outcomes in women stratified by obesity class using data from the UK Pregnancies Better Eating and Activity Trial (UPBEAT) (n = 1555). The stratification was by World Health Organization classifications: Class I, II and III (30-34.9 kg/m2, 35-39.9 kg/m2 and ≥40 kg/m2). Using linear and logistic regression, adjusted for confounders, outcomes were assessed post-intervention (27+0-28+6 weeks' gestation) and in late pregnancy (34+0-36+0 weeks' gestation). Interactions between obesity class and the intervention were explored. Compared to the standard care arm, class III intervention women had lower gestational weight gain (GWG) (-1.87 kg; 95% CI -3.29 to -0.47, p = 0.009), and the effect of the intervention was greater in class III compared to class I, by -2.01 kg (95% CI -3.45 to -0.57, p = 0.006). Class I and II intervention women reported significantly lower dietary glycaemic load and saturated fat intake across their pregnancy. This differential effect of the intervention suggests antenatal interventions for women with obesity should stratify outcomes by obesity severity. This would inform evidence-based antenatal strategies for high-risk groups, including women with a BMI ≥ 40 kg/m2.

Database: Medline

ONCOLOGY

Prospective study of a diabetes risk reduction diet and the risk of breast cancer.

Author(s): Kang ; Peng, Cheng; Rhee, Jinnie J; Farvid, Maryam S; Willett, Walter C; Hu, Frank B; Rosner, Bernard A; Tamimi, Rulla; Eliassen, A Heather

Source: American Journal of Clinical Nutrition; Dec 2020; vol. 112 (no. 6); p. 1492-1503

Publication Date: Dec 2020

Publication Type(s): Academic Journal

Available at The American Journal of Clinical Nutrition - from EBSCO (MEDLINE Complete)

Abstract: Background Hyperinsulinemia and higher insulin-like growth factors may increase breast cancer risk. We evaluated a diabetes risk reduction diet (DRRD) and breast cancer risk. Objectives We prospectively evaluated the association between adherence to a DRRD and the incidence of breast cancer. Methods We followed 88,739 women from the Nurses' Health Study (NHS; 1980–2016) and 93,915 women from the NHSII (1991–2017). Incident breast cancer cases (n = 11,943) were confirmed with medical records, and subtypes were determined by tissue microarray data and pathology reports. Information on diet and breast cancer risk factors was repeatedly ascertained in follow-up questionnaires. A DRRD score was derived with 9 factors: lower glycemic index of diet; lower intakes of trans fat, sugar-sweetened beverages/fruit juices, and red/processed meat; higher intakes of cereal fiber, coffee, nuts, and whole fruits; and a higher ratio of polyunsaturated to saturated fat (score range: 9–45). Multivariable-adjusted hazard ratios (MVHRs) and 95% CIs were calculated with Cox proportional hazards models. Results Being in the highest compared with the lowest DRRD adherence quintile was associated with a modestly lower breast cancer risk (MVHRQ5vsQ1: 0.89; 95% CI: 0.84, 0.95; P -trend = 0.0002); this was attenuated after adjusting for weight change since age 18 y (MVHRQ5vsQ1: 0.92; 95% CI: 0.87, 0.98; P -trend = 0.01). The inverse association was strongest among women with current BMI < 25 kg/m2 (MVHRQ5vsQ1: 0.89; 95% CI: 0.81, 0.98; P -trend = 0.004; P -interaction = 0.04). Among tumor molecular subtypes, the strongest inverse association was observed with basal-type tumors (MVHRQ5vsQ1: 0.67; 95% CI: 0.45, 1.01; P -trend = 0.04). Conclusions Greater DRRD-adherence was associated with lower breast cancer risk, likely mediated by less weight gain with a DRRD; however, independently of weight change, DRRD-adherence was modestly associated with lower breast cancer risk, particularly among lean women.

Database: CINAHL

Investigating the nutritional advice and support given to colorectal cancer survivors in the UK: is it fit for purpose and does it address their needs?

Author(s): Matsell ; Sánchez-García, M. A.; Halliday, V.; Williams, E. A.; Corfe, B. M.

Source: Journal of Human Nutrition & Dietetics; Dec 2020; vol. 33 (no. 6); p. 822-832

Publication Date: Dec 2020

Publication Type(s): Academic Journal

Available at Journal of Human Nutrition & Dietetics - from Wiley Online Library

Abstract: Background: The present study assessed the quantity and quality of nutritional advice and support given to colorectal cancer survivors in the UK. Methods: A descriptive cross-sectional survey was completed by 75 colorectal cancer survivors recruited through social media and bowel cancer support groups in the UK. The survey consisted of open-ended and closed questions that aimed to explore the nutritional needs, nutritional advice given and other sources of information accessed by colorectal cancer survivors. Results: Sixty-nine percent of respondents reported that they did not receive any nutritional advice or support from their healthcare team throughout diagnosis, treatment and post-treatment. Colorectal cancer survivors accessed nutritional advice from a variety of sources, mainly cancer charity websites. Respondents expressed their desire for individualised advice relating to their nutritional problems. Conclusions: The results obtained in the present study indicate that a high proportion of colorectal cancer patients are not receiving the nutritional support that they need to overcome nutritional difficulties. There is an urgent need to improve clinical practice to ensure colorectal patients receive nutritional advice that is both consistent between healthcare professionals and personalised throughout each stage of diagnosis, treatment and post-treatment.

Database: CINAHL

Effect of Citric Acid Cycle Genetic Variants and Their Interactions with Obesity, Physical Activity and Energy Intake on the Risk of Colorectal Cancer: Results from a Nested Case-Control Study in the UK Biobank.

Author(s): Cho ; Song, Nan; Choi, Ji-Yeob; Shin, Aesun

Source: Cancers; Oct 2020; vol. 12 (no. 10); p. 2939-2939

Publication Date: Oct 2020

Publication Type(s): Academic Journal

Available at Cancers - from Europe PubMed Central - Open Access

Abstract: Simple Summary: The citric acid cycle has a central role in the cellular energy metabolism and biosynthesis of macromolecules in the mitochondrial matrix. We identified the single nucleotide polymorphisms (SNPs) of the citrate acid cycle with colorectal cancer susceptibility in UK population. Furthermore, we found the significant interaction of SNPs in the citric acid cycle with the contributors to energy balance and SNP-SNP interactions. Our findings provide clues to the etiology in cancer development related to energy metabolism and evidence on identification of the population at high risk of colorectal cancer. Colorectal cancer is a common malignancy worldwide. Physical activity and a healthy diet contribute to energy balance and have been recommended for the prevention of colorectal cancer. We suggest that the individual differences in energy balance can be explained by genetic polymorphisms involved in mitochondria, which play a central role in energy metabolism at the cellular level. This study aimed to evaluate the association between genetic variants of the mitochondrial citric acid cycle and colorectal cancer. Study participants comprised 3523 colorectal cancer cases and 10,522 matched controls from the UK Biobank study. Odds ratios (ORs) and 95% confidence intervals (CIs) for colorectal cancer were estimated using a conditional logistic regression model. We found a significant association between the SUCLG2 gene rs35494829 and colon cancer (ORs [95% CIs] per increment of the minor allele, 0.82 [0.74–0.92]). Statistical significance was observed in the interactions of the citric acid cycle variants with obesity, energy intake, and vigorous physical activity in colorectal cancer. We also identified significant SNP-SNP interactions among citric acid cycle SNPs in colorectal cancer. The results of this study may provide evidence for bioenergetics in the development of colorectal cancer and for establishing a precise prevention strategy.

Database: CINAHL

Diet and nutrition information on nine national cancer organisation websites: A critical review.

Author(s): Barrett ; Uí Dhuibhir, Pauline; Njoroge, Catherine; Wickham, Sheelagh; Buchanan, Paul; Aktas, Aynur; Walsh, Declan

Source: European Journal of Cancer Care; Sep 2020; vol. 29 (no. 5); p. 1-22

Publication Date: Sep 2020

Publication Type(s): Academic Journal

Available at European Journal of Cancer Care - from Wiley Online Library

Abstract: Introduction: National Cancer Organisations (NCO) provide web-based diet and nutrition information for patients with all types and stages of cancer. We examined diet and nutrition information provided by nine NCO in English-speaking countries. Methods: Diet and nutrition information was examined under four headings: disease phases, treatment modalities, nutrition impact symptoms and cancer primary sites. We also examined the degree of concordance between NCO websites and appraised the readability of materials. Results: Nine NCO websites from six English-speaking countries were included: Australia, Canada, Ireland, New Zealand, the United Kingdom and the United States. All provided general healthy eating advice. Information at diagnosis and pre-treatment was inadequate, but well-addressed for survivorship. Specific treatment modalities such as biological and hormone therapy were largely ignored. Symptom management was well-addressed, with some exceptions. Cancer site-specific advice was readily available. All recommended consultation with a dietitian/healthcare professional for personalised guidance. Only one met the universal health literacy standard. Conclusions: NCO websites provided important general diet and nutrition information for cancer patients. The information was reliable and safe, but more in-depth, evidence-based and health-literate information is required. There is an urgent need for an international consensus for consistent cancer diet and nutrition advice.

Database: CINAHL

Genetic Factors, Adherence to Healthy Lifestyle Behavior, and Risk of Invasive Breast Cancer Among Women in the UK Biobank.

Author(s): Arthur ; Wang, Tao; Xue, Xiaonan; Kamensky, Victor; Rohan, Thomas E

Source: JNCI: Journal of the National Cancer Institute; Sep 2020; vol. 112 (no. 9); p. 893-901

Publication Date: Sep 2020

Publication Type(s): Academic Journal

PubMedID: NLM31899501

Abstract: Background: Breast cancer is considered to result from a combination of genetic and lifestyle-related factors, but the degree to which an overall healthy lifestyle may attenuate the impact of multiple genetic variants on invasive breast cancer risk remains equivocal.Methods: Using Cox proportional hazards regression models, we examined the association of a modified healthy lifestyle index (HLI) with risk of invasive breast cancer by genetic risk group among 146 326 women from the UK Biobank. We generated an HLI score based on a combination of diet, physical activity, smoking, alcohol consumption and anthropometry, and a polygenic risk score (PRS) using 304 breast cancer-associated genetic loci.Results: Among premenopausal and postmenopausal women, a favorable lifestyle (highest tertile) was associated with 22% and 31% reductions in invasive breast cancer risk, respectively (hazard ratio [HR]high vs low = 0.78, 95% confidence interval [CI] = 0.64 to 0.94; HRhigh vs low = 0.69, 95% CI = 0.63 to 0.77, respectively), whereas a high PRS (highest tertile) was associated with more than a doubling in the risk in both groups. For premenopausal women, the greatest risk reduction in association with the HLI was seen among those with a high PRS (HRhigh vs low = 0.73, 95% CI = 0.75 to 0.95). In postmenopausal women, those with a favorable lifestyle had 30%, 29%, and 32% reductions in risk of invasive breast cancer in the low, intermediate, and high PRS groups, respectively (HRhigh vs low = 0.70, 95% CI = 0.56 to 0.88; HRhigh vs low = 0.71, 95% CI = 0.59 to 0.84; and HRhigh vs low = 0.68, 95% CI = 0.59 to 0.78, respectively). There was an additive but not multiplicative interaction between the HLI score and PRS for postmenopausal and, to a lesser extent, premenopausal

women.Conclusion: Our findings support the view that an overall healthy lifestyle may attenuate the impact of genetic factors on invasive breast cancer risk among women of European ancestry.

Database: CINAHL

Determinants of quality of life in patients with incurable cancer.

Author(s): Daly ; Dolan, Ross D.; Power, Derek G.; Ní Bhuachalla, Éadaoin; Sim, Wei; Cushen, Samantha J.; Fallon, Marie; Simmons, Claribel; McMillan, Donald C.; Laird, Barry J.; Ryan, Aoife M.

Source: Cancer (0008543X); Jun 2020; vol. 126 (no. 12); p. 2872-2882

Publication Date: Jun 2020

Publication Type(s): Academic Journal

PubMedID: NLM32267548

Available at Cancer - from Wiley Online Library

Abstract: Background: Optimizing quality of life (QoL) remains the central tenet of care in patients with incurable cancer; however, determinants of QoL are not clear. The objective of the current study was to examine which factors influence QoL in patients with incurable cancer.Methods: A multicenter study of adult patients with advanced cancer was conducted in Ireland and the United Kingdom between 2011 and 2016. Data were collected from patients at study entry and included patient demographics, Eastern Cooperative Oncology Group performance status (ECOG-PS), nutritional parameters (the percentage weight loss [%WL]), muscle parameters assessed using computed tomography images (skeletal muscle index and skeletal muscle attenuation), inflammatory markers (modified Glasgow Prognostic score [mGPS]), and QoL data (the European Organization for Research and Treatment Quality-of-Life Questionnaire C-30). The relation between clinical, nutritional, and inflammatory parameters with QoL was assessed using the Spearman rank correlation coefficient and multivariate binary logistic regression. Components of the European Organization for Research and Treatment Quality-of-Life Questionnaire C-30 (physical function, fatigue, and appetite loss) and summary QoL scores were mean-dichotomized for the logistic regression analyses.Results: Data were available for 1027 patients (51% men; median age, 66 years). Gastrointestinal cancer was most prevalent (40%), followed by lung cancer (26%) and breast cancer (9%). Distant metastatic disease was present in 87% of patients. The %WL, ECOG-PS, and mGPS were significantly correlated with deteriorating QoL functional and symptom scales (all P 10% WL (odds ratio [OR], 2.69; 95% CI, 1.63-4.42), an ECOG-PS of 3 or 4 (OR, 14.33; 95% CI, 6.76-30.37), and an mGPS of 2 (OR, 1.58; 95% CI, 1.09-2.29) were independently associated with poorer summary QoL scores. These parameters were also independently associated with poorer physical function, fatigue, and appetite loss (all P < .05). Low skeletal muscle attenuation was independently associated with poorer physical functioning (OR, 1.67; 95% CI, 1.09-2.56), but muscle parameters were not independently associated with fatigue, appetite loss, or QoL summary scores.Conclusions: The current findings indicate that QoL is determined (at least in part) by WL, ECOG-PS, and the systemic inflammatory response in patients with advanced cancer. Identifying early predictors of poor QoL may allow the identification of patients who may benefit from early referral to palliative and supportive care, which has been shown to improve QoL.

Database: CINAHL

The associations of longitudinal changes in consumption of total and types of dairy products and markers of metabolic risk and adiposity: findings from the European Investigation into Cancer and Nutrition (EPIC)–Norfolk study, United Kingdom.

Author(s): Trichia ; Luben, Robert; Khaw, Kay-Tee; Wareham, Nicholas J; Imamura, Fumiaki; Forouhi, Nita G

Source: American Journal of Clinical Nutrition; May 2020; vol. 111 (no. 5); p. 1018-1026

Publication Date: May 2020

Publication Type(s): Academic Journal

Available at The American journal of clinical nutrition - from EBSCO (MEDLINE Complete)

Available at The American journal of clinical nutrition - from Unpaywall

Abstract: Background The consumption of some types of dairy products has been associated with lower cardiometabolic disease incidence. Knowledge remains limited about habitual dairy consumption and the pathways to cardiometabolic risk. Objective We aimed to investigate associations of habitual consumption of total and types of dairy products with markers of metabolic risk and adiposity among adults in the United Kingdom. Methods We examined associations of changes in dairy consumption (assessed with a food-frequency questionnaire) with parallel changes in cardiometabolic markers using multiple linear regression among 15,612 adults aged 40–78 y at baseline (1993–1997) and followed up over 1998–2000 (mean ± SD: 3.7±0.7 y) in the European Prospective Investigation into Cancer and Nutrition (EPIC)–Norfolk study. Results For adiposity, an increase in fermented dairy products [yogurt (total or low-fat) or low-fat cheese] consumption was associated with a lower increase in body weight and body mass index (BMI). For example, over 3.7 y, increasing yogurt consumption by 1 serving/d was associated with a smaller increase in body weight by 0.23 kg (95% CI: −0.46, −0.01 kg). An increase in full-fat milk, high-fat cheese, and total high-fat dairy was associated with greater increases in body weight and BMI [e.g., for high-fat dairy: β = 0.13 (0.05, 0.21) kg and 0.04 (0.01, 0.07) kg/m2, respectively]. For lipids, an increase in milk (total and low-fat) or yogurt consumption was positively associated with HDL cholesterol. An increase in total low-fat dairy was negatively associated with LDL cholesterol (−0.03 mmol/L; −0.05, −0.01 mmol/L), whereas high-fat dairy (total, butter, and high-fat cheese) consumption was positively associated [e.g., 0.04 (0.02, 0.06) mmol/L for total high-fat dairy]. For glycemia, increasing full-fat milk consumption was associated with a higher increase in glycated hemoglobin (P = 0.027). Conclusions The habitual consumption of different dairy subtypes may differently influence cardiometabolic risk through adiposity and lipid pathways.

Database: CINAHL

A prospective study of coffee and tea consumption and the risk of glioma in the UK Biobank.

Author(s): Creed ; Smith-Warner, Stephanie A.; Gerke, Travis A.; Egan, Kathleen M.

