36 bhma abstracts, august '12

Thirty six abstracts covering a multitude of stress, health & wellbeing related subjects including use of vitamin D in MS, over-the-counter N-acetylcysteine for cannabis dependence, post heart attack PTSD & increased recurrence rates, psychological distress & mortality, the quality of information provided by Wikipedia, hormonal contraceptives & mood disorders, cranberry juice & urinary tract infections, and much more.

(Aassve, Goisis et al. 2012; Abbott and Wallace 2012; Ascherio and Marrie 2012; Bukstein 2012; Cicek, Durakoglugil et al. 2012; de Jong, van Sluis et al. 2012; de Oliveira Otto, Mozaffarian et al. 2012; Delamothe 2012; Edmondson, Richardson et al. 2012; Evans-Lacko, Brohan et al. 2012; Gale, Batty et al. 2012; Geulayov, Gunnell et al. 2012; Gray, Carpenter et al. 2012; Hagger-Johnson, Sabia et al. 2012; Hamer, Endrighi et al. 2012; Hamer, Sabia et al. 2012; Hansen 2012; Hawkes 2012; Jacka, Maes et al. 2012; Kelley, Weathers et al. 2012; Kivimaki, Nyberg et al. 2012; Klevens, Kee et al. 2012; Lee, Shiroma et al. 2012; Lewis 2012; Martinez-Gonzalez, Guillen-Grima et al. 2012; Mishra, Scherer et al. 2012; Pasco, Jacka et al. 2012; Reavley, Mackinnon et al. 2012; Ritchie and Bryant 2012; Russ, Stamatakis et al. 2012; Sakamoto, Ebihara et al. 2012; Sarris, Moylan et al. 2012; Saxon and Barkham 2012; Sinha, Cross et al. 2012; Svendal, Berk et al. 2012; Wang, Fang et al. 2012)

Aassve, A., A. Goisis, et al. (2012). ***"Happiness and childbearing across Europe."*** Social Indicators Research 108(1): 65-86. http://dx.doi.org/10.1007/s11205-011-9866-x

Using happiness as a well-being measure and comparative data from the European social survey we focus in this paper on the link between happiness and childbearing across European countries. The analysis motivates from the recent lows in fertility in many European countries and that economic wellbeing measures are problematic when considering childbearing. We find significant country differences, though the direct association between happiness and childbearing is modest. However, partnership status plays an important role for both men and women. Working fathers are always happier, whereas working mothers are not, though mothers' happiness tends to increase with household income.

Abbott, P. and C. Wallace (2012). ***"Social quality: A way to measure the quality of society."*** Social Indicators Research 108(1): 153-167. http://dx.doi.org/10.1007/s11205-011-9871-0

In this paper we suggest a way to measure the well-being of society based upon our own development of the Social Quality model. The Social Quality model has the advantage of being sociologically grounded as a measure of the well-being of society and the individuals within it. We test our model of Social Quality against life satisfaction as an indicator of how successful it is in delivering these aspirations. The model was tested on all European countries using the European Quality of Life Surveys in 2003 and 2007 and was found to explain a large amount of variance, which was consistent across time and space. We suggest that it is possible to operationalise this model using small number of variables, ones that are frequently used in comparative surveys and this should enable the quality of society to be measured in a parsimonious and effective way.

Ascherio, A. and R. A. Marrie (2012). ***"Vitamin D in MS: A vitamin for 4 seasons."*** Neurology 79: 208-210. http://www.neurology.org/content/79/3/254/suppl/DC2

