ABSTRACT FROM CURRENT LITERATURE

Potato intake and incidence of hypertension: results from three prospective US cohort studies

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Objective: To determine whether higher intake of baked or boiled potatoes, French fries, or potato chips is associated with incidence of hypertension.

Design: Prospective longitudinal cohort studies.

Setting: Healthcare providers in the United States.

Participants: 62 175 women in Nurses' Health Study, 88 475 women in Nurses' Health Study 11, and 36 803 men in Health Professionals Follow up Study who were nonhypertensive at baseline.

Main outcome measure: Incident cases of hypertension (self reported diagnosis by healthcare provider).

Results: Compared with consumption of less than one serving a month, the random effects pooled hazard ratios for four or more servings a week were 1. 11 (95% confidence interval 0.96 to 1.28; P for trend=0.05) for baked, boiled, or mashed potatoes, 1. 17 (1.07 to 1.27; P for trend=0.001) for French fries, and 0.97 (0.87 to 1.08; P for trend=0.98) for potato chips. In substitution analyses, replacing one serving a day of baked, boiled, or mashed potatoes with one serving a day of nonstarchy vegetables was associated with decreased risk of hypertension (hazard ratio 0.93, 0.89 to 0.96).

Conclusion: Higher intake of baked, boiled, or mashed potatoes and French fries was independently and prospectively associated with an increased risk of developing hypertension in three large cohorts of adult men and women.

BMI and all cause mortality: systematic review and non linear dose response meta analysis of 230 cohort studies with 3.74 million deaths among 30.3 million participants

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Objective: To conduct a systematic review and meta analysis of cohort studies of body mass index (BMI) and the risk of all cause mortality, and to clarify the shape and the nadir of the dose response curve, and the influence on the results of confounding from smoking, weight loss associated with disease, and preclinical disease.

Data sources: PubMed and Embase databases searched up to 23 September 2015. Study selection: Cohort studies that reported adjusted risk estimates for at least three categories of BMI in relation to all cause mortality. Data synthesis: Summary relative risks were calculated with random effects models. Non linear associations were explored with fractional polynomial models.

Results: 230 cohort studies (207 publications) were included. The analysis of never smokers included 53 cohort studies (44 risk estimates) with >738 144 deaths and >9 976 077 participants. The analysis of all participants included 228 cohort studies (198 risk estimates) with >3 744 722 deaths among 30 233 329 participants. The summary relative risk for a 5 unit increment in BMI was 1.18 (95% confidence interval 1.15 to 1.21; 12=95%, n=44) among never smokers, 1.21 (1.18 to 1.25; 12=93%,n=25) among healthy never smokers, 1.27 (1.21 to 1.33; 12=89%, n=1 1) among healthy never smokers with exclusion of early follow up, and 1.05 (1.04 to 1.07; 12=97%, n=198) among all participants. There was a J shaped dose response relation in never smokers (Pnon-lin carity <0.001), and the lowest risk was observed at BMI 23-24 in never smokers, 22-23 in healthy never smokers, and 20-22 in studies of never smokers with >20 years' follow up. In contrast there was a U shaped association between BMI and mortality in analyses with a greater potential for bias including all participants, current, former, or ever smokers, and in studies with a short duration of follow up (<5 years or < 10 years), or with moderate study quality scores.

Conclusion: Overweight and obesity is associated with increased risk of all cause mortality and the nadir of the curve was observed at BMI 23-24 among never smokers, 22-23 among healthy never smokers, and 20-22 with longer durations of follow up. The increased risk of mortality observed in underweight people could at least partly be caused by residual confounding from prediagnostic disease. Lack of exclusion of ever smokers, people with prevalent and preclinical.

Occurrence of death and stroke in patients in 47 countries I year after presenting with atrial fibrillation: a cohort study

Healey JS, Oldgren J, Ezekowitz M, et al

The Lancet; 2016; 388; 1161-69

Background : Atrial fibrillation is an important cause of morbidity and mortality worldwide, but scant data are available for long term outcomes in individuals outside North America or Europe, especially in primary care settings.

