

Dietetics Update

24 January 2022



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

Contents

CARDIOVASCULAR DISEASE	3
ENDOCRINOLOGY & DIABETES	7
GERIATRICS	13
OBESITY	19
OBSTRETRICS & GYNAECOLOGY	22
ONCOLOGY.....	29
OTHER	38
PAEDIATRICS	48
STROKE.....	56



CARDIOVASCULAR DISEASE

Unhealthy Lifestyle, Genetics and Risk of Cardiovascular Disease and Mortality in 76,958 Individuals from the UK Biobank Cohort Study.

Author(s): Livingstone, Katherine M; Abbott, Gavin; Ward, Joey; Bowe, Steven J

Source: Nutrients; Nov 2021; vol. 13 (no. 12)

Publication Date: Nov 2021

Publication Type(s): Journal Article

PubMedID: 34959842

Available at [Nutrients](#) - from Europe PubMed Central - Open Access

Available at [Nutrients](#) - from ProQuest (MEDLINE with Full Text) - NHS Version

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

Abstract:To examine associations of unhealthy lifestyle and genetics with risk of all-cause mortality, cardiovascular disease (CVD) mortality, myocardial infarction (MI) and stroke. We used data on 76,958 adults from the UK Biobank prospective cohort study. Favourable lifestyle included no overweight/obesity, not smoking, physical activity, not sedentary, healthy diet and adequate sleep. A Polygenic Risk Score (PRS) was derived using 300 CVD-related single nucleotide polymorphisms. Cox proportional hazard ratios (HR) were used to model effects of lifestyle and PRS on risk of CVD and all-cause mortality, stroke and MI. New CVD (n = 364) and all-cause (n = 2408) deaths, and stroke (n = 748) and MI (n = 1140) events were observed during a 7.8 year mean follow-up. An unfavourable lifestyle (0-1 healthy behaviours) was associated with higher risk of all-cause mortality (HR: 2.06; 95% CI: 1.73, 2.45), CVD mortality (HR: 2.48; 95% CI: 1.64, 3.76), MI (HR: 2.12; 95% CI: 1.65, 2.72) and stroke (HR:1.74; 95% CI: 1.25, 2.43) compared to a favourable lifestyle (≥ 4 healthy behaviours). PRS was associated with MI (HR: 1.35; 95% CI: 1.27, 1.43). There was evidence of a lifestyle-genetics interaction for stroke ($p = 0.017$). Unfavourable lifestyle behaviours predicted higher risk of all-cause mortality, CVD mortality, MI and stroke, independent of genetic risk.

Database: Medline

Association of Diet Quality With Prevalence of Clonal Hematopoiesis and Adverse Cardiovascular Events.

Author(s): Bhattacharya, Romit; Zekavat, Seyedeh Maryam; Uddin, Md Mesbah; Pirruccello, James; Niroula, Abhishek; Gibson, Christopher; Griffin, Gabriel K; Libby, Peter; Ebert, Benjamin L; Bick, Alexander; Natarajan, Pradeep

Source: JAMA cardiology; Sep 2021; vol. 6 (no. 9); p. 1069-1077

Publication Date: Sep 2021

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

PubMedID: 34106216

Abstract:ImportanceClonal hematopoiesis of indeterminate potential (CHIP), the expansion of somatic leukemogenic variations in hematopoietic stem cells, has been associated with atherosclerotic cardiovascular disease. Because the inherited risk of developing CHIP is low, lifestyle elements such as dietary factors may be associated with the development and outcomes of CHIP.ObjectiveTo examine whether there is an association between diet quality and the prevalence of CHIP.Design, Setting, and ParticipantsThis retrospective cohort study used data from participants in the UK Biobank, an ongoing population-based study in the United Kingdom that examines whole-exome sequencing data and survey-based information on health-associated behaviors. Individuals from the UK Biobank were recruited between 2006 and 2010 and followed up prospectively with linkage to health data records through May 2020. The present study included 44 111 participants in the UK Biobank who were age 40 to 70 years, had data available from whole-exome sequencing of blood DNA, and were free of coronary artery disease (CAD) or hematologic cancer at baseline.ExposuresDiet quality was categorized as unhealthy if the intake of healthy elements (fruits and vegetables) was lower than the median of all survey responses, and the intake of unhealthy elements (red meat, processed food, and added salt) was higher than the median. Diets were classified as healthy if the intake of



healthy elements was higher than the median, and the intake of unhealthy elements was lower than the median. The presence of CHIP was detected by data from whole-exome sequencing of blood DNA. **Main Outcomes and Measures** The primary outcome was CHIP prevalence. Multivariable logistic regression analysis was used to examine the association between diet quality and the presence of CHIP. Multivariable Cox proportional hazards models were used to assess the association of incident events (acute coronary syndromes, coronary revascularization, or death) in each diet quality category stratified by the presence of CHIP. **Results** Among 44 111 participants (mean [SD] age at time of blood sample collection, 56.3 [8.0] years; 24 507 women [55.6%]), 2271 individuals (5.1%) had an unhealthy diet, 38 552 individuals (87.4%) had an intermediate diet, and 3288 individuals (7.5%) had a healthy diet. A total of 2507 individuals (5.7%) had CHIP, and the prevalence of CHIP decreased as diet quality improved from unhealthy (162 of 2271 participants [7.1%]) to intermediate (2177 of 38 552 participants [5.7%]) to healthy (168 of 3288 participants [5.1%]; $P = .003$ for trend). Compared with individuals without CHIP who had an intermediate diet, the rates of incident cardiovascular events progressively decreased among those with CHIP who had an unhealthy diet (hazard ratio [HR], 1.52; 95% CI, 1.04-2.22) and those with CHIP who had a healthy diet (HR, 0.99; 95% CI, 0.62-1.58) over a median of 10.0 years (interquartile range, 9.6-10.4 years) of follow-up. **Conclusions and Relevance** This cohort study suggests that an unhealthy diet quality may be associated with a higher prevalence of CHIP and higher rates of adverse cardiovascular events and death independent of CHIP status.

Database: Medline

Tea intake and cardiovascular disease: an umbrella review.

Author(s): Keller, Abby; Wallace, Taylor C

Source: Annals of medicine; Dec 2021; vol. 53 (no. 1); p. 929-944

Publication Date: Dec 2021

Publication Type(s): Review Journal Article

PubMedID: 34396859

Available at [Annals of medicine](#) - from EBSCO (MEDLINE Complete)

Abstract: Brewed tea (*Camellia sinensis*) is a major dietary source of flavonoids, in particular flavan-3-ols. Tea consumption has been suggested to be inversely associated with a decreased risk of cardiovascular disease (CVD). Several biological mechanisms support the inverse relationship between tea flavonoid intake and CVD risk. Given the recent accumulating evidence from various systematic reviews regarding the role of tea as a beverage in reducing CVD risk and severity, we conducted an umbrella review to describe and critically evaluate the totality of evidence to date. We searched the PubMed, Web of Science, Cochrane Database of Systematic Reviews, and BIOSIS databases for systematic reviews published between January 1, 2010 and February 22, 2020 reporting relationships between tea (*C. sinensis*) consumption and CVD mortality, CVD diagnosis or incidence, CVD events, stroke events, blood pressure, endothelial function, blood lipids and triglycerides, and inflammatory markers. Herein, we describe results from 23 included systematic reviews. Consistently consuming 2 cups of unsweet tea per day offers the right levels of flavonoids to potentially decrease CVD risk and its progression. This is supported by the consistency between a recent high-quality systematic review and dose-response meta-analyses of population-based studies demonstrating beneficial effects of consumption on CVD mortality, CVD events and stroke events and medium- to high-quality systematic reviews of intervention studies that further elucidate potential benefits on both validated (i.e., SBP, DBP, total cholesterol, and LDL-cholesterol) and emerging risk biomarkers of CVD (TNF- α and IL-6). On the basis of this umbrella review, the consumption of tea as a beverage did not seem to be harmful to health; therefore, the benefits of moderate consumption likely outweigh risk. Future large, clinical intervention studies will provide better mechanistic insight with the ability to confirm the outcome effects shown across observational studies. The review protocol was registered on PROSPERO (<https://www.crd.york.ac.uk/PROSPERO/>) as CRD42020218159. **KEY MESSAGES** It is reasonable to judge that 2 cups of unsweet tea per day has the potential to decrease CVD risk and progression due to its flavonoid content. The primary side effects of tea documented in human studies are hepatotoxicity and gastrointestinal disturbances (i.e., vomiting and diarrhea) after high-dose supplemental intake. Additional clinical research is needed to fully elucidate the effects of tea flavonoids on markers of CVD, as many studies were under-powered to detect changes. [Figure: see text].

Database: Medline



Association of low plasma antioxidant levels with all-cause mortality and coronary events in healthy middle-aged men from France and Northern Ireland in the PRIME study.

Author(s): McKay, Gareth J; Lyner, Natalie; Linden, Gerry J; Kee, Frank; Moitry, Marie; Biasch, Katia; Amouyel, Philippe; Dallongeville, Jean; Bongard, Vanina; Ferrières, Jean; Gey, K Fred; Patterson, Chris C; Woodside, Jayne V

Source: European journal of nutrition; Aug 2021; vol. 60 (no. 5); p. 2631-2641

Publication Date: Aug 2021

Publication Type(s): Journal Article

PubMedID: 33355688

Available at [European journal of nutrition](#) - from Unpaywall

Abstract:BACKGROUNDThe main underlying risk factors associated with coronary heart disease (CHD) are modifiable and oxidative injury and systemic inflammatory damage represent key aetiological factors associated with the development and progression of CHD and premature mortality.OBJECTIVETo examine associations of plasma antioxidant status with all-cause mortality and fatal or non-fatal cardiovascular events.DESIGNThe PRIME study prospectively evaluated 9709 men aged 50-59 years between 1991 and 1993 in Northern Ireland and France who were free of CHD at recruitment and followed annually for deaths and cardiovascular events for 10 years. Serum concentrations of vitamin C, retinol, two forms of vitamin E (α - and γ -tocopherol) and six carotenoids were quantified by high-performance liquid chromatography. Baseline conventional risk factors were considered, as well as socioeconomic differences and lifestyle behaviours including diet, smoking habit, physical activity, and alcohol consumption through Cox regression analyses.RESULTSAt 10 years, there were 538 deaths from any cause and 440 fatal or non-fatal cardiovascular events. After adjustment for country, age, systolic blood pressure, diabetes, body mass index, cholesterol, high density lipoprotein cholesterol, triglycerides, height, total physical activity, alcohol consumption and smoking habit, higher levels of all antioxidants were associated with significantly lower risk of all-cause mortality, with the exception of γ -tocopherol. Only retinol was significantly associated with decreased risk of cardiovascular events in a fully adjusted model.CONCLUSIONSLow antioxidant levels contribute to the gradient of all-cause mortality and cardiovascular incidence independent of lifestyle behaviours and traditional cardiovascular and socioeconomic risk factors.

Database: Medline

Salt reduction to prevent hypertension: the reasons of the controversy.

Author(s): He, Feng J; Campbell, Norm R C; Woodward, Mark; MacGregor, Graham A

Source: European heart journal; Jul 2021; vol. 42 (no. 25); p. 2501-2505

Publication Date: Jul 2021

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

PubMedID: 34117487

Abstract:There is a causal relationship between dietary salt intake and blood pressure. A reduction in salt intake from the current world average of ~ 10 g/day to the WHO recommended level of <5 g/day, lowers blood pressure and reduces the risk of cardiovascular disease and all-cause mortality. However, a few cohort studies have claimed that there is a J-shaped relationship between salt intake and cardiovascular risk, i.e. both high and low salt intakes are associated with an increased risk. These cohort studies have several methodological problems, including reverse causality, and inaccurate and biased estimation of salt intake, e.g. from a single spot urine sample with formulas. Recent studies have shown that the formulas used to estimate salt intake from spot urine cause a spurious J-curve. Research with inappropriate methodology should not be used to refute the robust evidence on the enormous benefits of population-wide reduction in salt intake. Several countries, e.g. Finland, the UK, have successfully reduced salt intake, which has resulted in falls in population blood pressure and deaths from stroke and ischaemic heart disease. Every country should develop and implement a coherent, workable strategy to reduce salt intake.



Even a modest reduction in salt intake across the whole population will lead to a major improvement in public health, along with huge cost-savings to the healthcare service.

Database: Medline

Bempedoic Acid: The New Kid on the Block for the Treatment of Dyslipidemia and LDL Cholesterol: A Narrative Review.

Author(s): Alam, Uazman; Al-Bazz, Dalal Y; Soran, Handrean

Source: Diabetes therapy : research, treatment and education of diabetes and related disorders; Jul 2021; vol. 12 (no. 7); p. 1779-1789

Publication Date: Jul 2021

Publication Type(s): Journal Article Review

PubMedID: 34037950

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

Available at [Diabetes therapy : research, treatment and education of diabetes and related disorders](#) - from Unpaywall

Abstract:Diabetes is a major risk factor for atherosclerotic cardiovascular disease (ASCVD) in which dyslipidaemia plays a crucial role. Statins are first line therapy for primary and secondary prevention of ASCVD; however, adverse events include reversible musculoskeletal and liver side effects in addition to a diabetogenic association. In this short review, we provide a succinct narrative of the future role and current trial data of a novel first-in-class molecule, bempedoic acid. The authors provide their expert insight with a focus on Phase III randomised controlled trials (RCT) of bempedoic acid. Bempedoic acid was approved by the US Food and Drug Administration (FDA) and the European Medicines Agency (EMA) in February and March 2020, respectively, and is a novel molecule which inhibits cholesterol biosynthesis in the same mechanistic pathway as statins. It is a first-in-class small molecule, delivered as a prodrug and administered as an oral, once-daily dose that decreases low-density lipoprotein cholesterol (LDL-C) levels. Phase II and III RCTs have demonstrated efficacy with adequate safety data as mono- or combination therapy with statins and ezetimibe. Bempedoic acid is hepatically converted to the active drug with a lack of activation in skeletal muscle. Due to this novel mechanism, musculoskeletal-related adverse events exhibit a lower prevalence providing an alternative pharmacotherapy in statin-intolerant patients. Bempedoic acid may be used as an adjunct to diet and maximally tolerated statin therapy or in statin-intolerant patients for the treatment of dyslipidaemia. The recent National Institute of Health and Care Excellence (NICE) (UK) technology appraisal guidance [TA694] published in April 2021 recommended bempedoic acid with ezetimibe as a treatment option for primary hypercholesterolaemia or mixed dyslipidaemia if statins are not tolerated or contraindicated and if there is inadequate control of LDL-C with ezetimibe alone. Additionally, outcomes trials evaluating 'hard' endpoints in statin-intolerant patients or those with ASCVD are currently underway.

Database: Medline

Differential associations between a priori diet quality scores and markers of cardiovascular health in women: cross-sectional analyses from TwinsUK.

Author(s): Mompeo ; Berry, Sarah E.; Spector, Tim D.; Menni, Cristina; Mangino, Massimo; Gibson, Rachel

Source: British Journal of Nutrition; Oct 2021; vol. 126 (no. 7); p. 1017-1027

Publication Date: Oct 2021

Publication Type(s): Academic Journal

Available at [British Journal of Nutrition](#) - from Unpaywall



Abstract:CVD is the leading cause of death worldwide and, after dementia, is the second biggest cause of death for women. In England, it accounts for one in four of all deaths. Lifestyle modifications represent the primary route both to reduce CVD risk factors and prevent CVD outcomes. Diet constitutes one of the key modifiable risk factors in the aetiology of CVD. We investigated the relationship between nine main dietary indices and a comprehensive range of CVD risk factors in 2590 women from TwinsUK. After adjustment for multiple testing, we found that the Dietary Approaches to Stop Hypertension (DASH) diet was inversely correlated with some of the most common CVD risk factors (BMI, visceral fat (VF), TAG, insulin, homoeostasis model assessment of insulin resistance (HOMA2-IR) and atherosclerotic CVD (ASCVD) risk) with PFDR ranging from 6.28×10^{-7} to 5.63×10^{-4} . Similar association patterns were detected across most of the dietary indices analysed. In our post hoc investigation, to determine if any specific food groups were driving associations between the DASH score and markers of cardiometabolic risk, we found that increased BMI, VF, HOMA2-IR, ASCVD risk, insulin and TAG levels were directly correlated with red meat consumption (PFDR ranging from 4.65×10^{-9} to 7.98×10^{-3}) and inversely correlated with whole-grain cereal consumption (PFDR ranging from 1.26×10^{-6} to 8.28×10^{-3}). Our findings revealed that the DASH diet is associated with a more favourable CVD risk profile, suggesting that this diet may be a candidate dietary pattern to supplement current UK dietary recommendations for CVD prevention.

Database: CINAHL

A critical review of cardiac rehabilitation in a digital era.

Author(s): Nikolov ; Hubbard, Julia

Source: British Journal of Cardiac Nursing; Aug 2021; vol. 16 (no. 8); p. 1-9

Publication Date: Aug 2021

Publication Type(s): Academic Journal

Abstract:Cardiac rehabilitation improves the outcomes of individuals following a cardiac event; however, only 50% of those eligible for cardiac rehabilitation in the UK sign up to a traditional face-to-face programme. The principal causes cited for non-attendance include living in a rural area, work or career commitments, lack of choice in location, gender, ethnicity and social economic constraints, and dislike of group participation. Alternative methods of delivery could ensure greater participation in cardiac rehabilitation activities, particularly among women, who are underrepresented. Studies into digital cardiac rehabilitation reveal improved quality of life, dietary intake and increased physical activity all equal to or an improvement compared to traditional approaches. Embracing digital approaches to cardiac rehabilitation is now timely with COVID-19 requirements for social distancing.

Database: CINAHL

ENDOCRINOLOGY & DIABETES

Dietary Patterns Characterized by Fat Type in Association with Obesity and Type 2 Diabetes: A Longitudinal Study of UK Biobank Participants.

Author(s): Brayner, Barbara; Kaur, Gunveen; Keske, Michelle A; Perez-Cornago, Aurora; Piernas, Carmen; Livingstone, Katherine M

Source: The Journal of nutrition; Nov 2021; vol. 151 (no. 11); p. 3570-3578

Publication Date: Nov 2021

Publication Type(s): Journal Article

PubMedID: 34522964

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

Abstract:BACKGROUNDThe fat type consumed is considered a risk factor for developing obesity and type 2 diabetes (T2D). However, these associations have not been investigated using a dietary patterns approach, which can capture



combinations of foods and fat type consumed. **OBJECTIVE** This study aimed to investigate associations between dietary patterns with varying proportions of SFAs, MUFAs, or PUFAs and obesity, abdominal obesity, and self-reported T2D incidence. **METHOD** This study included UK Biobank participants with 2 or more 24-h dietary assessments, free from the outcome of interest at recruitment, and with outcome data at follow-up (n = 16,523; mean follow-up: 6.3 y). Reduced rank regression was used to derive dietary patterns with SFAs, MUFAs, and PUFAs (% of energy intake) as response variables. Logistic regression, adjusted for sociodemographic and health characteristics, was used to investigate the associations between dietary patterns and obesity [BMI (kg/m²) ≥30], abdominal obesity (waist circumference; men: ≥102 cm; women: ≥88 cm) and T2D incidence. **RESULT** Two dietary patterns, DP1 and DP2, were identified: DP1 positively correlated with SFAs (r = 0.48), MUFAs (r = 0.67), and PUFAs (r = 0.56), characterized by higher intake of nuts, seeds, and butter and lower intake of fruit and low-fat yogurt; DP2 positively correlated with SFAs (r = 0.76) and negatively with PUFAs (r = -0.64) and MUFAs (r = -0.01), characterized by higher intake of butter and high-fat cheese and lower intake of nuts and seeds. Only DP2 was associated with higher obesity and abdominal obesity incidence (OR: 1.24; 95% CI: 1.02, 1.45; and OR: 1.19; 95% CI: 1.02, 1.38, respectively). Neither of the dietary patterns was associated with T2D incidence. **CONCLUSION** These findings provide evidence that a dietary pattern characterized by higher SFA and lower PUFA foods is associated with obesity and abdominal obesity incidence, but not T2D.

Database: Medline

Lower carbohydrate diets for adults with type 2 diabetes.

Author(s): Singh, Mamta; Hung, Estella S; Cullum, Adrienne; Allen, Rachel E; Aggett, Peter J; Dyson, Pamela; Forouhi, Nita G; Greenwood, Darren C; Pryke, Rachel; Taylor, Roy; Twenefour, Douglas; Waxman, Ruth; Young, Ian S

Source: The British journal of nutrition; Nov 2021 ; p. 1-6

Publication Date: Nov 2021

Publication Type(s): Journal Article

PubMedID: 34719409

Abstract: In May 2021, the Scientific Advisory Committee on Nutrition (SACN) published a risk assessment on lower carbohydrate diets for adults with type 2 diabetes (T2D)(1). The purpose of the report was to review the evidence on 'low'-carbohydrate diets compared with the current UK government advice on carbohydrate intake for adults with T2D. However, since there is no agreed and widely utilised definition of a 'low'-carbohydrate diet, comparisons in the report were between lower and higher carbohydrate diets. SACN's remit is to assess the risks and benefits of nutrients, dietary patterns, food or food components for health by evaluating scientific evidence and to make dietary recommendations for the UK based on its assessment(2). SACN has a public health focus and only considers evidence in healthy populations unless specifically requested to do otherwise. Since the Committee does not usually make recommendations relating to clinical conditions, a joint working group (WG) was established in 2017 to consider this issue. The WG comprised members of SACN and members nominated by Diabetes UK, the British Dietetic Association, Royal College of Physicians and Royal College of General Practitioners. Representatives from NHS England and NHS Health Improvement, the National Institute for Health and Care Excellence and devolved health departments were also invited to observe the WG. The WG was jointly chaired by SACN and Diabetes UK.

Database: Medline

Association of Type 2 Diabetes, According to the Number of Risk Factors Within Target Range, With Structural Brain Abnormalities, Cognitive Performance, and Risk of Dementia.

Author(s): van Gennip, April C E; Stehouwer, Coen D A; van Boxtel, Martin P J; Verhey, Frans R J; Koster, Annemarie; Kroon, Abraham A; Köhler, Sebastian; van Greevenbroek, Marleen M J; Wesselius, Anke; Eussen, Simone J P M; Backes, Walter H; Jansen, Jacobus F; Schram, Miranda T; Henry, Ronald M A; Singh-Manoux, Archana; van Sloten, Thomas T

Source: Diabetes care; Nov 2021; vol. 44 (no. 11); p. 2493-2502



Publication Date: Nov 2021

Publication Type(s): Journal Article

PubMedID: 34588209

Available at [Diabetes care](#) - from EBSCO (MEDLINE Complete)

Abstract:OBJECTIVE Type 2 diabetes is associated with increased risks of cognitive dysfunction and brain abnormalities. The extent to which risk factor modification can mitigate these risks is unclear. We investigated the associations between incident dementia, cognitive performance, and brain abnormalities among individuals with type 2 diabetes, according to the number of risk factors on target, compared with control subjects without diabetes. RESEARCH DESIGN AND METHODS Prospective data were from UK Biobank of 87,856 individuals (n = 10,663 diabetes, n = 77,193 control subjects; baseline 2006-2010), with dementia follow-up until February 2018. Individuals with diabetes were categorized according to the number of seven selected risk factors within the guideline-recommended target range (nonsmoking; guideline-recommended levels of glycated hemoglobin, blood pressure, BMI, albuminuria, physical activity, and diet). Outcomes were incident dementia, domain-specific cognitive performance, white matter hyperintensities, and total brain volume. RESULTS After a mean follow-up of 9.0 years, 147 individuals (1.4%) with diabetes and 412 control subjects (0.5%) had incident dementia. Among individuals with diabetes, excess dementia risk decreased stepwise for a higher number of risk factors on target. Compared with control subjects (incidence rate per 1,000 person-years 0.62 [95% CI 0.56; 0.68]), individuals with diabetes who had five to seven risk factors on target had no significant excess dementia risk (absolute rate difference per 1,000 person-years 0.20 [-0.11; 0.52]; hazard ratio 1.32 [0.89; 1.95]). Similarly, differences in processing speed, executive function, and brain volumes were progressively smaller for a higher number of risk factors on target. These results were replicated in the Maastricht Study. CONCLUSIONS Among individuals with diabetes, excess dementia risk, lower cognitive performance, and brain abnormalities decreased stepwise for a higher number of risk factors on target.

Database: Medline

Delivering the Diabetes Remission Clinical Trial (DiRECT) in primary care: Experiences of healthcare professionals.

Author(s): Rehackova, Lucia; Taylor, Roy; Lean, Mike; Barnes, Alison; McCombie, Louise; Thom, George; Brosnahan, Naomi; Leslie, Wilma S; Sniehotta, Falko F

Source: Diabetic medicine : a journal of the British Diabetic Association; Nov 2021 ; p. e14752

Publication Date: Nov 2021

Publication Type(s): Journal Article

PubMedID: 34837259

Available at [Diabetic medicine : a journal of the British Diabetic Association](#) - from Wiley Online Library

Abstract:OBJECTIVE The Diabetes Remission Clinical Trial (DiRECT) used a formula total diet replacement programme followed by structured weight loss maintenance to induce and sustain weight loss and remission of type 2 diabetes (T2D) in 36% of participants after 2 years. Nurses and dietitians delivering DiRECT in 22 primary care practices in Tyneside and Scotland provided behavioural support to participants. Participant experiences with DiRECT highlighted the key role of support by healthcare professionals (HCPs). We evaluated HCPs' experiences with DiRECT. RESEARCH DESIGN AND METHODS Healthcare professionals delivering DiRECT were interviewed at 12 months, while general practices (GPs) were sent an implementation questionnaire. The interviews were analysed thematically. The questionnaires were analysed using frequencies and a narrative synthesis. RESULTS Healthcare professionals representing 11 of 22 intervention practices were interviewed and 10 of 22 GPs completed questionnaires. HCPs' initial concerns over perceived potential negative intervention effects, particularly withdrawing anti-diabetes and anti-hypertensive medications, were barriers to engagement. Trust of HCPs towards the research team and perceived credibility of the study facilitated engagement and adoption. Ongoing support by research dietitians was key to the management of participants. Involvement in DiRECT inspired more focus on behaviour modification in the treatment of other people living with T2D in routine practice. CONCLUSIONS Diabetes Remission Clinical Trial was considered highly appropriate for the management of T2D in primary care when supported by trained dietitians.