(Free full text available) The results of 3 independent studies published in this issue of Neurology1–3 (table) suggest that higher levels of circulating 25-hydroxyvitaminD(25[OH]D) may reduce relapses and lesions on MRI in persons with multiple sclerosis (MS). Two of these studies also addressed a possible interaction between 25(OH)D levels and treatment with interferon-B (IFN-B), reaching opposite conclusions. How strong is this evidence and how should it affect clinical practice? ... What are the clinical implications of the reported inverse association between 25(OH)D and MS disease activity? A key consideration is the dose-response relationship. That vitamin deficiency (<50 nmol/L) has a negative effect in persons with MS would be scientifically interesting, but it would not radically change care. The diagnosis and treatment of vitamin D deficiency should already be part of routine care. For clinicians and their patients the fundamental question is whether otherwise adequate vitamin D levels for the general population are suboptimal for individuals with MS. For example, if the optimal serum 25(OH)D level for MS was >100nmol/L, as suggested by epidemiologic data on MS risk, then most persons with MS would benefit from additional vitamin D supplements. Unfortunately, the data on 25(OH)D and MS activity remain sparse and provide insufficient information on the optimal dose. Because of their small size, the studies reported here had insufficient power for dose-response resolution. Nevertheless, it is noteworthy that few patients took vitamin D supplements, and that in each study mean winter 25(OH)D levels were below 75 nmol/L, a level often used to define vitamin D sufficiency and associated with an increased fracture risk ... Solid evidence on optimal levels of 25(OH)D for the treatment of MS will have to rely on large, rigorous clinical trials, comparing a range of dosages rather than assuming that the highest tolerable dose is better and failing to consider that higher doses may have unintended effects. It is too soon to recommend the use of high-dose vitamin D in clinical practice. Meanwhile, considering the high prevalence of vitamin D insufficiency and deficiency in persons with MS, the high risk of osteoporosis, and the safety of vitamin D at modest doses, the evidence is sufficient to recommend monitoring of vitamin D levels and supplementation as needed to achieve at least a year-round level of vitamin D sufficiency in persons with MS.

Bukstein, O. G. (2012). ***"Taking note of over-the-counter remedies for adolescents with cannabis dependence."*** Am J Psychiatry 169(8): 771-773. http://www.ncbi.nlm.nih.gov/pubmed/22854924

(Free full text available): Out of a wide range of both pharmacological and psychosocial interventions for substance use disorders in adolescents comes a potentially valuable piece of the treatment puzzle, a piece that can be found among the many over-the-counter supplements in drug and grocery stores. The potential value of N-acetylcysteine (NAC), an inexpensive supplement, is somewhat reassuring given the increasing concern about the misuse and abuse of prescription and over-the-counter drugs by adolescents (1). Gray and colleagues (2) report in this issue an 8-week double-blind randomized placebo-controlled trial, in which 116 cannabis-dependent adolescents ages 15–21 received NAC or placebo twice daily, each added to a contingency management intervention and brief weekly cessation counseling. Adolescents receiving NAC had more than twice the odds, when compared with placebo participants, of having negative urine cannabinoid tests during treatment. As the authors note, this is the first well-controlled pharmacotherapy study for cannabis dependence to show a positive primary cessation outcome (as opposed to decreased use) in an intent-to-treat analysis. In a previous open-label study of NAC in 24 dependent marijuana users by Gray and colleagues (3), users reported reductions in days per week of use and "number of hits," but urine cannabinoid measures did not significantly change over the treatment period. In addition to decreased overall use, reductions in reported compulsivity, emotionality, and purposefulness regarding marijuana use were reported, reflecting an improvement in three of the four domains of the Marijuana Craving Questionnaire ... Researchers have looked at a number of possible targets for substance use disorder pharmacotherapy, including replacement therapy, attenuating reinforcement and reward pathways, and treatment of comorbid psychopathology. They have tested a number of agents already approved by the Food and Drug Administration for indications other than substance use disorder. Evidently, investigators need look only as far as the