Source: European Journal of Cancer; Apr 2020; vol. 129 ; p. 123-131

Publication Date: Apr 2020

Publication Type(s): Academic Journal

Abstract: Coffee and tea have been hypothesised to reduce the risk of some cancers; however, their impact on glioma is less well studied. We examined associations between self-reported intake of tea and coffee in relation to glioma risk in the UK Biobank. We identified 487 incident glioma cases among 379,259 participants. Hazard ratios (HR) and 95% confidence intervals (CI) for glioma according to caffeinated beverage consumption were calculated using Cox proportional hazards regression with adjustment for age, gender, race and education; daily cups of tea or coffee were included in models considering the other beverage. Consuming 4 or more cups of tea was associated with reduced risk of glioma when compared to no tea consumption (HR = 0.69; 95% CI, 0.51–0.94). A significant inverse association was observed for glioblastoma (HR = 0.93 per 1 cup/d increment; 95% CI, 0.89–0.98) and among males for all gliomas combined (HR = 0.95 per 1 cup/d increment; 95% CI, 0.90–1.00). A suggestive inverse association was also observed with greater consumption of coffee (HR = 0.71; 95% CI, 0.49–1.05 for >4 versus 0 cups/d). Results were not materially changed with further adjustment for smoking, alcohol and body mass index. Associations were similar in 2-year and 3-year lagged analyses. In this prospective study, we found a significant inverse association between tea consumption and the risk of developing glioma, and a suggestive inverse association for the consumption of coffee. Further investigation on the possible preventive role of caffeine in glioma is warranted. • Tea and coffee consumption were studied in relation to glioma risk in the UK Biobank. • Analyses were based on 487 gliomas diagnosed on average 4 years after enrolment. • Tea consumption was significantly related to a reduced risk of glioma. • Inverse associations with tea were significant only in men and high-grade tumours. • A suggestive inverse association was also found with greater consumption of coffee.

Database: CINAHL

Appraising causal relationships of dietary, nutritional and physical-activity exposures with overall and aggressive prostate cancer: two-sample Mendelian-randomization study based on 79 148 prostate-cancer cases and 61 106 controls.

Author(s): Kazmi ; Haycock, Philip; Tsilidis, Konstantinos; Lynch, Brigid M; Truong, Therese; Consortium, The PRACTICAL; Martin, Richard M; Lewis, Sarah J

Source: International Journal of Epidemiology; Apr 2020; vol. 49 (no. 2); p. 587-596

Publication Date: Apr 2020

Publication Type(s): Academic Journal

PubMedID: NLM31802111

Available at International journal of epidemiology - from Unpaywall

Abstract: Background: Prostate cancer is the second most common male cancer worldwide, but there is substantial geographical variation, suggesting a potential role for modifiable risk factors in prostate carcinogenesis.Methods: We identified previously reported prostate cancer risk factors from the World Cancer Research Fund (WCRF)'s systematic appraisal of the global evidence (2018). We assessed whether each identified risk factor was causally associated with risk of overall (79 148 cases and 61 106 controls) or aggressive (15 167 cases and 58 308 controls) prostate cancer using Mendelian randomization (MR) based on genome-wide association-study summary statistics from the PRACTICAL and GAME-ON/ELLIPSE consortia. We assessed evidence for replication in UK Biobank (7844 prostate-cancer cases and 204 001 controls).Results: WCRF identified 57 potential risk factors, of which 22 could be instrumented for MR analyses using single nucleotide polymorphisms. For overall prostate cancer, we identified evidence compatible with causality for the following risk factors (odds ratio [OR] per standard deviation increase; 95% confidence interval): accelerometer-measured physical activity, OR = 0.49 (0.33-0.72; P = 0.0003); serum iron, OR = 0.92 (0.86-0.98; P = 0.007); body mass index (BMI), OR = 0.90 (0.84-0.97; P = 0.003); and monounsaturated fat, OR = 1.11 (1.02-1.20; P = 0.02). Findings in our replication analyses in UK Biobank were compatible with our main analyses (albeit with wide confidence intervals). In MR analysis, height was positively associated with aggressive-prostate-cancer risk: OR = 1.07 (1.01-1.15; P = 0.03).Conclusions: The results for physical activity, serum iron, BMI, monounsaturated fat and height are compatible with causality for prostate cancer. The results suggest that interventions aimed at increasing physical activity may reduce prostate-cancer risk, although interventions to change other risk factors may have negative consequences on other diseases.

Database: CINAHL

Nutrition and physical activity recommendations for cancer survivors in Scotland: Feasibility of a short course to promote behaviour change.

Author(s): Masson ; Douglas, F.; MacLure, K.

Source: Nutrition Bulletin; Mar 2020; vol. 45 (no. 1); p. 66-73

Publication Date: Mar 2020

Publication Type(s): Academic Journal

Available at Nutrition Bulletin - from Wiley Online Library

Abstract: More people are living for longer following a cancer diagnosis; however, long-term survivors are more likely to experience chronic illnesses. Improving their diet and physical activity behaviours may increase survival and reduce the risk of cancer recurrence and other non-communicable diseases. The World Cancer Research Fund and American Institute for Cancer Research recommend that cancer survivors aim to be a healthy weight and physically active; eat a diet rich in wholegrains, vegetables, fruits and beans; limit consumption of 'fast foods', red and processed meat, sugar-sweetened drinks and alcohol; and meet nutritional needs through diet alone rather than relying on supplements. Evidence suggests that cancer survivors are receptive to receiving advice and making dietary and physical activity changes, but barriers to improving the diet and being physically active need to be explored and addressed. We collaborated with CLAN Cancer Support (an independent charity) to assess the feasibility of a 2-day course designed to improve diet and physical activity in cancer survivors in Scotland. Further, it explored the barriers and facilitators that cancer survivors identify in relation to eating a healthy diet and being physically active. The

course included presentations, practical activities and group discussions. Initial analysis indicates that factors specific to this population need to be designed into the delivery of the course to enhance recruitment and promote behaviour change. Research then needs to be translated into sustainable support programmes accessible by all cancer survivors. This article describes the rationale behind the study, its design and expected outcomes.

Database: CINAHL

Diet and colorectal cancer in UK Biobank: a prospective study.

Author(s): Bradbury ; Murphy, Neil; Key, Timothy J

Source: International Journal of Epidemiology; Feb 2020; vol. 49 (no. 1); p. 246-258

Publication Date: Feb 2020

Publication Type(s): Academic Journal

PubMedID: NLM30993317

Available at International journal of epidemiology - from Unpaywall

Abstract: Background: Most of the previous studies on diet and colorectal cancer were based on diets consumed during the 1990s.Methods: We used Cox-regression models to estimate adjusted hazard ratios for colorectal cancer by dietary factors in the UK Biobank study. Men and women aged 40-69 years at recruitment (2006-10) reported their diet on a short food-frequency questionnaire (n = 475 581). Dietary intakes were re-measured in a large sub-sample (n = 175 402) who completed an online 24-hour dietary assessment during follow-up. Trends in risk across the baseline categories were calculated by assigning re-measured intakes to allow for measurement error and changes in intake over time.Results: During an average of 5.7 years of follow-up, 2609 cases of colorectal cancer occurred. Participants who reported consuming an average of 76 g/day of red and processed meat compared with 21 g/day had a 20% [95% confidence interval (CI): 4-37] higher risk of colorectal cancer. Participants in the highest fifth of intake of fibre from bread and breakfast cereals had a 14% (95% CI: 2-24) lower risk of colorectal cancer. Alcohol was associated with an 8% (95% CI: 4-12) higher risk per 10 g/day higher intake. Fish, poultry, cheese, fruit, vegetables, tea and coffee were not associated with colorectal-cancer risk.Conclusions: Consumption of red and processed meat at an average level of 76 g/d that meets the current UK government recommendation (≤90 g/day) was associated with an increased risk of colorectal cancer. Alcohol was also associated with an increased risk of colorectal cancer, whereas fibre from bread and breakfast cereals was associated with a reduced risk.

Database: CINAHL

The health behaviour status of teenage and young adult cancer patients and survivors in the United Kingdom.

Author(s): Pugh ; Hough, R.; Gravestock, H.; Fisher, A.

Source: Supportive Care in Cancer; Feb 2020; vol. 28 (no. 2); p. 767-777

Publication Date: Feb 2020

Publication Type(s): Academic Journal

PubMedID: NLM31144171

Available at Supportive care in cancer : official journal of the Multinational Association of Supportive Care in Cancer - from Unpaywall

Abstract: Purpose: The primary aim of this study was to investigate the health behaviour status of teenage and young adult (TYA) cancer patients and survivors; the secondary aim was to determine if TYA cancer patients and survivors health behaviour differs to general population controls.Methods: Two hundred sixty-seven young people with cancer (n =83 cancer patients receiving active treatment: n =174 cancer survivors, 57.1% >1 year since treatment completion) and 321 controls completed a health and lifestyle questionnaire which included validated measures of physical activity (PA) (Godin Leisure Time Exercise Questionnaire), diet (Dietary Instrument for Nutrition Education, DINE), smoking status, and alcohol consumption (AUDIT-C).Results: General population controls and cancer survivors were more likely to meet current (PA) recommendations (p <0.001) than TYA cancer patients undergoing treatment

(54.8% vs 52.3% vs 30.1%, respectively). Less than 40% of young people with cancer and controls met fat intake, sugar intake, fibre intake or current fruit and vegetable recommendations. TYA cancer survivors were more likely to report binge drinking than controls (OR=3.26, 95% CI 2.12-5.02, p <0.001). Very few young people with in the study were current smokers. The majority of TYA cancer patients and survivors reported a desire to make positive changes to their health behaviour.Conclusion: Consideration should be given to whether existing health behaviour change interventions which have demonstrated positive effects among the general TYA population could be adapted for young people with cancer.

Database: CINAHL

Diet, nutrition, and cancer risk: what do we know and what is the way forward?

Author(s): Key, Timothy J; Bradbury, Kathryn E; Perez-Cornago, Aurora; Sinha, Rashmi; Tsilidis, Konstantinos K; Tsugane, Shoichiro

Source: BMJ (Clinical research ed.); Mar 2020; vol. 368 ; p. m511

Publication Date: Mar 2020

Publication Type(s): Research Support, Non-u.s. Gov't Journal Article

PubMedID: 32139373

Available at BMJ (Clinical research ed.) - from BMJ Journals

Database: Medline

Vegetable Consumption and Progression of Prostate Cancer.

Author(s): Kerley, Conor P

Source: JAMA; Jun 2020; vol. 323 (no. 24); p. 2528-2529

Publication Date: Jun 2020

Publication Type(s): Letter Comment

PubMedID: 32573661

Available at JAMA - from EBSCO (MEDLINE Complete)

Database: Medline

Effect of a Behavioral Intervention to Increase Vegetable Consumption on Cancer Progression Among Men With Early-Stage Prostate Cancer: The MEAL Randomized Clinical Trial.

Author(s): Parsons, J Kellogg; Zahrieh, David; Mohler, James L; Paskett, Electra; Hansel, Donna E; Kibel, Adam S; Liu, Heshan; Seisler, Drew K; Natarajan, Loki; White, Martha; Hahn, Olwen; Taylor, John; Hartman, Sheri J; Stroup, Sean P; Van Veldhuizen, Peter; Hall, Lannis; Small, Eric J; Morris, Michael J; Pierce, John P; Marshall, James

Source: JAMA; Jan 2020; vol. 323 (no. 2); p. 140-148

Publication Date: Jan 2020

Publication Type(s): Research Support, Non-u.s. Gov't Research Support, N.i.h., Extramural Research Support, U.s. Gov't, Non-p.h.s. Randomized Controlled Trial Multicenter Study Journal Article

PubMedID: 31935026

Available at JAMA - from EBSCO (MEDLINE Complete)

Abstract: ImportanceGuidelines endorsing vegetable-enriched diets to improve outcomes for prostate cancer survivors are based on expert opinion, preclinical studies, and observational data.ObjectiveTo determine the effect of a behavioral intervention that increased vegetable intake on cancer progression in men with early-stage prostate cancer.Design, Setting, and ParticipantsThe Men's Eating and Living (MEAL) Study (CALGB 70807 [Alliance]) was a

randomized clinical trial conducted at 91 US urology and medical oncology clinics that enrolled 478 men aged 50 to 80 years with biopsy-proven prostate adenocarcinoma (International Society of Urological Pathology grade group = 1 in those <70 years and ≤2 in those ≥70 years), stage cT2a or less, and serum prostate-specific antigen (PSA) level less than 10 ng/mL. Enrollment occurred from January 2011 to August 2015; 24-month follow-up occurred from January 2013 to August 2017.InterventionsPatients were randomized to a counseling behavioral intervention by telephone promoting consumption of 7 or more daily vegetable servings (MEAL intervention; n = 237) or a control group, which received written information about diet and prostate cancer (n = 241).Main Outcomes and MeasuresThe primary outcome was time to progression; progression was defined as PSA level of 10 ng/mL or greater, PSA doubling time of less than 3 years, or upgrading (defined as increase in tumor volume or grade) on follow-up prostate biopsy.ResultsAmong 478 patients randomized (mean [SD] age, 64 [7] years; mean [SD] PSA level, 4.9 [2.1] ng/mL), 443 eligible patients (93%) were included in the primary analysis. There were 245 progression events (intervention: 124; control: 121). There were no significant differences in time to progression (unadjusted hazards ratio, 0.96 [95% CI, 0.75 to 1.24]; adjusted hazard ratio, 0.97 [95% CI, 0.76 to 1.25]). The 24-month Kaplan-Meier progression-free percentages were 43.5% [95% CI, 36.5% to 50.6%] and 41.4% [95% CI, 34.3% to 48.7%] for the intervention and control groups, respectively (difference, 2.1% [95% CI, -8.1% to 12.2%]).Conclusions and RelevanceAmong men with early-stage prostate cancer managed with active surveillance, a behavioral intervention that increased vegetable consumption did not significantly reduce the risk of prostate cancer progression. The findings do not support use of this intervention to decrease prostate cancer progression in this population, although the study may have been underpowered to identify a clinically important difference.Trial RegistrationClinicalTrials.gov Identifier: NCT01238172.

Database: Medline

Routine use of feeding jejunostomy in oesophageal cancer resections: results of a survey in England.

Author(s): Tham, J C; Dovell, G; Berrisford, R G; Humphreys, M L; Wheatley, T J; Sanders, G; Ariyarathenam, A V

Source: Diseases of the esophagus : official journal of the International Society for Diseases of the Esophagus; Apr 2020; vol. 33 (no. 4)

Publication Date: Apr 2020

Publication Type(s): Journal Article

PubMedID: 31608935

Abstract: Nutrition and post-operative feeding in oesophageal cancer resections for enhanced recovery remain a controversial subject. Feeding jejunostomy tubes (FJT) have been used post-operatively to address the subject but evidence to support its routine use is contentious. There is currently no data on FJT use in England for oesophageal cancer resections. Knowledge regarding current FJT usage, and rationale for its use may provide a snapshot of the trend and current standing on FJT use by resectional units in England. A standardised survey was sent electronically to all oesophageal resectional units in the United Kingdom (UK) between October 2016 and January 2018. In summary, the questionnaire probes into current FJT use, rationale for its usage, consideration of cessation of its use, and rationale of cessation of its use for units not using FJT. The resectional units were identified using the National Oesophago-Gastric Cancer Audit (NOGCA) progress report 2016 and 1 selected resectional unit from Northern Ireland, Scotland, and Wales, respectively. Performance data of those units were collected from the 2017 NOGCA report. Out of 40 units that were eligible, 32 (80.0%) centres responded. The responses show a heterogeneity of FJT use across the resectional centres. Most centres (56.3%) still place FJT routinely with 2 of 18 (11.1%) were considering stopping its routine use. FJT was considered a mandatory adjunct to chemotherapy in 3 (9.4%) centres. FJT was not routinely used in 9 (28.1%) of centres with 5 of 9 (55.6%) reported previous complications and 4 of 9 (44.4%) cited using other forms of nutrition supplementation as factors for discontinuing FJT use. There were 5 (15.6%) centres with divided practice among its consultants. Of those 2 of 5 (40.0%) were considering stopping FJT use, and hence, a total of 4 of 23 (17.4%) of units are now considering stopping routine FJT use. In conclusion, the wider practice of FJT use in the UK remains heterogenous. More research regarding the optimal post-operative feeding regimen needs to be undertaken.

Database: Medline

Adult dietary fat intake and ovarian cancer risk.

Author(s): Rice, Megan S; Poole, Elizabeth M; Willett, Walter C; Tworoger, Shelley S

Source: International journal of cancer; May 2020; vol. 146 (no. 10); p. 2756-2772

Publication Date: May 2020

Publication Type(s): Research Support, Non-u.s. Gov't Research Support, N.i.h., Extramural Journal Article

PubMedID: 31443135

Available at International journal of cancer - from Wiley Online Library

Abstract: The association of dietary fat intake with ovarian cancer risk has been inconsistent across populations. We examined dietary fat intake, overall and by type and ovarian cancer risk in two prospective cohort studies. We assessed long-term dietary fat intake among Nurses' Health Study (NHS) and NHSII participants using food frequency questionnaires administered every 2-4 years beginning in 1984 and 1991, respectively. We examined cumulative energy-adjusted intake of total fat, specific types of fat (animal, vegetable, saturated, monounsaturated, polyunsaturated and trans fat) and cholesterol. We identified 700 ovarian cancer cases in NHS and 196 in NHSII with dietary information. Cox proportional hazards regression was used to estimate associations between intake and ovarian cancer risk. Dietary fat intake changed over time in both cohorts and was lower in NHS than NHSII. Higher cumulative average intakes of animal fat and cholesterol were significantly positively associated with risk of ovarian cancer in NHS (relative risk [RR] comparing extreme quartiles = 1.57, 95% CI: 1.20, 2.06 and 1.35, 95% CI: 1.08, 1.69, respectively), but not in NHSII. Other dietary fat sources were not clearly associated with risk in either population. We did not observe clear associations between dietary fat and ovarian cancer risk in two large prospective cohort studies.