Addressing limitations, including varying training needs of HCPs may improve intervention scale-up and tailoring to clinical contexts.

Database: Medline

Dairy consumption, plasma metabolites, and risk of type 2 diabetes.

Author(s): Drouin-Chartier, Jean-Philippe; Hernández-Alonso, Pablo; Guasch-Ferré, Marta; Ruiz-Canela, Miguel; Li, Jun; Wittenbecher, Clemens; Razquin, Cristina; Toledo, Estefanía; Dennis, Courtney; Corella, Dolores; Estruch, Ramon; Fitó, Montserrat; Eliassen, A Heather; Tobias, Deirdre K; Ascherio, Alberto; Mucci, Lorelei A; Rexrode, Kathryn M; Karlson, Elizabeth W; Costenbader, Karen H; Fuchs, Charles S; Liang, Liming; Clish, Clary B; Martínez-González, Miguel A; Salas-Salvadó, Jordi; Hu, Frank B

Source: The American journal of clinical nutrition; Jul 2021; vol. 114 (no. 1); p. 163-174

Publication Date: Jul 2021

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

PubMedID: 33742198

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

Abstract:BACKGROUND Epidemiologic studies have reported a modest inverse association between dairy consumption and the risk of type 2 diabetes (T2D). Whether plasma metabolite profiles associated with dairy consumption reflect this relationship remains unknown. OBJECTIVES We aimed to identify the plasma metabolites associated with total and specific dairy consumption, and to evaluate the association between the identified multi-metabolite profiles and T2D. METHODS The discovery population included 1833 participants from the Prevención con Dieta Mediterránea (PREDIMED) trial. The confirmatory cohorts included 1522 PREDIMED participants at year 1 of the trial and 4932 participants from the Nurses' Health Studies (NHS), Nurses' Health Study II (NHSII), and Health Professionals Follow-Up Study US-based cohorts. Dairy consumption was assessed using validated FFQs. Plasma metabolites (n = 385) were profiled using LC-MS. We identified the dairy-related metabolite profiles using elastic net regularized regressions with a 10-fold cross-validation procedure. We evaluated the associations between the metabolite profiles and incident T2D in the discovery and the confirmatory cohorts. RESULTS Total dairy intake was associated with 38 metabolites. C14:0 sphingomyelin (positive coefficient), C34:0 phosphatidylethanolamine (positive coefficient), and γ -butyrobetaine (negative coefficient) were associated in a directionally similar fashion with total and specific (milk, yogurt, cheese) dairy consumption. The Pearson correlation coefficients between self-reported total dairy intake and predicted total dairy intake based on the corresponding multi-metabolite profile were 0.37 (95% CI, 0.33-0.40) in the discovery cohort and 0.16 (95% CI, 0.13-0.19) in the US confirmatory cohort. After adjusting for T2D risk factors, a higher total dairy intake-related metabolite profile score was associated with a lower T2D risk [HR per 1 SD; discovery cohort: 0.76 (95% CI, 0.63-0.90); US confirmatory cohort: 0.88 (95% CI, 0.78-0.99)]. CONCLUSIONS Total dairy intake was associated with 38 metabolites, including 3 consistently associated with dairy subtypes (C14:0 sphingomyelin, C34:0 phosphatidylethanolamine, γ -butyrobetaine). A score based on the 38 identified metabolites showed an inverse association with T2D risk in Spanish and US populations.

Database: Medline

Effect of low glycaemic index or load dietary patterns on glycaemic control and cardiometabolic risk factors in diabetes: systematic review and meta-analysis of randomised controlled trials.

Author(s): Chiavaroli, Laura; Lee, Danielle; Ahmed, Amna; Cheung, Annette; Khan, Tauseef A; Blanco, Sonia; Mejia; Mirrahimi, Arash; Jenkins, David J A; Livesey, Geoffrey; Wolever, Thomas M S; Rahelić, Dario; Kahleová, Hana; Salas-Salvadó, Jordi; Kendall, Cyril W C; Sievenpiper, John L

Source: BMJ (Clinical research ed.); Aug 2021; vol. 374 ; p. n1651

Publication Date: Aug 2021

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



PubMedID: 34348965

Available at [BMJ \(Clinical research ed.\)](#) - from BMJ Journals

Available at [BMJ \(Clinical research ed.\)](#) - from BMJ Journals

Abstract:OBJECTIVE To inform the update of the European Association for the Study of Diabetes clinical practice guidelines for nutrition therapy. DESIGN Systematic review and meta-analysis of randomised controlled trials. DATA SOURCES Medline, Embase, and the Cochrane Library searched up to 13 May 2021. ELIGIBILITY CRITERIA FOR SELECTING STUDIES Randomised controlled trials of three or more weeks investigating the effect of diets with low glycaemic index (GI)/glycaemic load (GL) in diabetes. OUTCOME AND MEASURE The primary outcome was glycated haemoglobin (HbA1c). Secondary outcomes included other markers of glycaemic control (fasting glucose, fasting insulin); blood lipids (low density lipoprotein cholesterol (LDL-C), high density lipoprotein cholesterol (HDL-C), non-HDL-C, apo B, triglycerides); adiposity (body weight, BMI (body mass index), waist circumference), blood pressure (systolic blood pressure (SBP) and diastolic blood pressure (DBP)), and inflammation (C reactive protein (CRP)). DATA EXTRACTION AND SYNTHESIS Two independent reviewers extracted data and assessed risk of bias. Data were pooled by random effects models. GRADE (grading of recommendations assessment, development, and evaluation) was used to assess the certainty of evidence. RESULTS 29 trial comparisons were identified in 1617 participants with type 1 and 2 diabetes who were predominantly middle aged, overweight, or obese with moderately controlled type 2 diabetes treated by hyperglycaemia drugs or insulin. Low GI/GL dietary patterns reduced HbA1c in comparison with higher GI/GL control diets (mean difference -0.31% (95% confidence interval -0.42 to -0.19%), $P < 0.001$; substantial heterogeneity, $I^2 = 75%$, $P < 0.001$). Reductions occurred also in fasting glucose, LDL-C, non-HDL-C, apo B, triglycerides, body weight, BMI, systolic blood pressure (dose-response), and CRP ($P < 0.05$), but not blood insulin, HDL-C, waist circumference, or diastolic blood pressure. A positive dose-response gradient was seen for the difference in GL and HbA1c and for absolute dietary GI and SBP ($P < 0.05$). The certainty of evidence was high for the reduction in HbA1c and moderate for most secondary outcomes, with downgrades due mainly to imprecision. CONCLUSION This synthesis suggests that low GI/GL dietary patterns result in small important improvements in established targets of glycaemic control, blood lipids, adiposity, blood pressure, and inflammation beyond concurrent treatment with hyperglycaemia drugs or insulin, predominantly in adults with moderately controlled type 1 and type 2 diabetes. The available evidence provides a good indication of the likely benefit in this population. STUDY REGISTRATION ClinicalTrials.gov NCT04045938.

Database: Medline

Efficacy and safety of a novel dual GIP and GLP-1 receptor agonist tirzepatide in patients with type 2 diabetes (SURPASS-1): a double-blind, randomised, phase 3 trial.

Author(s): Rosenstock, Julio; Wysham, Carol; Frías, Juan P; Kaneko, Shizuka; Lee, Clare J; Fernández Landó, Laura; Mao, Huzhang; Cui, Xuewei; Karanikas, Chrisanthi A; Thieu, Vivian T

Source: Lancet (London, England); Jul 2021; vol. 398 (no. 10295); p. 143-155

Publication Date: Jul 2021

Publication Type(s): Journal Article Clinical Trial, Phase Iii Randomized Controlled Trial

PubMedID: 34186022

Available at [Lancet \(London, England\)](#) - from ProQuest (MEDLINE with Full Text) - NHS Version

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

Abstract:BACKGROUND Despite advancements in care, many people with type 2 diabetes do not meet treatment goals; thus, development of new therapies is needed. We aimed to assess efficacy, safety, and tolerability of novel dual glucose-dependent insulinotropic polypeptide and GLP-1 receptor agonist tirzepatide monotherapy versus placebo in people with type 2 diabetes inadequately controlled by diet and exercise alone. METHODS We did a 40-week, double-blind, randomised, placebo-controlled, phase 3 trial (SURPASS-1), at 52 medical research centres and hospitals in India, Japan, Mexico, and the USA. Adult participants (≥ 18 years) were included if they had type 2 diabetes inadequately controlled by diet and exercise alone and if they were naive to injectable diabetes therapy. Participants were randomly assigned (1:1:1:1) via computer-generated random sequence to once a week tirzepatide



(5, 10, or 15 mg), or placebo. All participants, investigators, and the sponsor were masked to treatment assignment. The primary endpoint was the mean change in glycated haemoglobin (HbA1c) from baseline at 40 weeks. This study is registered with ClinicalTrials.gov, NCT03954834. FINDINGS From June 3, 2019, to Oct 28, 2020, of 705 individuals assessed for eligibility, 478 (mean baseline HbA1c 7.9% [63 mmol/mol], age 54.1 years [SD 11.9], 231 [48%] women, diabetes duration 4.7 years, and body-mass index 31.9 kg/m²) were randomly assigned to tirzepatide 5 mg (n=121 [25%]), tirzepatide 10 mg (n=121 [25%]), tirzepatide 15 mg (n=121 [25%]), or placebo (n=115 [24%]). 66 (14%) participants discontinued the study drug and 50 (10%) discontinued the study prematurely. At 40 weeks, all tirzepatide doses were superior to placebo for changes from baseline in HbA1c, fasting serum glucose, bodyweight, and HbA1c targets of less than 7.0% (<53 mmol/mol) and less than 5.7% (<39 mmol/mol). Mean HbA1c decreased from baseline by 1.87% (20 mmol/mol) with tirzepatide 5 mg, 1.89% (21 mmol/mol) with tirzepatide 10 mg, and 2.07% (23 mmol/mol) with tirzepatide 15 mg versus +0.04% with placebo (+0.4 mmol/mol), resulting in estimated treatment differences versus placebo of -1.91% (-21 mmol/mol) with tirzepatide 5 mg, -1.93% (-21 mmol/mol) with tirzepatide 10 mg, and -2.11% (-23 mmol/mol) with tirzepatide 15 mg (all p<0.0001). More participants on tirzepatide than on placebo met HbA1c targets of less than 7.0% (<53 mmol/mol; 87-92% vs 20%) and 6.5% or less (≤48 mmol/mol; 81-86% vs 10%) and 31-52% of patients on tirzepatide versus 1% on placebo reached an HbA1c of less than 5.7% (<39 mmol/mol). Tirzepatide induced a dose-dependent bodyweight loss ranging from 7.0 to 9.5 kg. The most frequent adverse events with tirzepatide were mild to moderate and transient gastrointestinal events, including nausea (12-18% vs 6%), diarrhoea (12-14% vs 8%), and vomiting (2-6% vs 2%). No clinically significant (<54 mg/dL [<3 mmol/L]) or severe hypoglycaemia were reported with tirzepatide. One death occurred in the placebo group. INTERPRETATION Tirzepatide showed robust improvements in glycaemic control and bodyweight, without increased risk of hypoglycaemia. The safety profile was consistent with GLP-1 receptor agonists, indicating a potential monotherapy use of tirzepatide for type 2 diabetes treatment. FUNDING Eli Lilly and Company.

Database: Medline

Nutritional basis of type 2 diabetes remission.

Author(s): Taylor, Roy; Ramachandran, Ambady; Yancy, William S; Forouhi, Nita G

Source: BMJ (Clinical research ed.); Jul 2021; vol. 374 ; p. n1449

Publication Date: Jul 2021

Publication Type(s): Journal Article

PubMedID: 34233884

Available at [BMJ \(Clinical research ed.\)](#) - from BMJ Journals

Available at [BMJ \(Clinical research ed.\)](#) - from BMJ Journals

Available at [BMJ \(Clinical research ed.\)](#) - from Unpaywall

Database: Medline

How to help type 2 diabetes patients lose weight and eliminate medication use: The DiRECT trial has shown the benefits of rapid weight loss through a low-calorie diet.

Author(s): Dean, Erin

Source: Primary Health Care; Oct 2021 ; p. 6-8

Publication Date: Oct 2021

Publication Type(s): Academic Journal

Abstract: More than 4 million people in the UK have type 2 diabetes, according to Diabetes UK.

Database: CINAHL



Association of a Healthy Lifestyle With All-Cause and Cause-Specific Mortality Among Individuals With Type 2 Diabetes: A Prospective Study in UK Biobank.

Author(s): Han, Han; Cao, Yaying; Feng, Chengwu; Zheng, Yan; Dhana, Klodian; Zhu, Shu; Shang, Cong; Yuan, Changzheng; Zong, Geng

Source: Diabetes care; Dec 2021

Publication Date: Dec 2021

Publication Type(s): Journal Article

PubMedID: 34857534

Available at [Diabetes care](#) - from EBSCO (MEDLINE Complete)

Abstract:OBJECTIVE To evaluate the association of a healthy lifestyle, involving seven low-risk factors mentioned in diabetes management guidelines (no current smoking, moderate alcohol consumption, regular physical activity, healthy diet, less sedentary behavior, adequate sleep duration, and appropriate social connection), with all-cause and cause-specific mortality among individuals with type 2 diabetes. RESEARCH DESIGN AND METHODS This study included 13,366 participants with baseline type 2 diabetes from the UK Biobank free of cardiovascular disease (CVD) and cancer. Lifestyle information was collected through a baseline questionnaire. RESULTS During a median follow-up of 11.7 years, 1,561 deaths were documented, with 625 from cancer, 370 from CVD, 115 from respiratory disease, 81 from digestive disease, and 74 from neurodegenerative disease. In multivariate-adjusted model, each lifestyle factor was significantly associated with all-cause mortality, and hazard ratios associated with the lifestyle score (scoring 6-7 vs. 0-2 unless specified) were 0.42 (95% CI 0.34, 0.52) for all-cause mortality, 0.57 (0.41, 0.80) for cancer mortality, 0.35 (0.22, 0.56) for CVD mortality, 0.26 (0.10, 0.63) for respiratory mortality, and 0.28 (0.14, 0.53) for digestive mortality (scoring 5-7 vs. 0-2). In the population-attributable risk analysis, 29.4% (95% CI 17.9%, 40.9%) of deaths were attributable to a poor lifestyle (scoring 0-5). The association between a healthy lifestyle and all-cause mortality was consistent, irrespective of factors reflecting diabetes severity (diabetes duration, glycemic control, diabetes-related microvascular disease, and diabetes medication). CONCLUSION A healthy lifestyle was associated with a lower risk of all-cause mortality and mortality due to CVD, cancer, respiratory disease, and digestive disease among individuals with type 2 diabetes.

Database: Medline

GERIATRICS

Associations between Food Group Intake and Physical Frailty in Irish Community-Dwelling Older Adults.

Author(s): O'Connell, Maeve Lorraine; Coppinger, Tara; Lacey, Seán; Walton, Janette; Arsenic, Tijana; McCarthy, Aoife Louise

Source: Nutrition and metabolic insights; 2021; vol. 14 ; p. 11786388211006447

Publication Date: 2021

Publication Type(s): Journal Article

PubMedID: 33854330

Available at [Nutrition and metabolic insights](#) - from Europe PubMed Central - Open Access

Available at [Nutrition and metabolic insights](#) - from Unpaywall

Abstract:Background Certain nutrients have shown protective effects against frailty, but less is known about the influence of individual food groups. Thus, this study aimed to investigate the relationship between the intake of different food groups and physical frailty in a cohort of community-dwelling older adults in Cork, Ireland. Methods One hundred and forty-two (n = 81 females, n = 61 males, age 74.1 ± 6.80 years) Irish community-dwelling volunteers aged ≥65 years participated in this cross-sectional study. Dietary intake was assessed using a validated food frequency questionnaire (FFQ). Frailty was identified as having 3 or more of the following criteria: weight loss, exhaustion, weakness, slow walking speed and low physical activity. Relationships between intakes of food groups and frailty score were determined using Spearman's rank (and partial rank) correlations and ordinal logistic regression analysis. Results Negative Spearman's rank correlations were observed between frailty score and



fish and fish products, fruit and vegetables and nuts and seeds, while positive correlations were found between frailty score and potatoes, fats and oils and sugars, preserves and snacks ($P < .05$). After adjustment for confounders, partial rank correlations remained statistically significant ($P .05$). Following ordinal logistic regression, the odds ratios (ORs) (95%CI) for frailty incidence for those in the lowest tertile of food group intake compared to the highest were; 3.04 (1.09-8.85) for fish and fish products, 4.34 (1.54-13.13) for fruit and vegetables, 1.52 (0.58-4.15) for nuts and seeds, 0.54 (0.19-1.51) for potatoes, 0.58 (0.17-1.95) for fats and oils and 0.49 (0.16-1.47) for sugars, preserves and snacks. Conclusion This study suggests that intakes of selected food groups are independently associated with frailty. These findings may hold significant relevance for the development of future frailty prevention strategies.

Database: Medline

The relationship of nutritional risk with diet quality and health outcomes in community-dwelling older adults.

Author(s): Bloom, Ilse; Pilgrim, Anna; Jameson, Karen A; Dennison, Elaine M; Sayer, Avan A; Roberts, Helen C; Cooper, Cyrus; Ward, Kate A; Robinson, Sian M

Source: Aging clinical and experimental research; Oct 2021; vol. 33 (no. 10); p. 2767-2776

Publication Date: Oct 2021

Publication Type(s): Journal Article

PubMedID: 34255296

Available at [Aging clinical and experimental research](#) - from Unpaywall

Abstract: OBJECTIVE To identify early nutritional risk in older populations, simple screening approaches are needed. This study aimed to compare nutrition risk scores, calculated from a short checklist, with diet quality and health outcomes, both at baseline and prospectively over a 2.5-year follow-up period; the association between baseline scores and risk of mortality over the follow-up period was assessed. METHOD The study included 86 community-dwelling older adults in Southampton, UK, recruited from outpatient clinics. At both assessments, hand grip strength was measured using a Jamar dynamometer. Diet was assessed using a short validated food frequency questionnaire; derived 'prudent' diet scores described diet quality. Body mass index (BMI) was calculated and weight loss was self-reported. Nutrition risk scores were calculated from a checklist adapted from the DETERMINE (range 0-17). RESULT The mean age of participants at baseline ($n = 86$) was 78 (SD 8) years; half (53%) scored 'moderate' or 'high' nutritional risk, using the checklist adapted from DETERMINE. In cross-sectional analyses, after adjusting for age, sex and education, higher nutrition risk scores were associated with lower grip strength [difference in grip strength: -0.09 , 95% CI (-0.17 , -0.02) SD per unit increase in nutrition risk score, $p = 0.017$] and poorer diet quality [prudent diet score: -0.12 , 95% CI (-0.21 , -0.02) SD, $p = 0.013$]. The association with diet quality was robust to further adjustment for number of comorbidities, whereas the association with grip strength was attenuated. Nutrition risk scores were not related to reported weight loss or BMI at baseline. In longitudinal analyses there was an association between baseline nutrition risk score and lower grip strength at follow-up [fully-adjusted model: -0.12 , 95% CI (-0.23 , -0.02) SD, $p = 0.024$]. Baseline nutrition risk score was also associated with greater risk of mortality [unadjusted hazard ratio per unit increase in score: 1.29 (1.01, 1.63), $p = 0.039$]; however, this association was attenuated after adjustment for sex and age. CONCLUSION Cross-sectional associations between higher nutrition risk scores, assessed from a short checklist, and poorer diet quality suggest that this approach may hold promise as a simple way of screening older populations. Further larger prospective studies are needed to explore the predictive ability of this screening approach and its potential to detect nutritional risk in older adults.

Database: Medline

Malnutrition: A Misunderstood Diagnosis by Primary Care Health Care Professionals and Community-Dwelling Older Adults in Ireland.

Author(s): Geraghty, Aisling A; Browne, Sarah; Reynolds, Ciara M E; Kennelly, Sharon; Kelly, Lucy; McCallum, Kimberley; McBean, Laura; Clyne, Barbara; Bury, Gerard; Bradley, Catriona; McCullagh, Laura; Bardon, Laura A; Murrin, Celine; Perrotta, Carla; Gibney, Eileen R; Castro, Patricia Dominguez; Corish, Clare A



Source: Journal of the Academy of Nutrition and Dietetics; Dec 2021; vol. 121 (no. 12); p. 2443-2453

Publication Date: Dec 2021

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

PubMedID: 34219047

Abstract:BACKGROUND Language and communication have an impact on how a clinical condition is treated and experienced, from both the health care professional (HCP) and patient perspective. Malnutrition is prevalent among community-dwelling older adults, yet perceptions of patient understanding of the term malnutrition to date remain underexplored. OBJECTIVE This qualitative study explored the use and perceptions of the term malnutrition among HCPs and older adults at risk of malnutrition. DESIGN Semi-structured interviews and focus groups were conducted with HCPs and older adults with a prescription for oral nutritional supplements (ONS) in the community, to explore perspectives. PARTICIPANTS AND SETTINGS HCPs with experience of working with older adults were recruited in primary care centers, general practitioner practices, community health organizations, and community pharmacies in County Dublin, Ireland, between 2018 and 2019. Older adults, aged ≥ 60 years, with a current or previous prescription for ONS were recruited from daycare centers. One-to-one interviews were conducted with general practitioners (n = 16) and patients (n = 13), and focus groups were conducted with other HCPs, including dietitians (n = 22), nurses (n = 22), pharmacists (n = 9), physiotherapists (n = 12), occupational therapists (n = 6), and speech and language therapists (n = 4). DATA ANALYSIS Data from interviews and focus groups were transcribed verbatim and analyzed using thematic analysis. RESULTS There was mutual agreement between HCPs and patients on the main theme, "malnutrition is a term to be avoided." There were three subthemes with varying input from the different HCP groups and patients: "Malnutrition is a term a patient doesn't want to hear"-malnutrition has negative connotations that imply neglect and stigma; "malnutrition is a clinical term which patients don't understand"-with perceptions that it is better to substitute the term with simpler motivating messages; and "lack of confidence identifying malnutrition"-expressed by non-dietetics HCPs who believed they had insufficient expertise on malnutrition to communicate effectively with patients. CONCLUSIONS HCPs and patients perceived negative connotations with the term malnutrition, and HCPs used alternatives in practice. Additional consultation with HCPs and patients is recommended to explore appropriate language for conveying health risks associated with malnutrition. Future research should also address how current communication challenges can be addressed as part of strategic management programs or interventions to prevent and treat malnutrition.

Database: Medline

The Gender-Specific Relationship between Nutritional Status, Physical Activity and Functional Mobility in Irish Community-Dwelling Older Adults.

Author(s): O'Connell, Maeve Lorraine; Coppinger, Tara; Lacey, Seán; Arsenic, Tijana; McCarthy, Aoife Louise

Source: International journal of environmental research and public health; Aug 2021; vol. 18 (no. 16)

Publication Date: Aug 2021

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

PubMedID: 34444176

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 (MEDLINE with Full Text) - NHS Version

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

Abstract: Research suggests that both nutrition and physical activity can protect mobility in older adults, but it is yet to be determined whether these relationships are affected by gender. Thus, we investigated the gender-specific relationship between nutritional status, physical activity level and functional mobility in Irish older adults. A cross-



sectional study was undertaken in 176 community-dwelling older adults (73.6 ± 6.61 years) living in Cork, Ireland. Nutritional status was measured using the Mini Nutritional Assessment-Short Form (MNA-SF) and physical activity was assessed via the Physical Activity Scale for the Elderly (PASE). Functional mobility was measured using the Timed Up and Go (TUG) test. The gender-stratified relationship between variables was assessed using Pearson's correlations and multiple linear regression. Partial correlations ($p < 0.05$) were observed for TUG with PASE score in both genders, and with MNA-SF score in females, only. Multiple regression showed that physical activity was a predictor of TUG in both genders ($\beta = 0.257$ for males, $\beta = 0.209$ for females, $p < 0.05$), while nutritional status was a predictor of TUG in females, only ($\beta = -0.168$, $p = 0.030$). Our results suggest that physical activity is associated with functional mobility in both genders, while the relationship between nutritional status and mobility may be specific to older females. These findings may be of interest for the design of functional preservation strategies.

Database: Medline

Prevalence of sarcopenia and associated factors in older adults attending a day hospital service in Ireland.

Author(s): Connolly, Kieron; Cunningham, Conal; Murphy, Niamh; Romero-Ortuno, Roman; Horgan, Frances

Source: European geriatric medicine; Aug 2021; vol. 12 (no. 4); p. 851-862

Publication Date: Aug 2021

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

PubMedID: 33583001

Available at [European geriatric medicine](#) - from Unpaywall

Abstract: PURPOSESarcopenia is a muscle disease that is linked to the effects of ageing, chronic diseases, physical inactivity, and poor nutrition. In Ireland, there is a lack of readily available information on sarcopenia in older adults. The aim of this study was to describe the prevalence and associated factors of sarcopenia in community-dwelling older adults attending a day hospital service in Ireland, using the European Working Group of Sarcopenia in Older People (EWGSOP) guidelines. METHODSAn observational cross-sectional study was conducted, where a consecutive series of older adults attending a day hospital service were invited to participate. The measure of primary interest was the diagnosis of sarcopenia using the EWGSOP 2019 guidelines. We also collected other Comprehensive Geriatric Assessment measures including cognition, nutrition, frailty and physical activity. RESULTSA total of 134 participants took part in the study. The mean age was 81.7 (SD \pm 7.1). Sixty-one percent (N = 82) were female. The prevalence of sarcopenia ranged from 27 to 37% depending on the assessment tool used to assess muscle strength. Sarcopenia was associated with older age, frailty, reduced nutritional state, poor physical performance and reduced anthropometric measures, irrespective of how muscle strength was measured. Independently associated factors differed depending on muscle strength test, except for older age. CONCLUSIONThe prevalence of sarcopenia in the day hospital ranged from 27 to 37%. The assessment tool used to assess muscle strength influenced both the prevalence and associated factors of sarcopenia, suggesting scope for further research.