supplement section of their local grocery store or pharmacy to find NAC. Although it has been used for several decades, its use has more recently expanded to target psychiatric disorders as varied as schizophrenia, obsessive-compulsive disorder, bipolar disorder, deliberate self-injurious behaviors, and now the addictions or substance use disorders. Such wide-ranging use suggests its effect on a more general mechanism of psychopathology. Although research has identified glutamate as having an important role in development and maintenance of addiction, up-regulation of the cysteine-glutamate exchanger resulting from NAC administration may have benefits throughout the brain (7). In addition to having effects on neurotransmission, NAC has been shown to have anti-inflammatory properties that are linked to oxidative pathways, a role in oxidative homeostasis where NAC results in increased plasma cysteine levels, ultimately leading to increases in brain glutathione (7, 8). Each of these potential mechanisms suggests a role in the treatment of substance use disorders, although the mechanism may be more nonspecific in the case of substance use disorders. While it is tempting to now think of NAC as another potential daily supplement for "good health," like its neighbors on the shelves of the vitamin/supplement section of many stores, we have more work to do in considering NAC's place as a modality in the treatment of substance use disorders in adolescents. Does NAC work to prevent the development of substance use disorders? Does NAC work in longer-term therapy to prevent relapse? Does it work for problems with other drugs or more severe levels of substance use disorder? What are the adjunctive effects with other psychosocial treatment modalities or combinations? The last issue is particularly important as many may be tempted to use NAC as a single, individual treatment, a strategy discouraged by Gray et al. Despite the potential value of NAC and other pharmacotherapies for adolescents with cannabis and other substance use disorders, there is no evidence that any pharmacotherapies are efficacious for adolescents without concurrent psychosocial treatment (9). However, much of the treatment for substance use disorders in adolescents involves targeting the often multiple problems that are reflected in the high number of psychosocial risk factors for the development of substance use disorders. The magnitude of these problems and the often limited resources of treatment providers are factors in the high incidence of relapse seen in youth (6). By the time many adolescents receive treatment, the addictive process is well under way in this vulnerable population. The need to act successfully to abort or mitigate the development of substance dependence before it gets a head start suggests perhaps the most compelling question: "Does NAC work to prevent the development of substance use disorders?" Given the safety, affordability, and potential efficacy of NAC, a supplement to ward off addiction or other psychiatric disorders may not be an unreasonable idea. The serious epidemic of marijuana abuse in adolescents certainly mandates that we look at every possible option for their treatment.

Cicek, Y., M. E. Durakoglugil, et al. (2012). ***"Increased pulse wave velocity in patients with panic disorder: Independent vascular influence of panic disorder on arterial stiffness."*** Journal of Psychosomatic Research 73(2): 145-148. http://www.sciencedirect.com/science/article/pii/S002239991200150X

Objective Acute and chronic mental stress and many psychiatric disorders have been accepted as a cause of cardiovascular disease. Panic disorder, a subtype of anxiety disorder, has been associated with increased risk of fatal myocardial infarction and sudden cardiac death in epidemiological studies. Carotid–femoral pulse wave velocity (CF-PWV) is currently the gold standard measurement of arterial stiffness. CF-PWV is a well-recognized predictor of an adverse cardiovascular outcome with higher predictive value than classical cardiovascular risk factors. The aim of our study is to measure PWV as the surrogate of arterial stiffness and vascular involvement in patients with panic disorder. Methods Forty-two patients with PD, and 30 control participants were included in the study. Patients with hypertension, diabetes mellitus, or the history of any cardiovascular disease were excluded from study. Results Baseline characteristics were not significantly different between the two groups, except carotid–femoral pulse wave velocity (PD vs. control; 7.51 ± 2.02 vs. 6.24 ± 1.09 m/s, p = 0.001), heart rate, and smoking status. Additionally, CF-PWV positively correlated with age (r = 0.250, p = 0.034), heart rate (r = 0.284, p = 0.017), systolic and diastolic blood pressure (r = 0.393, p = 0.001 and r = 0.286, p = 0.015, respectively) significantly. However, only the presence of panic disorder was independently related to PWV (βeta: 0.317, p = 0.011) in the multivariate analysis including age, heart rate, smoking status and blood pressure measurements. Conclusion Increased pulse wave velocity in patients with panic disorder may justify the associated risk as documented in previous studies, and may be useful in identifying the patients with higher risk of future cardiovascular complications.