Database: Medline

Dietary Intake of Branched-Chain Amino Acids and Risk of Colorectal Cancer.

Author(s): Katagiri, Ryoko; Song, Mingyang; Zhang, Xuehong; Lee, Dong Hoon; Tabung, Fred K; Fuchs, Charles S; Meyerhardt, Jeffrey A; Nishihara, Reiko; Chan, Andrew T; Joshi, Amit D; Iwasaki, Motoki; Ogino, Shuji; Willett, Walter C; Giovannucci, Edward; Wu, Kana

Source: Cancer prevention research (Philadelphia, Pa.); Jan 2020; vol. 13 (no. 1); p. 65-72

Publication Date: Jan 2020

Publication Type(s): Research Support, Non-u.s. Gov't Research Support, N.i.h., Extramural Journal Article

PubMedID: 31699705

Available at Cancer prevention research (Philadelphia, Pa.) - from Unpaywall

Abstract: Branched-chain amino acids (BCAA) are essential amino acids, and emerging evidence suggests that BCAAs may mediate pathways related to cancer progression, possibly due to their involvement in insulin metabolism. We investigated the association between dietary intake of BCAAs with colorectal cancer risk in three prospective cohorts: the Nurses' Health Study I [(NHS), number of participants (n) at baseline = 77,017], NHS II (n = 92,984), and the Health Professionals Follow-up Study [(HPFS) n = 47,255]. Validated food frequency questionnaires were administered every 4 years and follow-up questionnaires on lifestyle biennially. Hazard ratios (HR) and 95% confidence intervals (CI) were calculated using Cox proportional hazards regression models. Pooled HRs were obtained using random effect models. After up to 28 years of follow-up, 1,660 cases were observed in NHS, 306 in NHS II, and 1,343 in HPFS. In multivariable adjusted models, we observed a weak inverse association between BCAA intake and colorectal cancer [highest vs. lowest quintile, pooled HR including all three cohorts (95% CI): 0.89 (0.80-1.00), P trend = 0.06, HR per standard deviation (SD) increment 0.95 (0.92-0.99)]. However, after including dairy calcium to the models, BCAA intake was no longer associated with risk of colorectal cancer [HR 0.96 (0.85-1.08), P trend = 0.50, HR per SD increment 0.97 (0.93-1.01)]. We did not find evidence that higher dietary BCAA intake is

associated with higher risk of colorectal cancer. As this is the first prospective study to examine the association between BCAA intake and colorectal cancer, our findings warrant investigation in other cohorts.

Database: Medline

The provision of nutritional advice and care for cancer patients: a UK national survey of healthcare professionals.

Author(s): Murphy, Jane L; Munir, Fehmidah; Davey, Fiona; Miller, Laura; Cutress, Ramsey; White, Rhys; Lloyd, Megan; Roe, Justin; Granger, Carol; Burden, Sorrel; Turner, Lesley

Source: Supportive care in cancer : official journal of the Multinational Association of Supportive Care in Cancer; Sep 2020

Publication Date: Sep 2020

Publication Type(s): Journal Article

PubMedID: 32918612

Available at Supportive care in cancer : official journal of the Multinational Association of Supportive Care in Cancer - from Unpaywall

Abstract:PURPOSEPeople living with and beyond cancer often experience nutrition-related issues and should receive appropriate advice on nutrition that is consistent and evidence based. The aim of this study was to investigate current practice for the provision of nutritional care by healthcare professionals (HCPs) from a UK national survey produced by the National Institute for Health Research (NIHR) Cancer and Nutrition Collaboration.METHODSAn online survey sent to professional groups and networks included questions on discussing nutrition, providing information, awareness of guidelines, confidence in providing nutritional advice, training and strategies for improving nutritional management.RESULTSThere were 610 HCPs who responded including nurses (31%), dietitians (25%), doctors (31%) and speech and language therapists (9%). The majority of HCPs discusses nutrition (94%) and provides information on nutrition (77%). However, only 39% of HCPs reported being aware of nutritional guidelines, and just 20% were completely confident in providing nutritional advice. Awareness of guidelines varied between the different professional groups with most but not all dietitians reporting the greatest awareness of guidelines and GPs the least (p = 0.001). Those HCPs with a greater awareness of guidelines had received training (p = 0.001) and were more likely to report complete confidence in providing nutritional advice (p = 0.001).CONCLUSIONWhilst HCPs discuss nutrition with cancer patients and may provide information, many lack an awareness of guidelines and confidence in providing nutritional advice. To ensure consistency of practice and improvements in patient care, there is scope for enhancing the provision of appropriate nutrition education and training.

Database: Medline

Post-diagnostic dietary glycemic index, glycemic load, dietary insulin index, and insulin load and breast cancer survival.

Author(s): Farvid, Maryam S; Tamimi, Rulla M; Poole, Elizabeth M; Chen, Wendy Y; Rosner, Bernard A; Willett, Walter C; Holmes, Michelle D; Eliassen, A Heather

Source: Cancer epidemiology, biomarkers & prevention : a publication of the American Association for Cancer Research, cosponsored by the American Society of Preventive Oncology; Nov 2020

Publication Date: Nov 2020

Publication Type(s): Journal Article

PubMedID: 33219162

Abstract:BACKGROUNDWe investigated the associations of post-diagnostic dietary glycemic index (GI), glycemic load (GL), insulin index (II), and insulin load (IL) with breast cancer-specific and all-cause mortality.METHODSAmong 8,932 women with stage I-III breast cancer identified in the Nurses' Health Study (NHS) (1980-2010) and NHSII (1991-2011), we prospectively evaluated the associations between post-diagnostic GI, GL, II, and IL, and breast cancer-specific and all-cause mortality. Participants completed a validated food frequency questionnaire every four years after

diagnosis.RESULTSDuring follow-up by 2014 in the NHS and 2015 in the NHSII, 2,523 deaths, including 1,071 from breast cancer were documented. Higher post-diagnostic GL was associated with higher risk of both breast cancer-specific mortality (HRQ5vsQ1=1.33, 95%CI=1.09-1.63; Ptrend=0.008) and all-cause mortality (HRQ5vsQ1=1.26, 95%CI=1.10-1.45; Ptrend=0.0006). Higher all-cause mortality was also observed with higher post-diagnostic GI (HRQ5vsQ1=1.23, 95%CI=1.08-1.40; Ptrend=0.001), II (HRQ5vsQ1=1.20, 95%CI=1.04-1.38; Ptrend=0.005), and IL (HRQ5vsQ1=1.23, 95%CI=1.07-1.42; Ptrend=0.0003). The associations were not modified by insulin receptor or estrogen receptor status of the tumor, or body mass index.CONCLUSIONWe found that higher dietary GL, reflecting postprandial glucose response, after a breast cancer diagnosis was associated with higher risk of breast cancer-specific mortality. Higher dietary GI, GL, II, and IL after a breast cancer diagnosis were associated with higher risk of death from any cause.IMPACTThese results suggest that carbohydrate quantity and quality may be important in breast cancer prognosis.

Database: Medline

Experiences of low iodine diets in the treatment of differentiated thyroid cancer with radioactive iodine ablation therapy.

Author(s): Herbert, Georgia; Searle, Aidan; England, Clare Yvonne; Ness, Andy; Beasley, Matthew; Haupt-Schott, Ingrid; Moss, Laura; Wescott, Judith; Atkinson, Charlotte

Source: Clinical nutrition ESPEN; Oct 2020; vol. 39 ; p. 190-197

Publication Date: Oct 2020

Publication Type(s): Journal Article

PubMedID: 32859315

Abstract:BACKGROUND AND AIMSInternational guidelines on the treatment of differentiated thyroid cancers (DTC) promote the use of low iodine diets (LID) prior to radioactive iodine remnant ablation (RIA), as high iodine status may interfere with radioiodine uptake. Most UK treatment centres adhere to these guidelines and advise people to consume a LID. There is limited research as to how people cope with the LID or its impact on daily life and wellbeing, and no studies have been conducted in the UK. This study explored peoples' views and experiences in relation to consuming a LID during treatment for DTC with RIA.METHODSTwenty-eight semi-structured interviews were conducted with people from across three treatment centres where differing advice had been delivered regarding a LID. Interviews were recorded, transcribed verbatim and key themes were developed through inductive thematic analyses.RESULTSIndividuals advised to consume a LID believed that adhering to the diet would help their treatment. Most restricted their diets beyond what was recommended and there was confusion surrounding what they could eat as part of the diet. Food selection and preparation were important which included substitution of foods and ingredient checking. Being on the diet was considered to have both a physical and psychological impact.CONCLUSIONSThe findings of this study provide a qualitative insight into the lived experiences of people with DTC in relation to consuming a LID. The results have relevance for professionals providing dietary guidance at oncology centres treating patients with RIA therapy in the UK.

Database: Medline

Healthy Eating and Active Lifestyle After Bowel Cancer (HEAL ABC): feasibility randomised controlled trial protocol.

Author(s): Sremanakova, Jana; Sowerbutts, Anne Marie; Todd, Chris; Cooke, Richard; Burden, Sorrel

Source: Pilot and feasibility studies; Nov 2020; vol. 6 (no. 1); p. 176

Publication Date: Nov 2020

Publication Type(s): Journal Article

PubMedID: 33292854

Available at Pilot and feasibility studies - from BioMed Central

Available at Pilot and feasibility studies - from Europe PubMed Central - Open Access

Available at Pilot and feasibility studies - from ProQuest (Health Research Premium) - NHS Version

Abstract:BACKGROUNDTargeting modifiable lifestyle factors including diet and physical activity represents a potentially cost-effective strategy that could support a growing population of colorectal cancer survivors and improve their health outcomes. Currently, effective, evidence-based interventions and resources helping people after bowel cancer to adopt new lifestyle habits are lacking. The aim of this trial is to test the Healthy Eating and Active Lifestyle After Bowel Cancer (HEAL-ABC) intervention to inform a future definitive randomised controlled trial.METHODS/DESIGNThis is a feasibility randomised controlled trial. A total of 72 survivors who have completed surgery and all anticancer treatments will be recruited. The intervention group will receive HEAL-ABC resources based on behaviour change theory combined with supportive telephone calls informed by motivational interviewing every 2 weeks during the 3-month intervention, and once a month for 6 months to follow-up. Participants in the control group will follow usual care and have access to resources available in the public domain. The study is testing feasibility of the intervention including adherence and ability to collect data on anthropometry, body composition, diet, physical activity, behaviour change, quality of life, blood markers, contact with healthcare services, morbidities and overall survival.DISCUSSIONThe proposed study will add to the evidence base by addressing an area where there is a paucity of data. This study on lifestyle interventions for people after colorectal cancer follows the Medical Research Council guidance on evaluating complex interventions in clinical practice. It focuses on people living after treatment for colorectal cancer and targets an important research area identified by cancer survivors as a research priority reported by the National Cancer Institute and James Lind Alliance UK.TRIAL REGISTRATIONClinicalTrials.gov NCT04227353 approved on the 13th of January 2020.

Database: Medline

Randomised clinical trial of a gastrointestinal care bundle to reduce symptoms in patients with pelvic cancer undergoing chemoradiotherapy.

Author(s): White, Katherine L; Henson, Caroline C; Hann, Mark; Eden, Martin; Burden, Sorrel T; Lal, Simon; Davidson, Susan E; McLaughlin, John T

Source: BMJ open gastroenterology; Aug 2020; vol. 7 (no. 1)

Publication Date: Aug 2020

Publication Type(s): Research Support, Non-u.s. Gov't Journal Article

PubMedID: 32771983

Available at BMJ open gastroenterology - from Europe PubMed Central - Open Access

Available at BMJ open gastroenterology - from ProQuest (Health Research Premium) - NHS Version

Abstract:OBJECTIVEPelvic radiotherapy is used to treat 17 000 people in the UK each year. Eight in 10 develop difficult bowel problems during pelvic treatment, especially diarrhoea, urgency and incontinence. Some cannot complete treatment, reducing the chance of cancer cure. Undertaking gastroenterologist-led investigation and management during pelvic radiotherapy has never been evaluated. In this study, we aimed to assess whether patients could successfully receive a novel gastrointestinal (GI) care bundle during chemoradiotherapy (feasibility aim) and would experience reduced symptom severity (clinical impact aim).DESIGNThis randomised controlled trial recruited patients with cervical and bladder cancers undergoing radical chemoradiotherapy. Participants were randomised to intervention or control groups. Questionnaire and anthropometric data were collected. All intervention group patients received individualised dietary counselling weekly throughout treatment, and if bowel symptoms developed they were offered rapid-access investigation and treatment for any identified pathology: lactose intolerance, bacterial overgrowth or bile acid malabsorption.RESULTSFeasibility: 50 participants were recruited, 24 were randomised to the intervention group and 26 to the control group. All completed 20 fractions of external beam pelvic radiotherapy. It was possible to perform 57/72 (79%) of proposed intervention tests with no disruption of oncological management.CLINICAL IMPACTAll participants developed GI symptoms during radiotherapy. The median symptom score for each group increased from baseline at 6 weeks. This was from 0.156 (0.000-0.333) to 0.600 (0.250-1.286) in the control group, and from 0.00 (0.000-0.300) to 0.402 (0.000-0.667) in the

intervention group.CONCLUSIONIt was feasible to recruit to and deliver a randomised controlled trial of interventions in patients undergoing pelvic chemoradiotherapy. Lower median bowel scores were reported in the intervention group at 6 weeks, with fewer patients experiencing symptoms overall.TRIAL REGISTRATION NUMBERISRCTN783488.

Database: Medline

OTHER

Perioperative nutrition: Recommendations from the ESPEN expert group.

Author(s): Lobo ; Gianotti, Luca; Adiamah, Alfred; Barazzoni, Rocco; Deutz, Nicolaas E.P.; Dhatariya, Ketan; Greenhaff, Paul L.; Hiesmayr, Michael; Hjort Jakobsen, Dorthe; Klek, Stanislaw; Krznaric, Zeljko; Ljungqvist, Olle; McMillan, Donald C.; Rollins, Katie E.; Panisic Sekeljic, Marina; Skipworth, Richard J.E.; Stanga, Zeno; Stockley, Audrey; Stockley, Ralph; Weimann, Arved

Source: Clinical Nutrition; Nov 2020; vol. 39 (no. 11); p. 3211-3227

Publication Date: Nov 2020

Publication Type(s): Academic Journal

Available at Clinical nutrition (Edinburgh, Scotland) - from Unpaywall

Abstract: Malnutrition has been recognized as a major risk factor for adverse postoperative outcomes. The ESPEN Symposium on perioperative nutrition was held in Nottingham, UK, on 14–15 October 2018 and the aims of this document were to highlight the scientific basis for the nutritional and metabolic management of surgical patients. This paper represents the opinion of experts in this multidisciplinary field and those of a patient and caregiver, based on current evidence. It highlights the current state of the art. Surgical patients may present with varying degrees of malnutrition, sarcopenia, cachexia, obesity and myosteatosis. Preoperative optimization can help improve outcomes. Perioperative fluid therapy should aim at keeping the patient in as near zero fluid and electrolyte balance as possible. Similarly, glycemic control is especially important in those patients with poorly controlled diabetes, with a stepwise increase in the risk of infectious complications and mortality per increasing HbA1c. Immobilization can induce a decline in basal energy expenditure, reduced insulin sensitivity, anabolic resistance to protein nutrition and muscle strength, all of which impair clinical outcomes. There is a role for pharmaconutrition, pre-, pro- and syn-biotics, with the evidence being stronger in those undergoing surgery for gastrointestinal cancer. Nutritional assessment of the surgical patient together with the appropriate interventions to restore the energy deficit, avoid weight loss, preserve the gut microbiome and improve functional performance are all necessary components of the nutritional, metabolic and functional conditioning of the surgical patient.

Database: CINAHL

Association between habitual coffee consumption and multiple disease outcomes: A Mendelian randomisation phenome-wide association study in the UK Biobank.

Author(s): Nicolopoulos ; Mulugeta, Anwar; Zhou, Ang; Hyppönen, Elina

Source: Clinical Nutrition; Nov 2020; vol. 39 (no. 11); p. 3467-3476

Publication Date: Nov 2020

Publication Type(s): Academic Journal

Abstract: Coffee is the most commonly consumed beverage in the world after water, however the debate as to whether coffee consumption is beneficial or detrimental to health continues. Current evidence of the link between coffee and health outcomes is predominately observational, thus subject to methodological issues such a confounding and reverse causation. This Mendelian randomisation phenome-wide association study (MR-PheWAS) used information from up to 333,214 participants of White-British ancestry in the UK Biobank to examine the causal association between genetically instrumented habitual coffee consumption and the full range of disease outcomes.