Database: Medline

Association of Daily Physical Activity and Sedentary Behaviour with Protein Intake Patterns in Older Adults: A Multi-Study Analysis across Five Countries.

Author(s): Lourida, Ilianna; Boer, Jolanda M A; Teh, Ruth; Kerse, Ngaire; Mendonça, Nuno; Rolleston, Anna; Sette, Stefania; Tapanainen, Heli; Turrini, Aida; Virtanen, Suvi M; Visser, Marjolein; Jagger, Carol

Source: Nutrients; Jul 2021; vol. 13 (no. 8)

Publication Date: Jul 2021

Publication Type(s): Journal Article

PubMedID: 34444732

Available at [Nutrients](#) - from Europe PubMed Central - Open Access

Available at [Nutrients](#) - from ProQuest (MEDLINE with Full Text) - NHS Version



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

Available at [Nutrients](#) - from Unpaywall

Abstract:Physical activity and protein intake are associated with ageing-related outcomes, including loss of muscle strength and functional decline, so may contribute to strategies to improve healthy ageing. We investigated the cross-sectional associations between physical activity or sedentary behaviour and protein intake patterns in community-dwelling older adults across five countries. Self-reported physical activity and dietary intake data were obtained from two cohort studies (Newcastle 85+ Study, UK; LiLACS, New Zealand Māori and Non-Māori) and three national food consumption surveys (DNFCS, The Netherlands; FINDIET, Finland; INRAN-SCAI, Italy). Associations between physical activity and total protein intake, number of eating occasions providing protein, number of meals with specified protein thresholds, and protein intake distribution over the day (calculated as a coefficient of variance) were assessed by regression and repeated measures ANOVA models adjusting for covariates. Greater physical activity was associated with higher total protein intake and more eating occasions containing protein, although associations were mostly explained by higher energy intake. Comparable associations were observed for sedentary behaviour in older adults in Italy. Evidence for older people with higher physical activity or less sedentary behaviour achieving more meals with specified protein levels was mixed across the five countries. A skewed protein distribution was observed, with most protein consumed at midday and evening meals without significant differences between physical activity or sedentary behaviour levels. Findings from this multi-study analysis indicate there is little evidence that total protein and protein intake patterns, irrespective of energy intake, differ by physical activity or sedentary behaviour levels in older adults.

Database: Medline

Macronutrient Intake and Risk of Dementia in Community-Dwelling Older Adults: A Nine-Year Follow-Up Cohort Study.

Author(s): Shang, Xianwen; Hill, Edward; Zhu, Zhuoting; Liu, Jiahao; Ge, Zongyuan; Wang, Wei; He, Mingguang

Source: Journal of Alzheimer's disease : JAD; Nov 2021

Publication Date: Nov 2021

Publication Type(s): Journal Article

PubMedID: 34864666

Abstract:BACKGROUND Little is known about the association between macronutrient intake and incident dementia. OBJECTIVE To identify an optimal range of macronutrient intake associated with reduced risk of dementia. METHODS Our analysis included 93,389 adults aged 60-75 years from the UK Biobank. Diet was assessed using a web-based 24-h recall questionnaire between 2009-2012. Dementia was ascertained using hospital inpatient, death records, and self-reported data up to January 2021. We calculated a macronutrient score based on associations between an individual's macronutrient intake and incident dementia. RESULTS During a median follow-up of 8.7 years, 1,171 incident dementia cases were documented. We found U-shape relationships for carbohydrate, fat, and protein intake with incident dementia. Compared to individuals with optimal carbohydrate intake, those with high intake (HR (95%CI): 1.48(1.15-1.91)) but not low intake (1.19(0.89-1.57)) had a higher risk of dementia. In the multivariable analysis, a low-fat intake (HR (95%CI): 1.42(1.11-1.82)) was associated with a higher risk of all-cause dementia. After adjustment for covariates, a high (HR (95%CI): 1.41(1.09-1.83)) but not low protein intake (1.22(0.94-1.57)) was associated with an increased risk of dementia. Individuals in quintiles 3-5 of optimal macronutrient score had a lower risk of dementia compared with those in quintile 1 (HR (95%CI): 0.76(0.64-0.91) for quintile 3, 0.71(0.60-0.85) for quintile 4, 0.74(0.61-0.91) for quintile 5). The association between macronutrient score and incident dementia was significant across subgroups of age, gender, education, and smoking. CONCLUSION Moderate intakes of carbohydrate, fat, and protein were associated with the lowest risk of incident dementia.

Database: Medline

Health technologies for the prevention and detection of falls in adult hospital inpatients: a scoping review.



Author(s): Cooper ; Pavlova, Anastasia; Greig, Leon; Swinton, Paul; Kirkpatrick, Pamela; Mitchelhill, Fiona; Simpson, Susan; Stephen, Audrey; Alexander, Lyndsay

Source: JBI Evidence Synthesis; Oct 2021; vol. 19 (no. 10); p. 2478-2658

Publication Date: Oct 2021

Publication Type(s): Academic Journal

Abstract:Objective: The objective of this scoping review was to examine and map the evidence relating to the reporting and evaluation of technologies for the prevention and detection of falls in adult hospital inpatients. Introduction: Falls are a common cause of accidental injury, leading to significant safety issues in hospitals globally, and resulting in substantial human and economic costs. Previous research has focused on community settings with less emphasis on hospital settings. Inclusion criteria: Participants included adult inpatients, aged 18 years and over; the concept included the use of fall-prevention or fall-detection technologies; the context included any hospital ward setting. Methods: This scoping review was conducted according to JBI methodology for scoping reviews, guided by an a priori protocol. A wide selection of databases including MEDLINE, CINAHL, AMED, Embase, PEDro, Epistimonikos, and Science Direct were searched for records from inception to October 2019. Other sources included gray literature, trial registers, government health department websites, and websites of professional bodies. Only studies in the English language were included. A three-step search strategy was employed, with all records exported for subsequent title and abstract screening prior to full-text screening. Screening was performed by two independent reviewers and data extraction by one reviewer following agreement checks. Data are presented in narrative and tabular form. Results: Over 13,000 records were identified with 404 included in the scoping review: 336 reported on fallprevention technologies, 51 targeted detection, and 17 concerned both. The largest contributions of studies came from the USA (n=185), Australia (n=65), the UK (n=36), and Canada (n=18). There was a variety of study designs including 77 prospective cohort studies, 33 before-after studies, and 35 systematic reviews; however, relatively few randomized controlled trials were conducted (n=25). The majority of records reported on multifactorial and multicomponent technologies (n=178), followed by fall detection devices (n=86). Few studies reported on the following interventions in isolation: fall risk assessment (n=6), environment design (n=8), sitters (n=5), rounding (n=3), exercise (n=3), medical/pharmaceutical (n=2), physiotherapy (n=1), and nutritional (n=1). The majority (57%) of studies reported clinical effectiveness outcomes, with smaller numbers (14%) reporting feasibility and/or acceptability outcomes, or cost-effectiveness outcomes (5%). Conclusions: This review has mapped the literature on fall-prevention and fall-detection technology and outcomes for adults in the hospital setting. Despite the volume of available literature, there remains a need for further highquality research on fall-prevention and fall-detection technologies.

Database: CINAHL

Poor oral health and the association with diet quality and intake in older people in two studies in the UK and USA.

Author(s): Kotronia ; Brown, Heather; Papacosta, A. Olia; Lennon, Lucy T.; Weyant, Robert J.; Whincup, Peter H.; Wannamethee, S. Goya; Ramsay, Sheena E.

Source: British Journal of Nutrition; Jul 2021; vol. 126 (no. 1); p. 118-130

Publication Date: Jul 2021

Publication Type(s): Academic Journal

Available at [British Journal of Nutrition](#) - from Unpaywall

Abstract:We aimed to investigate the associations of poor oral health cross-sectionally with diet quality and intake in older people. We also examined whether change in diet quality is associated with oral health problems. Data from the British Regional Heart Study (BRHS) comprising British males aged 71–92 years and the Health, Aging and Body Composition (HABC) Study comprising American males and females aged 71–80 years were used. Dental data included tooth loss, periodontal disease, dry mouth and self-rated oral health. Dietary data included diet quality (based on Elderly Dietary Index (BRHS) and Healthy Eating Score (HABC Study)) and several nutrients. In the BRHS, change in diet quality over 10 years (1998–2000 to 2010–2012) was also assessed. In the BRHS, tooth loss, fair/poor self-rated oral health and accumulation of oral health problems were associated with poor diet quality, after



adjustment. Similar associations were reported for high intake of processed meat. Poor oral health was associated with the top quartile of percentage of energy content from saturated fat (self-rated oral health, OR 1.34, 95 % CI 1.02, 1.77). In the HABC Study, no significant associations were observed for diet quality after adjustment. Periodontal disease was associated with the top quartile of percentage of energy content from saturated fat (OR 1.48, 95 % CI 1.09, 2.01). In the BRHS, persistent low diet quality was associated with higher risk of tooth loss and accumulation of oral health problems. Older individuals with oral health problems had poorer diets and consumed fewer nutrient-rich foods. Persistent poor diet quality was associated with oral health problems later in life.

Database: CINAHL

OBESITY

Modeling the impact of calorie-reduction interventions on population prevalence and inequalities in childhood obesity in the Southampton Women's Survey.

Author(s): Russell, Simon J; Hope, Steven; Croker, Helen; Crozier, Sarah; Packer, Jessica; Inskip, Hazel; Viner, Russell M

Source: Obesity science & practice; Oct 2021; vol. 7 (no. 5); p. 545-554

Publication Date: Oct 2021

Publication Type(s): Journal Article

PubMedID: 34631133

Available at [Obesity science & practice](#) - from Unpaywall

Abstract:BackgroundIn the United Kingdom, rates of childhood obesity are high and inequalities in obesity have widened in recent years. Children with obesity face heightened risks of living with obesity as adults and suffering from associated morbidities. Addressing population prevalence and inequalities in childhood obesity is a key priority for public health policymakers in the United Kingdom and elsewhere. Where randomized controlled trials are not possible, potential policy actions can be simulated using causal modeling techniques.ObjectivesUsing data from the Southampton Women's Survey (SWS), a cohort with high quality dietary and lifestyle data, the potential impact of policy-relevant calorie-reduction interventions on population prevalence and inequalities of childhood obesity was investigated.MethodsPredicted probabilities of obesity (using UK90 cut-offs) at age 6-7 years were estimated from logistic marginal structural models adjusting for observed calorie consumption at age 3 years (using food diaries) and confounding. A series of policy-relevant intervention scenarios were modeled to simulate reductions in energy intake (differing in effectiveness, the targeting mechanisms, and level of uptake).ResultsAt age 6-7 years, 8.3% of children were living with obesity, after accounting for observed energy intake and confounding. A universal intervention to lower median energy intake to the estimated average requirement (a 13% decrease), with an uptake of 75%, reduced obesity prevalence by 1% but relative and absolute inequalities remained broadly unchanged.ConclusionsSimulated interventions substantially reduced population prevalence of obesity, which may be useful in informing policymakers.

Database: Medline

Healthy eating and lifestyle in pregnancy (HELP): a cluster randomised trial to evaluate the effectiveness of a weight management intervention for pregnant women with obesity on weight at 12 months postpartum.

Author(s): Simpson, Sharon A; Coulman, Elinor; Gallagher, Dunla; Jewell, Karen; Cohen, David; Newcombe, Robert G; Huang, Chao; Robles-Zurita, José Antonio; Busse, Monica; Owen-Jones, Eleri; Duncan, Donna; Williams, Nefyn; Stanton, Helen; Avery, Amanda; McIntosh, Emma; Playle, Rebecca

Source: International journal of obesity (2005); Aug 2021; vol. 45 (no. 8); p. 1728-1739

Publication Date: Aug 2021

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



PubMedID: 34021264

Available at [International journal of obesity \(2005\)](#) - from Unpaywall

Abstract:OBJECTIVE To assess whether a weight management intervention for pregnant women with obesity was effective in reducing body mass index (BMI) 12 months after giving birth. METHODS Pragmatic, cluster randomised controlled trial (RCT) with embedded cost-effectiveness analysis. 598 women with a BMI of ≥ 30 kg/m² (between 12 and 20 weeks gestation) were recruited from 20 secondary care maternity units in England and Wales. BMI at 12 months postpartum was the primary outcome. A range of clinical and behavioural secondary outcomes were examined. INTERVENTIONS Women attending maternity units randomised to intervention were invited to a weekly weight management group, which combined expertise from a commercial weight loss programme with clinical advice from midwives. Both intervention and control participants received usual care and leaflets on diet and physical activity in pregnancy. RESULTS Mean (SD) BMI at 12 months postpartum was 36.0 kg/m² (5.2) in the control group, and 37.5 kg/m² (6.7) in the intervention group. After adjustment for baseline BMI, the intervention effect was -0.02 (95% CI -0.04 to 0.01). The intervention group had an improved healthy eating score (3.08, 95% CI 0.16 to 6.00, $p < 0.04$), improved fibre score (3.22, 1.07 to 5.37, $p < 0.01$) and lower levels of risky drinking at 12 months postpartum compared to the control group (OR 0.45, 0.27 to 0.74, $p < 0.002$). The net incremental monetary benefit was not statistically significantly different between arms, although the probability of the intervention being cost-effective was above 60%, at policy-relevant thresholds. CONCLUSIONS There was no significant difference between groups on the primary outcome of BMI at 12 months. Analyses of secondary outcomes indicated improved healthy eating and lower levels of risky drinking. TRIAL REGISTRATION Current Controlled Trials ISRCTN25260464.

Database: Medline

Group programmes for weight loss may be more effective than one-to-one sessions.

Author(s): Saul, Helen; Gursul, Deniz

Source: BMJ (Clinical research ed.); Nov 2021; vol. 375 ; p. n2771

Publication Date: Nov 2021

Publication Type(s): Journal Article

PubMedID: 34810160

Available at [BMJ \(Clinical research ed.\)](#) - from BMJ Journals

Available at [BMJ \(Clinical research ed.\)](#) - from BMJ Journals

Abstract:The study Abbott S, Smith E, Tighe B, Lycett D. Group versus one-to-one multi-component lifestyle interventions for weight management: a systematic review and meta-analysis of randomised controlled trials. J Hum Nutr Diet 2021;34:485-93. To read the full NIHR Alert, go to: <https://evidence.nihr.ac.uk/alert/group-weight-loss-programmes-more-effective-than-one-to-one-sessions/>.

Database: Medline

Coordinating Diet-Related Efforts to Reduce Obesity.

Author(s): Rubin, Rita

Source: JAMA; Oct 2021; vol. 326 (no. 16); p. 1571

Publication Date: Oct 2021

Publication Type(s): Journal Article

PubMedID: 34698799

Available at [JAMA](#) - from EBSCO (MEDLINE Complete)

Database: Medline



The nurse's role in providing strategies and advice on weight management.

Author(s): Coutts

Source: British Journal of Nursing; Nov 2021; vol. 30 (no. 21)

Publication Date: Nov 2021

Publication Type(s): Academic Journal

Available at [British journal of nursing \(Mark Allen Publishing\)](#) - from EBSCO (CINAHL Plus with Full Text)

Available at [British journal of nursing \(Mark Allen Publishing\)](#) - from EBSCO (CINAHL with Full Text)

Abstract:Maintaining a healthy weight is a concern for a large proportion of adults in the UK, with obesity rates having almost doubled between 1993 and 2011. With overweight and obesity linked to several diseases and health conditions, nurses are often tasked with raising the subject with their clients/patients and advising on lifestyle modifications. This article examines ways to identify whether a person needs to lose weight and establishing targets. It then reviews the evidence base for different approaches to weight management currently available and the advice nurses can provide.

Database: CINAHL

How to broach the subject of a patient's weight: The NHS has struggled in tackling obesity, so how should nurses raise this potentially sensitive issue?

Author(s): Evans, Nick

Source: Nursing Standard; Aug 2021; vol. 36 (no. 8); p. 74-76

Publication Date: Aug 2021

Publication Type(s): Trade Publication

Available at [Nursing Standard](#) - from RCN Publishing Company Access is limited to previous 3 years

Abstract:Obesity is one of the biggest health issues facing the nation, with more than one quarter of adults classed as obese. Add in those who are overweight it means that nearly two thirds of the population are carrying excess weight, putting them at higher risk of poor health.

Database: CINAHL

Sequencing of 640,000 exomes identifies GPR75 variants associated with protection from obesity.

Author(s): Akbari, Parsa; Gilani, Ankit; Sosina, Olukayode; Kosmicki, Jack A; Khrimian, Lori; Fang, Yi-Ya; Persaud, Trikaladarshi; Garcia, Victor; Sun, Dylan; Li, Alexander; Mbatchou, Joelle; Locke, Adam E; Benner, Christian; Verweij, Niek; Lin, Nan; Hossain, Sakib; Agostinucci, Kevin; Pascale, Jonathan V; Dirice, Ercument; Dunn, Michael; Regeneron Genetics Center; DiscovEHR Collaboration; Kraus, William E; Shah, Svati H; Chen, Yii-Der I; Rotter, Jerome I; Rader, Daniel J; Melander, Olle; Still, Christopher D; Mirshahi, Tooraj; Carey, David J; Berumen-Campos, Jaime; Kuri-Morales, Pablo; Alegre-Díaz, Jesus; Torres, Jason M; Emberson, Jonathan R; Collins, Rory; Balasubramanian, Suganthi; Hawes, Alicia; Jones, Marcus; Zambrowicz, Brian; Murphy, Andrew J; Paulding, Charles; Coppola, Giovanni; Overton, John D; Reid, Jeffrey G; Shuldiner, Alan R; Cantor, Michael; Kang, Hyun M; Abecasis, Goncalo R; Karalis, Katia; Economides, Aris N; Marchini, Jonathan; Yancopoulos, George D; Sleeman, Mark W; Altarejos, Judith; Della Gatta, Giusy; Tapia-Conyer, Roberto; Schwartzman, Michal L; Baras, Aris; Ferreira, Manuel A R; Lotta, Luca A

Source: Science (New York, N.Y.); Jul 2021; vol. 373 (no. 6550)

Publication Date: Jul 2021

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

PubMedID: 34210852

Abstract:Large-scale human exome sequencing can identify rare protein-coding variants with a large impact on complex traits such as body adiposity. We sequenced the exomes of 645,626 individuals from the United Kingdom,



the United States, and Mexico and estimated associations of rare coding variants with body mass index (BMI). We identified 16 genes with an exome-wide significant association with BMI, including those encoding five brain-expressed G protein-coupled receptors (CALCR, MC4R, GIPR, GPR151, and GPR75). Protein-truncating variants in GPR75 were observed in ~4/10,000 sequenced individuals and were associated with 1.8 kilograms per square meter lower BMI and 54% lower odds of obesity in the heterozygous state. Knock out of Gpr75 in mice resulted in resistance to weight gain and improved glycemic control in a high-fat diet model. Inhibition of GPR75 may provide a therapeutic strategy for obesity.

Database: Medline

OBSTRETRICS & GYNAECOLOGY

Effect of an Antenatal Lifestyle Intervention on Dietary Inflammatory Index and Its Associations with Maternal and Fetal Outcomes: A Secondary Analysis of the PEARS Trial.

Author(s): Killeen, Sarah Louise; Phillips, Catherine M; Delahunt, Anna; Yelverton, Cara A; Shivappa, Nitin; Hébert, James R; Kennelly, Maria A; Cronin, Martina; Mehegan, John; McAuliffe, Fionnuala M

Source: Nutrients; Aug 2021; vol. 13 (no. 8)

Publication Date: Aug 2021

Publication Type(s): Journal Article Randomized Controlled Trial

PubMedID: 34444958

Available at [Nutrients](#) - from Europe PubMed Central - Open Access

Available at [Nutrients](#) - from ProQuest (MEDLINE with Full Text) - NHS Version

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

Abstract:We investigated the effect of an antenatal lifestyle intervention of a low-glycaemic index (GI) diet and physical activity on energy-adjusted dietary inflammatory index (E-DIITM) and explored its relationship with maternal and child health in women with overweight and obesity. This was a secondary analysis of 434 mother-child pairs from the Pregnancy Exercise and Nutrition Study (PEARS) trial in Dublin, Ireland. E-DIITM scores were calculated for early (10-16 weeks) and late (28 weeks) pregnancy. Outcomes included lipids, inflammation markers, insulin resistance, mode of delivery, infant size, pre-eclampsia, and gestational diabetes. T-tests were used to assess changes in E-DIITM. Chi-square, correlations, and multiple regression were employed to investigate relationships with outcomes. The mean (SD) age of participants was 32.45 (4.29) years with median (IQR) BMI 28.25 (26.70, 31.34) kg/m². There was no change in E-DIITM in the controls (-0.14 (1.19) vs. -0.07 (1.09), p = 0.465) but E-DIITM reduced by 10% after the intervention (0.01 (1.07) vs -0.75 (1.05), p < 0.001). No associations were found between early pregnancy E-DIITM and maternal and child outcomes, except for increased odds of adverse cardiometabolic phenotype in women who delivered male (OR = 2.29, p = 0.010) but not female infants (OR = 0.99, p = 0.960). A low-GI antenatal intervention can reduce the inflammatory potential of diets. Sex differences should be explored further in future research.

Database: Medline

Bump2Baby and Me: protocol for a randomised trial of mHealth coaching for healthy gestational weight gain and improved postnatal outcomes in high-risk women and their children.

Author(s): O'Reilly, Sharleen L; Burden, Christy; Campoy, Cristina; McAuliffe, Fionnuala M; Teede, Helena; Andresen, Jesper; Campbell, Karen J; Geraghty, Aisling A; Harrison, Cheryce L; Laws, Rachel; Norman, Jane E; Maindal, Helle T; Vrangbæk, Karsten; Segurado, Ricardo; Versace, Vincent L; Skinner, Timothy C; IMPACT DIABETES B2B Collaboration Group

Source: Trials; Dec 2021; vol. 22 (no. 1); p. 963

Publication Date: Dec 2021

Publication Type(s): Journal Article Clinical Trial Protocol



PubMedID: 34963483

Available at [Trials](#) - from BioMed Central

Available at [Trials](#) - from Europe PubMed Central - Open Access

Available at [Trials](#) - from EBSCO (MEDLINE Complete)

Abstract:BACKGROUND Gestational diabetes (GDM) impacts 8-18% of pregnancies and greatly increases both maternal and child risk of developing non-communicable diseases such as type 2 diabetes and obesity. Whilst lifestyle interventions in pregnancy and postpartum reduce this risk, a research translation gap remains around delivering implementable interventions with adequate population penetration and participation. Impact Diabetes Bump2Baby is an implementation project of an evidence-based system of care for the prevention of overweight and obesity. Bump2Baby and Me is the multicentre randomised controlled trial investigating the effectiveness of a mHealth coaching programme in pregnancy and postpartum for women at high risk of developing GDM. METHODSEight hundred women will be recruited in early pregnancy from 4 clinical sites within Ireland, the UK, Spain, and Australia. Women will be screened for eligibility using the validated Monash GDM screening tool. Participants will be enrolled from 12 to 24 weeks' gestation and randomised on a 1:1 basis into the intervention or control arm. Alongside usual care, the intervention involves mHealth coaching via a smartphone application, which uses a combination of synchronous and asynchronous video and text messaging, and allows for personalised support and goal setting with a trained health coach. The control arm receives usual care. All women and their children will be followed from early pregnancy until 12 months postpartum. The primary outcome will be a difference in maternal body mass index (BMI) of 0.8 kg/m² at 12 months postpartum. Secondary maternal and infant outcomes include the development of GDM, gestational weight gain, pregnancy outcomes, improvements in diet, physical activity, sleep, and neonatal weight and infant growth patterns. The 5-year project is funded by the EU Commission Horizon 2020 and the Australian National Health and Medical Research Council. Ethical approval has been received. DISCUSSION Previous interventions have not moved beyond tightly controlled efficacy trials into routine service delivery. This project aims to provide evidence-based, sustainable support that could be incorporated into usual care for women during pregnancy and postpartum. This study will contribute evidence to inform the early prevention of non-communicable diseases like obesity and diabetes in mothers and the next generation. TRIAL REGISTRATION Australian New Zealand Clinical Trials Registry ACTRN12620001240932 . Registered on 19 November 2020.

Database: Medline

Changes in diet from pregnancy to one year after birth: a longitudinal study.

Author(s): Poulain, Tanja; Spielau, Ulrike; Vogel, Mandy; Dathan-Stumpf, Anne; Körner, Antje; Kiess, Wieland

Source: BMC pregnancy and childbirth; Sep 2021; vol. 21 (no. 1); p. 600

Publication Date: Sep 2021

Publication Type(s): Journal Article

PubMedID: 34481457

Available at [BMC pregnancy and childbirth](#) - from BioMed Central

Available at [BMC pregnancy and childbirth](#) - from Europe PubMed Central - Open Access

Available at [BMC pregnancy and childbirth](#) - from ProQuest (Health Research Premium) - NHS Version

Abstract:BACKGROUND Pregnancy and the first year after giving birth are marked by physiological and psychological changes. While it is well known that energy requirements change during this time, the question of how a woman's diet actually changes from pregnancy until 1 year postpartum has been left virtually unexplored. The present study employs a longitudinal design to investigate these changes. METHODS Data were collected within the framework of the LIFE Child study (Leipzig, Germany). The diet composition and culture of eating of 110 women were assessed at 3 time points: in the 24th week of pregnancy, 3 months after giving birth (breastfeeding period), and 12 months after giving birth (after weaning). We assessed differences in nutritional health (Nutritional Health Score, NHS) and the consumption of different food items at each of these time points. We also investigated associations between nutritional health and age, socio-economic status (SES), BMI before pregnancy, and previous births at all three time



points. RESULTSThe analyses revealed high correlations in the NHS values between the three time points ($r_{t0/t1} = .55$, $r_{t0/t2} = .60$). On average, nutritional health was lower in the breastfeeding period than during pregnancy. In more detail, women reported less healthy levels of treats and white bread consumption and a higher frequency of snacking in the breastfeeding period than during pregnancy. In contrast, overall nutritional health did not differ significantly between pregnancy and the time after weaning. Increased age was associated with a healthier diet during pregnancy, and a high SES was associated with healthier diet after weaning. Furthermore, the increase in nutritional health from the breastfeeding period to the time after weaning was significantly stronger in women with a higher BMI. We observed no significant associations between dietary nutritional health and previous births. CONCLUSIONSThe present findings suggest that higher energy requirements in the breastfeeding period are met by consuming high-calorie and unhealthy food products rather than healthy and nutrient-rich food. Young mothers should be supported in taking care of their own nutritional health during the challenging time of breastfeeding and caring for a newborn child.