Methods : We did a cohort study using a prospective registry of patients in 47 countries

who presented to a hospital emergency department with atrial fibrillation or atrial flutter as a primary or secondary diagnosis. 15 400 individuals were enrolled to determine the occurrence of death and strokes (the primary outcomes) in this cohort over eight geographical regions (North America, western Europe, and Australia; South America; eastern Europe; the Middle East and Mediterranean crescent; sub Saharan Africa; India; China; and southeast Asia) I year after attending the emergency department Patients from North America, Western Europe, and Australia were used as the reference population, and compared with patients from the other seven regions.

Findings : Between Dec 24, 2007, and Oct 21, 2011. we enrolled 15 400 individuals to the registry. Follow up was complete for 15 361 (99.7%). of whom 1758 (11%) died within I year. Fewer deaths occurred among patients presenting to the emergency department with a primary diagnosis of atrial fibrillation compared with patients who had atrial fibrillation as a secondary diagnosis (377 [6%] of 6825 patients vs 1381 [16%] of 8536, p<0.0001). Twice as many patients had died by I year in South America (192 [17%] of 1132) and Africa (225 [20%] of 1137) compared with North America, western Europe, and Australia (366 [10%] of 3800, p<0.0001). Heart failure was the most common cause of death (519 [30%] of 1758); stroke caused 148 (8%) deaths. 604 (4%) of 15361 patients had had a stroke by I year; 170 (3%) of 6825 for whom atrial fibrillation was a primary diagnosis and 434 (5%) of 8536 for whom it was a secondary diagnosis (p<0.0001). The highest number of strokes occurred in patients in Africa (89 [8%] of 1137), China (143 [7%] of 2023), and southeast Asia (88 [7%] of 133 1) and the lowest occurred in India (20 [<I%] of 2536). 94 (3%) of 3800 patients in North America, western Europe, and Australia had a stroke.

Interpretation : Marked unexplained inter regional variations in the occurrence of stroke and mortality suggest that factors other than clinical variables might be important. Prevention of death from heart failure should be a major priority in the treatment of atrial fibrillation.

Selecting children for head CT following head injury

Kemp A, Nickerson E, Trefan L, et al

Arch Dis Child 2016; 101: 929-934

Objective: Indicators for head CT scan defined by the 2007 National Institute for Health and Care Excellence (NICE) guidelines were analysed to identify CT uptake, influential variables and yield.

Design : Cross sectional study. Setting Hospital inpatient units: England, Wales, Northern Ireland and the Channel Islands. Patients Children (<15 years) admitted to hospital for more than 4 h following a head injury (September 2009 to February 2010). Interventions CT scan. Main outcome measures Number of children who had CT, extent to which NICE guidelines were followed and diagnostic yield.

Results: Data on 5700 children were returned by 90% of eligible hospitals, 84% of whom were admitted to a general hospital. CT scans were performed on 30.4% of children (1734), with a higher diagnostic yield in infants (56.5% (144/255)) than children aged 1 to 14 years (26.5% (391/1476)). Overall, only 40.4% (984 of 2437 children) fulfilling at least one of the four NICE criteria for CT actually underwent one. These children were much less likely to receive CT if admitted to a general hospital than to a specialist centre (OR 0.52 (95% Cl 0.45 to 0.59)); there was considerable variation between healthcare regions. When indicated, children >3 years were much more likely to have CT than those <3 years (OR 2.35 (95% Cl 2.08 to 2.65)).

Conclusion: Compliance with guidelines and diagnostic yield was variable across age groups, the type of hospital and region where children were admitted. With this pattern of clinical practice the risks of both missing intracranial injury and overuse of CT are considerable.

Does pulse oximeter use impact health outcomes? A systematic review

Enoch AJ, English M, Shepperd S

Arch Dis Child 2016; 101: 694-700

Objective: Do newborns, children and adolescents up to 19 years have lower mortality rates, lower morbidity and shorter length of stay in health facilities where pulse oximeters are used to inform diagnosis and treatment (excluding surgical care) compared with health facilities where pulse oximeters are not used?

Design: Studies were obtained for this systematic literature review by systematically searching the Database of Abstracts of Reviews of Effects, Cochrane, Medion, PubMed, Web of Science, Embase, Global Health, CINAHL, WHO Global Health Library, international health organisation and NGO websites, and study references. Patients: Children 0-19 years presenting for the first time to hospitals, emergency departments or primary care facilities. Interventions Included studies compared outcomes where pulse oximeters were used for diagnosis and/or management, with outcomes where pulse oximeters were not used. Main outcome measures: mortality, morbidity, length of stay, and treatment and management changes.