We constructed a genetic risk score for habitual coffee consumption and screened for associations with disease outcomes across 1117 case-control series. All signals under false discovery rate controlled threshold (5.8 × 10−4) were followed by Mendelian randomisation (MR) analyses, with replication in independent data sources where possible. The initial phenome-wide association analysis identified signals for 13 outcomes representing five distinct diseases. The strongest signal was seen for gout (P = 2.3 × 10−12), but there was notable pleiotropy (P distortion <0.001) and MR analyses did not support an association with habitual coffee consumption (inverse variance weighted MR OR 0.41, 95% CI 0.08 to 2.25, P = 0.31). Support for a possible causal relationship between habitual coffee consumption was only obtained for four distinct disease outcomes, including an increased odds of osteoarthrosis (OR 1.23, 95% CI 1.11 to 1.35), other arthropathies (OR 1.22, 95% CI 1.12 to 1.33) and overweight (OR 1.28, 95% CI 1.05 to 1.56), and a lower odds of postmenopausal bleeding (OR 0.72, 95% CI 0.63 to 0.82). Evidence for an association between habitual coffee consumption and these four diseases was also supported by phenotypic associations with self-reported coffee consumption. This large-scale MR-PheWAS provided little evidence for notable harm or benefit with respect to higher habitual coffee consumption. The only evidence for harm was seen with respect to osteoarthrosis, other arthropathies and obesity.

Database: CINAHL

Habitual Coffee and Tea Consumption and Cardiometabolic Biomarkers in the UK Biobank: The Role of Beverage Types and Genetic Variation.

Author(s): Cornelis ; van Dam, Rob M; van Dam, Rob M

Source: Journal of Nutrition; Oct 2020; vol. 150 (no. 10); p. 2772-2788

Publication Date: Oct 2020

Publication Type(s): Academic Journal

PubMedID: NLM32805014

Available at The Journal of nutrition - from EBSCO (MEDLINE Complete)

Abstract: Background: Mechanisms linking habitual consumption of coffee and tea to the development of type 2 diabetes and cardiovascular diseases remain unclear.Objectives: We leveraged dietary, genetic, and biomarker data collected from the UK Biobank to investigate the role of different varieties of coffee and tea in cardiometabolic health.Methods: We included data from ≤447,794 participants aged 37-73 y in 2006-2010 who provided a blood sample and completed questionnaires regarding sociodemographic factors, medical history, diet, and lifestyle. Multivariable linear regression was used to examine the association between coffee or tea consumption and blood concentrations of glycated hemoglobin, fasting glucose, total cholesterol, HDL cholesterol, LDL cholesterol, fasting triglycerides (TGs), apoA-1, apoB, lipoprotein-a, and C-reactive protein (CRP). Lifestyle and genetic factors affecting caffeine metabolism, responses, or intake were tested for interactions with beverage intake in relation to biomarker concentrations.Results: Compared with coffee nonconsumers, each additional cup of coffee was significantly associated with higher total cholesterol, HDL-cholesterol, and LDL-cholesterol concentrations and lower TG and CRP concentrations in both men and women (P-trend < 0.002). Higher consumption of espresso coffee (≥2 compared with 0 cups/d) was associated with higher LDL cholesterol in men (β: 0.110 mmol/L; 95% CI: 0.058, 0.163 mmol/L) and women (β: 0.161 mmol/L; 95% CI: 0.088, 0.234 mmol/L), whereas no substantial association was observed for instant coffee. Compared with tea nonconsumers, higher tea consumption was associated with lower total and LDL cholesterol and apoB and higher HDL cholesterol (P-trend < 0.002); these associations were similar for black and green tea. Associations were not modified by genetics.Conclusions: In the UK Biobank, consumption of certain coffee brews such as espresso had unfavorable associations with blood lipids, whereas consumption of tea had favorable associations. Findings were not modified by genetic variants affecting caffeine metabolism, suggesting a role of noncaffeine constituents of these beverages in cardiometabolic health.

Database: CINAHL

A healthy lifestyle pattern and the risk of symptomatic gallstone disease: results from 2 prospective cohort studies.

Author(s): Wirth ; Joshi, Amit D; Song, Mingyang; Lee, Dong Hoon; Tabung, Fred K; Fung, Teresa T; Chan, Andrew T; Weikert, Cornelia; Leitzmann, Michael; Willett, Walter C; Giovannucci, Edward; Wu, Kana

Source: American Journal of Clinical Nutrition; Sep 2020; vol. 112 (no. 3); p. 586-594

Publication Date: Sep 2020

Publication Type(s): Academic Journal

Abstract: Background Symptomatic gallstones cause high financial and disease burden for public health systems. The combined role of diet and other lifestyle factors has not been studied so far. Objectives We aimed to investigate the association between an a priori defined healthy lifestyle score (HLS, including healthy diet, moderate alcohol and regular coffee intakes, never smoking, physical activity, and normal weight) and the risk of symptomatic gallstone disease, and to estimate the proportion of cases potentially preventable by lifestyle modification. Methods We followed 60,768 women from the Nurses' Health Study (NHS) and 40,744 men from the Health Professionals Follow-up Study (HPFS), both ongoing prospective cohort studies, from baseline (1986) until 2012. Symptomatic gallstone disease was self-reported and validated by review of medical records. The association between the HLS and the risk of symptomatic gallstone disease was investigated using Cox proportional hazards regression. Results During 1,156,079 and 769,287 person-years of follow-up, respectively, 6946 women and 2513 men reported symptomatic gallstone disease. Comparing 6 with 0 points of the HLS, the multivariable HR of symptomatic gallstone disease was 0.26 (95% CI: 0.15, 0.45) for women, and 0.17 (95% CI: 0.07, 0.43) for men. For individual lifestyle factors, multivariable and mutually adjusted partial population attributable risks (women and men) were 33% and 23% for BMI <25 kg/m2, 10% and 18% for ≥2 cups of coffee per day, 13% and 7% for moderate alcohol intake, 8% and 11% for a high Alternate Healthy Eating Index 2010, 9% and 5% for being physically active, and 1% and 5% for never smoking. The full population attributable risk percentage for all factors combined was 62% and 74%, respectively. Conclusions Findings from these large prospective studies indicate that adopting a healthy lifestyle, especially maintaining a healthy weight, can help to prevent a considerable proportion of symptomatic gallstone diseases.

Database: CINAHL

Lower carbohydrate and higher fat intakes are associated with higher hemoglobin A1c: findings from the UK National Diet and Nutrition Survey 2008–2016.

Author(s): Churuangsuk ; Lean, Michael E.J.; Combet, Emilie

Source: European Journal of Nutrition; Sep 2020; vol. 59 (no. 6); p. 2771-2782

Publication Date: Sep 2020

Publication Type(s): Academic Journal

Available at European Journal of Nutrition - from Unpaywall

Abstract: Purpose: Evidence of low-carbohydrate, high-fat diets (LCHF) for type 2 diabetes (T2DM) prevention is scarce. We investigated how carbohydrate intake relates to HbA1c and T2DM prevalence in a nationally representative survey dataset. Methods: We analyzed dietary information (4-day food diaries) from 3234 individuals aged ≥ 16 years, in eight waves of the UK National Diet and Nutrition Survey (2008–2016). We calculated LCHF scores (0–20, higher score indicating lower %food energy from carbohydrate, with reciprocal higher contribution from fat) and UK Dietary Reference Value (DRV) scores (0–16, based on UK dietary recommendations). Associations between macronutrients and diet scores and diabetes prevalence were analyzed (in the whole sample) using multivariate logistic regression. Among those without diabetes, analyses between exposures and %HbA1c (continuous) were analyzed using multivariate linear regression. All analyses were adjusted for age, sex, body mass index, ethnicity, smoking status, total energy intake, socioeconomic status and survey years. Results: In the overall study sample, 194 (6.0%) had diabetes. Mean intake was 48.0%E for carbohydrates, and 34.9%E for total fat. Every 5%E decrease in carbohydrate, and every 5%E increase in fat, was associated with 12% (95% CI 0.78–0.99; P = 0.03) and 17% (95% CI 1.02–1.33; P = 0.02) higher odds of diabetes, respectively. Each two-point increase in LCHF score is related to 8% (95% CI 1.02–1.14; P = 0.006) higher odds of diabetes, while there was no evidence for association between DRV score and diabetes. Among the participants without diagnosed diabetes (n = 3130), every 5%E decrease in carbohydrate was associated with higher %HbA1c by + 0.016% (95% CI 0.004–0.029; P = 0.012), whereas every 5%E

increase in fat was associated with higher %HbA1c by + 0.029% (95% CI 0.015–0.043; P < 0.001). Each two-point increase in LCHF score is related to higher %HbA1c by + 0.010% (0.1 mmol/mol), while each two-point increase in the DRV score is related to lower %HbA1c by − 0.023% (0.23 mmol/mol). Conclusions: Lower carbohydrate and higher fat intakes were associated with higher HbA1c and greater odds of having diabetes. These data do not support low(er) carbohydrate diets for diabetes prevention.

Database: CINAHL

Efficacy of an intermittent energy restriction diet in a primary care setting.

Author(s): Antoni ; Johnston, K. L.; Steele, C.; Carter, D.; Robertson, M. D.; Capehorn, M. S.

Source: European Journal of Nutrition; Sep 2020; vol. 59 (no. 6); p. 2805-2812

Publication Date: Sep 2020

Publication Type(s): Academic Journal

Available at European journal of nutrition - from Unpaywall

Abstract: Purpose: Intermittent energy restriction (IER) is a popular weight loss (WL) strategy; however, its efficacy in clinical practice remains unknown. The present study compared the effects of IER compared to continuous energy restriction (CER) on WL and cardiometabolic risk factors in primary care. Methods: A (self-selected) cohort study was conducted at the Rotherham Institute for Obesity (RIO), a primary care-based weight management service. 197(24% male) obese patients volunteered to participate and selected their diet group. IER participants (n = 99) consumed ~ 2600 kJ for two days/week. CER participants (n = 98) restricted their diet by ~ 2100 kJ/day below estimated requirements. Both interventions were delivered alongside RIO standard care. Changes in anthropometry and cardiometabolic disease risk markers (fasting biochemistry and blood pressure) were assessed after a 6-month intervention period and then participants were followed up again 6 months later (month 12). Results: 27 IER patients (27%) and 39 CER patients (40%) completed the 6-month weight loss phase. Among completers, mean (SEM) WL was greater in the IER group at 6 months (5.4 ± 1.1% versus 2.8 ± 0.6%; p = 0.01), as were reductions in fat mass (p < 0.001) and improvements in systolic blood pressure (p < 0.001). Fasting insulin (p = 0.873) and diastolic blood pressure (p = 0.701) were reduced similarly in both groups. However, in the IER group, changes in anthropometry and blood pressure in the IER group had reverted to baseline by 12-month follow-up, whilst the CER group maintained weight loss but showed an increase in blood pressure. Conclusions: Among completers, IER resulted in superior short-term changes in anthropometry and some cardiometabolic risk factors. However, rates of attrition and weight regain were higher compared with standard care, providing important insights in the implementations of IER within a "real-life" NHS setting. Trial registration number: ISRCTN31465600.

Database: CINAHL

Diet-quality and its association with cardiovascular diseases and cancer incidence and all-cause mortality: a prospective cohort study from UK Biobank.

Author(s): Petermann-Rocha ; Gray, Stuart R.; Pell, Jill; Celis-Morales, Carlos

Source: Proceedings of the Nutrition Society; May 2020; vol. 79 (no. OCE2); p. 1-1

Publication Date: May 2020

Publication Type(s): Academic Journal

Available at Proceedings of the Nutrition Society - from Unpaywall

Database: CINAHL

Increased Consumption of Plant Foods is Associated with Increased Bone Mineral Density.

Author(s): Berg ; Seyedsadjadi, N.; Grant, Ross

Source: Journal of Nutrition, Health & Aging; Apr 2020; vol. 24 (no. 4); p. 388-397

Publication Date: Apr 2020

Publication Type(s): Academic Journal

Abstract: Objectives: To determine the relationship between plant food consumption and bone mineral density (BMD) in a healthy population when age, gender, BMI and physical activity are accounted for. Design: Cross-sectional study. Setting: Participants were recruited from the Sydney Adventist hospital and the University of New South Wales, Sydney, Australia. Participants: 33 males and 40 females (total n=73) participated in this study. The mean age was 56.1 ± 8.5 years. All participants were non-diabetic and in general good health. Measurements: A principle component analysis (PCA) was performed on 12 month self-report food intake data, gathered using the Cancer Council Victoria Dietary Questionnaire for Epidemiological Studies Version 2. Dual-energy X-ray absorptiometry was used to measure total BMD. Fasting plasma total protein, calcium and 25-Hydroxy Vitamin D levels were analysed by the Sydney Adventist Hospital pathology laboratory. Anthropometric measures were obtained using a standardized protocol. Self-reported physical activity levels were assessed using the International Physical Activity Questionnaire. Results: The PCA revealed three principle components. These were termed 'Meat Based', 'Junk Food' and 'Plant Based.' After controlling for age, gender, physical activity and BMI, the Plant Based component correlated positively with BMD (p=0.054, R2=0.439) and T-score (p=0.053, R2=0.221). Using a similar model no association between the Meat Based component and BMD or T-score was found. However, when the Plant Based component was included the Meat Based component correlated positively with BMD (p=0.046, R2=0.474) and T-score (p=0.046, R2=0.279). There was no significant association between the Junk Food component and BMD or T-score. People in the third Plant (927 ± 339 vs 751 ± 255 g/day, p=0.025) and Meat Based (921 ± 270 vs 676 ± 241 g/day, p=0.002) tertile had higher calcium intakes than those in the first. People in the second Plant Based tertile had higher plasma Vitamin D levels than those in the first (63.5 ± 16.8 vs. 52.3 ± 22.1 nmol/L, p=0.053) while those in the third Junk Food tertile had lower levels than those in the first (52.4 ± 18.5 vs. 65.4 ± 19.8 nmol/L, p=0.027). No association between Plant Based tertiles and protein intake was observed, however those in the third Meat Based (99.7 ± 25.1 vs. 50.9 ± 13.8 g/day, p=0.000) and Junk Food (87.4 ± 30.7 vs. 56.6 ± 22.2 g/day, p=0.000) tertile had higher protein intake compared to those in the first tertile. Conclusion: In a healthy middle aged population with normal BMD, an increase in plant food consumption, either alone or in combination with a diet containing meat, is associated with improved bone mineralisation markers. This positive relationship is most likely due to the extensive range of micronutrients and phytochemicals packaged within plants.

Database: CINAHL

A Mediterranean Diet Is Positively Associated with Bone and Muscle Health in a Non-Mediterranean Region in 25,450 Men and Women from EPIC-Norfolk.

Author(s): Jennings ; Mulligan, Angela A.; Khaw, Kay-Tee; Luben, Robert N.; Welch, Ailsa A.

Source: Nutrients; Apr 2020; vol. 12 (no. 4); p. 1154-1154

Publication Date: Apr 2020

Publication Type(s): Academic Journal

Available at Nutrients - from Europe PubMed Central - Open Access

Available at Nutrients - from ProQuest (Health Research Premium) - NHS Version

Abstract: Research on Mediterranean diet (MD) adherence and musculoskeletal health is limited. The current study determined if adherence to the alternative MD score (aMED) and MD score (MDS), quantified from 7-d food diaries, was associated with fracture incidence, bone density (calcaneal broadband ultrasound attenuation (BUA)) and fat free mass (expressed over BMI (FFMBMI) using bioelectrical impedance) in 25,450 men and women recruited to the European Prospective Investigation into Cancer study in Norfolk, UK. During 17.4 years of follow up (443,178 total person years) 2195 incident fractures occurred. Higher aMED adherence was associated with 23% reduced total (Q5–Q1 HR 0.77; 95% CI 0.67, 0.88; p-trend < 0.01) and 21% reduced hip (Q5–Q1 HR 0.79; 95% CI 0.65, 0.96; p-trend = 0.01) fracture incidence, and significantly higher BUA (Q5–Q1 1.0 dB/MHz 95% CI 0.2, 1.9; p-trend < 0.01) and FFMBMI (Q5–Q1 0.05 kg/(kg/m2) 95% CI 0.04, 0.06; p-trend < 0.01), comparing extreme adherence quintiles. Higher

MDS was also associated with reduced total fractures (Q5–Q1 HR 0.83; 95% CI 0.71, 0.96; p-trend = 0.03) and significantly higher BUA (Q5–Q1 1.4 dB/MHz 95% CI 0.5, 2.3; p-trend < 0.01) and FFMBMI (Q5–Q1 0.03 kg/(kg/m2) 95% CI 0.01, 0.04; p-trend < 0.01). This evidence supports the need to develop interventions to enhance MD adherence, particularly in women, where evidence for associations was stronger.

Database: CINAHL

Association of supplemental calcium and dairy milk intake with all-cause and cause-specific mortality in the UK Biobank: a prospective cohort study.

Author(s): Stasinopoulos ; Zhou, A.; Hyppönen, E.