Database: Medline

The top 10 research priorities in diabetes and pregnancy according to women, support networks and healthcare professionals.

Author(s): Ayman, Göher; Strachan, James A; McLennan, Niamh; Malouf, Reem; Lowe-Zinola, Jack; Magdi, Fida; Roberts, Nia; Alderdice, Fiona; Berneantu, Iuliana; Breslin, Niki; Byrne, Caroline; Carnell, Sonya; Churchill, David; Grisoni, Jeannie; Hirst, Jane E; Morris, Anna; Murphy, Helen R; O'Brien, Jane; Schmutz, Caroline; Shah, Kamini; Singal, Ankita S; Strachan, Mark W J; Cowan, Katherine; Knight, Marian

Source: Diabetic medicine : a journal of the British Diabetic Association; Aug 2021; vol. 38 (no. 8); p. e14588

Publication Date: Aug 2021

Publication Type(s): Journal Article

PubMedID: 33949704

Available at [Diabetic medicine : a journal of the British Diabetic Association](#) - from Wiley Online Library

Available at [Diabetic medicine : a journal of the British Diabetic Association](#) - from Unpaywall

Abstract: AIMSTo undertake a Priority Setting Partnership (PSP) to establish priorities for future research in diabetes and pregnancy, according to women with experience of pregnancy, and planning pregnancy, with any type of diabetes, their support networks and healthcare professionals. METHODSThe PSP used established James Lind Alliance (JLA) methodology working with women and their support networks and healthcare professionals UK-wide. Unanswered questions about the time before, during or after pregnancy with any type of diabetes were identified using an online survey and broad-level literature search. A second survey identified a shortlist of questions for final prioritisation at an online consensus development workshop. RESULTSThere were 466 responses (32% healthcare professionals) to the initial survey, with 1161 questions, which were aggregated into 60 unanswered questions. There were 614 responses (20% healthcare professionals) to the second survey and 18 questions shortlisted for ranking at the workshop. The top 10 questions were: diabetes technology, the best test for diabetes during pregnancy, diet and lifestyle interventions for diabetes management during pregnancy, emotional and well-being needs of women with diabetes pre- to post-pregnancy, safe full-term birth, post-natal care and support needs of women, diagnosis and management late in pregnancy, prevention of other types of diabetes in women with gestational diabetes, women's labour and birth experiences and choices and improving planning pregnancy. CONCLUSIONSThese research priorities provide guidance for research funders and researchers to target research in diabetes and pregnancy that will achieve greatest value and impact.

Database: Medline

Outcomes in relation to early parenteral nutrition use in preterm neonates born between 30 and 33 weeks' gestation: a propensity score matched observational study.



Author(s): Webbe, James William Harrison; Longford, Nicholas; Battersby, Cheryl; Oughham, Kayleigh; Uthaya, Sabita N; Modi, Neena; Gale, Chris

Source: Archives of disease in childhood. Fetal and neonatal edition; Sep 2021

Publication Date: Sep 2021

Publication Type(s): Journal Article

PubMedID: 34548324

Available at [Archives of disease in childhood. Fetal and neonatal edition](#) - from BMJ Journals

Abstract:OBJECTIVE To evaluate whether in preterm neonates parenteral nutrition use in the first 7 postnatal days, compared with no parenteral nutrition use, is associated with differences in survival and other important morbidities. Randomised trials in critically ill older children show that harms, such as nosocomial infection, outweigh benefits of early parenteral nutrition administration; there is a paucity of similar data in neonates. DESIGN Retrospective cohort study using propensity matching including 35 maternal, infant and organisational factors to minimise bias and confounding. SETTING National, population-level clinical data obtained for all National Health Service neonatal units in England and Wales. PATIENTS Preterm neonates born between 30+0 and 32+6 weeks+days. INTERVENTIONS The exposure was parenteral nutrition administered in the first 7 days of postnatal life; the comparator was no parenteral nutrition. MAIN OUTCOME MEASUREMENT The primary outcome was survival to discharge from neonatal care. Secondary outcomes comprised the neonatal core outcome set. RESULTS 16 292 neonates were compared in propensity score matched analyses. Compared with matched neonates not given parenteral nutrition in the first postnatal week, neonates who received parenteral nutrition had higher survival at discharge (absolute rate increase 0.91%; 95% CI 0.53% to 1.30%), but higher rates of necrotising enterocolitis (absolute rate increase 4.6%), bronchopulmonary dysplasia (absolute rate increase 3.9%), late-onset sepsis (absolute rate increase 1.5%) and need for surgical procedures (absolute rate increase 0.92%). CONCLUSIONS In neonates born between 30+0 and 32+6 weeks' gestation, those given parenteral nutrition in the first postnatal week had a higher rate of survival but higher rates of important neonatal morbidities. Clinician equipoise in this area should be resolved by prospective randomised trials. TRIAL REGISTRATION NUMBER NCT03767634.

Database: Medline

Effect of Maternal Metformin Treatment in Pregnancy on Neonatal Metabolism: Evidence From Newborn Metabolic Screening.

Author(s): Estrella, Jane; Wiley, Veronica; Simmons, David; Hng, Tien-Ming; McLean, Mark

Source: Diabetes care; Nov 2021; vol. 44 (no. 11); p. 2536-2541

Publication Date: Nov 2021

Publication Type(s): Journal Article

PubMedID: 34475030

Available at [Diabetes care](#) - from EBSCO (MEDLINE Complete)

Abstract:OBJECTIVE To investigate effects of maternal diabetes and metformin treatment on metabolic newborn screening (NBS) results of infants born to mothers with hyperglycemia during pregnancy. RESEARCH DESIGN AND METHODS Retrospective case-control study. NBS results of infants born to mothers treated with metformin for hyperglycemia during pregnancy were compared with diet-treated subjects with diabetes and matched normal control subjects. EXCLUSIONS maternal type 1 diabetes, major fetal anomalies, and incomplete infant data. Inclusions: maternal hyperglycemia in pregnancy treated with diet alone or diet plus metformin. Results from the New South Wales Newborn Screening Program (dried infant blood spot sample, 24-72 h after birth) for 25 routinely studied analytes were measured using mass spectrometry. Data from metformin-exposed and control infants were compared using nonparametric methods and multiples of the median for each analyte. RESULTS A total of 574 case subjects were compared with 952 diet-treated case subjects with diabetes and 979 control subjects. Metformin-exposed infants had shorter gestational age (266 ± 7 vs. 272 ± 10 vs. 274 ± 9 days) ($P < 0.001$) and lower birth weights (3.28 ± 0.51 vs. 3.29 ± 0.49 vs. 3.33 ± 0.43 kg) ($P = 0.008$). Short-, medium-, and one long-chain acylcarnitine (tetradecanoylcarnitine [C14]) concentrations were higher in the metformin-exposed group compared with normal



control subjects. Comparison with diet-treated control subjects with diabetes (to eliminate confounding by hyperglycemia) continued to show raised butyrylcarnitine (C4), isovalerylcarnitine (C5), and glutarylcarnitine (C5D) in the metformin-exposed group. There was no evidence of vitamin B12 deficiency (low methionine and elevated propionylcarnitine [C3]) in metformin-exposed infants. All results were within normal population limits. **CONCLUSIONS** We have identified subtle (nonpathological) changes in neonatal metabolism that represent a signature effect of fetal metformin exposure.

Database: Medline

Placental expression of endoglin, placental growth factor, leptin, and hypoxia-inducible factor-1 in diabetic pregnancy and pre-eclampsia.

Author(s): Kapustin, Roman V; Kopteeva, Ekaterina V; Alekseenkova, Elena N; Tral, Tatyana G; Tolibova, Gulrukhsor Kh; Arzhanova, Olga N

Source: Gynecological endocrinology : the official journal of the International Society of Gynecological Endocrinology; 2021; vol. 37 ; p. 35-39

Publication Date: 2021

Publication Type(s): Journal Article

PubMedID: 34937509

Abstract: **OBJECTIVE** To evaluate a level of expression of endoglin (Eng), leptin (Lep), placental growth factor (PIGF), and hypoxia-inducible factor-1 α (HIF-1 α) in placenta among women with pre-eclampsia and diabetes mellitus (DM), considering the method of glycemia correction and preconception care. **MATERIALS AND METHODS** A retrospective cohort study was conducted. A total of 124 women were divided into following groups: type 1 DM (n = 40), type 2DM (n = 31), gestational DM (n = 33), pre-eclampsia without DM (PE) (n = 10) and the control group (n = 10). The histochemical study was performed by using primary monoclonal antibodies to Eng, PIGF, Lep, and HIF-1 α (Abcam, UK). **RESULT** The highest level of placental expression of Eng was observed in the PE group (20.34%). The same trend was also typical for T1DM (not planned) and insulin-treated groups: T2DM and GDM. An amount of cell with an PIGF expression was significantly higher in the control group (12.2%), while the lowest was observed in the pre-eclampsia group (1.18%) and T1DM (not planned) (1.26%). The placental leptin expression within each DM group was increased among the patients with unplanned pregnancy and those who received insulin therapy. We observed the lowest Lep expression in the PE group (6.3%). High level of HIF-1 α expression was detected in T1DM (not planned) (30.44%) and PE (29.64%) as compared to the control group (11.62%). In T2DM and GDM insulin groups, the HIF-1 α expression was significantly higher as compared to diet groups. **CONCLUSION** The obtained data show that DM and pre-eclampsia are associated with changes in angiogenic and metabolic placental factor expressions. The degree of changes depends on preconception care and the control of glycemia level during pregnancy.

Database: Medline

Extensive Study of Breast Milk and Infant Growth: Protocol of the Cambridge Baby Growth and Breastfeeding Study (CBGS-BF).

Author(s): Olga, Laurentya; Petry, Clive J; van Diepen, Janna A; Prentice, Philippa M; Hughes, Ieuan A; Vervoort, Jacques; Boekhorst, Jos; Chichlowski, Maciej; Gross, Gabriele; Dunger, David B; Ong, Ken K

Source: Nutrients; Aug 2021; vol. 13 (no. 8)

Publication Date: Aug 2021

Publication Type(s): Journal Article

PubMedID: 34445039

Available at [Nutrients](#) - from Europe PubMed Central - Open Access

Available at [Nutrients](#) - from ProQuest (MEDLINE with Full Text) - NHS Version

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



Abstract: Growth and nutrition during early life have been strongly linked to future health and metabolic risks. The Cambridge Baby Growth Study (CBGS), a longitudinal birth cohort of 2229 mother-infant pairs, was set up in 2001 to investigate early life determinant factors of infant growth and body composition in the UK setting. To carry out extensive profiling of breastmilk intakes and composition in relation to infancy growth, the Cambridge Baby Growth and Breastfeeding Study (CBGS-BF) was established upon the original CBGS. The strict inclusion criteria were applied, focusing on a normal birth weight vaginally delivered infant cohort born of healthy and non-obese mothers. Crucially, only infants who were exclusively breastfed for the first 6 weeks of life were retained in the analysed study sample. At each visit from birth, 2 weeks, 6 weeks, and then at 3, 6, 12, 24, and 36 months, longitudinal anthropometric measurements and blood spot collections were conducted. Infant body composition was assessed using air displacement plethysmography (ADP) at 6 weeks and 3 months of age. Breast milk was collected for macronutrients and human milk oligosaccharides (HMO) measurements. Breast milk intake volume was also estimated, as well as sterile breastmilk and infant stool collection for microbiome study.

Database: Medline

Non-Coding RNAs in Human Breast Milk: A Systematic Review.

Author(s): Tingö, Lina; Ahlberg, Emelie; Johansson, Lovisa; Pedersen, Sindre Andre; Chawla, Konika; Sætrom, Pål; Cione, Erika; Simpson, Melanie Rae

Source: *Frontiers in immunology*; 2021; vol. 12 ; p. 725323

Publication Date: 2021

Publication Type(s): Journal Article Systematic Review

PubMedID: 34539664

Available at [Frontiers in immunology](#) - from Europe PubMed Central - Open Access

Abstract: Breast milk is the primary source of nutrition and hydration for the newborn infant but also plays an important role in the child's first immune defense. Additionally, several breast milk factors have been implicated in immune-related health outcomes later in life, including immunoglobulins, cytokines, chemokines, growth factors and, more recently, non-coding RNA (ncRNA) species. In this systematic review, we provide a comprehensive summary of the current literature on endogenous ncRNAs found in human breast milk. Thirty (30) relevant studies were identified and, whilst the majority studies focused on microRNAs (miRNAs), there is evidence that breast milk contains high quantities of RNA which also include long-coding RNAs, circular RNAs, as well as other short RNAs and fragmented tRNA and rRNAs. Among studies investigating miRNAs, miR-148a-3p, miR-30a/d-5p, miR-22-3p, miR-146b-5p, miR-200a/c-3p, and the 5p end of the let-7 miRNAs were commonly reported among the top 10 miRNAs in the cell, lipid, and skim milk fractions of breast milk. Methodological difference and small sample sizes limit the possibility of conclusively identifying which maternal and infant characteristics affect the miRNA profile. The highly expressed miRNAs were generally reported to be similar across lactational stage, milk fraction, maternal and infant characteristics, or infant growth and health. All the same, individual studies identify potential differences in miRNA expression levels which should be confirmed by future studies. Stability, uptake, and physiological functions of miRNAs were also considered in several studies. Breast milk miRNAs are relatively resistant to a range of harsh conditions and uptake experiments suggest that extracellular vesicles containing miRNAs and circular RNAs can be taken up by intestinal epithelial cells. Although the evidence regarding the functional effect of breast milk miRNAs is limited, the predicted functions range from metabolic and biosynthetic processes to signaling pathways, cellular adhesion, communication, growth, and differentiation. Finally, this systematic review highlights some of the methodological challenges and knowledge gaps which can help direct future research in this field. In particular, it is important to further investigate the bioavailability of miRNAs in different milk fractions, and to characterize other ncRNAs which are largely unstudied. Systematic Review Registration PROSPERO https://www.crd.york.ac.uk/prospero/display_record.php?RecordID=138989, identifier CRD42020138989.

Database: Medline



Systematically developing a family-based health promotion intervention for women with prior gestational diabetes based on evidence, theory and co-production: the Face-it study.

Author(s): Maindal ; Timm, Anne; Dahl-Petersen, Inger Katrine; Davidsen, Emma; Hillersdal, Line; Jensen, Nanna Husted; Thøgersen, Maja; Jensen, Dorte Møller; Ovesen, Per; Damm, Peter; Kampmann, Ulla; Vinter, Christina Anne; Mathiesen, Elisabeth Reinhardt; Nielsen, Karoline Kragelund

Source: BMC Public Health; Sep 2021; vol. 21 (no. 1); p. 1-14

Publication Date: Sep 2021

Publication Type(s): Academic Journal

PubMedID: NLM34479526

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: Women with prior gestational diabetes mellitus (GDM) are at high risk of developing type 2 diabetes; however, this risk can be reduced by engaging in positive health behaviours e.g. healthy diet and regular physical activity. As such behaviours are difficult to obtain and maintain there is a need to develop sustainable behavioural interventions following GDM. We aimed to report the process of systematically developing a health promotion intervention to increase quality of life and reduce diabetes risk among women with prior GDM and their families. We distil general lessons about developing complex interventions through co-production and discuss our extensions to intervention development frameworks.Methods: The development process draws on the Medical Research Council UK Development of complex interventions in primary care framework and an adaptation of a three-stage framework proposed by Hawkins et al. From May 2017 to May 2019, we iteratively developed the Face-it intervention in four stages: 1) Evidence review, qualitative research and stakeholder consultations; 2) Co-production of the intervention content; 3) Prototyping, feasibility- and pilot-testing and 4) Core outcome development. In all stages, we involved stakeholders from three study sites.Results: During stage 1, we identified the target areas for health promotion in families where the mother had prior GDM, including applying a broad understanding of health and a multilevel and multi-determinant approach. We pinpointed municipal health visitors as deliverers and the potential of using digital technology. In stage 2, we tested intervention content and delivery methods. A health pedagogic dialogue tool and a digital health app were co-adapted as the main intervention components. In stage 3, the intervention content and delivery were further adapted in the local context of the three study sites. Suggestions for intervention manuals were refined to optimise flexibility, delivery, sequencing of activities and from this, specific training manuals were developed. Finally, at stage 4, all stakeholders were involved in developing realistic and relevant evaluation outcomes.Conclusions: This comprehensive description of the development of the Face-it intervention provides an example of how to co-produce and prototype a complex intervention balancing evidence and local conditions. The thorough, four-stage development is expected to create ownership and feasibility among intervention participants, deliverers and local stakeholders.Trial Registration: ClinicalTrials.gov NCT03997773 , registered retrospectively on 25 June 2019.

Database: CINAHL

All you ever wanted to know about infant formulas (but were afraid to ask).

Author(s): Traves

Source: Paediatrics & Child Health; Aug 2021; vol. 31 (no. 8); p. 316-321

Publication Date: Aug 2021

Publication Type(s): Academic Journal

Abstract:The World Health organisation recommends breast feeding infants for the first six months of life. When this breast feeding does not occur either through parental choice or medical need, infant formulas will be required. There is a bewildering array of formulas on the UK market for many different requirements. When faced with an



unsettled infant many parents (and health care professionals) will experiment with the infant formula available and often attend the paediatric clinic looking for help and advice. It is therefore essential that paediatricians understand what milks are available and what the key differences between different products are. This review attempts to provide a simple guide through many of the formulations currently available in the UK; and offers advice for the dietary management of the child with extra calorie requirements, infants with cow's milk protein allergy, gastro oesophageal reflux disease, apparent unresolved hunger and infantile colic. Whatever the underlying condition, there is likely to be an infant formula that is suitable in this generation of ever expanding formulations.

Database: CINAHL

ONCOLOGY

Association Between Vitamin D Exposure and Head and Neck Cancer: A Systematic Review With Meta-Analysis.

Author(s): Pu, Yuting; Zhu, Gangcai; Xu, Yimin; Zheng, Siyuan; Tang, Bin; Huang, Huimei; Wu, Irene X Y; Huang, Donghai; Liu, Yong; Zhang, Xin

Source: Frontiers in immunology; 2021; vol. 12 ; p. 627226

Publication Date: 2021

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

PubMedID: 33732250

Available at [Frontiers in immunology](#) - from Europe PubMed Central - Open Access

Available at [Frontiers in immunology](#) - from Unpaywall

Abstract:Background Vitamin D deficiency is a well-described preventable cause of many cancers; the association of vitamin D use with the development of head and neck cancer (HNC) is not clear. We aim to conduct a systematic review of the studies assessing the relation between vitamin D exposure and the prevention and prognosis of the HNC using meta-analysis. Methods PubMed, EMBASE, Cochrane Library, Web of Science up to 1 January 2021, and reference lists of related studies were searched. We extracted observational studies reporting the association between vitamin D (vitamin D receptor gene polymorphisms, 25-hydroxyvitamin D concentrations, and vitamin D intake) and the outcomes of interest (HNC incidence and HNC mortality) in HNC patients aged 18 or older. Fixed effects models were used to calculate pooled effect sizes and 95% confidence intervals (CIs) by RevMan (version 5.3). Results Sixteen studies with a total of 81,908 participants were enrolled in our meta-analysis. Based on the pooled genomic analysis, comparing with participants with the genotypes of Ff + FF or FF, the pooled odds ratio (OR) of participants with the genotype of ff was 0.77 (95% CI: 0.61 to 0.97) and 0.75 (0.58 to 0.97), respectively. A similar trend was noted when comparing tt with Tt + TT or TT, in which OR (95% CI) was 0.70 (0.55 to 0.90) and 0.72 (0.55 to 0.95). No significant association was identified between Bsm1 polymorphism and HNC. Furthermore, the OR of HNC incidence was 0.77 (0.65 to 0.92) for participants with vitamin D intake over the ones with a regular diet. High concentrations of circulated 25-hydroxyvitamin D (25-OHD) significantly decreased by 32% of HNC incidence (OR (95% CI): 0.68 (0.59 to 0.78)) and increased HNC survival (pooled hazard ratio 1.13, 1.05 to 1.22) during a 4-5 years follow-up. High concentrations of circulating 25-OHD in patients with HNC led to a decreased risk of mortality to 0.75 (0.60 to 0.94) as the follow-up extends to 8-12 years. Conclusions Elevated activities of vitamin D by diet intake, genomic polymorphisms, or circulated 25-OHD may protect people from HNC and improve the prognosis of patients with HNC. Systematic Review Registration PROSPERO, identifier CRD42020176002 (https://www.crd.york.ac.uk/PROSPERO/display_record.php?RecordID=176002).

Database: Medline

Diet and Risk of Incident Lung Cancer: A Large Prospective Cohort Study in UK Biobank.

Author(s): Wei, Xiaoxia; Zhu, Chen; Ji, Mengmeng; Fan, Jingyi; Xie, Junxing; Huang, Yanqian; Jiang, Xiangxiang; Xu, Jing; Yin, Rong; Du, Lingbin; Wang, Yuzhuo; Dai, Juncheng; Jin, Guangfu; Xu, Lin; Hu, Zhibin; Shen, Hongbing; Zhu, Meng; Ma, Hongxia

Source: The American journal of clinical nutrition; Sep 2021



Publication Date: Sep 2021

Publication Type(s): Journal Article

PubMedID: 34582556

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

Abstract:BACKGROUND Epidemiological evidence remains conflicting regarding diet and risk of lung cancer. OBJECTIVES We sought to systematically investigate whether dietary factors are associated with the risk of incident lung cancer in the UK Biobank. METHODS A total of 416,588 participants (54% women) from the UK Biobank were included in the present study. Based on baseline data from FFQs, 3 main dietary patterns were identified by using principal component analysis. Cox proportional hazards models were used to investigate the association of individual food groups and dietary patterns with lung cancer risk. RESULTS During a median follow-up of 7.13 y, 1782 incident lung cancer cases were documented. The association analysis showed high intake of red meat and processed meat was associated with an increased risk of lung cancer (HR per 50 g/d: 1.36; 95% CI: 1.13, 1.65 for red meat; HR per 25 g/d: 1.30; 95% CI: 1.10, 1.53 for processed meat). However, the consumption of fruits (HR per 100 g/d: 0.90; 95% CI: 0.84, 0.95), vegetables (HR per 100 g/d: 0.89; 95% CI: 0.81, 0.99), breakfast cereals (HR per 50 g/d: 0.81; 95% CI: 0.74, 0.89), and dietary fiber (HR per 5 g/d: 0.76; 95% CI: 0.69, 0.84) was inversely associated with the risk of lung cancer. For the dietary pattern analysis [quartile (Q) comparison], high adherence to the Prudent pattern (HR Q4 compared with Q1: 0.84; 95% CI: 0.73, 0.96) was associated with a lower risk of lung cancer, whereas the Western pattern (HR Q4 compared with Q1: 1.27; 95% CI: 1.11, 1.46) was associated with a higher risk of lung cancer. CONCLUSIONS Our study indicated that a diet characterized by high intake of fruits, vegetables, breakfast cereals, and dietary fiber, as well as low intake of red meat and processed meat, was associated with a lower risk of lung cancer.

Database: Medline

Association of a healthy lifestyle index with risk of breast cancer among women with normal body mass index in the UK Biobank.

Author(s): Peila, Rita; Arthur, Rhonda S; Dannenberg, Andrew J; Rohan, Thomas E

Source: Cancer epidemiology, biomarkers & prevention : a publication of the American Association for Cancer Research, cosponsored by the American Society of Preventive Oncology; Dec 2021

Publication Date: Dec 2021

Publication Type(s): Journal Article

PubMedID: 34933955

Abstract:BACKGROUND A high healthy lifestyle index (HLI), a composite score based on good diet quality, low alcohol consumption, no smoking, moderate to high physical activity, and waist circumference <80cm, has been consistently associated with a reduced risk of breast cancer (BC). Recently, high levels of body fat were found to be associated with an elevated risk of BC in postmenopausal women with a normal body mass index (BMI) (18.5-<25 kg/m²). Whether the HLI is associated with BC risk in women with normal BMI is unknown. METHODS We studied 102,572 women aged 40-69 years with a normal BMI at enrollment into the UK Biobank cohort study. The HLI was created by assigning to each component higher scores for healthier behaviors and then summing the scores. The HLI was categorized by tertiles and age- and multivariable-adjusted hazard ratios (HRs) for the association of the HLI with BC risk by menopausal status were estimated using Cox proportional hazards models. RESULTS In postmenopausal women, compared to a low HLI, higher scores were associated with a reduced risk of BC (HR_{HLI-3rd tertile} 0.76; 95% CI, 0.64-0.91). Findings were similar for premenopausal women, although they did not reach statistical significance, except when smoking status was excluded from the HLI score (HLI_{without smoking}: HR_{3rd tertile}, 0.71; 95% CI, 0.56-0.90). CONCLUSIONS In normal BMI postmenopausal women, a high HLI score was associated with a reduced risk of BC. IMPACT Following a healthy lifestyle may reduce the risk of BC among normal weight postmenopausal women.

Database: Medline



Branched-Chain Amino Acids and Risk of Breast Cancer.