de Jong, K., P. van Sluis, et al. (2012). ***"Understanding the differential impact of outcome monitoring: Therapist variables that moderate feedback effects in a randomized clinical trial."*** Psychotherapy Research 22(4): 464-474. http://dx.doi.org/10.1080/10503307.2012.673023

Providing outcome monitoring feedback to therapists seems to be a promising approach to improve outcomes in clinical practice. This study aims to examine the effect of feedback and investigate whether it is moderated by therapist characteristics. Patients (n=413) were randomly assigned to either a feedback or a no-feedback control condition. There was no significant effect of feedback in the full sample, but feedback was effective for not-on-track cases for therapists who used the feedback. Internal feedback propensity, self-efficacy, and commitment to use the feedback moderated the effects of feedback. The results demonstrate that feedback is not effective under all circumstances and therapist factors are important when implementing feedback in clinical practice.

de Oliveira Otto, M. C., D. Mozaffarian, et al. (2012). ***"Dietary intake of saturated fat by food source and incident cardiovascular disease: The multi-ethnic study of atherosclerosis."*** Am J Clin Nutr 96(2): 397-404. http://ajcn.nutrition.org/content/96/2/397.abstract

Background: Although dietary recommendations have focused on restricting saturated fat (SF) consumption to reduce cardiovascular disease (CVD) risk, evidence from prospective studies has not supported a strong link between total SF intake and CVD events. An understanding of whether food sources of SF influence these relations may provide new insights. Objective: We investigated the association of SF consumption from different food sources and the incidence of CVD events in a multiethnic population. Design: Participants who were 45–84 y old at baseline (n = 5209) were followed from 2000 to 2010. Diet was assessed by using a 120-item food-frequency questionnaire. CVD incidence (316 cases) was assessed during follow-up visits. Results: After adjustment for demographics, lifestyle, and dietary confounders, a higher intake of dairy SF was associated with lower CVD risk [HR (95% CI) for +5 g/d and +5% of energy from dairy SF: 0.79 (0.68, 0.92) and 0.62 (0.47, 0.82), respectively]. In contrast, a higher intake of meat SF was associated with greater CVD risk [HR (95% CI) for +5 g/d and a +5% of energy from meat SF: 1.26 (1.02, 1.54) and 1.48 (0.98, 2.23), respectively]. The substitution of 2% of energy from meat SF with energy from dairy SF was associated with a 25% lower CVD risk [HR (95% CI): 0.75 (0.63, 0.91)]. No associations were observed between plant or butter SF and CVD risk, but ranges of intakes were narrow. Conclusion: Associations of SF with health may depend on food-specific fatty acids or other nutrient constituents in foods that contain SF, in addition to SF.

Delamothe, T. (2012). ***"Water, water, every where."*** BMJ 345. http://www.bmj.com/content/345/bmj.e4903

I knew things had got out of hand when my fellow swimmer perched a sports drink at the end of her lane to ward off dehydration. In a joint investigation this week with BBC's Panorama, Deborah Cohen tells how dehydration has emerged as one of sport's greatest fears (doi:10.1136/bmj.e4737). It's an unedifying tale of scientists, sports and sports medicine organisations, guideline developers, and medical editors—and the sports drinks companies that bankroll them. Science's role has been to