Source: British Journal of Nutrition; Mar 2020; vol. 123 (no. 5); p. 574-582

Publication Date: Mar 2020

Publication Type(s): Academic Journal

Abstract: Excessive Ca intakes have been proposed to associate with vascular calcification and a higher risk of prostate cancer. We investigated the associations of supplemental and dietary Ca intake with mortality using data from 497 828 UK Biobank participants. The average follow-up was 4·2 years and 14 255 participants died, 8297 from cancer, 2959 from CVD and 572 from respiratory disease. The use of Ca supplements and milk consumption were associated with differences in mortality in younger (≤65 years) but not in older participants (>65 years, P interaction ≤ 0·04 for all comparisons). Among participants <65 years, there was an inverse association between Ca supplementation (OR 0·91, 95 % CI 0·83, 0·99) and milk consumption (OR 0·93, 95 % CI 0·86, 1·00) with respect to all-cause mortality. In the same age group, milk drinkers had lower odds of cancer mortality (OR 0·89, 95 % CI 0·80, 0·98) but Ca supplement use was associated with increased odds of respiratory mortality (OR 1·69, 95 % CI 1·16, 2·74). All associations in participants aged ≥65 years were null after full adjustment. In sensitivity analyses stratified by hormone replacement therapy, Ca supplement use was associated with decreased odds of cancer mortality in users but increased risk in other women (OR 0·81, 95 % CI 0·69, 0·94 v. OR 1·17, 95 % CI 1·01, 1·35, respectively). To conclude, we saw little evidence for harm with dietary or supplemental Ca. Further studies are required to confirm the proposed interaction with hormone replacement therapy and to exclude reverse causation as a determinant in the association between Ca supplements and increased risk of respiratory diseases.

Database: CINAHL

Association of Long-term Exposure to Elevated Lipoprotein(a) Levels With Parental Life Span, Chronic Disease–Free Survival, and Mortality Risk: A Mendelian Randomization Analysis.

Author(s): Arsenault ; Pelletier, William; Kaiser, Yannick; Perrot, Nicolas; Couture, Christian; Khaw, Kay-Tee; Wareham, Nicholas J.; Bossé, Yohan; Pibarot, Philippe; Stroes, Erik S. G.; Mathieu, Patrick; Thériault, Sébastien; Boekholdt, S. Matthijs

Source: JAMA Network Open; Feb 2020

Publication Date: Feb 2020

Publication Type(s): Academic Journal

Available at JAMA Network Open - from Unpaywall

Abstract: Key Points: Question: Is long-term exposure to elevated lipoprotein(a) levels associated with shorter life span? Findings: In this genetic association study including 139 362 participants, 2-sample mendelian randomization showed that genetically elevated lipoprotein(a) levels were associated with parental life span. Measured lipoprotein(a) levels were also associated with all-cause mortality in a population-based study. Meaning: Results of this study provide additional knowledge on the potential biological determinants of human longevity phenotypes and a rationale for trials of lipoprotein(a)-lowering therapy in individuals with high lipoprotein(a) levels. Importance: Elevated lipoprotein(a) (Lp[a]) levels are associated with atherosclerotic cardiovascular diseases. The association between high Lp(a) levels and human longevity phenotypes is, however, controversial. Objective: To examine whether genetically determined Lp(a) levels are associated with parental life span and chronic disease–free survival

(health span) and the association between Lp(a) levels and long-term, all-cause mortality risk. Design, Setting, and Participants: In this genetic association study, cross-sectional mendelian randomization (UK Biobank [2006-2010] and LifeGen Consortium) and prospective analyses (European Prospective Investigation Into Cancer and Nutrition (EPIC)-Norfolk [1993-1997, with patients followed up to 2016]) were conducted using individual-level data on 139 362 participants. The association between a weighted genetic risk score of 26 independent single-nucleotide polymorphisms at the LPA locus on parental life span using individual participant data from the UK Biobank, as well as with summary statistics of a genome-wide association study of more than 1 million life spans (UK Biobank and LifeGen), were examined. The association between these single-nucleotide polymorphisms and the age at the end of the health span was tested using summary statistics of a previous genome-wide association study in the UK Biobank. The association between Lp(a) levels and all-cause mortality in the EPIC-Norfolk study was also investigated. Data were analyzed from December 2018 to December 2019. Exposures: Genetically determined and measured Lp(a) levels. Main Outcomes and Measures: Parental life span, health span, and all-cause mortality. Results: In 139 362 white British participants (mean [SD] age, 62.8 [3.9] years; 52% women) from the UK Biobank, increases in the genetic risk score (weighted for a 50-mg/dL increase in Lp[a] levels) were inversely associated with a high parental life span (odds ratio, 0.92; 95% CI, 0.89-0.94; $P = 2.7 \times 10^{-8}$). Using the Egger-mendelian randomization method, a negative association between LPA single-nucleotide polymorphisms and parental life span (mean [SD] Egger-mendelian randomization slope, −0.0019 [0.0002]; $P = 2.22 \times 10^{-18}$) and health span (−0.0019 [0.0003]; $P = 3.00 \times 10^{-13}$) was noted. In 18 720 participants from EPIC-Norfolk (5686 cases), the mortality risk for those with Lp(a) levels equal to or above the 95th percentile was equivalent to being 1.5 years older in chronologic age (β coefficient [SE], 0.194 [0.064]). Conclusions and Relevance: The results of this study suggest a potential causal effect of absolute Lp(a) levels on human longevity as defined by parental life span, health span, and all-cause mortality. The results also provide a rationale for trials of Lp(a)-lowering therapy in individuals with high Lp(a) levels. This genetic association study uses mendelian randomization to examine the association between genetically determined lipoprotein(a) levels and the parental life span, chronic disease–free survival, and mortality risk of individuals with elevated levels.

Database: CINAHL

Unacceptable failures: the final report of the Lancet Commission into liver disease in the UK.

Author(s): Williams ; Aithal, Guruprasad; Alexander, Graeme J; Allison, Michael; Armstrong, Iain; Aspinall, Richard; Baker, Alastair; Batterham, Rachel; Brown, Katrina; Burton, Robyn; Cramp, Matthew E; Day, Natalie; Dhawan, Anil; Drummond, Colin; Ferguson, James; Foster, Graham; Gilmore, Ian; Greenberg, Jonny; Henn, Clive; Jarvis, Helen

Source: Lancet; Jan 2020; vol. 395 (no. 10219); p. 226-239

Publication Date: Jan 2020

Publication Type(s): Academic Journal

PubMedID: NLM31791690

Available at Lancet (London, England) - from ProQuest (Health Research Premium) - NHS Version

Abstract: This final report of the Lancet Commission into liver disease in the UK stresses the continuing increase in burden of liver disease from excess alcohol consumption and obesity, with high levels of hospital admissions which are worsening in deprived areas. Only with comprehensive food and alcohol strategies based on fiscal and regulatory measures (including a minimum unit price for alcohol, the alcohol duty escalator, and an extension of the sugar levy on food content) can the disease burden be curtailed. Following introduction of minimum unit pricing in Scotland, alcohol sales fell by 3%, with the greatest effect on heavy drinkers of low-cost alcohol products. We also discuss the major contribution of obesity and alcohol to the ten most common cancers as well as measures outlined by the departing Chief Medical Officer to combat rising levels of obesity-the highest of any country in the west. Mortality of severely ill patients with liver disease in district general hospitals is unacceptably high, indicating the need to develop a masterplan for improving hospital care. We propose a plan based around specialist hospital centres that are linked to district general hospitals by operational delivery networks. This plan has received strong backing from the British Association for Study of the Liver and British Society of Gastroenterology, but is held up at NHS England. The value of so-called day-case care bundles to reduce high hospital readmission rates with greater care in the community is described, along with examples of locally derived schemes for the early detection of disease and, in

particular, schemes to allow general practitioners to refer patients directly for elastography assessment. New funding arrangements for general practitioners will be required if these proposals are to be taken up more widely around the country. Understanding of the harm to health from lifestyle causes among the general population is low, with a poor knowledge of alcohol consumption and dietary guidelines. The Lancet Commission has serious doubts about whether the initiatives described in the Prevention Green Paper, with the onus placed on the individual based on the use of information technology and the latest in behavioural science, will be effective. We call for greater coordination between official and non-official bodies that have highlighted the unacceptable disease burden from liver disease in England in order to present a single, strong voice to the higher echelons of government.

Database: CINAHL

Healthy lifestyle and life expectancy free of cancer, cardiovascular disease, and type 2 diabetes: prospective cohort study.

Author(s): Li, Yanping; Schoufour, Josje; Wang, Dong D; Dhana, Klodian; Pan, An; Liu, Xiaoran; Song, Mingyang; Liu, Gang; Shin, Hyun Joon; Sun, Qi; Al-Shaar, Laila; Wang, Molin; Rimm, Eric B; Hertzmark, Ellen; Stampfer, Meir J; Willett, Walter C; Franco, Oscar H; Hu, Frank B

Source: BMJ (Clinical research ed.); Jan 2020; vol. 368 ; p. l6669

Publication Date: Jan 2020

Publication Type(s): Research Support, N.i.h., Extramural Journal Article

PubMedID: 31915124

Available at BMJ (Clinical research ed.) - from BMJ Journals

Abstract:OBJECTIVETo examine how a healthy lifestyle is related to life expectancy that is free from major chronic diseases.DESIGNProspective cohort study.SETTING AND PARTICIPANTSThe Nurses' Health Study (1980-2014; n=73 196) and the Health Professionals Follow-Up Study (1986-2014; n=38 366).MAIN EXPOSURESFive low risk lifestyle factors: never smoking, body mass index 18.5-24.9, moderate to vigorous physical activity (≥30 minutes/day), moderate alcohol intake (women: 5-15 g/day; men 5-30 g/day), and a higher diet quality score (upper 40%).MAIN OUTCOMELife expectancy free of diabetes, cardiovascular diseases, and cancer.RESULTSThe life expectancy free of diabetes, cardiovascular diseases, and cancer at age 50 was 23.7 years (95% confidence interval 22.6 to 24.7) for women who adopted no low risk lifestyle factors, in contrast to 34.4 years (33.1 to 35.5) for women who adopted four or five low risk factors. At age 50, the life expectancy free of any of these chronic diseases was 23.5 (22.3 to 24.7) years among men who adopted no low risk lifestyle factors and 31.1 (29.5 to 32.5) years in men who adopted four or five low risk lifestyle factors. For current male smokers who smoked heavily (≥15 cigarettes/day) or obese men and women (body mass index ≥30), their disease-free life expectancies accounted for the lowest proportion (≤75%) of total life expectancy at age 50.CONCLUSIONAdherence to a healthy lifestyle at mid-life is associated with a longer life expectancy free of major chronic diseases.

Database: Medline

Dietary intake of total, animal, and plant proteins and risk of all cause, cardiovascular, and cancer mortality: systematic review and dose-response meta-analysis of prospective cohort studies.

Author(s): Naghshi, Sina; Sadeghi, Omid; Willett, Walter C; Esmaillzadeh, Ahmad

Source: BMJ (Clinical research ed.); Jul 2020; vol. 370 ; p. m2412

Publication Date: Jul 2020

Publication Type(s): Research Support, Non-u.s. Gov't Meta-analysis Journal Article Systematic Review

PubMedID: 32699048

Available at BMJ (Clinical research ed.) - from BMJ Journals

Abstract:OBJECTIVETo examine and quantify the potential dose-response relation between intake of total, animal, and plant protein and the risk of mortality from all causes, cardiovascular disease, and cancer.DESIGNSystematic

review and meta-analysis of prospective cohort studies.DATA SOURCESPubMed, Scopus, and ISI Web of Science until December 2019, and references of retrieved relevant articles.STUDY SELECTIONProspective cohort studies that reported the risk estimates for all cause, cardiovascular, and cancer mortality in adults aged 18 or older.DATA SYNTHESISRandom effects models were used to calculate pooled effect sizes and 95% confidence intervals for the highest versus lowest categories of protein intake and to incorporate variation between studies. Linear and non-linear dose-response analyses were done to evaluate the dose-response relations between protein intake and mortality.RESULTS32 prospective cohort studies were included in the systematic review and 31 in the meta-analysis. During the follow-up period of 3.5 to 32 years, 113 039 deaths (16 429 from cardiovascular disease and 22 303 from cancer) occurred among 715 128 participants. Intake of total protein was associated with a lower risk of all cause mortality (pooled effect size 0.94, 95% confidence interval 0.89 to 0.99, I2=58.4%, P<0.001). Intake of plant protein was significantly associated with a lower risk of all cause mortality (pooled effect size 0.92, 95% confidence interval 0.87 to 0.97, I2=57.5%, P=0.003) and cardiovascular disease mortality (pooled hazard ratio 0.88, 95% confidence interval 0.80 to 0.96, I2=63.7%, P=0.001), but not with cancer mortality. Intake of total and animal protein was not significantly associated with risk of cardiovascular disease and cancer mortality. A dose-response analysis showed a significant inverse dose-response association between intake of plant protein and all cause mortality (P=0.05 for non-linearity). An additional 3% energy from plant proteins a day was associated with a 5% lower risk of death from all causes.CONCLUSIONSHigher intake of total protein was associated with a lower risk of all cause mortality, and intake of plant protein was associated with a lower risk of all cause and cardiovascular disease mortality. Replacement of foods high in animal protein with plant protein sources could be associated with longevity.

Database: Medline

Double-duty actions: seizing programme and policy opportunities to address malnutrition in all its forms.

Author(s): Hawkes, Corinna; Ruel, Marie T; Salm, Leah; Sinclair, Bryony; Branca, Francesco

Source: Lancet (London, England); Jan 2020; vol. 395 (no. 10218); p. 142-155

Publication Date: Jan 2020

Publication Type(s): Research Support, Non-u.s. Gov't Journal Article Review

PubMedID: 31852603

Available at Lancet (London, England) - from ProQuest (Health Research Premium) - NHS Version

Abstract: Actions to address different forms of malnutrition are typically managed by separate communities, policies, programmes, governance structures, and funding streams. By contrast, double-duty actions, which aim to simultaneously tackle both undernutrition and problems of overweight, obesity, and diet-related non-communicable diseases (DR-NCDs) have been proposed as a way to effectively address malnutrition in all its forms in a more holisitic way. This Series paper identifies ten double-duty actions that have strong potential to reduce the risk of both undernutrition, obesity, and DR-NCDs. It does so by summarising evidence on common drivers of different forms of malnutrition; documenting examples of unintended harm caused by some undernutrition-focused programmes on obesity and DR-NCDs; and highlighting examples of double-duty actions to tackle multiple forms of malnutrition. We find that undernutrition, obesity, and DR-NCDs are intrinsically linked through early-life nutrition, diet diversity, food environments, and socioeconomic factors. Some evidence shows that programmes focused on undernutrition have raised risks of poor quality diets, obesity, and DR-NCDs, especially in countries undergoing a rapid nutrition transition. This Series paper builds on this evidence to develop a framework to guide the design of double-duty approaches and strategies, and defines the first steps needed to deliver them. With a clear package of double-duty actions now identified, there is an urgent need to move forward with double-duty actions to address malnutrition in all its forms.

Database: Medline

The double burden of malnutrition: aetiological pathways and consequences for health.

Author(s): Wells, Jonathan C; Sawaya, Ana Lydia; Wibaek, Rasmus; Mwangome, Martha; Poullas, Marios S; Yajnik, Chittaranjan S; Demaio, Alessandro

Source: Lancet (London, England); Jan 2020; vol. 395 (no. 10217); p. 75-88

Publication Date: Jan 2020

Publication Type(s): Research Support, Non-u.s. Gov't Journal Article Review

PubMedID: 31852605

Available at Lancet (London, England) - from ProQuest (Health Research Premium) - NHS Version

Abstract: Malnutrition has historically been researched and addressed within two distinct silos, focusing either on undernutrition, food insecurity, and micronutrient deficiencies, or on overweight, obesity, and dietary excess. However, through rapid global nutrition transition, an increasing proportion of individuals are exposed to different forms of malnutrition during the life course and have the double burden of malnutrition (DBM) directly. Long-lasting effects of malnutrition in early life can be attributed to interconnected biological pathways, involving imbalance of the gut microbiome, inflammation, metabolic dysregulation, and impaired insulin signalling. Life-course exposure to early undernutrition followed by later overweight increases the risk of non-communicable disease, by imposing a high metabolic load on a depleted capacity for homoeostasis, and in women increases the risk of childbirth complications. These life-course trajectories are shaped both by societal driving factors-ie, rapidly changing diets, norms of eating, and physical activity patterns-and by broader ecological factors such as pathogen burden and extrinsic mortality risk. Mitigation of the DBM will require major societal shifts regarding nutrition and public health, to implement comprehensive change that is sustained over decades, and scaled up into the entire global food system.

Database: Medline

Management of hypertriglyceridemia.

Author(s): Simha, Vinaya

Source: BMJ (Clinical research ed.); Oct 2020; vol. 371 ; p. m3109

Publication Date: Oct 2020

Publication Type(s): Journal Article Review

PubMedID: 33046451

Available at BMJ (Clinical research ed.) - from BMJ Journals

Abstract: Hypertriglyceridemia is one of the most common lipid abnormalities encountered in clinical practice. Many monogenic disorders causing severe hypertriglyceridemia have been identified, but in most patients triglyceride elevations result from a combination of multiple genetic variations with small effects and environmental factors. Common secondary causes include obesity, uncontrolled diabetes, alcohol misuse, and various commonly used drugs. Correcting these factors and optimizing lifestyle choices, including dietary modification, is important before starting drug treatment. The goal of drug treatment is to reduce the risk of pancreatitis in patients with severe hypertriglyceridemia and cardiovascular disease in those with moderate hypertriglyceridemia. This review discusses the various genetic and acquired causes of hypertriglyceridemia, as well as current management strategies. Evidence supporting the different drug and non-drug approaches to treating hypertriglyceridemia is examined, and an easy to adopt step-by-step management strategy is presented.