Author(s): Zeleznik, Oana A; Balasubramanian, Raji; Ren, Yumeng; Tobias, Deirdre K; Rosner, Bernard A; Peng, Cheng; Bever, Alaina M; Frueh, Lisa; Jeanfavre, Sarah; Avila-Pacheco, Julian; Clish, Clary B; Mora, Samia; Hu, Frank B; Eliassen, A Heather

Source: JNCI cancer spectrum; Oct 2021; vol. 5 (no. 5); p. pkab059

Publication Date: Oct 2021

Publication Type(s): Journal Article

PubMedID: 34585062

Available at [JNCI cancer spectrum](#) - from Oxford Journals - Open Access

Available at [JNCI cancer spectrum](#) - from Unpaywall

Abstract:BackgroundCirculating branched-chain amino acid (BCAA) levels reflect metabolic health and dietary intake. However, associations with breast cancer are unclear.MethodsWe evaluated circulating BCAA levels and breast cancer risk within the Nurses' Health Study (NHS) and NHSII (1997 cases and 1997 controls). A total of 592 NHS women donated 2 blood samples 10 years apart. We estimated odds ratios (ORs) and 95% confidence intervals (CIs) of breast cancer risk in multivariable logistic regression models. We conducted an external validation in 1765 cases in the Women's Health Study (WHS). All statistical tests were 2-sided.ResultsAmong NHSII participants (predominantly premenopausal at blood collection), elevated circulating BCAA levels were associated with lower breast cancer risk (eg, isoleucine highest vs lowest quartile, multivariable OR = 0.86, 95% CI = 0.65 to 1.13, P trend = .20), with statistically significant linear trends among fasting samples (eg, isoleucine OR = 0.74, 95% CI = 0.53 to 1.05, P trend = .05). In contrast, among postmenopausal women, proximate measures (<10 years from blood draw) were associated with increased breast cancer risk (eg, isoleucine OR = 1.63, 95% CI = 1.12 to 2.39, P trend = .01), with stronger associations among fasting samples (OR = 1.73, 95% CI = 1.15 to 2.61, P trend = .01). Distant measures (10-20 years since blood draw) were not associated with risk. In the WHS, a positive association was observed for distant measures of leucine among postmenopausal women (OR = 1.23, 95% CI = 0.96 to 1.58, P trend = .04).ConclusionsNo statistically significant associations between BCAA levels and breast cancer risk were consistent across NHS and WHS or NHSII and WHS. Elevated circulating BCAA levels were associated with lower breast cancer risk among predominantly premenopausal NHSII women and higher risk among postmenopausal women in NHS but not in the WHS. Additional studies are needed to understand this complex relationship.

Database: Medline

Dietary and Supplemental Vitamin C Intake and Risk of Breast Cancer: Results from the Nurses' Health Studies.

Author(s): Cadeau, Claire; Farvid, Maryam S; Rosner, Bernard A; Willett, Walter C; Eliassen, A Heather

Source: The Journal of nutrition; Dec 2021

Publication Date: Dec 2021

Publication Type(s): Journal Article

PubMedID: 34865068

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

Abstract:BACKGROUNDSome previous studies suggested that high supplemental vitamin C intake may be associated with an increased risk of breast cancer, although evidence is inconsistent.OBJECTIVEOur objective was to study the association between vitamin C intake and breast cancer risk using regularly updated assessments of intake over a long follow-up.METHODSWe prospectively followed 88,041 women aged 33 to 60 years from the Nurses' Health Study (NHS; 1980-2014) and 93,372 women aged 26 to 45 years from the Nurses' Health Study II (NHSII; 1991-2013). A total of 11,258 incident invasive breast cancers among 181,413 women were diagnosed. Data on vitamin C intake were collected every 2-4 years via a validated food frequency questionnaire and specific questions on dietary supplement use. Multivariate hazard ratios (HRs) and 95% confidence intervals (CIs) for incident invasive breast cancer were estimated with Cox models.RESULTSDuring follow-up, 82% of participants ever used supplements containing vitamin C, including multivitamins. Cumulative total vitamin C intake (HR for quintile 5 vs. 1 = 0.97, 95%CI:



0.91, 1.03, Ptrend = 0.81), dietary vitamin C intake (HR for quintile 5 vs. 1 = 0.98, 95%CI: 0.92, 1.04, Ptrend = 0.57) and supplemental vitamin C intake (HR for quintile 5 vs. 1 in users = 1.02, 95%CI: 0.94, 1.09, Ptrend = 0.77) were not associated with breast cancer risk. Results were unchanged when different exposure latencies were considered. The results did not differ by menopausal status; postmenopausal hormone therapy use or BMI. No differences were observed by estrogen receptor status of the tumor. CONCLUSIONS Our results do not support any important association between total, dietary or supplemental vitamin C intake and breast cancer risk.

Database: Medline

Nutritional care in colorectal cancer-what is the state of play?

Author(s): Maunsell, Rose; Sodergren, Samantha; Hopkinson, Jane; Shaw, Clare; Foster, Claire; Wheelwright, Sally

Source: Colorectal disease : the official journal of the Association of Coloproctology of Great Britain and Ireland; Dec 2021; vol. 23 (no. 12); p. 3227-3233

Publication Date: Dec 2021

Publication Type(s): Journal Article

PubMedID: 34605160

Available at [Colorectal disease : the official journal of the Association of Coloproctology of Great Britain and Ireland](#) - from Wiley Online Library

Abstract: AIM Nutrition is associated with aetiology and impacts outcomes in colorectal cancer (CRC). This study aimed to explore nutritional symptoms and concerns of patients with CRC and CRC dietetic resource across the UK. METHODS Study 1 is a descriptive analysis of nutrition-related measures in the ColoRectal Wellbeing (CREW) study, a prospective 5-year longitudinal cohort study of a representative sample of 872 adults with non-metastatic CRC. Study 2 is a descriptive analysis of data collected using a freedom of information request to all UK trusts/boards on dietetic resources for CRC. RESULTS Study 1 found that 31% of CREW participants wanted more diet and lifestyle advice. At 3 months post-surgery, 10% reported poor appetite. A fifth experienced weight loss and 16% had concerns regarding weight loss 9 months post-surgery. In study 2 just 3% of hospitals providing CRC services had a dedicated CRC dietitian (hepato-pancreato-biliary, 11.1%; head and neck cancer, 14.3%). There was no dietetic outpatient follow-up of CRC patients in 72% of hospitals. CONCLUSIONS Dietetic resource for patients with CRC is scarce even though weight loss, poor appetite and unmet needs are common and persist over time. Work is needed to embed nutritional care into the management of patients with CRC.

Database: Medline

The Role of Healthy Lifestyle in Cancer Incidence and Temporal Transitions to Cardiometabolic Disease.

Author(s): Cao, Zhi; Xu, Chenjie; Yang, Hongxi; Li, Shu; Wang, Yaogang

Source: JACC. CardioOncology; Dec 2021; vol. 3 (no. 5); p. 663-674

Publication Date: Dec 2021

Publication Type(s): Journal Article

PubMedID: 34988474

Abstract: Background Cardiometabolic disease, including cardiovascular disease (CVD) and type 2 diabetes (T2D), can result in serious late effects in patients with cancer. Preventing long-term complications in this population is an increasingly important priority in public health and clinical practice. Objectives The aim of this study was to investigate the role of a healthy lifestyle in the transition from a healthy status to the development of cancer and subsequent CVD and T2D. Methods The analysis was based on data from the UK Biobank and included 2 subsamples: a cancer-free cohort of 397,136 individuals in the general population and a cancer-prevalent cohort of 35,564 patients with cancer. All participants were 40 to 70 years of age and were free of CVD and T2D at recruitment. A healthy lifestyle that included no current smoking, regular physical activity, a healthy diet, and moderate alcohol consumption and sleep duration were included in a healthy lifestyle index (HLI). Results In the cancer-free cohort,



during a maximum follow-up period of 15 years, 6.38% and 4.18% of patients with cancer developed CVD and T2D, respectively. A healthy lifestyle significantly mitigated the risk for transition from cancer to subsequent CVD and T2D, with HRs per 1-point increment in HLI of 0.90 (95% CI: 0.86-0.94) and 0.84 (95% CI: 0.79-0.89), respectively. In the cancer-prevalent cohort, each 1-point increment in HLI was similarly associated with lower risk for CVD (HR: 0.90; 95% CI: 0.87-0.93) and T2D (HR: 0.87; 95% CI: 0.83-0.91) in cancer survivors. **Conclusions** A healthy lifestyle is associated with a slower transition from cancer development to the subsequent development of CVD and T2D. Moreover, among patients with cancer, a healthy lifestyle is associated with lower risk for CVD and T2D. This study highlights the practical benefits of adherence to a healthy lifestyle.

Database: Medline

Genetic Risk for Overall Cancer and the Benefit of Adherence to a Healthy Lifestyle.

Author(s): Zhu, Meng; Wang, Tianpei; Huang, Yanqian; Zhao, Xiaoyu; Ding, Yuqing; Zhu, Mengyi; Ji, Mengmeng; Wang, Cheng; Dai, Juncheng; Yin, Rong; Xu, Lin; Ma, Hongxia; Wei, Qingyi; Jin, Guangfu; Hu, Zhibin; Shen, Hongbing

Source: Cancer research; Sep 2021; vol. 81 (no. 17); p. 4618-4627

Publication Date: Sep 2021

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

PubMedID: 34321244

Abstract: Cancer site-specific polygenic risk scores (PRS) effectively identify individuals at high risk of individual cancers, but the effectiveness of PRS on overall cancer risk assessment and the extent to which a high genetic risk of overall cancer can be offset by a healthy lifestyle remain unclear. Here, we constructed an incidence-weighted overall cancer polygenic risk score (CPRS) based on 20 cancer site-specific PRSs. Lifestyle was determined according to smoking, alcohol consumption, physical activity, body mass index, and diet. Cox regression by sex was used to analyze associations of genetic and lifestyle factors with cancer incidence using UK Biobank data (N = 442,501). Compared with participants at low genetic risk (bottom quintile of CPRS), those at intermediate (quintiles 2 to 4) or high (top quintile) genetic risk had HRs of 1.27 (95% confidence interval, 1.21-1.34) or 1.91 (1.81-2.02) for overall cancer, respectively, for men, and 1.21 (1.16-1.27) or 1.62 (1.54-1.71), respectively, for women. A joint effect of genetic and lifestyle factors on overall cancer risk was observed, with HRs reaching 2.99 (2.45-3.64) for men and 2.38 (2.05-2.76) for women with high genetic risk and unfavorable lifestyle compared with those with low genetic risk and favorable lifestyle. Among participants at high genetic risk, the standardized 5-year cancer incidence was significantly reduced from 7.23% to 5.51% for men and from 5.77% to 3.69% for women having a favorable lifestyle. In summary, individuals at high genetic risk of overall cancer can be identified by CPRS, and risk can be attenuated by adopting a healthy lifestyle. **SIGNIFICANCE:** A new indicator of cancer polygenic risk score measures genetic risk for overall cancer, which could identify individuals with high cancer risk to facilitate decision-making about lifestyle modifications for personalized prevention.

Database: Medline

Dietary Habits of Women with Gynecological Cancer before, during and after Treatment: A Long-Term Prospective Cohort Study.

Author(s): Cirillo Sanchez, Claudia; Czuber-Dochan, Wladzia; Cox, Selena; Murrells, Trevor; Christine, Norton; Ann, Muls

Source: Nutrition and cancer; 2021; vol. 73 (no. 11-12); p. 2643-2653

Publication Date: 2021

Publication Type(s): Journal Article

PubMedID: 33305602

Abstract: **BACKGROUND AND AIM** Over 21,000 new cases of gynecological cancer are diagnosed annually in the United Kingdom. There is evidence of cancer patients altering their eating habits before and during treatment. Some



women with gynecological cancer make conscious decisions to change their diet as self-management for their cancer symptoms and to adopt a healthier lifestyle. Little is known about the impact of treatment on dietary habits. This study aimed to identify and describe the dietary habits of women with gynecological cancer before, during and after treatment. **METHODS** This was a longitudinal prospective cohort study using seven-day food diaries to collect dietary intake data before treatment and up to two years after gynecological cancer treatment. Nutritics© software was used for analysis of the diaries. A general linear mixed model was used for the statistical analysis, adjusted for multiple comparisons. **RESULTS** 15 women with gynecological cancer participated; 69 food diaries were analyzed. There were no statistically significant changes in dietary habits or weight for this cohort during the two-year follow-up, except for caffeine intake which increased at 2 years ($p < 0.05$). **CONCLUSIONS** Despite the importance of maintaining a healthy dietary intake and weight after cancer treatment, participants' diets did not change.

Database: Medline

Intake of processed meat, but not sodium, is associated with risk of colorectal cancer: Evidence from a large prospective cohort and two-sample Mendelian randomization.

Author(s): Feng, Qi; Wong, Sunny H; Zheng, Jie; Yang, Qian; Sung, Joseph Jy; Tsoi, Kelvin Kf

Source: Clinical nutrition (Edinburgh, Scotland); Jul 2021; vol. 40 (no. 7); p. 4551-4559

Publication Date: Jul 2021

Publication Type(s): Journal Article Observational Study

PubMedID: 34229259

Abstract: **BACKGROUND & AIMS** Processed meat and high sodium intake are common in Western diet. The objective was to examine their independent effects on the risk of colorectal cancer (CRC). **METHODS** We performed both observational analysis with UK Biobank and genetic analysis with Mendelian randomization (MR). The 24-h urinary sodium (UNa) and reported intake of processed meat were fitted on incident CRC by multivariable Cox proportional hazard model, adjusted for covariates, such as age, gender, family history, etc. Different sodium measures were used for sensitivity analyses. Two-sample MR analyses were performed using summary data from genome-wide association studies of UNa and CRC. Multivariable MR was adjusted for body mass index. **RESULTS** We included 415 524 eligible participants from UK Biobank. During a median follow-up of 11.1 years, 2663 participants were diagnosed with CRC. High intake of processed meat independently increased risk of CRC by 23% (HR 1.23; 95% CI: 1.03 to 1.46), but 24-h UNa was not significantly associated with CRC (HR 0.96; 95% CI: 0.87 to 1.06). Furthermore, MR also showed little evidence for the effect of UNa on CRC (OR 1.02; 95% CI: 0.11 to 9.42). Sensitivity analyses showed consistent results across different measurements of sodium intake. **CONCLUSIONS** Intake of processed meat had an independent effect on the risk of CRC, but the risk was not associated with sodium level. Reduction of processed meat intake may be an effective strategy for CRC prevention, while sodium reduction should still be recommended to achieve other health benefits.

Database: Medline

Association of Postoperative Clinical Outcomes With Sarcopenia, Frailty, and Nutritional Status in Older Patients With Colorectal Cancer: Protocol for a Prospective Cohort Study.

Author(s): Humphry, Nia Angharad; Wilson, Thomas; Cox, Michael Christian; Carter, Ben; Arkesteijn, Marco; Reeves, Nicola Laura; Brakenridge, Scott; McCarthy, Kathryn; Bunni, John; Draper, John; Hewitt, Jonathan

Source: JMIR research protocols; Aug 2021; vol. 10 (no. 8); p. e16846

Publication Date: Aug 2021

Publication Type(s): Journal Article

PubMedID: 34402798

Available at [JMIR research protocols](#) - from Europe PubMed Central - Open Access

Available at [JMIR research protocols](#) - from ProQuest (Health Research Premium) - NHS Version



Available at [JMIR research protocols](#) - from Unpaywall

Abstract:BACKGROUND Older patients account for a significant proportion of patients undergoing colorectal cancer surgery and are vulnerable to a number of preoperative risk factors that are not often present in younger patients. Further, three preoperative risk factors that are more prevalent in older adults include frailty, sarcopenia, and malnutrition. Although each of these has been studied in isolation, there is little information on the interplay between them in older surgical patients. A particular area of increasing interest is the use of urine metabolomics for the objective evaluation of dietary profiles and malnutrition. OBJECTIVE Herein, we describe the design, cohort, and standard operating procedures of a planned prospective study of older surgical patients undergoing colorectal cancer resection across multiple institutions in the United Kingdom. The objectives are to determine the association between clinical outcomes and frailty, nutritional status, and sarcopenia. METHODS The procedures will include serial frailty evaluations (Clinical Frailty Scale and Groningen Frailty Indicator), functional assessments (hand grip strength and 4-meter walk test), muscle mass evaluations via computerized tomography morphometric analysis, and the evaluation of nutritional status via the analysis of urinary dietary biomarkers. The primary feasibility outcome is the estimation of the incidence rate of postoperative complications, and the primary clinical outcome is the association between the presence of postoperative complications and frailty, sarcopenia, and nutritional status. The secondary outcome measures are the length of hospital stay, 30-day hospital readmission rate, and mortality rate at days 30 and 90. RESULTS Our study was approved by the National Health Service Research Ethics Committee (reference number: 19/WA/0190) via the Integrated Research Application System (project ID: 231694) prior to subject recruitment. Cardiff University is acting as the study sponsor. Our study is financially supported through an external, peer-reviewed grant from the British Geriatrics Society and internal funding resources from Cardiff University. The results will be disseminated through peer-review publications, social media, and conference proceedings. CONCLUSIONS As frailty, sarcopenia, and malnutrition are all areas of common derangement in the older surgical population, prospectively studying these risk factors in concert will allow for the analysis of their interplay as well as the development of predictive models for those at risk of commonly tracked surgical complications and outcomes. INTERNATIONAL REGISTERED REPORT IDENTIFIER (IRRID) PRR1-10.2196/16846.

Database: Medline

Circulating phosphorus level and risk of prostate cancer: a Mendelian randomization study.

Author(s): Lv, Linshuoshuo; Ye, Ding; Chen, Jie; Qian, Yu; Fu, Alan Nuo; Song, Jie; Yang, Hong; Liu, Bin; Sun, Xiaohui; Du, Lingbin; Mao, Yingying

Source: The American journal of clinical nutrition; Oct 2021

Publication Date: Oct 2021

Publication Type(s): Journal Article

PubMedID: 34617559

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

Abstract:BACKGROUND Recent observational studies have suggested that circulating phosphorus levels are positively associated with risk of prostate cancer. However, little is known about the causal direction of the association. OBJECTIVE To explore the potential causal relationship between circulating phosphorus and risk of prostate cancer, we conducted a Mendelian randomization (MR) study. DESIGN Summary statistics of prostate cancer were obtained from a meta-analysis of genome-wide association studies (GWAS) consisting of 79,148 cases and 61,106 controls. Single nucleotide polymorphisms (SNP) associated with serum phosphorus level were selected from a GWAS of 291,408 individuals from the UK Biobank. MR analysis was performed using the inverse-variance weighted (IVW) method, supplemented with simple-median, weighted-median, maximum likelihood-based, MR-Egger regression and MR-PRESSO test. We also performed a meta-analysis of observational studies to assess the associations of dietary phosphorus intake and serum phosphorus level with risk of prostate cancer. RESULTS In the MR analysis, a total of 125 independent SNPs associated with serum phosphorus levels were used as instrumental variables. Genetically predicted serum phosphorus levels were associated with a 19% increased risk of prostate cancer (95% confidence interval (CI): 9%, 31%) per one SD increment of serum phosphorus by IVW ($P = 1.82 \times 10^{-4}$). Sensitivity analyses using alternative MR methods produced similar positive associations, and no evidence of



pleiotropy was detected by MR-Egger regression ($P = 0.422$). For meta-analysis, eight studies for dietary phosphorus intake and four for serum phosphorus levels were included involving a total of 669,080 participants. Consistently, high dietary phosphorus intake and serum phosphorus levels were associated with an 8% (95% CI: 4%, 12%) and 7% (95% CI: 1%, 14%) increase in prostate cancer risk, respectively. **CONCLUSIONS** Our study suggested a potential causal relationship between circulating phosphorus and risk of prostate cancer. Further studies are warranted to elucidate the underlying mechanism of phosphorus in the development of prostate cancer.

Database: Medline

Circulating vitamin C concentration and risk of cancers: a Mendelian randomization study.

Author(s): Fu, Yuanqing; Xu, Fengzhe; Jiang, Longda; Miao, Zelei; Liang, Xinxiu; Yang, Jian; Larsson, Susanna C; Zheng, Ju-Sheng

Source: BMC medicine; Jul 2021; vol. 19 (no. 1); p. 171

Publication Date: Jul 2021

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

PubMedID: 34325683

Available at [BMC medicine](#) - from BioMed Central

Available at [BMC medicine](#) - from Europe PubMed Central - Open Access

Available at [BMC medicine](#) - from ProQuest (Health Research Premium) - NHS Version

Available at [BMC medicine](#) - from EBSCO (MEDLINE Complete)

Available at [BMC medicine](#) - from Unpaywall

Abstract: **BACKGROUND** Circulating vitamin C concentrations have been associated with several cancers in observational studies, but little is known about the causal direction of the associations. This study aims to explore the potential causal relationship between circulating vitamin C and risk of five most common cancers in Europe. **METHODS** We used summary-level data for genetic variants associated with plasma vitamin C in a large vitamin C genome-wide association study (GWAS) meta-analysis on 52,018 Europeans, and the corresponding associations with lung, breast, prostate, colon, and rectal cancer from GWAS consortia including up to 870,984 participants of European ancestry. We performed two-sample, bi-directional Mendelian randomization (MR) analyses using inverse-variance-weighted method as the primary approach, while using 6 additional methods (e.g., MR-Egger, weighted median-based, and mode-based methods) as sensitivity analysis to detect and adjust for pleiotropy. We also conducted a meta-analysis of prospective cohort studies and randomized controlled trials to examine the association of vitamin C intakes with cancer outcomes. **RESULTS** The MR analysis showed no evidence of a causal association of circulating vitamin C concentration with any examined cancer. Although the odds ratio (OR) per one standard deviation increase in genetically predicted circulating vitamin C concentration was 1.34 (95% confidence interval 1.14 to 1.57) for breast cancer in the UK Biobank, this association could not be replicated in the Breast Cancer Association Consortium with an OR of 1.05 (0.94 to 1.17). Smoking initiation, as a positive control for our reverse MR analysis, showed a negative association with circulating vitamin C concentration. However, there was no strong evidence of a causal association of any examined cancer with circulating vitamin C. Sensitivity analysis using 6 different analytical approaches yielded similar results. Moreover, our MR results were consistent with the null findings from the meta-analysis exploring prospective associations of dietary or supplemental vitamin C intakes with cancer risk, except that higher dietary vitamin C intake, but not vitamin C supplement, was associated with a lower risk of lung cancer (risk ratio: 0.84, 95% confidence interval 0.71 to 0.99). **CONCLUSIONS** These findings provide no evidence to support that physiological-level circulating vitamin C has a large effect on risk of the five most common cancers in European populations, but we cannot rule out very small effect sizes.

Database: Medline

Salicylic Acid and Risk of Colorectal Cancer: A Two-Sample Mendelian Randomization Study.



Author(s): Nounu, Aayah; Richmond, Rebecca C; Stewart, Isobel D; Surendran, Praveen; Wareham, Nicholas J; Butterworth, Adam; Weinstein, Stephanie J; Albanes, Demetrius; Baron, John A; Hopper, John L; Figueiredo, Jane C; Newcomb, Polly A; Lindor, Noralane M; Casey, Graham; Platz, Elizabeth A; Marchand, Loïc Le; Ulrich, Cornelia M; Li, Christopher I; van Duijnhoven, Fränzel J B; Gsur, Andrea; Campbell, Peter T; Moreno, Víctor; Vodicka, Pavel; Vodickova, Ludmila; Amitay, Efrat; Alwers, Elizabeth; Chang-Claude, Jenny; Sakoda, Lori C; Slattery, Martha L; Schoen, Robert E; Gunter, Marc J; Castellví-Bel, Sergi; Kim, Hyeong-Rok; Kweon, Sun-Seog; Chan, Andrew T; Li, Li; Zheng, Wei; Bishop, D Timothy; Buchanan, Daniel D; Giles, Graham G; Gruber, Stephen B; Rennert, Gad; Stadler, Zsofia K; Harrison, Tabitha A; Lin, Yi; Keku, Temitope O; Woods, Michael O; Schafmayer, Clemens; Van Guelpen, Bethany; Gallinger, Steven; Hampel, Heather; Berndt, Sonja I; Pharoah, Paul D P; Lindblom, Annika; Wolk, Alicja; Wu, Anna H; White, Emily; Peters, Ulrike; Drew, David A; Scherer, Dominique; Bermejo, Justo Lorenzo; Brenner, Hermann; Hoffmeister, Michael; Williams, Ann C; Relton, Caroline L

Source: *Nutrients*; Nov 2021; vol. 13 (no. 11)

Publication Date: Nov 2021

Publication Type(s): Journal Article

PubMedID: 34836419

Available at [Nutrients](#) - from Europe PubMed Central - Open Access

Available at [Nutrients](#) - from ProQuest (MEDLINE with Full Text) - NHS Version

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

Abstract: Salicylic acid (SA) has observationally been shown to decrease colorectal cancer (CRC) risk. Aspirin (acetylsalicylic acid, that rapidly deacetylates to SA) is an effective primary and secondary chemopreventive agent. Through a Mendelian randomization (MR) approach, we aimed to address whether levels of SA affected CRC risk, stratifying by aspirin use. A two-sample MR analysis was performed using GWAS summary statistics of SA (INTERVAL and EPIC-Norfolk, N = 14,149) and CRC (CCFR, CORECT, GECCO and UK Biobank, 55,168 cases and 65,160 controls). The DACHS study (4410 cases and 3441 controls) was used for replication and stratification of aspirin-use. SNPs proxying SA were selected via three methods: (1) functional SNPs that influence the activity of aspirin-metabolising enzymes; (2) pathway SNPs present in enzymes' coding regions; and (3) genome-wide significant SNPs. We found no association between functional SNPs and SA levels. The pathway and genome-wide SNPs showed no association between SA and CRC risk (OR: 1.03, 95% CI: 0.84-1.27 and OR: 1.08, 95% CI: 0.86-1.34, respectively). Results remained unchanged upon aspirin use stratification. We found little evidence to suggest that an SD increase in genetically predicted SA protects against CRC risk in the general population and upon stratification by aspirin use.

Database: Medline

Beta-hydroxy beta-methylbutyrate/arginine/glutamine (HMB/Arg/Gln) supplementation to improve the management of cachexia in patients with advanced lung cancer: an open-label, multicentre, randomised, controlled phase II trial (NOURISH).