dazzle, not to illuminate. Somewhere amid "the coupling of science with creative marketing" it was forgotten, or obscured, that healthy bodies have exquisitely sensitive mechanisms for maintaining plasma osmolality (doi:10.1136/bmj.e4171). Thirst is the best sign that fluid replacement is needed, yet sports people have been hoodwinked into believing it's an unreliable marker of dehydration. Cue a billion dollar industry of flavoured water for which extravagant claims have been made and guidelines dutifully written. The new "science" of hydration looks distinctly ropy. As part of the investigation, researchers asked companies for the evidence that supported their promotion of sports drinks. Of the several companies approached, only GlaxoSmithKline provided a list of studies (for Lucozade). The median sample size was nine; many studies used outcomes irrelevant to performance in real life events; most lacked allocation concealment and blinding, and so on. In short, these studies can't support the enormous edifice that has been erected upon them. The European Union agency charged with evaluating these claims, the European Food Safety Authority, has fallen short of its brief. Matthew Thompson and colleagues "found a major discrepancy between what they set out to do, and what they actually did" (doi:10.1136/bmj.e4753). The authority seems unaware of the value of meta-analyses and systematic reviews in evaluating evidence ... This feels like familiar territory. In his column this week Des Spence lists some of the transgressions that have resulted in massive recent fines for GlaxoSmithKline and other big pharma companies (doi:10.1136/bmj.e4825). They include suppression of data, excessive hospitality, expert panels paid bloated fees, disease mongering, payments to lobby groups and charities, and omnipresent threats of litigation. He believes that the solution rests with doctors cleaning up their act. Although not every doctor who has worked with the sports drinks industry emerges covered with glory, the solution in this case lies elsewhere. EU legislation exists to evaluate health and nutrition claims related to food, and there's an agency responsible for doing so. It's still early days, and the European Food Safety Authority is overwhelmed by the first tranche of claims. We can only hope that it's quickly staffed up and skilled up to discharge its obligations, free from the pressure that big money can buy.

Edmondson, D., S. Richardson, et al. (2012). ***"Posttraumatic stress disorder prevalence and risk of recurrence in acute coronary syndrome patients: A meta-analytic review."*** PLoS ONE 7(6): e38915. http://dx.doi.org/10.1371%2Fjournal.pone.0038915

(Free full text available) Background: Acute coronary syndromes (ACS; myocardial infarction or unstable angina) can induce posttraumatic stress disorder (PTSD), and ACS-induced PTSD may increase patients' risk for subsequent cardiac events and mortality. Objective: To determine the prevalence of PTSD induced by ACS and to quantify the association between ACS-induced PTSD and adverse clinical outcomes using systematic review and meta-analysis. Data Sources: Articles were identified by searching Ovid MEDLINE, PsycINFO, and Scopus, and through manual search of reference lists. Methodology/Principal Findings: Observational cohort studies that assessed PTSD with specific reference to an ACS event at least 1 month prior. We extracted estimates of the prevalence of ACS-induced PTSD and associations with clinical outcomes, as well as study characteristics. We identified 56 potentially relevant articles, 24 of which met our criteria (N = 2383). Meta-analysis yielded an aggregated prevalence estimate of 12% (95% confidence interval [CI], 9%–16%) for clinically significant symptoms of ACS-induced PTSD in a random effects model. Individual study prevalence estimates varied widely (0%–32%), with significant heterogeneity in estimates explained by the use of a screening instrument (prevalence estimate was 16% [95% CI, 13%–20%] in 16 studies) vs a clinical diagnostic interview (prevalence estimate was 4% [95% CI, 3%–5%] in 8 studies). The aggregated point estimate for the magnitude of the relationship between ACS-induced PTSD and clinical outcomes (ie, mortality and/or ACS recurrence) across the 3 studies that met our criteria (N = 609) suggested a doubling of risk (risk ratio, 2.00; 95% CI, 1.69–2.37) in ACS patients with clinically significant PTSD symptoms relative to patients without PTSD symptoms. Conclusions/Significance: This meta-analysis suggests that clinically significant PTSD symptoms induced by ACS are moderately prevalent and are associated with increased risk for recurrent cardiac events and mortality. Further tests of the association of ACS-induced PTSD and clinical outcomes are needed.