Database: Medline

Dynamics of the double burden of malnutrition and the changing nutrition reality.

Author(s): Popkin, Barry M; Corvalan, Camila; Grummer-Strawn, Laurence M

Source: Lancet (London, England); Jan 2020; vol. 395 (no. 10217); p. 65-74

Publication Date: Jan 2020

Publication Type(s): Research Support, Non-u.s. Gov't Research Support, N.i.h., Extramural Journal Article Review

PubMedID: 31852602

Available at Lancet (London, England) - from ProQuest (Health Research Premium) - NHS Version

Abstract: The double burden of malnutrition (DBM), defined as the simultaneous manifestation of both undernutrition and overweight and obesity, affects most low-income and middle-income countries (LMICs). This Series paper describes the dynamics of the DBM in LMICs and how it differs by socioeconomic level. This Series paper shows that the DBM has increased in the poorest LMICs, mainly due to overweight and obesity increases. Indonesia is the largest country with a severe DBM, but many other Asian and sub-Saharan African countries also face this problem. We also discuss that overweight increases are mainly due to very rapid changes in the food system, particularly the availability of cheap ultra-processed food and beverages in LMICs, and major reductions in physical activity at work, transportation, home, and even leisure due to introductions of activity-saving technologies. Understanding that the lowest income LMICs face severe levels of the DBM and that the major direct cause is rapid increases in overweight allows identifying selected crucial drivers and possible options for addressing the DBM at all levels.

Database: Medline

Nonalcoholic Steatohepatitis: A Review.

Author(s): Sheka, Adam C; Adeyi, Oyedele; Thompson, Julie; Hameed, Bilal; Crawford, Peter A; Ikramuddin, Sayeed

Source: JAMA; Mar 2020; vol. 323 (no. 12); p. 1175-1183

Publication Date: Mar 2020

Publication Type(s): Research Support, N.i.h., Extramural Journal Article Review

PubMedID: 32207804

Available at JAMA - from EBSCO (MEDLINE Complete)

Abstract: ImportanceNonalcoholic steatohepatitis (NASH) is the inflammatory subtype of nonalcoholic fatty liver disease (NAFLD) and is associated with disease progression, development of cirrhosis, and need for liver transplant. Despite its importance, NASH is underrecognized in clinical practice.ObservationsNASH affects an estimated 3% to 6% of the US population and the prevalence is increasing. NASH is strongly associated with obesity, dyslipidemia, type 2 diabetes, and metabolic syndrome. Although a number of noninvasive tests and scoring systems exist to characterize NAFLD and NASH, liver biopsy is the only accepted method for diagnosis of NASH. Currently, no NASH-specific therapies are approved by the US Food and Drug Administration. Lifestyle modification is the mainstay of treatment, including dietary changes and exercise, with the primary goal being weight loss. Substantial improvement in histologic outcomes, including fibrosis, is directly correlated with increasing weight loss. In some cases, bariatric surgery may be indicated to achieve and maintain the necessary degree of weight loss required for therapeutic effect. An estimated 20% of patients with NASH will develop cirrhosis, and NASH is predicted to become the leading indication for liver transplants in the US. The mortality rate among patients with NASH is substantially higher than the general population or patients without this inflammatory subtype of NAFLD, with annual all-cause mortality rate of 25.56 per 1000 person-years and a liver-specific mortality rate of 11.77 per 1000 person-years.Conclusions and RelevanceNonalcoholic steatohepatitis affects 3% to 6% of the US population, is more prevalent in patients with metabolic disease and obesity, progresses to cirrhosis in approximately 20% of cases, and is associated with increased rates of liver-specific and overall mortality. Early identification and targeted treatment of patients with nonalcoholic steatohepatitis are needed to improve patient outcomes, including directing patients toward intensive lifestyle modification to promote weight loss and referral for bariatric surgery as indicated for management of obesity and metabolic disease.

Database: Medline

Oral nitrate supplementation to enhance pulmonary rehabilitation in COPD: ON-EPIC a multicentre, double-blind, placebo-controlled, randomised parallel group study.

Author(s): Pavitt, Matthew J; Tanner, Rebecca Jayne; Lewis, Adam; Buttery, Sara; Mehta, Bhavin; Jefford, Helen; Curtis, Katrina J; Banya, Winston A S; Husain, Syed; Satkunam, Karnan; Shrikrishna, Dinesh; Man, William; Polkey, Michael I; Hopkinson, Nicholas S

Source: Thorax; Jul 2020; vol. 75 (no. 7); p. 547-555

Publication Date: Jul 2020

Publication Type(s): Research Support, Non-u.s. Gov't Randomized Controlled Trial Multicenter Study Journal Article

PubMedID: 32376732

Available at Thorax - from BMJ Journals

Abstract:RATIONALEDietary nitrate supplementation has been proposed as a strategy to improve exercise performance, both in healthy individuals and in people with COPD. We aimed to assess whether it could enhance the effect of pulmonary rehabilitation (PR) in COPD.METHODSThis double-blind, placebo-controlled, parallel group, randomised controlled study performed at four UK centres, enrolled adults with Global Initiative for Chronic Obstructive Lung Disease grade II-IV COPD and Medical Research Council dyspnoea score 3-5 or functional limitation to undertake a twice weekly 8-week PR programme. They were randomly assigned (1:1) to either 140 mL of nitrate-rich beetroot juice (BRJ) (12.9 mmol nitrate), or placebo nitrate-deplete BRJ, consumed 3 hours prior to undertaking each PR session. Allocation used computer-generated block randomisation.MEASUREMENTSThe primary outcome was change in incremental shuttle walk test (ISWT) distance. Secondary outcomes included quality of life, physical activity level, endothelial function via flow-mediated dilatation, fat-free mass index and blood pressure parameters.RESULTS165 participants were recruited, 78 randomised to nitrate-rich BRJ and 87 randomised to placebo. Exercise capacity increased more with active treatment (n=57) than placebo (n=65); median (IQR) change in ISWT distance +60 m (10, 85) vs +30 m (0, 70), estimated treatment effect 30 m (95% CI 10 to 40); p=0.027. Active treatment also impacted on systolic blood pressure: treatment group -5.0 mm Hg (-5.0, -3.0) versus control +6.0 mm Hg (-1.0, 15.5), estimated treatment effect -7 mm Hg (95% CI 7 to -20) (p<0.0005). No significant serious adverse events or side effects were reported.CONCLUSIONSDietary nitrate supplementation appears to be a well-tolerated and effective strategy to augment the benefits of PR in COPD.TRIAL REGISTRATION NUMBERISRCTN27860457.

Database: Medline

PAEDIATRICS

Early Gluten Introduction and Celiac Disease in the EAT Study: A Prespecified Analysis of the EAT Randomized Clinical Trial.

Author(s): Logan ; Perkin, Michael R.; Marrs, Tom; Radulovic, Suzana; Craven, Joanna; Flohr, Carsten; Bahnson, Henry T.; Lack, Gideon

Source: JAMA Pediatrics; Nov 2020; vol. 174 (no. 11); p. 1041-1047

Publication Date: Nov 2020

Publication Type(s): Academic Journal

Available at JAMA Pediatrics - from EBSCO (MEDLINE Complete)

Abstract: Key Points: Question: Is early introduction of gluten associated with a reduced prevalence of celiac disease at age 3 years? Findings: In this prespecified analysis of a randomized clinical trial, the mean quantities of gluten consumed in an early introduction group between age 4 and 6 months was 2.66 g/wk and 0.49 g/wk in a standard introduction group that did not receive gluten until at least age 6 months. Significantly more children in the standard introduction group had a diagnosis of celiac disease confirmed than in the early introduction group (1.4% vs 0%). Meaning: The findings of this trial indicate that early consumption of high-dose gluten should be considered as a strategy to prevent celiac disease in future research. Importance: There are no strategies for the prevention of celiac disease (CD). Current guidelines stating that the age at gluten introduction does not affect the prevalence of CD are based on the results from several randomized clinical trials, but the doses of gluten and timing of its introduction varied. Objective: To determine whether early introduction of high-dose gluten lowers the prevalence of CD at age 3

years. Design, Setting, and Participants: The Enquiring About Tolerance (EAT) Study was an open-label randomized clinical trial. A total of 1303 children from the general population in England and Wales were recruited and followed up from November 2, 2009, to July 30, 2012. For the present study, samples were collected from November 1, 2012, to March 31, 2015, and data were analyzed from April 25, 2017, to September 17, 2018. Interventions: Infants were randomized to consume 6 allergenic foods (peanut, sesame, hen's egg, cow's milk, cod fish, and wheat) in addition to breast milk from age 4 months (early introduction group [EIG]) or to avoid allergenic foods and follow UK infant feeding recommendations of exclusive breastfeeding until approximately age 6 months (standard introduction group [SIG]). Main Outcomes and Measures: Evaluation of CD was an a priori secondary end point of the EAT Study, and at age 3 years, all children with available serum samples were tested for antitransglutaminase type 2 antibodies. Children with antibody levels greater than 20 IU/L were referred to independent gastroenterologists for further investigation. Results: Of the 1004 infants included in the analysis, 514 were male (51.2%). The mean (SD) quantity of gluten consumed between ages 4 and 6 months was 0.49 (1.40) g/wk in the SIG and 2.66 (1.85) g/wk in the EIG (P <.001). Mean (SD) weekly gluten consumption ranged from 0.08 (1.00) g/wk at age 4 months to 0.9 (2.05) g/wk at age 6 months in the SIG vs 1.3 (1.54) g/wk at age 4 months to 4.03 (2.40) g/wk at age 6 months in the EIG. Seven of 516 children from the SIG (1.4%) had a diagnosis of CD confirmed vs none of the 488 children in the EIG (P =.02, risk difference between the groups using the bootstrap, 1.4%; 95% CI, 0.6%-2.6%). Conclusions and Relevance: In this analysis of infants in the EAT Study, the introduction of gluten from age 4 months was associated with reduced CD prevalence. These results suggest that early high-dose consumption of gluten should be considered as a strategy to prevent CD in future studies. Trial Registration: isrctn.org Identifier: ISRCTN14254740 This prespecified analysis of a randomized clinical trial compares the development of celiac disease in infants with gluten introduced to their diet before vs after age 6 months.

Database: CINAHL

Long-Chain Polyunsaturated Fatty Acids and Lipid Peroxidation Products in Donor Human Milk in the United Kingdom: Results From the LIMIT 2-Centre Cross-Sectional Study.

Author(s): Nessel ; De Rooy, Laura; Khashu, Minesh; Murphy, Jane L.; Dyall, Simon C.

Source: JPEN Journal of Parenteral & Enteral Nutrition; Nov 2020; vol. 44 (no. 8); p. 1501-1509

Publication Date: Nov 2020

Publication Type(s): Academic Journal

Abstract: Background: Donor human milk (DHM) is used as alternative to maternal milk to feed preterm infants; however, it may provide less long-chain (LC) polyunsaturated fatty acids (PUFAs) and more oxidized lipids, which may be detrimental to preterm infant health and development. Levels have not been reported for DHM in the United Kingdom. Methods: DHM (n = 19) from 2 neonatal units, preterm milk from a neonatal unit (n = 10), and term milk from the community (n = 11) were analyzed for fatty acids, malondialdehyde, 4-hydroxy-2-nonenal, and hexanal. Study registration: NCT03573531. Results: DHM had significantly lower absolute LCPUFA content than term (P <.001) and significantly lower ω-3 PUFAs than preterm milk (P <.05), although relative LCPUFA composition did not differ. Exclusive DHM feeding leads to significantly lower fat (3.7 vs 6.7 g/d) and LCPUFA (docosahexaenoic acid [DHA]: 10.6 vs 16.8 mg/d; arachidonic acid [ARA]: 17.4 vs 25.2 mg/d) intake than recommended by the European Society for Pediatric Gastroenterology, Hepatology and Nutrition, and provides 17.3% and 43.1% of the in utero accreted ARA and DHA. DHM had the highest proportion of lipid peroxidation. Conclusions: This study confirms that DHM in the United Kingdom has insufficient LCPUFAs for preterm infants. It demonstrates for the first time that DHM has the highest level of lipid peroxidation, compared with preterm or term milk. This has important implications for preterm infant nutrition, as exclusive DHM feeding might not be suitable long term and may contribute to the development of major preterm neonatal morbidities.

Database: CINAHL

Factors Impacting on Eating in Pediatric Intestinal-Transplant Recipients: A Mixed-Methods Study.

Author(s): Mancell ; Meyer, Rosan; Hind, Jonathan; Halter, Mary

Source: Nutrition in Clinical Practice; Oct 2020; vol. 35 (no. 5); p. 919-926

Publication Date: Oct 2020

Publication Type(s): Academic Journal

Available at Nutrition in clinical practice : official publication of the American Society for Parenteral and Enteral Nutrition - from Unpaywall

Abstract: Background: No empirical data are found examining why eating may be difficult for some children and not others following intestinal transplant. This study aimed to describe the eating behaviors and nutrition intake of intestinal-transplant–recipient children and examine factors that may impact on their eating. Methods: Caregivers of all (n = 34) intestinal-transplant recipients <18 years of age in the United Kingdom were invited to participate in this mixed-methods study comprising questionnaires, a 3-day food diary and interviews. Questionnaires included the Children's Eating Behaviour Questionnaire and demographic/nutrition-related items. Analysis was by descriptive statistics using SPSS. Semistructured telephone interviews explored caregiver perceptions of their child's eating. Analysis was thematic. Results: Nine caregivers were recruited and completed the questionnaire and food diary. Eight of these were interviewed. Home tube feeding was required by 77% (n = 7) of children post transplant, 56% (n = 5) were "food avoidant", and median energy intake was 93% (range, 61%–137%) of requirements. The findings revealed complex, interrelated positive and negative medical, caregiver, and child-related influences on eating. Learning to eat at the recommended age and having positive and significant pretransplant eating experiences appeared protective, whereas receiving nothing by mouth and having aversive experiences were barriers. Conclusion: This study provides the first empirical evidence of factors that may influence eating after intestinal transplant in children. The findings suggest promoting eating pretransplant, when the negative physical consequences can be managed, may be protective, and there may be eating-difficulty predictors that could be used to facilitate targeted interventions.

Database: CINAHL

Ketogenic diet therapy in infants with epilepsy.

Author(s): Schoeler ; Cross, J. Helen

Source: Paediatrics & Child Health; Oct 2020; vol. 30 (no. 10); p. 356-360

Publication Date: Oct 2020

Publication Type(s): Academic Journal

Abstract: Approximately 25% of children with epilepsy are drug-resistant. Lack of seizure control in infants impacts developmental outcome and places a large burden on NHS services, but there are few data to guide optimal treatment in infants with drug-resistant epilepsy. Ketogenic diet therapy is an effective non-pharmacological treatment option for individuals with drug-resistant epilepsy and reports of its use in infants have increased over the last decade. This article gives an overview of use of ketogenic diet therapy in infants with epilepsy, including a history of dietary treatment, evidence for efficacy in infants, patient selection and clinical and dietetic management.

Database: CINAHL

Dietary calcium intake does not meet the nutritional requirements of children with chronic kidney disease and on dialysis.

Author(s): McAlister ; Silva, Selmy; Shaw, Vanessa; Shroff, Rukshana

Source: Pediatric Nephrology; Oct 2020; vol. 35 (no. 10); p. 1915-1923

Publication Date: Oct 2020

Publication Type(s): Academic Journal

Available at Pediatric nephrology (Berlin, Germany) - from Unpaywall

Abstract: Background: Adequate calcium (Ca) intake is required for bone mineralization in children. We assessed Ca intake from diet and medications in children with CKD stages 4–5 and on dialysis (CKD4–5D) and age-matched controls, comparing with the UK Reference Nutrient Intake (RNI) and international recommendations. Methods: Three-day prospective diet diaries were recorded in 23 children with CKD4–5, 23 with CKD5D, and 27 controls. Doses of phosphate (P) binders and Ca supplements were recorded. Results: Median dietary Ca intake in CKD4–5D was 480 (interquartile range (IQR) 300–621) vs 724 (IQR 575–852) mg/day in controls (p = 0.00002), providing 81% vs 108% RNI (p = 0.002). Seventy-six percent of patients received < 100% RNI. In CKD4–5D, 40% dietary Ca was provided from dairy foods vs 56% in controls. Eighty percent of CKD4–5D children were prescribed Ca-based P-binders, 15% Ca supplements, and 9% both medications, increasing median daily Ca intake to 1145 (IQR 665–1649) mg/day; 177% RNI. Considering the total daily Ca intake from diet and medications, 15% received 200% RNI. Three children (6%) exceeded the National Kidney Foundation Kidney Disease Outcomes Quality Initiative (KDOQI) upper limit of 2500 mg/day. None with a total Ca intake 2 × RNI was hypercalcemic. Conclusions: Seventy-six percent of children with CKD4–5D had a dietary Ca intake < 100% RNI. Restriction of dairy foods as part of a P-controlled diet limits Ca intake. Additional Ca from medications is required to meet the KDOQI guideline of 100–200% normal recommended Ca intake.

Database: CINAHL

Health professionals' perspectives on delivering home and hospital management at diagnosis for children with type 1 diabetes: A qualitative study from the Delivering Early Care in Diabetes Evaluation trial.