Author(s): Pascoe ; Jackson, Aimee; Gaskell, Charlotte; Gaunt, Claire; Thompson, Joyce; Billingham, Lucinda; Steven, Neil

Source: *BMC Cancer*; Jul 2021; vol. 21 (no. 1); p. 1-11

Publication Date: Jul 2021

Publication Type(s): Academic Journal

PubMedID: NLM34247580

Available at [BMC cancer](#) - from BioMed Central

Available at [BMC cancer](#) - from Europe PubMed Central - Open Access

Available at [BMC cancer](#) - from ProQuest (Health Research Premium) - NHS Version

Available at [BMC cancer](#) - from EBSCO (MEDLINE Complete)

Available at [BMC cancer](#) - from Unpaywall



Abstract:Background: Cancer cachexia causes significant morbidity and mortality in advanced lung cancer patients. Clinical benefit of β -hydroxy- β -methylbutyrate, arginine, and glutamine (HMB/Arg/Gln) was assessed in newly diagnosed patients. Methods: Nourish, a prospective, two-arm, open-label, multi-centre, randomised controlled phase II trial compared cachexia in patients who received HMB/Arg/Gln with those who did not. All patients received structured nutritional, exercise and symptom control via a Macmillan Durham Cachexia Pack. Conducted in five UK centres, patients aged > 18 years, with newly diagnosed advanced small cell lung cancer (SCLC) or non-small cell lung cancer (NSCLC), who were able to take oral nutrition, with a performance status of 0-to-2 and a life expectancy > 4 months were eligible for trial entry. Patients suitable for treatment with curative intent were ineligible. The trial was designed as a signal-seeking pilot study with target recruitment of 96 patients. One-to-one randomisation was stratified by diagnosis (SCLC or NSCLC), stage of disease (locally advanced or metastatic) and performance status. The primary outcome measure was treatment success defined as a patient being alive without significant loss of lean body mass (not > 5%) by 12 weeks. Secondary outcome measures included quality of life. Results: Between February-2012 and February-2013, 38 patients were recruited, 19 to each arm. Baseline characteristics were balanced. The trial was halted due to slow accrual and partial adherence. Trial data demonstrated no evidence of treatment benefit. No serious adverse events were reported during the trial. Conclusions: Further evaluation of HMB/Arg/Gln in this setting could not be recommended on the basis of this trial. Clinical Trial Registration: ISRCTN registry: 39911673; 14-Apr-2011 <https://doi.org/10.1186/ISRCTN39911673> .

Database: CINAHL

Providing nutrition advice in the oncology setting: A survey of current practice, awareness of guidelines and training needs of Irish healthcare professionals in three hospitals.

Author(s): Keaver ; Connolly, Pauline; Richmond, Janice

Source: European Journal of Cancer Care; Jul 2021; vol. 30 (no. 4); p. 1-9

Publication Date: Jul 2021

Publication Type(s): Academic Journal

Available at [European journal of cancer care](#) - from Wiley Online Library

Abstract:Objective: To determine the current practices of Irish healthcare professionals working in the oncology setting of three hospitals in the north-west of Ireland with regard to nutrition screening, provision of nutrition advice and training needs. Methods: This cross-sectional study distributed a questionnaire to healthcare professionals in the oncology departments of three hospitals between November 2018 and April 2019. Data were analysed using SPSS, and one open-ended question underwent thematic analysis. Results: Fifty-one individuals completed the survey. 98.1% rated nutrition as very or critically important in cancer management. 74.5% nutritionally screen inpatients while only 17.6% screen outpatients. The majority (86.3%) provide nutrition advice to patients, yet only 19.6% collect data on nutrition status. Doctors and nurses report low levels of confidence and lack of awareness of guidelines. 78.4% of respondents were interested in further training in oncology nutrition, preferably through a conference study day. Respondents reported that early nutrition intervention and integration into current practice is important, there is a current lack of resources and they recognised a need for different interventions depending on cancer type and stage. Conclusion: Current practice varies; however, positive attitudes towards nutrition and interest in additional training were found.

Database: CINAHL

OTHER

Associations between free sugar intake and markers of health in the UK population: an analysis of the National Diet and Nutrition Survey rolling programme.

Author(s): Young, Julie; Scott, Sophie; Clark, Lindsey; Lodge, John K

Source: The British journal of nutrition; Aug 2021 ; p. 1-12

Publication Date: Aug 2021



Publication Type(s): Journal Article

PubMedID: 34369329

Abstract: Recommendations for free sugar intake in the UK should be no more than 5 % of total energy due to increased health risks associated with overconsumption. It was therefore of interest to examine free sugar intakes and associations with health parameters in the UK population. The UK National Diet and Nutrition Survey rolling programme (2008-2017) was used for this study. Dietary intake, anthropometrical measurements and clinical biomarker data collated from 5121 adult respondents aged 19-64 years were statistically analysed. Compared with the average total carbohydrate intake (48 % of energy), free sugars comprised 12.5 %, with sucrose 9 % and fructose 3.5 %. Intakes of these sugars, apart from fructose, were significantly different over collection year ($P < 0.001$) and significantly higher in males ($P < 0.001$). Comparing those consuming above or below the UK recommendations for free sugars (5 % energy), significant differences were found for BMI ($P < 0.001$), TAG ($P < 0.001$), HDL ($P = 0.006$) and homocysteine concentrations ($P = 0.028$), and significant sex differences were observed (e.g. lower blood pressure in females). Regression analysis demonstrated that free sugar intake could predict plasma TAG, HDL and homocysteine concentrations ($P < 0.0001$), consistent with the link between these parameters and CVD. We also found selected unhealthy food choices (using the UK Eatwell Guide) to be significantly higher in those that consumed above the recommendations ($P < 0.0001$) and were predictors of free sugar intakes ($P < 0.0001$). We have shown that adult free sugar intakes in the UK population are associated with certain negative health parameters that support the necessary reduction in free sugar intakes for the UK population.

Database: Medline

Iodine status of consumers of milk-alternative drinks v. cows' milk: data from the UK National Diet and Nutrition Survey.

Author(s): Dineva, M; Rayman, M P; Bath, S C

Source: The British journal of nutrition; Jul 2021; vol. 126 (no. 1); p. 28-36

Publication Date: Jul 2021

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

PubMedID: 32993817

Available at [The British journal of nutrition](#) - from Unpaywall

Abstract: Milk is the main source of iodine in the UK; however, the consumption and popularity of plant-based milk-alternative drinks are increasing. Consumers may be at risk of iodine deficiency as, unless fortified, milk alternatives have a low iodine concentration. We therefore aimed to compare the iodine intake and status of milk-alternative consumers with that of cows' milk consumers. We used data from the UK National Diet and Nutrition Survey from years 7 to 9 (2014-2017; before a few manufacturers fortified their milk-alternative drinks with iodine). Data from 4-d food diaries were used to identify consumers of milk-alternative drinks and cows' milk, along with the estimation of their iodine intake ($\mu\text{g}/\text{d}$) (available for $n = 3976$ adults and children ≥ 1.5 years). Iodine status was based on urinary iodine concentration (UIC, $\mu\text{g}/\text{l}$) from spot-urine samples (available for $n = 2845$ adults and children ≥ 4 years). Milk-alternative drinks were consumed by 4.6 % ($n = 185$; $n = 88$ consumed these drinks exclusively). Iodine intake was significantly lower in exclusive consumers of milk alternatives than cows' milk consumers (94 v. 129 $\mu\text{g}/\text{d}$; $P < 0.001$). Exclusive consumers of milk alternatives also had a lower median UIC than cows' milk consumers (79 v. 132 $\mu\text{g}/\text{l}$; $P < 0.001$) and were classified as iodine deficient by the WHO criterion (median UIC $< 100 \mu\text{g}/\text{l}$), whereas cows' milk consumers were iodine sufficient. These data show that consumers of unfortified milk-alternative drinks are at risk of iodine deficiency. As a greater number of people consume milk-alternative drinks, it is important that these products are fortified appropriately to provide a similar iodine content to that of cows' milk.

Database: Medline

Implementation strategies for improving vitamin D status and increasing vitamin D intake in the UK: current controversies and future perspectives: proceedings of the 2nd Rank Prize Funds Forum on vitamin D.



Author(s): Buttriss, Judy L; Lanham-New, Susan A; Steenson, Simon; Levy, Louis; Swan, Gillian E; Darling, Andrea L; Cashman, Kevin D; Allen, Rachel E; Durrant, Louise R; Smith, Collin P; Magee, Pamela; Hill, Tom R; Uday, Suma; Kiely, Mairead; Delamare, Gael; Hoyland, Alexa E; Larsen, Lise; Street, Laura N; Mathers, John C; Prentice, Ann

Source: The British journal of nutrition; Jul 2021 ; p. 1-21

Publication Date: Jul 2021

Publication Type(s): Journal Article

PubMedID: 34284830

Available at [The British journal of nutrition](#) - from Unpaywall

Abstract:A multi-disciplinary expert group met to discuss vitamin D deficiency in the UK and strategies for improving population intakes and status. Changes to UK Government advice since the 1st Rank Forum on Vitamin D (2009) were discussed, including rationale for setting a reference nutrient intake (10 µg/d; 400 IU/d) for adults and children (4+ years). Current UK data show inadequate intakes among all age groups and high prevalence of low vitamin D status among specific groups (e.g. pregnant women and adolescent males/females). Evidence of widespread deficiency within some minority ethnic groups, resulting in nutritional rickets (particularly among Black and South Asian infants), raised particular concern. Latest data indicate that UK population vitamin D intakes and status remain relatively unchanged since Government recommendations changed in 2016. Vitamin D food fortification was discussed as a potential strategy to increase population intakes. Data from dose-response and dietary modelling studies indicate dairy products, bread, hens' eggs and some meats as potential fortification vehicles. Vitamin D3 appears more effective than vitamin D2 for raising serum 25-hydroxyvitamin D concentration, which has implications for choice of fortificant. Other considerations for successful fortification strategies include: (i) need for 'real-world' cost information for use in modelling work; (ii) supportive food legislation; (iii) improved consumer and health professional understanding of vitamin D's importance; (iv) clinical consequences of inadequate vitamin D status and (v) consistent communication of Government advice across health/social care professions, and via the food industry. These areas urgently require further research to enable universal improvement in vitamin D intakes and status in the UK population.

Database: Medline

Screening, assessment and management of perioperative malnutrition: a survey of UK practice.

Author(s): Matthews, L S; Wootton, S A; Davies, S J; Levett, D Z H

Source: Perioperative medicine (London, England); Aug 2021; vol. 10 (no. 1); p. 30

Publication Date: Aug 2021

Publication Type(s): Journal Article

PubMedID: 34433498

Available at [Perioperative medicine \(London, England\)](#) - from BioMed Central

Available at [Perioperative medicine \(London, England\)](#) - from Europe PubMed Central - Open Access

Available at [Perioperative medicine \(London, England\)](#) - from ProQuest (Health Research Premium) - NHS Version

Abstract:BACKGROUND Perioperative malnutrition is common and is associated with increased mortality, complications and healthcare costs. Patients having surgery for cancer and gastro-intestinal disease are at particular risk. It is a modifiable pre-operative risk factor and perioperative clinicians are well placed to identify those at risk and instigate interventions shown to improve outcome. Thus, we conducted a survey of Perioperative Medicine Leads with the aim of assessing the current provision of nutritional screening and intervention pathways in the UK. METHODS Perioperative Medicine Leads registered with the Royal College of Anaesthetists were asked to complete an online survey exploring current practice in screening, assessment and management of malnutrition in the perioperative period. The survey included a mixture of open and closed questions, graded response questions and options for free text. Where a response was not received, departments were phoned directly and e-mails sent to non-responders. RESULTS We received 121 completed questionnaires from 167 Perioperative Medicine Leads (response rate of 72.5%). Seventy respondents (57.9%) reported using the Malnutrition Universal Screening Tool to



screen patients; however, only 61 (50.4%) referred patients at nutritional risk onto a dietitian. Sixty (49.6%) lacked confidence in local ability to identify and manage malnutrition perioperatively, with 28 (23.1%) reporting having a structured pathway for managing malnourished patients. One hundred eleven respondents (91.7%) agreed that malnutrition impacts on quality of life after surgery and 105 (86.8%) felt adopting a standard protocol would improve outcomes for patients. Those reporting a lack of confidence in dealing with malnutrition perioperatively cited a lack of organisational support, patients being seen too close to surgery and lack of clarity around responsibility as key reasons for difficulties in managing this group of patients. **CONCLUSIONS** Malnutrition in the perioperative period is a modifiable risk factor which is common and results in increased morbidity for patients and increased cost to healthcare systems. This survey highlights areas of practice where perioperative clinicians can improve the assessment and management of patients at nutritional risk prior to elective surgery.

Database: Medline

Association between serum urate, gout and comorbidities: a case-control study using data from the UK Biobank.

Author(s): Sandoval-Plata, Gabriela; Nakafero, Georgina; Chakravorty, Mithun; Morgan, Kevin; Abhishek, Abhishek

Source: Rheumatology (Oxford, England); Jul 2021; vol. 60 (no. 7); p. 3243-3251

Publication Date: Jul 2021

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

PubMedID: 33313843

Abstract: **OBJECTIVE** To examine the association between comorbidities and serum urate (SU), gout and comorbidities, and to determine whether the association between gout and comorbidities is independent of SU. **METHODS** We performed a case-control study using UK Biobank data. Two separate analyses were conducted: one excluding participants with gout to investigate the association between comorbidities and SU and the other with participants with gout as the index condition to examine the association between gout and comorbidities. SU was measured at the baseline visit. Self-reported physician-diagnosed illnesses were used to define gout and comorbidities, except for chronic kidney disease (CKD), which was defined using an estimated glomerular filtration rate cut-off. Participants prescribed urate-lowering treatment were also classified as gout. Logistic regression was used to examine associations. Odds ratios (ORs) and 95% CIs were calculated and adjusted for covariates including comorbidities and SU. **RESULTS** Data for 458 781 UK Biobank participants were used to examine the association between comorbidities and SU. There was an association between hypertension, ischaemic heart disease (IHD), congestive cardiac failure (CCF), hyperlipidaemia, CKD and SU with and adjusted OR (aOR) of 1.10-3.14 for each 1 mg/dl SU increase. A total of 10 265 gout cases and 458 781 controls were included in the analysis of association between gout and comorbidities. Gout associated independently with hypertension, IHD, CCF, hyperlipidaemia and diabetes, with aORs of 1.21-4.15 after adjusting for covariates including SU. **CONCLUSION** Comorbidities associate with increasing SU. The association between gout and cardiometabolic comorbidities was independent of SU, suggesting separate SU-independent mechanisms such as inflammation driven by crystal deposition, pro-inflammatory genotype or non-purine dietary factors.

Database: Medline

A study into the effect of Lactobacillus casei Shirota in preventing antibiotic associated diarrhoea including Clostridioides difficile infection in patients with spinal cord injuries: a multicentre randomised, double-blind, placebo-controlled trial.

Author(s): Wong, Samford; Hirani, Shashivadan P; Forbes, Alastair; Kumar, Naveen; Hariharan, Ramaswamy; O'Driscoll, Jean; Viswanathan, Anand; Harvey, Graham; Sekhar, Ravi; Jamous, Ali

Source: EClinicalMedicine; Oct 2021; vol. 40 ; p. 101098

Publication Date: Oct 2021

Publication Type(s): Journal Article

PubMedID: 34541475



Abstract:Background Antibiotic Associated Diarrhoea (AAD) and Clostridioides Difficile Infection (CDI) are of major concern in spinal cord injury (SCI) rehabilitation. Methods A multi-centre, randomized, double-blind, placebo-controlled (the ECLISP) trial, was conducted in three tertiary spinal cord injury centre in the UK to assess the efficacy of consuming a probiotic beverage containing at least 6.5×10^9 live Lactobacillus casei Shirota (LcS) in preventing AAD and CDI and in patients with SCI and to determine whether proton pump inhibitors (PPI) and under nutrition-risk are risk factors for AAD/CDI. LcS or placebo was given once daily for the duration of an antibiotic course and continued for 7 days thereafter. Follow up was set at 7 and 30 days after the antibiotic course finished. The primary outcome was occurrence of AAD up to 30 days after finishing LcS/placebo. This trial is completed and registered (ISRCTN:13119162). Findings Between November 2014, and November 2019, 359 consenting adult SCI patients (median age: 53.3; range: 18-88 years), from 3 SCI centres responsible for providing approximate 45-50% of UK SCI service, with a requirement for antibiotics due to infection were randomly allocated to receive LcS (n = 181) or placebo (n = 178). Overall, no statistical difference was seen in occurrence of the primary outcomes of AAD at 30 days follow up (45% v 42.1%, RR: 1.071, 0.8-1.4, p = 0.639). In the secondary analyses LcS was associated with a lower risk of AAD at 7 (19% v 35.7%, RR: 0.53, 0.29-0.99, p = 0.040) and 30 days follow up (28% v 52.2%, RR: 0.54, 0.32-0.91, p = 0.015) in the participants who took PPI regularly. Under nutrition-risk was associated with an increased risk of AAD at 7 (RR: 1.76, 1.28-2.44) and 30 days follow up (RR: 1.69, 1.30-2.0). No intervention-related adverse events were reported during the study. Interpretation The present study indicates that LcS could not prevent AAD/CDI in unselected SCI patients. LcS might have the potential to prevent AAD in the higher risk group of patients on regular PPI. Confirmatory studies are needed to allow translation of this apparent therapeutic success into improved clinical outcomes. Funding Yakult Honsha Co., Ltd.

Database: Medline

A single-centre ten-year retrospective cohort study of malignant small bowel obstruction.

Author(s): Cato, L D; Evans, T; Ward, S T

Source: Annals of the Royal College of Surgeons of England; Nov 2021; vol. 103 (no. 10); p. 738-744

Publication Date: Nov 2021

Publication Type(s): Journal Article

PubMedID: 34436951

Available at [Annals of the Royal College of Surgeons of England](#) - from EBSCO (MEDLINE Complete)

Abstract:INTRODUCTION Management of malignant small bowel obstruction (mSBO) is challenging. The decision to perform an operation evaluates the perceived chance of success against a patient's fitness for operation. The aim of this study was to characterise the mSBO patient population in a tertiary UK centre and assess the patient's treatment pathway including use and effects of palliative surgery, total parenteral nutrition (TPN), Gastrografin and dexamethasone as well as preoperative stratification. METHODSPatients were included if they had mSBO confirmed on computed tomography imaging due to a primary or metastatic neoplasm. Data were collected on pathway and management, and Cox proportional hazard methods were utilised to observe effects on survival. RESULTSNinety-four patients were included, with 104 inpatient episodes. Mean age was 67.4 (SD 13.7), with 57 (60.6%) females. Most (89.4%) had only one admission for mSBO. Eighty-four (89.4%) patients died over the ten-year period, 18 (17.3%) within 30 days of admission. Fifty patients (53.1%) underwent operative management: 70% bypass, 24% stoma formation and 6% open-close laparotomies. Log rank testing of survival probability analysis was significant (p = 0.00018), with 50% survival probability at 107.32 days for operative management and 47.87 days for non-operative. DISCUSSION AND CONCLUSION Operative management forms part of the treatment pathway for a significant proportion of patients with mSBO, offering a survival benefit, though quality of survival is not known. Case selection is good, with few open-close laparotomies. Trials of non-operative interventions such as Gastrografin and dexamethasone are not utilised fully.

Database: Medline



Dietary intake and biomarkers of alpha linolenic acid and risk of all cause, cardiovascular, and cancer mortality: systematic review and dose-response meta-analysis of cohort studies.

Author(s): Naghshi, Sina; Aune, Dagfinn; Beyene, Joseph; Mobarak, Sara; Asadi, Masoomeh; Sadeghi, Omid

Source: BMJ (Clinical research ed.); Oct 2021; vol. 375 ; p. n2213

Publication Date: Oct 2021

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

PubMedID: 34645650

Available at [BMJ \(Clinical research ed.\)](#) - from BMJ Journals

Available at [BMJ \(Clinical research ed.\)](#) - from BMJ Journals

Abstract:OBJECTIVETo examine the associations between dietary intake and tissue biomarkers of alpha linolenic acid (ALA) and risk of mortality from all causes, cardiovascular disease (CVD), and cancer.DESIGNSystematic review and meta-analysis of prospective cohort studies.DATA SOURCESPubMed, Scopus, ISI Web of Science, and Google Scholar to 30 April 2021.STUDY SELECTIONProspective cohort studies that reported the risk estimates for death from all causes, CVD, and cancer.DATA SYNTHESISSummary relative risks and 95% confidence intervals were calculated for the highest versus lowest categories of ALA intake using random effects and fixed effects models. Linear and non-linear dose-response analyses were conducted to assess the dose-response associations between ALA intake and mortality.RESULTS41 articles from prospective cohort studies were included in this systematic review and meta-analysis, totalling 1 197 564 participants. During follow-up ranging from two to 32 years, 198 113 deaths from all causes, 62 773 from CVD, and 65 954 from cancer were recorded. High intake of ALA compared with low intake was significantly associated with a lower risk of deaths from all causes (pooled relative risk 0.90, 95% confidence interval 0.83 to 0.97, I²=77.8%, 15 studies), CVD (0.92, 0.86 to 0.99, I²=48.2%, n=16), and coronary heart disease (CHD) (0.89, 0.81 to 0.97, I²=5.6%, n=9), and a slightly higher risk of cancer mortality (1.06, 1.02 to 1.11, I²=3.8%, n=10). In the dose-response analysis, a 1 g/day increase in ALA intake (equivalent to one tablespoon of canola oil or 0.5 ounces of walnut) was associated with a 5% lower risk of all cause (0.95, 0.91 to 0.99, I²=76.2%, n=12) and CVD mortality (0.95, 0.91 to 0.98, I²=30.7%, n=14). The pooled relative risks for the highest compared with lowest tissue levels of ALA indicated a significant inverse association with all cause mortality (0.95, 0.90 to 0.99, I²=8.2%, n=26). Also, based on the dose-response analysis, each 1 standard deviation increment in blood concentrations of ALA was associated with a lower risk of CHD mortality (0.92, 0.86 to 0.98, I²=37.1%, n=14).CONCLUSIONSThe findings show that dietary ALA intake is associated with a reduced risk of mortality from all causes, CVD, and CHD, and a slightly higher risk of cancer mortality, whereas higher blood levels of ALA are associated with a reduced risk of all cause and CHD mortality only.SYSTEMATIC REVIEW REGISTRATIONPROSPERO CRD42021229487.

Database: Medline

Current evidence on dietary intakes of fatty acids and mortality.

Author(s): Naghshi, Sina; Sadeghi, Omid

Source: BMJ (Clinical research ed.); Oct 2021; vol. 375 ; p. n2379

Publication Date: Oct 2021

Publication Type(s): Journal Article

PubMedID: 34645601

Available at [BMJ \(Clinical research ed.\)](#) - from BMJ Journals

Available at [BMJ \(Clinical research ed.\)](#) - from BMJ Journals

Database: Medline

Eosinophilic Esophagitis: A Review.

Author(s): Muir, Amanda; Falk, Gary W



Source: JAMA; Oct 2021; vol. 326 (no. 13); p. 1310-1318

Publication Date: Oct 2021

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

PubMedID: 34609446

Available at [JAMA](#) - from EBSCO (MEDLINE Complete)

Abstract:ImportanceEosinophilic esophagitis (EoE) is a chronic immune-mediated inflammatory disease of the esophagus that affects an estimated 34.4/100 000 people in Europe and North America. EoE affects both children and adults, and causes dysphagia, food impaction of the esophagus, and esophageal strictures.ObservationsEoE is defined by symptoms of esophageal dysfunction, such as vomiting, dysphagia, or feeding difficulties, in a patient with an esophageal biopsy demonstrating at least 15 eosinophils per high-power field in the absence of other conditions associated with esophageal eosinophilia such as gastroesophageal reflux disease or achalasia. Genetic factors and environmental factors, such as exposure to antibiotics early in life, are associated with EoE. Current therapies include proton pump inhibitors; topical steroid preparations, such as fluticasone and budesonide; dietary therapy with amino acid formula or empirical food elimination; and endoscopic dilation. In a systematic review of observational studies that included 1051 patients with EoE, proton pump inhibitor therapy was associated with a histologic response, defined as less than 15 eosinophils per high-power field on endoscopic biopsy, in 41.7% of patients, while placebo was associated with a 13.3% response rate. In a systematic review of 8 randomized trials of 437 patients with EoE, topical corticosteroid treatment was associated with histologic remission in 64.9% of patients compared with 13.3% for placebo. Patients with esophageal narrowing may require dilation. Objective assessment of therapeutic response typically requires endoscopy with biopsy.Conclusions and RelevanceEoE has a prevalence of approximately 34.4/100 000 worldwide. Treatments consist of proton pump inhibitors, topical steroids, elemental diet, and empirical food elimination, with esophageal dilation reserved for patients with symptomatic esophageal narrowing.

Database: Medline

Chronic kidney disease.

Author(s): Kalantar-Zadeh, Kamyar; Jafar, Tazeen H; Nitsch, Dorothea; Neuen, Brendon L; Perkovic, Vlado

Source: Lancet (London, England); Aug 2021; vol. 398 (no. 10302); p. 786-802

Publication Date: Aug 2021

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

PubMedID: 34175022

Available at [Lancet \(London, England\)](#) - from ProQuest (MEDLINE with Full Text) - NHS Version

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

Abstract:Chronic kidney disease is a progressive disease with no cure and high morbidity and mortality that occurs commonly in the general adult population, especially in people with diabetes and hypertension. Preservation of kidney function can improve outcomes and can be achieved through non-pharmacological strategies (eg, dietary and lifestyle adjustments) and chronic kidney disease-targeted and kidney disease-specific pharmacological interventions. A plant-dominant, low-protein, and low-salt diet might help to mitigate glomerular hyperfiltration and preserve renal function for longer, possibly while also leading to favourable alterations in acid-base homeostasis and in the gut microbiome. Pharmacotherapies that alter intrarenal haemodynamics (eg, renin-angiotensin-aldosterone pathway modulators and SGLT2 [SLC5A2] inhibitors) can preserve kidney function by reducing intraglomerular pressure independently of blood pressure and glucose control, whereas other novel agents (eg, non-steroidal mineralocorticoid receptor antagonists) might protect the kidney through anti-inflammatory or antifibrotic mechanisms. Some glomerular and cystic kidney diseases might benefit from disease-specific therapies. Managing chronic kidney disease-associated cardiovascular risk, minimising the risk of infection, and preventing acute kidney injury are crucial interventions for these patients, given the high burden of complications, associated morbidity and mortality, and the role of non-conventional risk factors in chronic kidney disease. When renal replacement therapy becomes inevitable, an incremental transition to dialysis can be considered and has been proposed to possibly



preserve residual kidney function longer. There are similarities and distinctions between kidney-preserving care and supportive care. Additional studies of dietary and pharmacological interventions and development of innovative strategies are necessary to ensure optimal kidney-preserving care and to achieve greater longevity and better health-related quality of life for these patients.