Evans-Lacko, S., E. Brohan, et al. (2012). ***"Association between public views of mental illness and self-stigma among individuals with mental illness in 14 European countries."*** Psychological Medicine 42(08): 1741-1752. http://dx.doi.org/10.1017/S0033291711002558

Background Little is known about how the views of the public are related to self-stigma among people with mental health problems. Despite increasing activity aimed at reducing mental illness stigma, there is little evidence to guide and inform specific anti-stigma campaign development and messages to be used in mass campaigns. A better understanding of the association between public knowledge, attitudes and behaviours and the internalization of stigma among people with mental health problems is needed. Method This study links two large, international datasets to explore the association between public stigma in 14 European countries (Eurobarometer survey) and individual reports of self-stigma, perceived discrimination and empowerment among persons with mental illness (n=1835) residing in those countries [the Global Alliance of Mental Illness Advocacy Networks (GAMIAN) study]. Results Individuals with mental illness living in countries with less stigmatizing attitudes, higher rates of help-seeking and treatment utilization and better perceived access to information had lower rates of self-stigma and perceived discrimination and those living in countries where the public felt more comfortable talking to people with mental illness had less self-stigma and felt more empowered. Conclusions Targeting the general public through mass anti-stigma interventions may lead to a virtuous cycle by disrupting the negative feedback engendered by public stigma, thereby reducing self-stigma among people with mental health problems. A combined approach involving knowledge, attitudes and behaviour is needed; mass interventions that facilitate disclosure and positive social contact may be the most effective. Improving availability of information about mental health issues and facilitating access to care and help-seeking also show promise with regard to stigma.

Gale, C., G. Batty, et al. (2012). ***"Association of mental disorders in early adulthood and later psychiatric hospital admissions and mortality in a cohort study of more than 1 million men."*** Archives of General Psychiatry 69(8): 823-831. http://dx.doi.org/10.1001/archgenpsychiatry.2011.2000

Context Mental disorders have been associated with increased mortality, but the evidence is primarily based on hospital admissions for psychoses. The underlying mechanisms are unclear. Objectives To investigate whether the risks of death associated with mental disorders diagnosed in young men are similar to those associated with admission for these disorders and to examine the role of confounding or mediating factors. Design Prospective cohort study in which mental disorders were assessed by psychiatric interview during a medical examination on conscription for military service at a mean age of 18.3 years and data on psychiatric hospital admissions and mortality during a mean 22.6 years of follow-up were obtained from national registers. Setting Sweden. Participants A total of 1 095 338 men conscripted between 1969 and 1994. Main Outcome Measure All-cause mortality according to diagnoses of schizophrenia, other nonaffective psychoses, bipolar or depressive disorders, neurotic and adjustment disorders, personality disorders, and alcohol-related or other substance use disorders at conscription and on hospital admission. Results Diagnosis of mental disorder at conscription or on hospital admission was associated with increased mortality. Age-adjusted hazard ratios according to diagnoses at conscription ranged from 1.81 (95% CI, 1.54-2.10) (depressive disorders) to 5.55 (95% CI, 1.79-17.2) (bipolar disorders). The equivalent figures according to hospital diagnoses ranged from 5.46 (95% CI, 5.06-5.89) (neurotic and adjustment disorders) to 11.2 (95% CI,

10.4-12.0) (other substance use disorders) in men born from 1951 to 1958 and increased in men born later. Adjustment for early-life socioeconomic status, body mass index, and blood pressure had little effect on these associations, but they were partially attenuated by adjustment for smoking, alcohol intake, intelligence, educational level, and late-life socioeconomic status. These associations were not primarily due to deaths from suicide. Conclusion The increased risk of premature death associated with mental disorder is not confined to those whose illness is severe enough for hospitalization or those with psychotic or substance use disorders.