Author(s): Townson ; Lowes, Lesley; Robling, Michael; Hood, Kerry; Gregory, John W.

Source: Pediatric Diabetes; Aug 2020; vol. 21 (no. 5); p. 824-831

Publication Date: Aug 2020

Publication Type(s): Academic Journal

Available at Pediatric diabetes - from Wiley Online Library

Abstract: Objective: To explore the delivery of home and hospital management at diagnosis of type 1 diabetes in childhood and any impact this had on health professionals delivering care. Methods: This qualitative study was undertaken as part of the Delivering Early Care in Diabetes Evaluation randomized controlled trial where participants were individually randomized to receive initiation of management at diagnosis, to home or hospital. Semi-structured telephone interviews were planned with a purposive sample of health professionals involved with the delivery of home and hospital management, to include consultants, diabetes and research nurses, and dieticians from the eight UK centres taking part. The interview schedule focused on their experiences of delivering the two models of care; preferences, impact, and future plans. Data were subject to thematic analysis. Results: Twenty-two health professionals participated, represented by consultants, diabetes and research nurses, and dieticians. Overall, nurses preferred home management and perceived it to be beneficial in terms of facilitating a unique opportunity to understand family life and provide education to extended family members. Nurses described a special bond and lasting relationship that they developed with the home managed children and families. Consultants expressed concern that it jeopardized their relationship with families. Dieticians reported being unable to deliver short bursts of education to families in the home managed arm. All health professionals were equally divided over which was logistically easier to deliver. Conclusions: A hybrid approach, of a brief stay in hospital and early home management, offers a pragmatic solution to the advantages and challenges presented by both systems.

Database: CINAHL

Are our babies off to a healthy start? The state of implementation of the Global strategy for infant and young child feeding in Europe.

Author(s): Zakarija-Grković ; Cattaneo, Adriano; Bettinelli, Maria Enrica; Pilato, Claudia; Vassallo, Charlene; Borg Buontempo, Mariella; Gray, Helen; Meynell, Clare; Wise, Patricia; Harutyunyan, Susanna; Rosin, Stefanie; Hemmelmayr, Andrea; Šniukaitė-Adner, Daiva; Arendt, Maryse; Gupta, Arun

Source: International Breastfeeding Journal; Jun 2020; vol. 15 (no. 1); p. 1-12

Publication Date: Jun 2020

Publication Type(s): Academic Journal

Available at International breastfeeding journal - from BioMed Central

Available at International breastfeeding journal - from Europe PubMed Central - Open Access

Available at International breastfeeding journal - from ProQuest (Health Research Premium) - NHS Version

Abstract: Background: To protect children's right to optimal nutrition, WHO/UNICEF developed a Global Strategy for Infant and Young Child Feeding, endorsed by all 53 WHO/EURO Member States. The World Breastfeeding Trends Initiative (WBTi) is a tool for monitoring implementation of the Global Strategy. It comprises 15 indicators, ten referring to policies and programmes, and five to feeding practices. Each is scored on a scale of 10, giving a total score of 150 for Global Strategy implementation. To date, 18 WHO/EURO Member States – Armenia, Austria, Belgium, Bosnia and Herzegovina, Croatia, France, Georgia, Germany, Italy, Lithuania, North Macedonia, Malta, Moldova, Portugal, Spain, Turkey, Ukraine and United Kingdom – have conducted a WBTi assessment and produced a report. Methods: Between June 2018 and May 2019, all 18 WBTi European reports were carefully read and analysed by a group of national WBTi coordinators. Descriptive data analysis, including inter-country comparisons, was conducted using frequencies and percentages. This paper summarises the findings. The full 88-page report will be published on the WBTi website. Results: Three-quarters of 18 European countries have adequate maternity protection, and two-thirds have breastfeeding initiation rates of 50% or higher. However, 'Preparedness and planning for appropriate and safe Infant and Young Child Feeding (IYCF) in emergencies' is seriously neglected. Breastfeeding duration is far below WHO recommendations, with an average of 8.7 months. Only three European countries have a budget allocated for implementing IYCF policies and plans, and a third currently have no Baby-friendly designated maternity facilities. Bottle feeding is prevalent, despite its inherent risks, monitoring of IYCF practices is inadequate, with most countries not routinely collecting data, and violations of the International Code of Marketing of Breast-milk Substitutes are commonplace. Conclusions: European governments are not doing enough to protect, promote and support sound infant and young child feeding practices. Political commitment at the highest level and adequate funding are required to ensure optimal IYCF for Europe's babies. This report highlights worrying gaps, thereby providing governments, international organisations and other concerned parties with an opportunity to invest in priority areas and, by doing so, hopefully create a better future for our babies.

Database: CINAHL

Associations between dietary patterns, eating behaviours, and body composition and adiposity in 3-year-old children of mothers with obesity.

Author(s): Dalrymple ; Flynn, Angela C.; Seed, Paul T.; Briley, Annette L.; O'Keeffe, Majella; Godfrey, Keith M.; Poston, Lucilla

Source: Pediatric Obesity; May 2020; vol. 15 (no. 5); p. 1-11

Publication Date: May 2020

Publication Type(s): Academic Journal

Available at Pediatric Obesity - from Wiley Online Library

Abstract: Summary: Background: The relationships between eating habits, behaviours, and the development of obesity in preschool children is not well established. Objective: As children of mothers with obesity are themselves at risk of obesity, we examined these relationships in a cohort of 482 three-year-old children of mothers with obesity from the UK Pregnancy Better Eating and Activity Trial (UPBEAT). Method: Dietary patterns were derived using factor analysis of an 85-item food frequency questionnaire (FFQ). Eating behaviours were assessed using the Children's Eating Behaviour Questionnaire (CEBQ). Measures of body composition included age-specific BMI cut-offs, WHO z scores, sum of skinfolds, waist and arm circumferences, and body fat percentage. Using adjusted regression analysis, we examined associations between dietary patterns, eating behaviours, and measures of body composition. Results: Three distinct dietary patterns were defined: "healthy/prudent," "African/Caribbean," and "processed/snacking." The "processed/snacking" pattern was associated with greater odds of obesity; OR 1.53 (95% CI, 1.07-2.19). The "African/Caribbean" and the "healthy/prudent" patterns were associated with a lower arm circumference (β = −0.23

cm [−0.45 to −0.01]) and sum of skinfolds (β = −1.36 cm [−2.88 to −0.37]), respectively. Lower enjoyment of food and food responsiveness, and greater slowness in eating and satiety, were associated with lower arm and waist circumferences, WHO z scores, and obesity (all P <.05). Conclusion: In children of mothers with obesity, those who had higher scores on a "processed/snacking" dietary pattern had greater odds of obesity. In contrast, slowness in eating was associated with lower measures of body composition. These novel findings highlight modifiable behaviours in high-risk preschool children which could contribute to public health strategies for prevention of childhood obesity.

Database: CINAHL

Association of Fish Consumption and Mercury Exposure During Pregnancy With Metabolic Health and Inflammatory Biomarkers in Children.

Author(s): Stratakis ; Conti, David V.; Borras, Eva; Sabido, Eduardo; Roumeliotaki, Theano; Papadopoulou, Eleni; Agier, Lydiane; Basagana, Xavier; Bustamante, Mariona; Casas, Maribel; Farzan, Shohreh F.; Fossati, Serena; Gonzalez, Juan R.; Grazuleviciene, Regina; Heude, Barbara; Maitre, Lea; McEachan, Rosemary R. C.; Theologidis, Ioannis; Urquiza, Jose; Vafeiadi, Marina

Source: JAMA Network Open; Mar 2020; vol. 3 (no. 3)

Publication Date: Mar 2020

Publication Type(s): Academic Journal

Available at JAMA network open - from Unpaywall

Abstract: Key Points: Question: Is fish consumption during pregnancy associated with benefits for the metabolic health of children? Findings: In this cohort study of 805 mothers and their singleton offspring, moderate fish consumption during pregnancy was associated with the downregulation of inflammation and improvements in the metabolic profile of children; high mercury exposure during pregnancy had the opposite associations. Meaning: The results of this study suggest that fish consumption consistent with current recommendations during pregnancy was associated with improvements in the metabolic health of children. Importance: The balance of mercury risk and nutritional benefit from fish intake during pregnancy for the metabolic health of offspring to date is unknown. Objective: To assess the associations of fish intake and mercury exposure during pregnancy with metabolic syndrome in children and alterations in biomarkers of inflammation in children. Design, Setting, and Participants: This population-based prospective birth cohort study used data from studies performed in 5 European countries (France, Greece, Norway, Spain, and the UK) between April 1, 2003, and February 26, 2016, as part of the Human Early Life Exposome (HELIX) project. Mothers and their singleton offspring were followed up until the children were aged 6 to 12 years. Data were analyzed between March 1 and August 2, 2019. Exposures: Maternal fish intake during pregnancy (measured in times per week) was assessed using validated food frequency questionnaires, and maternal mercury concentration (measured in micrograms per liter) was assessed using maternal whole blood and cord blood samples. Main Outcomes and Measures: An aggregate metabolic syndrome score for children was calculated using the z scores of waist circumference, systolic and diastolic blood pressures, and levels of triglyceride, high-density lipoprotein cholesterol, and insulin. A higher metabolic syndrome score (score range, −4.9 to 7.5) indicated a poorer metabolic profile. Three protein panels were used to measure several cytokines and adipokines in the plasma of children. Results: The study included 805 mothers and their singleton children. Among mothers, the mean (SD) age at cohort inclusion or delivery of their infant was 31.3 (4.6) years. A total of 400 women (49.7%) had a high educational level, and 432 women (53.7%) were multiparous. Among children, the mean (SD) age was 8.4 (1.5) years (age range, 6-12 years). A total of 453 children (56.3%) were boys, and 734 children (91.2%) were of white race/ethnicity. Fish intake consistent with health recommendations (1 to 3 times per week) during pregnancy was associated with a 1-U decrease in metabolic syndrome score in children (β = −0.96; 95% CI, −1.49 to −0.42) compared with low fish consumption (<1 time per week) after adjusting for maternal mercury levels and other covariates. No further benefit was observed with fish intake of more than 3 times per week. A higher maternal mercury concentration was independently associated with an increase in the metabolic syndrome score of their offspring (β per 2-fold increase in mercury concentration = 0.18; 95% CI, 0.01-0.34). Compared with low fish intake, moderate and high fish intake during pregnancy were associated with reduced levels of proinflammatory cytokines and adipokines in children. An integrated analysis identified a cluster of children with increased susceptibility to

metabolic disease, which was characterized by low fish consumption during pregnancy, high maternal mercury levels, decreased levels of adiponectin in children, and increased levels of leptin, tumor necrosis factor α, and the cytokines interleukin 6 and interleukin 1β in children. Conclusions and Relevance: Results of this study suggest that moderate fish intake consistent with current health recommendations during pregnancy was associated with improvements in the metabolic health of children, while high maternal mercury exposure was associated with an unfavorable metabolic profile in children. This cohort study used data from the Human Early Life Exposome (HELIX) project, a collaboration of 5 European birth cohort studies, to examine the associations of maternal fish consumption and mercury exposure during pregnancy with metabolic health and inflammatory biomarkers in children.

Database: CINAHL

Screening for Hypertension in Children and Adolescents: Updated Evidence Report and Systematic Review for the US Preventive Services Task Force.

Author(s): Gartlehner, Gerald; Vander Schaaf, Emily B; Orr, Colin; Kennedy, Sara M; Clark, Rachel; Viswanathan, Meera

Source: JAMA; Nov 2020; vol. 324 (no. 18); p. 1884-1895

Publication Date: Nov 2020

Publication Type(s): Journal Article Research Support, U.s. Gov't, P.h.s. Systematic Review

PubMedID: 33170247

Available at JAMA - from EBSCO (MEDLINE Complete)

Abstract: ImportanceChildhood hypertension can result in adverse outcomes during adulthood; identifying and treating primary and secondary childhood hypertension may reduce such risks.ObjectiveTo update the evidence on screening and treatment of hypertension in childhood and adolescence for the US Preventive Services Task Force.Data SourcesPubMed, Cochrane Library, International Pharmaceutical Abstracts, EMBASE, and trial registries through September 3, 2019; bibliographies from retrieved articles, experts, and surveillance of the literature through October 6, 2020.Study SelectionFair- or good-quality English-language studies evaluating diagnostic accuracy of blood pressure screening; cohort studies assessing the association of hypertension in childhood and adolescence with blood pressure or other intermediate outcomes in adulthood; randomized clinical trials (RCTs) or meta-analyses of pharmacological and lifestyle interventions.Data Extraction and SynthesisTwo reviewers independently assessed titles/abstracts and full-text articles, extracted data, and assessed study quality; the evidence was synthesized qualitatively.Main Outcomes and MeasuresSensitivity, specificity, and measures of association between childhood and adulthood blood pressure; reduction of childhood blood pressure; adverse effects of treatments.ResultsForty-two studies from 43 publications were included (N>12 400). No studies evaluated the benefits or harms of screening and the effect of treating childhood hypertension on outcomes in adulthood. One study reported a sensitivity of 0.82 and a specificity of 0.70 for 2 office-based blood pressure measurements. Twenty observational studies suggested a significant association between childhood hypertension and abnormal blood pressure in adulthood (odds ratios, 1.1-4.5; risk ratios, 1.45-3.60; hazard ratios, 2.8-3.2). Thirteen placebo-controlled RCTs and 1 meta-analysis assessed reductions in systolic (SBP) and diastolic blood pressure from pharmacological treatments. Pooled reductions of SBP were -4.38 mm Hg (95% CI, -7.27 to -2.16) for angiotensin-converting enzyme inhibitors and -3.07 mm Hg (95% CI, -4.99 to -1.44) for angiotensin receptor blockers. Candesartan reduced SBP by -6.56 mm Hg (P < .001; n = 240). β-Blockers, calcium channel blockers, and mineralocorticoid receptor antagonists did not achieve significant reductions over 2 to 4 weeks. SBP was significantly reduced by exercise over 8 months (-4.9 mm Hg, P ≤ .05; n = 69), by dietary approaches to stop hypertension over 3 months (-2.2 mm Hg, P < .01; n = 57), and by a combination of drug treatment and lifestyle interventions over 6 months (-7.6 mm Hg; P < .001; n = 95). Low-salt diet did not achieve reductions of blood pressure.Conclusions and RelevanceObservational studies indicate an association between hypertension in childhood and hypertension in adulthood. However, the evidence is inconclusive whether the diagnostic accuracy of blood pressure measurements is adequate for screening asymptomatic children and adolescents in primary care.

Database: Medline

Effects of food supplementation on cognitive function, cerebral blood flow, and nutritional status in young children at risk of undernutrition: randomized controlled trial.

Author(s): Roberts, Susan B; Franceschini, Maria A; Silver, Rachel E; Taylor, Salima F; de Sa, Augusto Braima; Có, Raimundo; Sonco, Aliu; Krauss, Amy; Taetzsch, Amy; Webb, Patrick; Das, Sai Krupa; Chen, C-Y; Rogers, Beatrice L; Saltzman, Edward; Lin, Pei-Yi; Schlossman, Nina; Pruzensky, William; Balé, Carlito; Chui, Kenneth Kwan Ho; Muentener, Paul

Source: BMJ (Clinical research ed.); Jul 2020; vol. 370 ; p. m2397

Publication Date: Jul 2020

Publication Type(s): Research Support, Non-u.s. Gov't Randomized Controlled Trial Journal Article

PubMedID: 32699176

Available at BMJ (Clinical research ed.) - from BMJ Journals

Abstract:OBJECTIVETo assess the effects of food supplementation on improving working memory and additional measures including cerebral blood flow in children at risk of undernutrition.DESIGNRandomized controlled trial.SETTING10 villages in Guinea-Bissau.PARTICIPANTS1059 children aged 15 months to 7 years; children younger than 4 were the primary population.INTERVENTIONSSupervised isocaloric servings (≈1300 kJ, five mornings each week, 23 weeks) of a new food supplement (NEWSUP, high in plant polyphenols and omega 3 fatty acids, within a wide variety and high fortification of micronutrients, and a high protein content), or a fortified blended food (FBF) used in nutrition programs, or a control meal (traditional rice breakfast).MAIN OUTCOME MEASUREMENTSThe primary outcome was working memory, a core executive function predicting long term academic achievement. Additional outcomes were hemoglobin concentration, growth, body composition, and index of cerebral blood flow (CBFi). In addition to an intention-to-treat analysis, a predefined per protocol analysis was conducted in children who consumed at least 75% of the supplement (820/925, 89%). The primary outcome was assessed by a multivariable Poisson model; other outcomes were assessed by multivariable linear mixed models.RESULTSAmong children younger than 4, randomization to NEWSUP increased working memory compared with the control meal (rate ratio 1.20, 95% confidence interval 1.02 to 1.41, P=0.03), with a larger effect in the per protocol population (1.25, 1.06 to 1.47, P=0.009). NEWSUP also increased hemoglobin concentration among children with anemia (adjusted mean difference 0.65 g/dL, 95% confidence interval 0.23 to 1.07, P=0.003) compared with the control meal, decreased body mass index z score gain (-0.23, -0.43 to -0.02, P=0.03), and increased lean tissue accretion (2.98 cm2, 0.04 to 5.92, P=0.046) with less fat (-5.82 cm2, -11.28 to -0.36, P=0.04) compared with FBF. Additionally, NEWSUP increased CBFi compared with the control meal and FBF in both age groups combined (1.14 mm2/s×10-8, 0.10 to 2.23, P=0.04 for both comparisons). Among children aged 4 and older, NEWSUP had no significant effect on working memory or anemia, but increased lean tissue compared with FBF (4.31 cm2, 0.34 to 8.28, P=0.03).CONCLUSIONSChildhood undernutrition is associated with long term impairment in cognition. Contrary to current understanding, supplementary feeding for 23 weeks could improve executive function, brain health, and nutritional status in vulnerable young children living in low income countries. Further research is needed to optimize nutritional prescriptions for regenerative improvements in cognitive function, and to test effectiveness in other vulnerable groups.TRIAL REGISTRATIONClinicalTrials.gov NCT03017209.