Database: Medline

Optimising nutritional care and combatting malnutrition.

Author(s): Holdoway ; Franklin, Hilary

Source: Journal of Community Nursing; Dec 2021; vol. 35 (no. 6); p. 30-36

Publication Date: Dec 2021

Publication Type(s): Academic Journal

Available at [Journal of Community Nursing](#) - from ProQuest (Health Research Premium) - NHS Version

Available at [Journal of Community Nursing](#) - from EBSCO (CINAHL with Full Text)

Abstract:In 2006, the National Institute for Health and Care Excellence (NICE) released the landmark guidance on nutrition, 'Nutrition support in adults: oral nutrition support, enteral tube feeding and parenteral nutrition' (NICE, 2006). At the heart of NICE guidance and quality standards is the aim to integrate research into practice and reduce gaps between recommended and actual practice. However, successful implementation is dependent on national and local action. To facilitate the implementation of the NICE clinical guidance (CG32), a national multidisciplinary expert panel was convened to explore and develop strategies that would overcome barriers to implementation of the NICE guidance, facilitate access to practical tools, and enhance knowledge to improve the management of disease-related malnutrition in the community. The collaborative work undertaken by the panel, in conjunction with major stakeholders, led to the development of the 'Managing Adult Malnutrition in the Community' materials. This article reviews the work of both the initial panel in 2012 and subsequent expert panels, that have delivered and continue to develop resources for nurses and the wider multidisciplinary team to assist in tackling malnutrition, which affects up to three million people in the UK at any time (Elia and Russell, 2009), especially that which arises as a consequence of illness and long-term medical conditions having an impact on appetite and the ability to eat and drink.

Database: CINAHL

Cardiometabolic, Lifestyle, and Nutritional Factors in Relation to Varicose Veins: A Mendelian Randomization Study.

Author(s): Unit of Cardiovascular and Nutritional Epidemiology, Institute of Environmental Medicine, Karolinska Institutet, Stockholm, Sweden; Bruzelius, Maria; Damrauer, Scott M.; Larsson, Susanna C.; Yuan, Shuai

Source: Journal of the American Heart Association; Nov 2021; vol. 10 (no. 21); p. 1-22

Publication Date: Nov 2021

Publication Type(s): Academic Journal

PubMedID: NLM34666504

Available at [Journal of the American Heart Association](#) - from Europe PubMed Central - Open Access

Available at [Journal of the American Heart Association](#) - from HighWire - Free Full Text

Available at [Journal of the American Heart Association](#) - from Wiley Online Library Free Content - NHS

Abstract:Background We conducted a 2-sample Mendelian randomization study to assess the associations of cardiometabolic, lifestyle, and nutritional factors with varicose veins. Methods and Results Independent single-nucleotide polymorphisms associated with height (positive control), body mass index, type 2 diabetes, diastolic and systolic blood pressure, smoking, alcohol and coffee consumption, 7 circulating vitamins (A, B6, B9, B12, C, 25-hydroxyvitamin D, and E), and 5 circulating minerals (calcium, iron, magnesium, selenium, and zinc) at the genome-wide significance level were used as instrumental variables. Summary-level data for the genetic associations with



varicose veins were obtained from the UK Biobank (8763 cases and 352 431 noncases) and the FinnGen consortium (13 928 cases and 153 951 noncases). Genetically predicted higher height, body mass index, smoking, and circulating iron levels were associated with an increased risk of varicose veins. The odds ratios (ORs) per 1-SD increase in the exposure were 1.34 (95% CI, 1.25-1.43) for height, 1.39 (95% CI, 1.27-1.52) for body mass index, 1.12 (95% CI, 1.04-1.22) for the prevalence of smoking initiation, and 1.24 (95% CI, 1.16-1.33) for iron. Higher genetically predicted systolic blood pressure and circulating calcium and zinc levels were associated with a reduced risk of varicose veins, whereas the association for systolic blood pressure did not persist after adjustment for genetically predicted height. The OR was 0.75 (95% CI, 0.62-0.92) per 1-SD increase in calcium levels and 0.97 (95% CI, 0.95-0.98) for zinc. Conclusions This study identified several modifiable risk factors for varicose veins.

Database: CINAHL

Nature of the evidence base and frameworks underpinning dietary recommendations for prevention of non-communicable diseases: a position paper from the Academy of Nutrition Sciences.

Author(s): Williams ; Ashwell, Margaret; Prentice, Ann; Hickson, Mary; Stanner, Sara

Source: British Journal of Nutrition; Oct 2021; vol. 126 (no. 7); p. 1076-1090

Publication Date: Oct 2021

Publication Type(s): Academic Journal

Available at [The British journal of nutrition](#) - from Unpaywall

Abstract:This Position Paper from the Academy of Nutrition Sciences is the first in a series which describe the nature of the scientific evidence and frameworks that underpin nutrition recommendations for health. This first paper focuses on evidence which underpins dietary recommendations for prevention of non-communicable diseases. It considers methodological advances made in nutritional epidemiology and frameworks used by expert groups to support objective, rigorous and transparent translation of the evidence into dietary recommendations. The flexibility of these processes allows updating of recommendations as new evidence becomes available. For CVD and some cancers, the paper has highlighted the long-term consistency of a number of recommendations. The innate challenges in this complex area of science include those relating to dietary assessment, misreporting and the confounding of dietary associations due to changes in exposures over time. A large body of experimental data is available that has the potential to support epidemiological findings, but many of the studies have not been designed to allow their extrapolation to dietary recommendations for humans. Systematic criteria that would allow objective selection of these data based on rigour and relevance to human nutrition would significantly add to the translational value of this area of nutrition science. The Academy makes three recommendations: (i) the development of methodologies and criteria for selection of relevant experimental data, (ii) further development of innovative approaches for measuring human dietary intake and reducing confounding in long-term cohort studies and (iii) retention of national nutrition surveillance programmes needed for extrapolating global research findings to UK populations.

Database: CINAHL

The role of non-dietetic healthcare professionals in managing interventions among adults at risk of malnutrition: A systematic review.

Author(s): Dabbous ; Hastings, Rebecca; Weekes, C. Elizabeth; Baldwin, Christine

Source: Clinical Nutrition; Jul 2021; vol. 40 (no. 7); p. 4509-4525

Publication Date: Jul 2021

Publication Type(s): Academic Journal

Abstract:Malnutrition is estimated to affect over three million people in the UK resulting in serious consequences on both the individuals' health and healthcare system. While dietitians are uniquely qualified to provide nutritional interventions, they have one of the lowest workforce numbers in the NHS making it difficult to tackle the malnutrition burden alone. Thus, innovative ways of working are needed. Non-dietetic health care professionals are



often involved in the identification, assessment and treatment of malnutrition and research has shown benefits of their involvement in identification and management of nutritional issues, however their role in delivering nutritional interventions has not yet been evaluated. The aim of this systematic review is to collate evidence on the potential roles and effectiveness of non-dietetic healthcare professionals in providing nutritional interventions and their impact on patient-centred outcomes in malnourished or at-risk individuals. Three electronic databases were searched on 10th October 2019. Titles and abstracts were initially screened, followed by full texts, against inclusion criteria and included/excluded studies by two authors independently. Data were extracted and tabulated where possible and grouped according to type of intervention and outcomes. Risk of bias and quality of evidence was assessed using the GRADE approach. Data were combined in the form of a narrative synthesis. Eighteen eligible studies were included; five involved feeding assistance, 10 involved implementing individualised nutrition monitoring or care plans and three were multi-factorial interventions. Interventions took place in a range of settings including hospital and long term care facilities. Very low and low quality evidence suggests that non-dietetic HCP interventions may improve weight, percent of patients reaching estimated energy requirements, quality of life, falls and frailty rate and patient satisfaction. Very low quality evidence suggests that non-dietetic HCP interventions may not improve mid-arm circumference, energy or protein intake, activities of daily living, handgrip strength or length of hospital stay. Low quality evidence suggests that non-dietetic HCP interventions have no effect on mortality. A lack of good quality evidence on the effectiveness of non-dietetic HCP delivered interventions on the management of malnutrition in adults makes it difficult to draw conclusions. However, this review has highlighted the types of interventions and potential roles of non-dietetic HCPs, providing a groundwork for further high-quality research such as feasibility studies in this area, for the effective management of malnutrition within clinical and community practice.

Database: CINAHL

Associations of circulating insulin-like growth factor-I with intake of dietary proteins and other macronutrients.

Author(s): Watling ; Kelly, Rebecca K.; Tong, Tammy Y.N.; Piernas, Carmen; Watts, Eleanor L.; Tin Tin, Sandar; Knuppel, Anika; Schmidt, Julie A.; Travis, Ruth C.; Key, Timothy J.; Perez-Cornago, Aurora

Source: Clinical Nutrition; Jul 2021; vol. 40 (no. 7); p. 4685-4693

Publication Date: Jul 2021

Publication Type(s): Academic Journal

Available at [Clinical nutrition \(Edinburgh, Scotland\)](#) - from Unpaywall

Abstract: Circulating insulin-like growth factor-I (IGF-I) is associated with the risk of several cancers. Dietary protein intake, particularly dairy protein, may increase circulating IGF-I; however, associations with different protein sources, other macronutrients, and fibre are inconclusive. To investigate the associations between intake of protein, macronutrients and their sources, fibre, and alcohol with serum IGF-I concentrations. A total of 11,815 participants from UK Biobank who completed ≥ 4 24-h dietary assessments and had serum IGF-I concentrations measured at baseline were included. Multivariable linear regression was used to assess the cross-sectional associations of macronutrient and fibre intake with circulating IGF-I concentrations. Circulating IGF-I concentrations were positively associated with intake of total protein (per 2.5% higher energy intake: 0.56 nmol/L (95% confidence interval: 0.47, 0.66)), milk protein: 1.20 nmol/L (0.90, 1.51), and yogurt protein: 1.33 nmol/L (0.79, 1.86), but not with cheese protein: -0.07 nmol/L (-0.40, 0.25). IGF-I concentrations were also positively associated with intake of fibre (per 5 g/day higher intake: 0.46 nmol/L (0.35, 0.57)) and starch from wholegrains (Q5 vs. Q1: 1.08 nmol/L (0.77, 1.39)), and inversely associated with alcohol consumption (>40 g/day vs <1 g/day: -1.36 nmol/L (-1.00, -1.71)). These results show differing associations with IGF-I concentrations depending on the source of dairy protein, with positive associations with milk and yogurt protein intake but no association with cheese protein. The positive association of fibre and starch from wholegrains with IGF-I warrants further investigation.

Database: CINAHL

Salt added to food and body mass index: A bidirectional Mendelian randomisation study.



Author(s): Zhou ; Wen, Xiaoxiao; Peng, Yaguang; Zhao, Liancheng; Yu, Yan

Source: Nutrition & Dietetics; Jul 2021; vol. 78 (no. 3); p. 315-323

Publication Date: Jul 2021

Publication Type(s): Academic Journal

Available at [Nutrition & dietetics: the journal of the Dietitians Association of Australia](#) - from Wiley Online Library

Abstract:Aim: This study aimed to determine the causal association between salt added to food and body mass index (BMI) by integrating a summary-level genome-wide association study (GWAS) data. Methods: We performed two-sample Mendelian randomisation (MR) analyses using summary statistics of GWAS. Inverse-variance weighted (IVW), maximum likelihood estimation, and random effect model were used to analyse the effect of salt added to food on BMI. A bidirectional MR analysis with BMI as the exposure and salt added to food as the outcome was also performed. Results: The single nucleotide polymorphisms (SNPs) were selected from the UK Biobank (n = 462 630) and a meta-analysis of 322 154 European-descent individuals. The IVW method estimate indicated that salt added to food was positively associated with BMI ($\beta = 0.1416$, SE = 0.0576, P = .0139). Results from maximum likelihood estimation ($\beta = 0.1476$, SE = 0.0363, P < .0001) and the random effect model ($\beta = 0.1411$, SE = 0.0572, P = .0137) were consistent with the IVW. Bidirectional MR analysis suggested that BMI did not causally affect salt added to food. Conclusion: Our results provided qualitative evidence supporting a causal relationship between salt intake and BMI.

Database: CINAHL

PAEDIATRICS

Dietary Management of Children With Super-Refractory Status Epilepticus: A Systematic Review and Experience in a Single UK Tertiary Centre.

Author(s): Schoeler, Natasha E; Simpson, Zoe; Zhou, Runming; Pujar, Suresh; Eltze, Christin; Cross, J H

Source: Frontiers in neurology; 2021; vol. 12 ; p. 643105

Publication Date: 2021

Publication Type(s): Systematic Review

PubMedID: 33776895

Available at [Frontiers in neurology](#) - from Europe PubMed Central - Open Access

Available at [Frontiers in neurology](#) - from Unpaywall

Abstract:Ketogenic diet therapies (KDT) are high-fat, low carbohydrate diets used as an effective treatment option for drug-resistant epilepsy. There is limited research on the efficacy of KDT for super-refractory status epilepticus (SRSE). We systematically review evidence for use of KDT in children with SRSE and present a single UK tertiary centre's experience. Thirty one articles were included, of which 24 were "medium" or "low" quality. One hundred and forty seven children with SRSE started KDT, of which 141 (96%) achieved ketosis. KDT was started mean 5.3 days (range 1-420) after status epilepticus (SE) started. SRSE resolved in 85/141 (60%) children after mean 6.3 days (range 0-19) post SE onset, but it is unclear whether further treatments were initiated post-KDT. 13/141 (9%) children died. Response to KDT was more likely when initiated earlier (p = 0.03) and in females (p = 0.01). Adverse side effects were reported in 48/141 (34%), mostly gastrointestinal; potentially serious adverse effects occurred in $\leq 4\%$. Eight children with SRSE, all diagnosed with febrile infection-related epilepsy syndrome, were treated with KDT at Great Ormond Street Hospital for Children. KDT was initiated enterally at mean day 13.6+/- 5.1 of admission. Seven of 8 (88%) children reported adverse side effects, which were potentially serious in 4/8 (50%), including metabolic acidosis, hypoglycaemia and raised amylase. SE ceased in 6/8 (75%) children after mean 25+/- 9.4 days post onset, but other treatments were often started concomitantly and all children started other treatments post-KDT. Two of 8 (25%) children died during admission and another died post-admission. Four of the remaining 5 children continue to have drug-resistant seizures, one of whom remains on KDT; seizure burden was unknown for one child. Our findings indicate that KDT is possible and safe in children with SRSE. Cessation of SRSE may occur in almost two-thirds of children initiated with KDT, but a causal effect is difficult to determine due to concomitant treatments, treatments started post-KDT and the variable length of time post-KDT onset when SRSE cessation occurs. Given that serious



adverse side effects seem rare and response rates are (cautiously) favorable, KDT should be considered as an early treatment option in this group.

Database: Medline

Transition Services for Paediatric Inflammatory Bowel Disease: A Multicentre Study of Practice in the United Kingdom.

Author(s): Ashton, James J; Narula, Priya; Kiparissi, Fevronia; Spray, Christine; Wilson, David C; Tayler, Rachel; Howarth, Lucy; Torrente, Franco; Deb, Protima; Cameron, Fiona L; Muhammed, Rafeeq; Paul, Thankam; Epstein, Jenny; Lawson, Maureen; Maginnis, Janis; Zamvar, Veena; Fagbemi, Andrew; Devadason, David; Bhavsar, Hemant S; Kammermeier, Jochen; Beattie, Robert M

Source: Journal of pediatric gastroenterology and nutrition; Aug 2021; vol. 73 (no. 2); p. 251-258

Publication Date: Aug 2021

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

PubMedID: 33853108

Abstract:OBJECTIVESPatients with paediatric inflammatory bowel disease (IBD) constitute one of the largest cohorts requiring transition from paediatric to adult services. Standardised transition care improves short and long-term patient outcomes. This study aimed to detail the current state of transition services for IBD in the United Kingdom (UK).METHODSWe performed a nationwide study to ascertain current practice, facilities and resources for children and young people with IBD. Specialist paediatric IBD centres were invited to contribute data on: timing of transition/transfer of care; transition resources available including clinics, staff and patient information; planning for future improvement.RESULTSTwenty of 21 (95%) of invited centres responded. Over 90% of centres began the transition process below 16 years of age and all had completed transfer to adult care at 18 years of age. The proportion of patients in the transition process at individual centres varied from 10% to 50%.Joint clinics were held in every centre, with a mean of 12.9 clinics per year. Adult and paediatric gastroenterologists attended at all sites. Availability of additional team members was patchy across the UK, with dietetic, psychological and surgical attendance available in <50% centres. A structured transition tool was used in 75% of centres. Sexual health, contraception and pregnancy were discussed by <60% of teams.CONCLUSIONSThis study provides real-world clinical data on UK-wide transition services. These data can be used to develop a national strategy to complement current transition guidelines, focused on standardising services whilst allowing for local implementation.

Database: Medline

Associations of maternal diet and nutritional status with offspring hepatic steatosis in the Avon longitudinal study of parents and children.

Author(s): Sekkarie, Ahlia; Welsh, Jean A; Northstone, Kate; Stein, Aryeh D; Ramakrishnan, Usha; Vos, Miriam B

Source: BMC nutrition; Jul 2021; vol. 7 (no. 1); p. 28

Publication Date: Jul 2021

Publication Type(s): Journal Article

PubMedID: 34233762

Available at [BMC nutrition](#) - from BioMed Central

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

Available at [BMC nutrition](#) - from Unpaywall

Abstract:BACKGROUNDPriming for cardiometabolic diseases, including non-alcoholic fatty liver disease (NAFLD), is hypothesized to begin in utero. The primary objective of this study is to determine whether there is an association between maternal nutritional status and offspring NAFLD.METHODSData come from the Avon Longitudinal Study of Parents and Children (ALSPAC) in the UK. The analytic sample included 3353 participants who had maternal



information on pre-pregnancy BMI, gestational weight gain, diabetes, and free sugar intake as percent of total energy and were assessed for mild-severe hepatic steatosis at 24 years by transient elastography (controlled attenuation parameter score ≥ 248 dB/m). Multiple logistic regression was used to evaluate the association between maternal factors and offspring hepatic steatosis at 24 years. RESULTS In confounder-adjusted models the independent associations for each maternal factor with mild to severe vs low hepatic steatosis at 24 years were: pre-pregnancy overweight (OR: 1.84, 95%CI: 1.43-2.38) or obesity (OR: 2.73, 95%CI: 1.84-4.03), more than recommended gestational weight gain (OR: 1.30, 95%CI: 1.04-1.64), diabetes (OR: 1.39, 95%CI: 0.87, 2.21), and high free sugar intake during pregnancy (OR: 1.04, 95% CI: 0.82, 1.33). These associations were largely mediated by BMI at 24 years, but not by birthweight or breastfeeding. CONCLUSIONS Our results suggest that maternal nutritional status is associated with the development of NAFLD in their adult offspring, although the relationship is largely mediated by offspring BMI in adulthood.

Database: Medline

Inequalities in body mass index, diet and physical activity in the UK: Longitudinal evidence across childhood and adolescence.

Author(s): Libuy, Nicolás; Bann, David; Fitzsimons, Emla

Source: SSM - population health; Dec 2021; vol. 16 ; p. 100978

Publication Date: Dec 2021

Publication Type(s): Journal Article

PubMedID: 34950761

Abstract: We use longitudinal data across a key developmental period, spanning much of childhood and adolescence (age 5 to 17, years 2006-2018) from the UK Millennium Cohort Study, a nationally representative study with an initial sample of just over 19,000. We first examine the extent to which inequalities in overweight, obesity, BMI and body fat over this period are consistent with the evolution of inequalities in health behaviours, including exercise and healthy diet markers (i.e., skipping breakfast) ($n = 7,220$). We next study the links between SES, health behaviours and adiposity (BMI, body fat), using rich models that account for the influence of a range of unobserved factors that are fixed over time. In this way, we improve on existing estimates measuring the relationship between SES and health behaviours on the one hand and adiposity on the other. The advantage of the individual fixed effects models is that they exploit within-individual changes over time to help mitigate biases due to unobserved fixed characteristics ($n = 6,883$). We observe stark income inequalities in BMI and body fat in childhood (age 5), which have further widened by age 17. Inequalities in obesity, physical activity, and skipping breakfast are observed to widen from age 7 onwards. Ordinary Least Square estimates reveal the previously documented SES gradient in adiposity, which is reduced slightly once health behaviours including breakfast consumption and physical activity are accounted for. The main substantive change in estimates comes from the fixed effects specification. Here we observe mixed findings on the SES associations, with a positive association between income and adiposity and a negative association with wealth. The role of health behaviours is attenuated but they remain important, particularly for body fat.

Database: Medline

'They Are Kids, Let Them Eat': A Qualitative Investigation into the Parental Beliefs and Practices of Providing a Healthy Diet for Young Children among a Culturally Diverse and Deprived Population in the UK.

Author(s): Cook, Erica Jane; Powell, Faye Caroline; Ali, Nasreen; Penn-Jones, Catrin Pedder; Ochieng, Bertha; Constantinou, Georgina; Randhawa, Gurch

Source: International journal of environmental research and public health; Dec 2021; vol. 18 (no. 24)

Publication Date: Dec 2021

Publication Type(s): Journal Article

PubMedID: 34948698



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 (MEDLINE with Full Text) - NHS Version

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

Abstract:In the UK, ethnic minority children are at greater risk of obesity and weight-related ill health compared to the wider national population. The factors that influence the provision of a healthy diet among these populations remain less understood. An interpretive qualitative study with a phenomenological perspective comprised of 24 single sex semi-structured focus groups was conducted with 110 parents (63 mothers and 47 fathers) of young children (aged 0-5 years). The participants were recruited from deprived and ethnically diverse wards in Luton, UK and self-identified as being white British, Pakistani, Bangladeshi, black African-Caribbean or Polish. The findings highlighted a wide range of inter-relating psychological and sociocultural factors that underpin parental beliefs and practices in providing children with a healthy diet. Parents, whilst aware of the importance of providing children with a healthy diet, faced challenges such as lack of time and balancing competing responsibilities, which were clear barriers to providing children with a healthy diet. Access to and affordability of healthy food and the overexposure of cheap, convenient, and unhealthy processed foods made it increasingly difficult for parents to provide a healthy diet for their growing families. Household food practices were also found to be situated within the wider context of sociocultural and religious norms around cooking and eating, along with cultural identity and upbringing.

Database: Medline

Longitudinal dietary trajectories from preconception to mid-childhood in women and children in the Southampton Women's Survey and their relation to offspring adiposity: a group-based trajectory modelling approach.

Author(s): Dalrymple, Kathryn V; Vogel, Christina; Godfrey, Keith M; Baird, Janis; Harvey, Nicholas C; Hanson, Mark A; Cooper, Cyrus; Inskip, Hazel M; Crozier, Sarah R

Source: International journal of obesity (2005); Dec 2021

Publication Date: Dec 2021

Publication Type(s): Journal Article

PubMedID: 34916617

Abstract:BACKGROUND Rates of childhood obesity are increasing globally, with poor dietary quality an important contributory factor. Evaluation of longitudinal diet quality across early life could identify timepoints and subgroups for nutritional interventions as part of effective public health strategies. OBJECTIVE This research aimed to: (1) define latent classes of mother-offspring diet quality trajectories from pre-pregnancy to child age 8-9 years, (2) identify early life factors associated with these trajectories, and (3) describe the association between the trajectories and childhood adiposity outcomes. DESIGN Dietary data from 2963 UK Southampton Women's Survey mother-offspring dyads were analysed using group-based trajectory modelling of a diet quality index (DQI). Maternal diet was assessed pre-pregnancy and at 11- and 34-weeks' gestation, and offspring diet at ages 6 and 12 months, 3, 6-7- and 8-9-years using interviewer-administered food frequency questionnaires. At each timepoint, a standardised DQI was derived using principal component analysis. Adiposity age 8-9 years was assessed using dual-energy X-ray absorptiometry (DXA) and BMI z-scores. RESULTS A five-trajectory group model was identified as optimal. The diet quality trajectories were characterised as stable, horizontal lines and were categorised as poor (n = 142), poor-medium (n = 667), medium (n = 1146), medium-better (n = 818) and best (n = 163). A poorer dietary trajectory was associated with higher maternal pre-pregnancy BMI, smoking, multiparity, lower maternal age and lower educational attainment. Using linear regression adjusted for confounders, a 1-category decrease in the dietary trajectory was associated with higher DXA percentage body fat (0.08 SD (95% confidence interval 0.01, 0.15) and BMI z-score (0.08 SD (0.00, 0.16) in the 1216 children followed up at age 8-9 years. CONCLUSION Mother-offspring dietary trajectories are stable across early life, with poorer diet quality associated with maternal socio-demographic and



other factors and childhood adiposity. The preconception period may be an important window to promote positive maternal dietary changes in order to improve childhood outcomes.

Database: Medline

Use of home parenteral nutrition in severely neurologically impaired children.