Geulayov, G., D. Gunnell, et al. (2012). ***"The association of parental fatal and non-fatal suicidal behaviour with offspring suicidal behaviour and depression: A systematic review and meta-analysis."*** Psychological Medicine 42(08): 1567-1580. http://dx.doi.org/10.1017/S0033291711002753

Background Children whose parents die by, or attempt, suicide are believed to be at greater risk of suicidal behaviours and affective disorders. We systematically reviewed the literature on these associations and, using meta-analysis, estimated the strength of associations as well as investigated potential effect modifiers (parental and offspring gender, offspring age). Method We comprehensively searched the literature (Medline, PsycINFO, EMBASE, Web of Science), finding 28 articles that met our inclusion criteria, 14 of which contributed to the meta-analysis. Crude odds ratio and adjusted odds ratio (aOR) were pooled using fixed-effects models. Results Controlling for relevant confounders, offspring whose parents died by suicide were more likely than offspring of two living parents to die by suicide [aOR 1.94, 95% confidence interval (CI) 1.54–2.45] but there were heterogeneous findings in the two studies investigating the impact on offspring suicide attempt (aOR 1.31, 95% CI 0.73–2.35). Children whose parents attempted suicide were at increased risk of attempted suicide (aOR 1.95, 95% CI 1.48–2.57). Limited evidence indicated that exposure to parental death by suicide is associated with subsequent risk of affective disorders. Maternal suicidal behaviour and younger age at exposure were associated with larger effect estimates but there was no evidence that the association differed in sons versus daughters. Conclusions Parental suicidal behaviour is associated with increased risk of offspring suicidal behaviour. Findings suggest that maternal suicidal behaviour is a more potent risk factor than paternal, and that children are more vulnerable than adolescents and adults. However, there is no evidence of a stronger association in either male or female offspring.

Gray, K. M., M. J. Carpenter, et al. (2012). ***"A double-blind randomized controlled trial of n-acetylcysteine in cannabis-dependent adolescents."*** Am J Psychiatry 169(8): 805-812. http://www.ncbi.nlm.nih.gov/pubmed/22706327

OBJECTIVE: Preclinical findings suggest that the over-the-counter supplement N-acetylcysteine (NAC), via glutamate modulation in the nucleus accumbens, holds promise as a pharmacotherapy for substance dependence. The authors investigated NAC as a novel cannabis cessation treatment in adolescents, a vulnerable group for whom existing treatments have shown limited efficacy. METHOD: In an 8-week double-blind randomized placebo-controlled trial, treatment-seeking cannabis-dependent adolescents (ages 15-21 years; N=116) received NAC (1200 mg) or placebo twice daily as well as a contingency management intervention and brief (<10 minutes) weekly cessation counseling. The primary efficacy measure was the odds of negative weekly urine cannabinoid test results during treatment among participants receiving NAC compared with those receiving placebo, in an intent-to-treat analysis. The primary tolerability measure was frequency of adverse events, compared by treatment group. RESULTS: Participants receiving NAC had more than twice the odds, compared with those receiving placebo, of having negative urine cannabinoid test results during treatment (odds ratio=2.4, 95% CI=1.1-5.2). Exploratory secondary abstinence outcomes favored NAC but were not statistically significant. NAC was well tolerated, with minimal adverse events. CONCLUSIONS: This is the first randomized controlled trial of pharmacotherapy for cannabis dependence in any age group to yield a positive primary cessation outcome in an intent-to-treat analysis. Findings support NAC as a pharmacotherapy to complement psychosocial treatment for cannabis dependence in adolescents.