Database: Medline

Height and body-mass index trajectories of school-aged children and adolescents from 1985 to 2019 in 200 countries and territories: a pooled analysis of 2181 population-based studies with 65 million participants.

Author(s): NCD Risk Factor Collaboration (NCD-RisC)

Source: Lancet (London, England); Nov 2020; vol. 396 (no. 10261); p. 1511-1524

Publication Date: Nov 2020

Publication Type(s): Journal Article

PubMedID: 33160572

Available at Lancet (London, England) - from Unpaywall

Abstract:BACKGROUNDComparable global data on health and nutrition of school-aged children and adolescents are scarce. We aimed to estimate age trajectories and time trends in mean height and mean body-mass index (BMI), which measures weight gain beyond what is expected from height gain, for school-aged children and adolescents.METHODSFor this pooled analysis, we used a database of cardiometabolic risk factors collated by the Non-Communicable Disease Risk Factor Collaboration. We applied a Bayesian hierarchical model to estimate trends from 1985 to 2019 in mean height and mean BMI in 1-year age groups for ages 5-19 years. The model allowed for non-linear changes over time in mean height and mean BMI and for non-linear changes with age of children and adolescents, including periods of rapid growth during adolescence.FINDINGSWe pooled data from 2181 population-based studies, with measurements of height and weight in 65 million participants in 200 countries and territories. In 2019, we estimated a difference of 20 cm or higher in mean height of 19-year-old adolescents between countries with the tallest populations (the Netherlands, Montenegro, Estonia, and Bosnia and Herzegovina for boys; and the Netherlands, Montenegro, Denmark, and Iceland for girls) and those with the shortest populations (Timor-Leste, Laos, Solomon Islands, and Papua New Guinea for boys; and Guatemala, Bangladesh, Nepal, and Timor-Leste for girls). In the same year, the difference between the highest mean BMI (in Pacific island countries, Kuwait, Bahrain, The Bahamas, Chile, the USA, and New Zealand for both boys and girls and in South Africa for girls) and lowest mean BMI (in India, Bangladesh, Timor-Leste, Ethiopia, and Chad for boys and girls; and in Japan and Romania for girls) was approximately 9-10 kg/m2. In some countries, children aged 5 years started with healthier height or BMI than the global median and, in some cases, as healthy as the best performing countries, but they became progressively less healthy compared with their comparators as they grew older by not growing as tall (eg, boys in Austria and Barbados, and girls in Belgium and Puerto Rico) or gaining too much weight for their height (eg, girls and boys in Kuwait, Bahrain, Fiji, Jamaica, and Mexico; and girls in South Africa and New Zealand). In other countries, growing children overtook the height of their comparators (eg, Latvia, Czech Republic, Morocco, and Iran) or curbed their weight gain (eg, Italy, France, and Croatia) in late childhood and adolescence. When changes in both height and BMI were considered, girls in South Korea, Vietnam, Saudi Arabia, Turkey, and some central Asian countries (eg, Armenia and Azerbaijan), and boys in central and western Europe (eg, Portugal, Denmark, Poland, and Montenegro) had the healthiest changes in anthropometric status over the past 3·5 decades because, compared with children and adolescents in other countries, they had a much larger gain in height than they did in BMI. The unhealthiest changes-gaining too little height, too much weight for their height compared with children in other countries, or both-occurred in many countries in sub-Saharan Africa, New Zealand, and the USA for boys and girls; in Malaysia and some Pacific island nations for boys; and in Mexico for girls.INTERPRETATIONThe height and BMI trajectories over age and time of school-aged children and adolescents are highly variable across countries, which indicates heterogeneous nutritional quality and lifelong health advantages and risks.FUNDINGWellcome Trust, AstraZeneca Young Health Programme, EU.

Database: Medline

Assessing coverage of interventions for reproductive, maternal, newborn, child, and adolescent health and nutrition.

Author(s): Requejo, Jennifer; Diaz, Theresa; Park, Lois; Chou, Doris; Choudhury, Allysha; Guthold, Regina; Jackson, Debra; Moller, Ann-Beth; Monet, Jean-Pierre; Moran, Allisyn C; Say, Lale; Strong, Kathleen L; Banerjee, Anshu

Source: BMJ (Clinical research ed.); Jan 2020; vol. 368 ; p. l6915

Publication Date: Jan 2020

Publication Type(s): Research Support, Non-u.s. Gov't Journal Article

PubMedID: 31983681

Available at BMJ (Clinical research ed.) - from BMJ Journals

Database: Medline

The use of Breast Milk Fortifier in Preterm Infants by paediatric dietitians in the UK.

Author(s): Jupe, Sophie; Maslin, Kate

Source: Journal of human nutrition and dietetics : the official journal of the British Dietetic Association; Nov 2020

Publication Date: Nov 2020

Publication Type(s): Journal Article

PubMedID: 33135808

Available at Journal of human nutrition and dietetics : the official journal of the British Dietetic Association - from Wiley Online Library

Abstract:BACKGROUNDBreast milk is the feed of choice for premature infants, although its nutritional composition is not always sufficient to meet their raised nutritional requirements. The addition of a multi-nutrient breast milk fortifier (BMF) to breastmilk is recommended; however, international guidelines on the use of BMF are inconsistent. The present study aimed to explore the use of BMF in preterm infants by paediatric dietitians in the UK.METHODSA questionnaire was designed and sent to members of the British Dietetic Association neonatal specialist group (n = 100) using a secure online platform. Descriptive statistics were calculated.RESULTSForty dietitians completed the survey, all of whom used BMF. Local hospital BMF guidelines were available to 77.5% (n = 31). The most commonly used criteria for commencing BMF were: tolerating a feed volume of 150 mL kg-1 day-1 (72.5%, n = 29), a gestational age <34 weeks (67.5%, n = 27) and a birth weight <1500 g (60%, n = 24). The primary contraindication for the use of BMF was necrotising enterocolitis (NEC). The majority of respondents used standard fortification, with individualised fortification available to only 12.5% (n = 5). The most common indicators for discontinuing BMF were on discharge home (67.5%, n = 27), satisfactory growth (65%, n = 26) or feeding directly from the breast (62.5%, n = 25).CONCLUSIONSAlthough BMF is used more proactively in UK neonatal units than previously, variation in practice remains. Individualised fortification is very uncommon and caution remains regarding risk of NEC. The development of national guidelines on the use of BMF would help to standardise nutritional care in neonatal units.

Database: Medline

Strategies to improve the implementation of healthy eating, physical activity and obesity prevention policies, practices or programmes within childcare services.

Author(s): Wolfenden, Luke; Barnes, Courtney; Jones, Jannah; Finch, Meghan; Wyse, Rebecca J; Kingsland, Melanie; Tzelepis, Flora; Grady, Alice; Hodder, Rebecca K; Booth, Debbie; Yoong, Sze Lin

Source: The Cochrane database of systematic reviews; Feb 2020; vol. 2 ; p. CD011779

Publication Date: Feb 2020

Publication Type(s): Research Support, Non-u.s. Gov't Meta-analysis Journal Article Systematic Review

PubMedID: 32036618

Available at The Cochrane database of systematic reviews - from Cochrane Collaboration (Wiley)

Abstract:BACKGROUNDDespite the existence of effective interventions and best-practice guideline recommendations for childcare services to implement evidence-based policies, practices and programmes to promote child healthy eating, physical activity and prevent unhealthy weight gain, many services fail to do so.OBJECTIVESThe primary aim of the review was to examine the effectiveness of strategies aimed at improving the implementation of policies, practices or programmes by childcare services that promote child healthy eating, physical activity and/or obesity prevention. The secondary aims of the review were to: 1. Examine the cost or cost-effectiveness of such strategies; 2. Examine any adverse effects of such strategies on childcare services, service staff or children; 3. Examine the effect of such strategies on child diet, physical activity or weight status. 4. Describe the acceptability, adoption, penetration, sustainability and appropriateness of such implementation strategies.SEARCH METHODSWe searched the following electronic databases on February 22 2019: Cochrane Central Register of Controlled trials (CENTRAL), MEDLINE, MEDLINE In Process, Embase, PsycINFO, ERIC, CINAHL and SCOPUS for relevant studies. We searched reference lists of included studies, handsearched two international implementation science journals, the World Health Organization International Clinical Trials Registry Platform (www.who.int/ictrp/) and ClinicalTrials.gov (www.clinicaltrials.gov).SELECTION CRITERIAWe included any study (randomised or nonrandomised) with a parallel control group that compared any strategy to improve the implementation of a

healthy eating, physical activity or obesity prevention policy, practice or programme by staff of centre-based childcare services to no intervention, 'usual' practice or an alternative strategy. Centre-based childcare services included preschools, nurseries, long daycare services and kindergartens catering for children prior to compulsory schooling (typically up to the age of five to six years).DATA COLLECTION AND ANALYSISTwo review authors independently screened study titles and abstracts, extracted study data and assessed risk of bias; we resolved discrepancies via consensus. We performed meta-analysis using a random-effects model where studies with suitable data and homogeneity were identified; otherwise, findings were described narratively.MAIN RESULTSTwenty-one studies, including 16 randomised and five nonrandomised, were included in the review. The studies sought to improve the implementation of policies, practices or programmes targeting healthy eating (six studies), physical activity (three studies) or both healthy eating and physical activity (12 studies). Studies were conducted in the United States (n = 12), Australia (n = 8) and Ireland (n = 1). Collectively, the 21 studies included a total of 1945 childcare services examining a range of implementation strategies including educational materials, educational meetings, audit and feedback, opinion leaders, small incentives or grants, educational outreach visits or academic detailing, reminders and tailored interventions. Most studies (n = 19) examined implementation strategies versus usual practice or minimal support control, and two compared alternative implementation strategies. For implementation outcomes, six studies (one RCT) were judged to be at high risk of bias overall. The review findings suggest that implementation strategies probably improve the implementation of policies, practices or programmes that promote child healthy eating, physical activity and/or obesity prevention in childcare services. Of the 19 studies that compared a strategy to usual practice or minimal support control, 11 studies (nine RCTs) used score-based measures of implementation (e.g. childcare service nutrition environment score). Nine of these studies were included in pooled analysis, which found an improvement in implementation outcomes (SMD 0.49; 95% CI 0.19 to 0.79; participants = 495; moderate-certainty evidence). Ten studies (seven RCTs) used dichotomous measures of implementation (e.g. proportion of childcare services implementing a policy or specific practice), with seven of these included in pooled analysis (OR 1.83; 95% CI 0.81 to 4.11; participants = 391; low-certainty evidence). Findings suggest that such interventions probably lead to little or no difference in child physical activity (four RCTs; moderate-certainty evidence) or weight status (three RCTs; moderate-certainty evidence), and may lead to little or no difference in child diet (two RCTs; low-certainty evidence). None of the studies reported the cost or cost-effectiveness of the intervention. Three studies assessed the adverse effects of the intervention on childcare service staff, children and parents, with all studies suggesting they have little to no difference in adverse effects (e.g. child injury) between groups (three RCTs; low-certainty evidence). Inconsistent quality of the evidence was identified across review outcomes and study designs, ranging from very low to moderate. The primary limitation of the review was the lack of conventional terminology in implementation science, which may have resulted in potentially relevant studies failing to be identified based on the search terms used.AUTHORS' CONCLUSIONSCurrent research suggests that implementation strategies probably improve the implementation of policies, practices or programmes by childcare services, and may have little or no effect on measures of adverse effects. However such strategies appear to have little to no impact on measures of child diet, physical activity or weight status.

Database: Medline

Clinical features and management of children with primary ciliary dyskinesia in England.

Author(s): Rubbo, Bruna; Best, Sunayna; Hirst, Robert Anthony; Shoemark, Amelia; Goggin, Patricia; Carr, Siobhan B; Chetcuti, Philip; Hogg, Claire; Kenia, Priti; Lucas, Jane S; Moya, Eduardo; Narayanan, Manjith; O'Callaghan, Christopher; Williamson, Michael; Walker, Woolf Theodore; English National Children’s PCD Management Service

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Publication Type(s): Research Support, Non-u.s. Gov't Comparative Study Multicenter Study Journal Article

PubMedID: 32156696

Available at Archives of disease in childhood - from BMJ Journals

Abstract:OBJECTIVEIn England, the National Health Service commissioned a National Management Service for children with primary ciliary dyskinesia (PCD). The aims of this study were to describe the health of children seen in

this Service and compare lung function to children with cystic fibrosis (CF).DESIGNMulti-centre service evaluation of the English National Management PCD Service.SETTINGFour nationally commissioned PCD centres in England.PATIENTS333 children with PCD reviewed in the Service in 2015; lung function data were also compared with 2970 children with CF.RESULTSMedian age at diagnosis for PCD was 2.6 years, significantly lower in children with situs inversus (1.0 vs 6.0 years, p<0.001). Compared with national data from the CF Registry, mean (SD) %predicted forced expiratory volume in one second (FEV1) was 76.8% in PCD (n=240) and 85.0% in CF, and FEV1 was lower in children with PCD up to the age of 15 years. Approximately half of children had some hearing impairment, with 26% requiring hearing aids. Children with a lower body mass index (BMI) had lower FEV1 (p<0.001). One-third of children had positive respiratory cultures at review, 54% of these grew Haemophilus influenzae.CONCLUSIONSWe provide evidence that children with PCD in England have worse lung function than those with CF. Nutritional status should be considered in PCD management, as those with a lower BMI have significantly lower FEV1. Hearing impairment is common but seems to improve with age. Well-designed and powered randomised controlled trials on management of PCD are needed to inform best clinical practice.

Database: Medline

Alterations in Intestinal Microbiota of Children With Celiac Disease at the Time of Diagnosis and on a Gluten-free Diet.

Author(s): Zafeiropoulou, Konstantina; Nichols, Ben; Mackinder, Mary; Biskou, Olga; Rizou, Eleni; Karanikolou, Antonia; Clark, Clare; Buchanan, Elaine; Cardigan, Tracey; Duncan, Hazel; Wands, David; Russell, Julie; Hansen, Richard; Russell, Richard K; McGrogan, Paraic; Edwards, Christine A; Ijaz, Umer Z; Gerasimidis, Konstantinos

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PubMedID: 32791131

Available at Gastroenterology - from Unpaywall

Abstract:BACKGROUND AND AIMSIt is not clear whether alterations in the intestinal microbiota of children with celiac disease (CD) cause the disease or are a result of disease and/or its treatment with a gluten-free diet (GFD).METHODSWe obtained 167 fecal samples from 141 children (20 with new-onset CD, 45 treated with a GFD, 57 healthy children, and 19 unaffected siblings of children with CD) in Glasgow, Scotland. Samples were analyzed by 16S ribosomal RNA sequencing, and diet-related metabolites were measured by gas chromatography. We obtained fecal samples from 13 children with new-onset CD after 6 and 12 months on a GFD. Relationships between microbiota with diet composition, gastrointestinal function, and biomarkers of GFD compliance were explored.RESULTSMicrobiota α diversity did not differ among groups. Microbial dysbiosis was not observed in children with new-onset CD. In contrast, 2.8% (Bray-Curtis dissimilarity index, P = .025) and 2.5% (UniFrac distances, P = .027) of the variation in microbiota composition could be explained by the GFD. Between 3% and 5% of all taxa differed among all group comparisons. Eleven distinctive operational taxonomic units composed a microbe signature specific to CD with high diagnostic probability. Most operational taxonomic units that differed between patients on a GFD with new-onset CD vs healthy children were associated with nutrient and food group intake (from 75% to 94%) and with biomarkers of gluten ingestion. Fecal levels of butyrate and ammonia decreased during the GFD.CONCLUSIONSAlthough several alterations in the intestinal microbiota of children with established CD appear to be effects of a GFD, specific bacteria were found to be distinct biomarkers of CD. Studies are needed to determine whether these bacteria contribute to pathogenesis of CD.

Database: Medline

Relevant NICE Guidelines:

COVID-19 rapid guideline: vitamin D
NICE guideline [NG187]
Published date: 17 December 2020
https://www.nice.org.uk/guidance/ng187

COVID-19 rapid guideline: gastrointestinal and liver conditions treated with drugs affecting the immune response
NICE guideline [NG172]
Published date: 23 April 2020 Last updated: 21 August 2020
https://www.nice.org.uk/guidance/ng172

COVID-19 rapid guideline: managing the long-term effects of COVID-19
NICE guideline [NG188]
Published date: 18 December 2020
https://www.nice.org.uk/guidance/ng188

A full list of COVID specific NICE guidelines can be found here:
https://www.nice.org.uk/search?om=[{%22nai%22:[%22COVID-19%22]}]&ps=15&q=Covid-19&sp=on