Results: The evidence is low quality and hypoxaemia definitions varied across studies, but the evidence suggests pulse oximeter use with children can reduce mortality rates (when combined with improved oxygen administration) and length of emergency department stay, increase admission of children with previously unrecognised hypoxaemia, and change physicians' decisions on illness severity, diagnosis and treatment. Pulse oximeter use generally increased resource utilisation.

Conclusions: As international organisations are investing in programmes to increase pulse oximeter use in low income, settings, more research is needed on the optimal use of pulse oximeters (eg, appropriate oxygen saturation thresholds), and how pulse oximeter use affects referral and admission rates, length of stay, resource utilisation and health outcomes.

Role of omentectomy as part of radical surgery for gastric cancer

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BJS 2016; 103: 1497-1503

Background: A complete omentectomy is recommended as part of radical (sub)total gastrectomy for gastric cancer, but there is little evidence to suggest any survival benefit. The aim of this study was to evaluate the incidence of, and risk factors for, metastases in the greater omenturn in patients undergoing gastrectomy for gastric cancer.

Methods : This was a multicentre prospective cohort study (OMEGA trial) of consecutive patients with gastric cancer undergoing (sub)total gastrectomy with complete en bloc omentectorny and modified D2 lymphadenectomy. After resection, the omentum. was separated from the gastrectomy specimen distal to the gastroepiploic vessels and sent separately for pathological examination. The primary endpoint was the presence of metastases in the greater omenturn.

Results : Of 100 included patients, five (5.0 per cent) had metastases in the greater omentum. Pathology results showed advanced tumours in all five (pT4b NI MI, pT4b N2 MI, ypT4aN I M I, ypT3 N2 MO, ypT3 N3 MO). The resection was microscopically non radical at the proximal (3) or distal (2) resection margin in all of these patients.

Metastases in the greater omenturn correlated significantly with a microscopically non radical resection, tumour expansion in the oesophagus or duodenum, linitis plastica or a proximal gastric tumour with diameter of at least 5 cm, stage III-IV disease and (Y)PMI category.

Conclusion : In resectable gastric cancer, the incidence of metastases in the greater omentum is low, and when present associated with advanced disease and non radical features. Thus, omentectomy as part of a radical gastrectomy may be omitted. Registration number.

Two year results from a randomized clinical trial of revascularization in patients with intermittent claudication

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BJS 2016; 103 : 1290-1299

Background : Intermittent claudication is associated with significant impairment of health related quality of life. The use of revascularization techniques to improve health related quality of life remains controversial.

Methods : Patients with intermittent claudication due to iliac or femoropopliteal peripheral artery disease were enrolled in the IRONIC trial. They were randomized to either best medical therapy (BMT), including a structured, non supervised exercise programme, or revascularization with either endovascular or open techniques in addition to BMT. The primary outcome was health related quality of life at 2 years assessed using the Short Form 36 (SF-36Ò) questionnaire. Secondary outcomes included VascuQoL questionnaire results, treadmill walking distances and achievement of patient specified treatment goals.

Results : Both randomized groups had improved health related quality of life and treadmill walking distance at 2 year follow up. Overall SF-36 physical component summary score, three SF-36 physical domain scores, overall VascuQoL score, and three of five VascuQoL domain scores showed significantly greater improvement in the group that also received invasive treatment. Intermittent claudication distance on a graded treadmill improved more in the revascularization+ BMT group (117 versus 55 m; P =0.003) whereas maximum walking distance and 6 min walk test distance were similar. Some 44 per cent of patients in the revascularization. + BMT group reported they had fully achieved their treatment goal versus 10 per cent in the BMT group.

Conclusion : A revascularization strategy with unsupervised exercise improved health related quality of life and intermittent claudication distance more than standard BMT and an unsupervised exercise programme in patients with lifestyle limiting claudication.