Author(s): Ribeiro-Mourão, Francisco; Bertaud, Sophie; Brierley, Joe; McCulloch, Renee; Köglmeier, Jutta; Hill, Susan M

Source: Archives of disease in childhood; Sep 2021

Publication Date: Sep 2021

Publication Type(s): Journal Article

PubMedID: 34551897

Available at [Archives of disease in childhood](#) - from BMJ Journals

Abstract:OBJECTIVE To review the outcome of children with severe neurological impairment (NI) and intestinal failure (IF) referred to our specialist multidisciplinary IF rehabilitation service and to discuss implications. DESIGN Case report series, descriptive analysis. SETTING IF rehabilitation programme at a tertiary children's hospital in the UK. PATIENTS Children with severe NI referred to our IF rehabilitation programme from 2009 to 2019. MAIN OUTCOME MEASURES Demographic and social data, diagnosis, clinical condition, use of home parenteral nutrition (HPN), complications, ethics review outcome and advance care plans. RESULTS Six patients with severe NI were referred to our IF rehabilitation service. Consent for publication was obtained from five families. After thorough medical review and clinical ethics committee assessment, three children started HPN, one had intravenous fluids in addition to enteral feed as tolerated and one intravenous fluids only. The HPN children survived 3-7.08 years (median 4.42 years) on treatment. Objective gastrointestinal signs, for example, bleeding improved without excessive HPN-related complications. Symptomatic improvement was less clear. Analgesia was reduced in three of the five children. All cases had detailed symptom management and advance care plans regularly updated. CONCLUSION SHPN can play a role in relieving gastrointestinal signs/symptoms in children with severe NI and IF. HPN can be conceptualised as part of good palliative care if judged to be in the child's best interests. However, given its risks and that HPN has the potential to become inappropriately life-sustaining, a thorough ethics review and evaluation should be performed before it is initiated, withheld or withdrawn in children with severe NI.

Database: Medline

Impact of school closures on the health and well-being of primary school children in Wales UK: a routine data linkage study using the HAPPEN Survey (2018-2020).

Author(s): James, Michaela; Marchant, Emily; Defeyter, Margaret Anne; Woodside, Jayne; Brophy, Sinead

Source: BMJ open; Oct 2021; vol. 11 (no. 10); p. e051574

Publication Date: Oct 2021

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

PubMedID: 34625414

Available at [BMJ open](#) - from BMJ Journals

Available at [BMJ open](#) - from Europe PubMed Central - Open Access

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Abstract:OBJECTIVE This study aimed to explore the relationship between initial school closures and children's health by comparing health and well-being outcomes collected during school closures (April-June 2020) via HAPPEN (the Health and Attainment of Pupils in a Primary Education Network) with data from the same period in 2019 and 2018 via the HAPPEN Survey. SETTING The study was conducted online with 161 primary schools across Wales



involved in the 'HAPPEN At Home' Survey. PARTICIPANTS Data were collected via the 'HAPPEN At Home' Survey capturing the typical health behaviours of children aged 8-11 years from 1333 participants across Wales. These data were compared with data in 2018 and 2019 also collected between April and June, from HAPPEN (2019 (n=1150) and 2018 (n=475)). PRIMARY AND SECONDARY OUTCOME MEASURES Primary outcomes included validated measures of physical activity, screen time, diet and dental health, as well as well-being, competency and autonomy. Free school meal (FSM) status was used as a proxy for socioeconomic deprivation. Analyses were repeated stratifying by FSM. RESULTS Comparing responses between April-June in 2020 (n=1068), 2019 (n=1150) and 2018 (n=475), there were improvements in physical activity levels, sleep time, happiness and general well-being for children during school closures compared with previous years. However, children on FSM ate fewer fruits and vegetables (21% less at five or more portions of fruits and vegetables (95% CI: 5.7% to 37%)) and had lower self-assessed school competence compared with 2019. Compared with those not on FSM, they also spent less time doing physical activity (13.03%, 95% CI: 3.3% to 21.7%) and consumed more takeaways (16.3%, 95% CI: 2% to 30%) during school closures. CONCLUSION This study suggests that schools are important in reducing inequalities in physical health. The physical health (eg, physical activity and diet) of children eligible for FSM may be affected by prolonged school closures.

Database: Medline

Efficacy of a school-based physical activity and nutrition intervention on child weight status: Findings from a cluster randomized controlled trial.

Author(s): Barnes, Courtney; Hall, Alix; Nathan, Nicole; Sutherland, Rachel; McCarthy, Nicole; Pettet, Matthew; Brown, Alison; Wolfenden, Luke

Source: Preventive medicine; Dec 2021; vol. 153 ; p. 106822

Publication Date: Dec 2021

Publication Type(s): Journal Article

PubMedID: 34599925

Abstract: Despite the benefits of factorial designs in quantifying the relative benefits of different school-based approaches to prevent unhealthy weight gain among students, few have been undertaken. The aims of this 2 × 2 cluster randomized factorial trial was to evaluate the impact of a physical activity and nutrition intervention on child weight status and quality of life. Twelve primary schools in New South Wales, Australia randomly allocated to one of four groups: (i.) physical activity (150 min of planned in-school physical activity); (ii.) nutrition (a healthy school lunch-box); (iii.) combined physical activity and nutrition; or (iv.) control. Outcome data assessing child weight and quality of life were collected at baseline and 9-months post-baseline. Within Grades 4-6 in participating schools, 742 students participated in anthropometric measurements, including child body mass index (BMI) and waist circumference, at baseline and follow-up. Findings indicated that students that received the nutrition intervention had higher odds of being classified in the BMI category of underweight/healthy weight (OR 1.64 95%CI 1.07, 2.50; p = 0.0220), while those who received the physical activity intervention reported a lower waist circumference (mean difference - 1.86 95%CI -3.55, -0.18; p = 0.030). There were no significant effects of the nutrition or physical activity intervention on child BMI scores or child quality of life, and no significant synergistic effects of the two interventions combined. Future research assessing the longer-term impact of both intervention strategies, alone and combined, is warranted to better understand their potential impact on child health. TRIAL REGISTRATION: Australian Clinical Trials Registry ACTRN: ACTRN12616001228471.

Database: Medline

Association Between Childhood Consumption of Ultraprocessed Food and Adiposity Trajectories in the Avon Longitudinal Study of Parents and Children Birth Cohort.

Author(s): Chang, Kiara; Khandpur, Neha; Neri, Daniela; Touvier, Mathilde; Huybrechts, Inge; Millett, Christopher; Vamos, Eszter P

Source: JAMA pediatrics; Sep 2021; vol. 175 (no. 9); p. e211573



Publication Date: Sep 2021

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

PubMedID: 34125152

Available at [JAMA pediatrics](#) - from EBSCO (MEDLINE Complete)

Available at [JAMA pediatrics](#) - from Unpaywall

Abstract: Importance Reports of associations between higher consumption of ultraprocessed foods (UPF) and elevated risks of obesity, noncommunicable diseases, and mortality in adults are increasing. However, associations of UPF consumption with long-term adiposity trajectories have never been investigated in children. Objective To assess longitudinal associations between UPF consumption and adiposity trajectories from childhood to early adulthood. Design, Setting, and Participants This prospective birth cohort study included children who participated in the Avon Longitudinal Study of Parents and Children (ALSPAC) in Avon County, southwest England. Children were followed up from 7 to 24 years of age during the study period from September 1, 1998, to October 31, 2017. Data were analyzed from March 1, 2020, to January 31, 2021. Exposures Baseline dietary intake data were collected using 3-day food diaries. Consumption of UPF (applying the NOVA food classification system) was computed as a percentage of weight contribution in the total daily food intake for each participant and categorized into quintiles. Main Outcomes and Measures Repeated recordings of objectively assessed anthropometrics (body mass index [BMI; calculated as weight in kilograms divided by height in meters squared], weight, and waist circumference) and dual-energy x-ray absorptiometry measurements (fat and lean mass indexes [calculated as fat and lean mass, respectively, divided by height in meters squared] and body fat percentage). Associations were evaluated using linear growth curve models and were adjusted for study covariates. Results A total of 9025 children (4481 [49.7%] female and 4544 [50.3%] male) were followed up for a median of 10.2 (interquartile range, 5.2-16.4) years. The mean (SD) UPF consumption at baseline was 23.2% (5.0%) in quintile 1, 34.7% (2.5%) in quintile 2, 43.4% (2.5%) in quintile 3, 52.7% (2.8%) in quintile 4, and 67.8% (8.1%) in quintile 5. Among those in the highest quintile of UPF consumption compared with their lowest quintile counterpart, trajectories of BMI increased by an additional 0.06 (95% CI, 0.04-0.08) per year; fat mass index, by an additional 0.03 (95% CI, 0.01-0.05) per year; weight, by an additional 0.20 (95% CI, 0.11-0.28) kg per year; and waist circumference, by an additional 0.17 (95% CI, 0.11-0.22) cm per year. Conclusions and Relevance These findings suggest that higher UPF consumption is associated with greater increases in adiposity from childhood to early adulthood. Robust public health measures that promote minimally processed foods and discourage UPF consumption among children are urgently needed to reduce obesity in England and globally.

Database: Medline

What does the evidence say about vegan diets in children?

Author(s): Mahase, Elisabeth

Source: BMJ (Clinical research ed.); Nov 2021; vol. 375 ; p. n2792

Publication Date: Nov 2021

Publication Type(s): Journal Article

PubMedID: 34782397

Available at [BMJ \(Clinical research ed.\)](#) - from BMJ Journals

Available at [BMJ \(Clinical research ed.\)](#) - from BMJ Journals

Database: Medline

Screening of iron deficiency anaemia in early childhood.

Author(s): Jullien

Source: BMC Pediatrics; Sep 2021; vol. 21 (no. 1); p. 1-6



Publication Date: Sep 2021

Publication Type(s): Academic Journal

PubMedID: NLM34496786

Available at [BMC pediatrics](#) - from BioMed Central

Available at [BMC pediatrics](#) - from Europe PubMed Central - Open Access

Available at [BMC pediatrics](#) - from ProQuest (Health Research Premium) - NHS Version

Available at [BMC pediatrics](#) - from EBSCO (MEDLINE Complete)

Abstract:We looked at existing recommendations and supporting evidence on the effectiveness of universal screening of iron deficiency anaemia (IDA) in children under five years of age for improving growth, cognitive function, and psychomotor development. We assessed the accuracy of the screening tests for detecting IDA, the efficacy of existing treatment for children with IDA, and the potential harms associated with screening and treatment. We conducted a literature search up to the 18th of August 2019 by using key terms and manual search in selected sources. We summarized the recommendations and the strength of the recommendation when and as reported by the authors. We summarized the main findings of systematic reviews with the certainty of the evidence as reported. There is no suitable test for IDA screening that is non-invasive with high accuracy for detecting IDA and there is uncertainty whether IDA in children causes cognitive and psychomotor delays. There is a lack of evidence on the effects of routine screening for IDA in asymptomatic children under five years of age on growth, cognitive and psychomotor development outcomes. Universal screening of IDA in children under five years of age is not recommended by most organisations such as the Spanish Association of Primary Care Paediatrics, the United Kingdom National Screening Committee, and the United States Preventive Services Task Force, but is recommended by the American Academy of Paediatrics. However, selective screening of IDA is recommended in infants and children with risk factors including prematurity, low birth weight, and dietary risk factors.

Database: CINAHL

Association of Emotion Regulation Trajectories in Childhood With Anorexia Nervosa and Atypical Anorexia Nervosa in Early Adolescence.

Author(s): Henderson ; Bould, Helen; Flouri, Eirini; Harrison, Amy; Lewis, Gemma; Lewis, Glyn; Srinivasan, Ramya; Stafford, Jean; Warne, Naomi; Solmi, Francesca

Source: JAMA Psychiatry; Nov 2021; vol. 78 (no. 11); p. 1249-1257

Publication Date: Nov 2021

Publication Type(s): Academic Journal

PubMedID: NLM34232251

Available at [JAMA psychiatry](#) - from EBSCO (MEDLINE Complete)

Abstract:Importance: People with anorexia nervosa often experience difficulties regulating their emotions. There is no longitudinal evidence as to whether these differences are already present in childhood or when they begin to emerge. Objective: To investigate the association between emotion regulation trajectories from 3 to 7 years of age and symptoms of anorexia nervosa and atypical anorexia nervosa in adolescence. Design, Setting, and Participants: This cohort study included all children with complete exposure data in the Millennium Cohort Study, a UK general population birth cohort. Data were acquired from June 2001 to March 2016 and analyzed from June to November 2020. Exposures: Mothers reported on their children's emotion regulation skills at 3, 5, and 7 years of age using the Children's Social Behavior Questionnaire. Multilevel models were used to derive early childhood emotion regulation scores (ie, predicted intercept) and within-child changes in emotion regulation scores from 3 to 7 years of age (ie, predicted slope). Main Outcome and Measures: Symptoms consistent with a DSM-5 diagnosis of anorexia nervosa or atypical anorexia nervosa at 14 years of age, defined using a range of questions relative to body image, weight perception, and dieting behaviors (hereinafter referred to as broad anorexia nervosa). Univariable and multivariable logistic regression models tested the association between exposures and outcome. Regression models were adjusted for child and family sociodemographic and socioeconomic characteristics and mental health difficulties, prenatal and perinatal factors, child's cognitive development, and maternal attachment. Results: A total of 15 896 participants (85.7% of total sample; 51.0% boys; 84.5% White individuals) had complete data on the exposure and were included



in the main analyses. Among those with complete exposure and outcome data (9912 of the analytical sample [62.4%]), 97 participants (1.0%; 86 [88.7%] girls and 85 [87.6%] White individuals) had symptoms consistent with a diagnosis of broad anorexia nervosa at 14 years of age. No evidence suggested that children with lower emotion regulation ability at 3 years of age had greater odds of later reporting symptoms of broad anorexia nervosa (odds ratio [OR], 1.21; 95% CI, 0.91-1.63). However, children whose emotion regulation skills did not improve over childhood and who had greater problems regulating emotions at 7 years of age had higher odds of having broad anorexia nervosa at 14 years of age (OR, 1.45; 95% CI, 1.16-1.83). **Conclusions and Relevance:** These findings suggest that difficulties in developing age-appropriate emotion regulation skills in childhood are associated with experiencing broad anorexia nervosa in adolescence. Interventions to support the development of emotion regulation skills across childhood may help reduce the incidence of anorexia nervosa.

Database: CINAHL

STROKE

Consumption of coffee and tea and risk of developing stroke, dementia, and poststroke dementia: A cohort study in the UK Biobank.

Author(s): Zhang, Yuan; Yang, Hongxi; Li, Shu; Li, Wei-Dong; Wang, Yaogang

Source: PLoS medicine; Nov 2021; vol. 18 (no. 11); p. e1003830

Publication Date: Nov 2021

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

PubMedID: 34784347

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 (MEDLINE with Full Text) - NHS Version

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

Abstract:BACKGROUND Previous studies have revealed the involvement of coffee and tea in the development of stroke and dementia. However, little is known about the association between the combination of coffee and tea and the risk of stroke, dementia, and poststroke dementia. Therefore, we aimed to investigate the associations of coffee and tea separately and in combination with the risk of developing stroke and dementia. METHODS AND FINDINGS This prospective cohort study included 365,682 participants (50 to 74 years old) from the UK Biobank. Participants joined the study from 2006 to 2010 and were followed up until 2020. We used Cox proportional hazards models to estimate the associations between coffee/tea consumption and incident stroke and dementia, adjusting for sex, age, ethnicity, qualification, income, body mass index (BMI), physical activity, alcohol status, smoking status, diet pattern, consumption of sugar-sweetened beverages, high-density lipoprotein (HDL), low-density lipoprotein (LDL), history of cancer, history of diabetes, history of cardiovascular arterial disease (CAD), and hypertension. Coffee and tea consumption was assessed at baseline. During a median follow-up of 11.4 years for new onset disease, 5,079 participants developed dementia, and 10,053 participants developed stroke. The associations of coffee and tea with stroke and dementia were nonlinear (P for nonlinear <0.01), and coffee intake of 2 to 3 cups/d or tea intake of 3 to 5 cups/d or their combination intake of 4 to 6 cups/d were linked with the lowest hazard ratio (HR) of incident stroke and dementia. Compared with those who did not drink tea and coffee, drinking 2 to 3 cups of coffee and 2 to 3 cups of tea per day was associated with a 32% (HR 0.68, 95% CI, 0.59 to 0.79; $P < 0.001$) lower risk of stroke and a 28% (HR, 0.72, 95% CI, 0.59 to 0.89; $P = 0.002$) lower risk of dementia. Moreover, the combination of coffee and tea consumption was associated with lower risk of ischemic stroke and vascular dementia. Additionally, the combination of tea and coffee was associated with a lower risk of poststroke dementia, with the lowest risk of incident poststroke dementia at a daily consumption level of 3 to 6 cups of coffee and tea (HR, 0.52, 95% CI, 0.32 to 0.83; $P = 0.007$). The main limitations were that coffee and tea intake was self-reported at baseline and may not reflect long-term consumption patterns, unmeasured confounders in observational studies may result in biased effect estimates, and UK Biobank participants are not representative of the whole United Kingdom population. CONCLUSIONS We found



that drinking coffee and tea separately or in combination were associated with lower risk of stroke and dementia. Intake of coffee alone or in combination with tea was associated with lower risk of poststroke dementia.

Database: Medline

Designing stroke services for the delivery of cognitive rehabilitation: A qualitative study with stroke rehabilitation professionals.

Author(s): Jeffares, Isabelle; Merriman, Niamh A; Doyle, Frank; Horgan, Frances; Hickey, Anne

Source: Neuropsychological rehabilitation; Oct 2021 ; p. 1-24

Publication Date: Oct 2021

Publication Type(s): Journal Article

PubMedID: 34648412

Abstract:This qualitative study explored the potential to deliver cognitive rehabilitation for post-stroke cognitive impairment (PSCI), with a specific focus on barriers and facilitators to its delivery from the perspective of Irish stroke rehabilitation professionals. Sixteen semi-structured interviews were completed with healthcare professionals in both hospital and community settings. The sample comprised physiotherapists, occupational therapists, nurses, a stroke physician, a psychologist, a neuropsychologist, a speech and language therapist, a dietician, and a public health nurse. Interviews were audio-recorded and analysed in NVivo using inductive Thematic Analysis. Barriers and facilitators to the delivery of cognitive rehabilitation were identified and described under four key themes: (i) Cognitive screening; (ii) Cognitive rehabilitation: no one size fits all; (iii) Psychology: the lost dimension of stroke rehabilitation; and (iv) Joining the dots in the community. Staffing required to deliver cognitive rehabilitation for PSCI was highlighted as under-resourced in the Republic of Ireland. Inadequate resourcing of neuropsychology and stroke-related psychological services, in particular, has had negative implications for the delivery of cognitive rehabilitation. Stroke-specific cognitive rehabilitation expertise is virtually inaccessible in the community, highlighting an urgent need for investment in specialist rehabilitation teams to deliver cognitive rehabilitation in this setting.

Database: Medline

Metabolomic Profiles Associated With Incident Ischemic Stroke.

Author(s): Balasubramanian, Raji; Hu, Jie; Guasch-Ferre, Marta; Li, Jun; Sorond, Farzaneh; Zhao, Yibai; Shutta, Katherine; Salvado, Jordi Salas; Hu, Frank; Clish, Clary B; Rexrode, Kathryn M

Source: Neurology; Dec 2021

Publication Date: Dec 2021

Publication Type(s): Journal Article

PubMedID: 34853177

Abstract:BACKGROUND Women have higher lifetime risk of stroke than men, and metabolic factors seem more strongly associated with stroke for women than men. However, few studies in either men or women have evaluated metabolomic profiles and incident stroke. METHODS We applied liquid chromatography-tandem mass spectrometry to measure 519 plasma metabolites in a discovery set of women in the Nurses' Health Study ([NHS], 454 incident ischemic stroke cases, 454 controls) with validation in two independent, prospective cohorts: Prevención con Dieta Mediterránea ([PREDIMED], 118 stroke cases, 791 controls), and Nurses' Health Study 2 ([NHS2], 49 ischemic stroke cases, 49 controls). We applied logistic regression models with stroke as the outcome to adjust for multiple risk factors; the false discovery rate (FDR) was controlled through the q value method. RESULT Twenty-three metabolites were significantly associated with incident stroke in NHS after adjustment for traditional risk factors (q value <0.05). Of these, 14 metabolites were available in PREDIMED and 3 were significantly associated with incident stroke: methionine sulfoxide, N6-acetyllysine, and sucrose (q value <0.05). In NHS2, one of the 23 metabolites (glucuronate) was significantly associated with incident stroke (q value <0.05). For all four metabolites, higher levels were



associated with increased risk. These four metabolites were used to create a stroke metabolite score (SMS) in the NHS and tested in PREDIMED. Per unit of standard deviation of SMS, the odds ratio for incident stroke was 4.12 (95% CI: 2.26 - 7.51) in PREDIMED, after adjustment for risk factors. In PREDIMED, the area under the ROC curve (AUC) for the model including SMS and traditional risk factors was 0.70 (95% CI: 0.75-0.79) versus the AUC for the model including the traditional risk factors only of 0.65 (95% CI: 0.70-75), corresponding to a 5% improvement in risk prediction with SMS ($p < 0.005$). DISCUSSION Metabolites associated with stroke included two amino acids, a carboxylic acid and sucrose. A composite SMS including these metabolites was associated with ischemic stroke and showed improvement in risk prediction beyond traditional risk factors. CLASSIFICATION OF EVIDENCE This study provides Class II evidence that a stroke metabolic score accurately predicts incident ischemic stroke risk.

Database: Medline

Diet-Derived Antioxidants Do Not Decrease Risk of Ischemic Stroke: A Mendelian Randomization Study in 1 Million People.

Author(s): Martens, Leon G; Luo, Jiao; Willems van Dijk, Ko; Jukema, J Wouter; Noordam, Raymond; van Heemst, Diana

Source: Journal of the American Heart Association; Dec 2021; vol. 10 (no. 23); p. e022567

Publication Date: Dec 2021

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

PubMedID: 34796734

Available at [Journal of the American Heart Association](#) - from Europe PubMed Central - Open Access

Available at [Journal of the American Heart Association](#) - from HighWire - Free Full Text

Available at [Journal of the American Heart Association](#) - from Wiley Online Library Free Content - NHS

Abstract: Background Dietary intake and blood concentrations of vitamins E and C, lycopene, and carotenoids have been associated with a lower risk of incident (ischemic) stroke. However, causality cannot be inferred from these associations. Here, we investigated causality by analyzing the associations between genetically influenced antioxidant levels in blood and ischemic stroke using Mendelian randomization. Methods and Results For each circulating antioxidant (vitamins E and C, lycopene, β -carotene, and retinol), which were assessed as either absolute blood levels and/or high-throughput metabolite levels, independent genetic instrumental variables were selected from earlier genome-wide association studies ($P < 5 \times 10^{-8}$). We used summary statistics for single-nucleotide polymorphisms-stroke associations from 3 European-ancestry cohorts (cases/controls): MEGASTROKE (60 341/454 450), UK Biobank (2404/368 771), and the FinnGen study (8046/164 286). Mendelian randomization analyses were performed on each exposure per outcome cohort using inverse variance-weighted analyses and subsequently meta-analyzed. In a combined sample of 1 058 298 individuals (70 791 cases), none of the genetically influenced absolute antioxidants or antioxidant metabolite concentrations were causally associated with a lower risk of ischemic stroke. For absolute antioxidants levels, the odds ratios (ORs) ranged between 0.94 (95% CI, 0.85-1.05) for vitamin C and 1.04 (95% CI, 0.99-1.08) for lycopene. For metabolites, ORs ranged between 1.01 (95% CI, 0.98-1.03) for retinol and 1.12 (95% CI, 0.88-1.42) for vitamin E. Conclusions This study did not provide evidence for a causal association between dietary-derived antioxidant levels and ischemic stroke. Therefore, antioxidant supplements to increase circulating levels are unlikely to be of clinical benefit to prevent ischemic stroke.

Database: Medline

Milk intake and incident stroke and CHD in populations of European descent: a Mendelian randomisation study.

Author(s): Vissers, L E T; Sluijs, I; Burgess, S; Forouhi, N G; Freisling, H; Imamura, F; Nilsson, T K; Renström, F; Weiderpass, E; Aleksandrova, K; Dahm, C C; Perez-Cornago, A; Schulze, M B; Tong, T Y N; Aune, D; Bonet, C; Boer, J M A; Boeing, H; Chirlaque, M D; Conchi, M I; Imaz, L; Jäger, S; Krogh, V; Kyrø, C; Masala, G; Melander, O; Overvad, K; Panico, S; Sánchez, M J; Sonestedt, E; Tjønneland, A; Tzoulaki, I; Verschuren, W M M; Riboli, E; Wareham, N J; Danesh, J; Butterworth, A S; van der Schouw, Y T



Source: The British journal of nutrition; Oct 2021 ; p. 1-9

Publication Date: Oct 2021

Publication Type(s): Journal Article

PubMedID: 34670632

Abstract: Higher milk intake has been associated with a lower stroke risk, but not with risk of CHD. Residual confounding or reverse causation cannot be excluded. Therefore, we estimated the causal association of milk consumption with stroke and CHD risk through instrumental variable (IV) and gene-outcome analyses. IV analysis included 29 328 participants (4611 stroke; 9828 CHD) of the European Prospective Investigation into Cancer and Nutrition (EPIC)-CVD (eight European countries) and European Prospective Investigation into Cancer and Nutrition-Netherlands (EPIC-NL) case-cohort studies. rs4988235, a lactase persistence (LP) SNP which enables digestion of lactose in adulthood was used as genetic instrument. Intake of milk was first regressed on rs4988235 in a linear regression model. Next, associations of genetically predicted milk consumption with stroke and CHD were estimated using Prentice-weighted Cox regression. Gene-outcome analysis included 777 024 participants (50 804 cases) from MEGASTROKE (including EPIC-CVD), UK Biobank and EPIC-NL for stroke, and 483 966 participants (61 612 cases) from CARDIoGRAM, UK Biobank, EPIC-CVD and EPIC-NL for CHD. In IV analyses, each additional LP allele was associated with a higher intake of milk in EPIC-CVD ($\beta = 13.7$ g/d; 95 % CI 8.4, 19.1) and EPIC-NL (36.8 g/d; 95 % CI 20.0, 53.5). Genetically predicted milk intake was not associated with stroke (HR per 25 g/d 1.05; 95 % CI 0.94, 1.16) or CHD (1.02; 95 % CI 0.96, 1.08). In gene-outcome analyses, there was no association of rs4988235 with risk of stroke (OR 1.02; 95 % CI 0.99, 1.05) or CHD (OR 0.99; 95 % CI 0.95, 1.03). Current Mendelian randomisation analysis does not provide evidence for a causal inverse relationship between milk consumption and stroke or CHD risk.

Database: Medline