Umbilical lactate as a measure of acidosis and predictor of neonatal risk: a systematic review

Allanson ER, Waqar T, White CRH, et al

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Background: Umbilical cord lactate is one approach to measuring acidosis and intrapartum

hypoxia, knowledge of which may be helpful for clinicians involved in the care of women and newborns.

Objective : To synthesise the evidence on accuracy of umbilical cord lactate in measuring acidosis and predicting poor neonatal outcome.

Search strategy : Studies published and unpublished between 1990 and 2014 from PubMed/Medline, EMBASE, Cochrane Central Register of Controlled Trials, and clinicaltrials.gov were assessed.

Selection criteria : Cross sectional and randomised studies that assessed fetal acidosis (using lactate as the index test) with or without an assessment of neonatal outcome.

Data collection and analysis : Correlations between index and reference test(s) were recorded, as were the raw data to classify the predictive ability of umbilical lactate for neonatal outcomes. Meta analysis of correlation was performed. We plotted estimates of the studies' observed sensitivities and specificities on Forest plots with 95% confidence intervals (CI). Where possible, we combined data using meta analysis, applying the hierarchical summary receiver operating characteristics model and a bivariate model.

Main results : Twelve studies were included. Umbilical lactate correlated with pH [pooled effect size (ES) 0.650; 95% CI-0.663 to -0.637, P < 0.001], base excess (ES-0.710; 95% CI-0.721 to 0.699, P <0.001), and Apgar scores at 5 minutes (ES 0.300; 95% 0.193-0.407, P < 0.001). Umbilical lactate had pooled sensitivity and specificity for predicting neonatal neurological outcome including hypoxic ischaemic encephalopathy of 69.7% (95% CI 23.8-94.4%) and 93% (95% CI 86.8-96.3%).

Conclusion : Umbilical cord lactate is a clinically applicable, inexpensive and effective way to measure acidosis and is a tool that may be used in the assessment of neonatal outcome.

Metabolic screening in patients with polycystic ovary syndrome is largely underutilized among obstetrician-gynecologists

Dhesi AS, Murtough KL, Lim JK, et al

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Women with polycystic ovary syndrome have substantially higher rates of insulin resistance, impaired glucose tolerance, type 2 diabetes, dyslipidemia, and metabolic syndrome when compared with women without the disease. Given the high prevalence of these comorbidities, guidelines issued by the American College of Obstetricians and Gynecologists and the Endocrine Society recommend that all women with polycystic ovary syndrome undergo screening for impaired glucose tolerance and dyslipidemia with a 2 hour 75 g oral glucose tolerance test and fasting lipid profile upon diagnosis and also undergo repeat screening every 2-5 years and every 2 years, respectively. Although a hemoglobin AIC and/or fasting glucose are widely used screening tests for diabetes, both the American College of Obstetricians and Gynecologists and the Endocrine Society preferentially recommend the 2 hour oral glucose tolerance test in women with polycystic ovary syndrome as a superior indicator of impaired glucose tolerance/diabetes mellitus. However, we found that gynecologists underutilize current recommendations for metabolic screening in women with polycystic ovary syndrome. In an online survey study targeting American College of Obstetricians and Gynecologists fellows and junior fellows, 22.3% of respondents would not order any screening test at the initial visit for at least 50% of their patients with polycystic ovary syndrome. The most common tests used to screen for impaired glucose tolerance in women with polycystic ovary syndrome were hemoglobin Al C (51.0%) and fasting glucose (42.7%). Whereas 54.1% would order a fasting lipid profile in at least 50% of their polycystic ovary syndrome patients, only 7% of respondents order a 2 hour oral glucose tolerance test. We therefore call for increased efforts to encourage obstetrician-gynecologists to address metabolic abnormalities in their patients with polycystic ovary syndrome. Such efforts should include education of physicians early in their careers, at the medical student and resident level. Efforts should also include implementation of continuing medical education activities, both locally and at the national level, to improve understanding of the metabolic implications of polycystic ovary syndrome. Electronic medical record system should be utilized to generate prompts for appropriate screening tests in patients with a diagnosis of polycystic ovary syndrome. Because obstetrician-gynecologists may be the only physicians seen by many polycystic ovary syndrome patients, particularly those in their young reproductive years, such interventions could effectively promote optimal preventative health care and early diagnosis of metabolic comorbidities in these at risk women.