Hagger-Johnson, G., S. Sabia, et al. (2012). ***"Low conscientiousness and risk of all-cause, cardiovascular and cancer mortality over 17 years: Whitehall II cohort study."*** Journal of Psychosomatic Research 73(2): 98-103. http://www.sciencedirect.com/science/article/pii/S0022399912001377

Objective To examine the personality trait conscientiousness as a risk factor for mortality and to identify candidate explanatory mechanisms. Methods Participants in the Whitehall II cohort study (N = 6800, aged 34 to 55 at recruitment in 1985) completed two self-reported items measuring conscientiousness in 1991–1993 ('I am overly conscientious' and 'I am overly perfectionistic', Cronbach's α = .72), the baseline for this study. Age, socio-economic status (SES), social support, health behaviours, physiological variables and minor psychiatric morbidity were also recorded at baseline. The vital status of participants was then monitored for a mean of 17 years. All-cause and cause-specific mortality was ascertained through linkage to a national mortality register until January 2010. Results Each 1 standard deviation decrease in conscientiousness was associated with a 10% increase in all-cause (hazard ratio [HR] = 1.10, 95% CI 1.003, 1.20) mortality. Patterns were similar for cardiovascular (HR = 1.17, 95% CI 0.98, 1.39) and cancer mortality (HR = 1.10, 95% CI 0.96, 1.25), not reaching statistical significance. The association with all-cause mortality was attenuated by 5% after adjustment for SES, 13% for health behaviours, 14% for cardiovascular risk factors, 5% for minor psychiatric morbidity, 29% for all variables. Repeating analyses with each item separately and excluding participants who died within five years of personality assessment did not change the results materially. Conclusion Low conscientiousness in midlife is a risk factor for all-cause mortality. This association is only partly explained by health behaviours, SES, cardiovascular disease risk factors and minor psychiatric morbidity in midlife.

Hamer, M., R. Endrighi, et al. (2012). ***"Physical activity, stress reduction, and mood: Insight into immunological mechanisms."*** Methods Mol Biol 934: 89-102. http://www.ncbi.nlm.nih.gov/pubmed/22933142

Psychosocial factors, such as chronic mental stress and mood, are recognized as an important predictor of longevity and wellbeing. In particular, depression is independently associated with cardiovascular disease and all-cause mortality, and is often comorbid with chronic diseases that can worsen their associated health outcomes. Regular exercise is thought to be associated with stress reduction and better mood, which may partly mediate associations between depression, stress, and health outcomes. The underlying mechanisms for the positive effects of exercise on wellbeing remain poorly understood. In this overview we examine epidemiological evidence for an association between physical activity and mental health. We then describe the exercise withdrawal paradigm as an experimental protocol to study mechanisms linking exercise, mood, and stress. In particular we will discuss the potential role of the inflammatory response as a central mechanism.

Hamer, M., S. Sabia, et al. (2012). ***"Physical activity and inflammatory markers over 10 years: Follow-up in men and women from the whitehall II cohort study."*** Circulation 126(8): 928-933. http://www.ncbi.nlm.nih.gov/pubmed/22891048

BACKGROUND: Inflammatory processes are putative mechanisms underlying the cardioprotective effects of physical activity. An inverse association between physical activity and inflammation has been demonstrated, but no long-term prospective data are available. We therefore examined the association between physical activity and inflammatory markers over a 10-year follow-up period. METHODS AND RESULTS: Participants were 4289 men and women (mean age, 49.2 years) from the Whitehall II cohort study. Self-reported physical activity and inflammatory markers (serum high-sensitivity C-reactive protein

and interleukin-6) were measured at baseline (1991) and follow-up (2002). Forty-nine percent of the participants adhered to standard physical activity recommendations for cardiovascular health (2.5 h/wk moderate to vigorous physical activity) across all assessments. Physically active participants at baseline had lower C-reactive protein and interleukin-6 levels, and this difference remained stable over time. Compared with participants who rarely adhered to physical activity guidelines over the 10-year follow-up, the high-adherence group displayed lower log(e) C-reactive protein (beta=-0.07; 95% confidence interval, -0.12 to -0.02) and log(e) interleukin-6 (beta=-0.07; 95% confidence interval, -0.10 to -0.03) at follow-up after adjustment for a range of covariates. Compared with participants who remained stable, those who reported an increase in physical activity of at least 2.5 h/wk displayed lower log(e) C-reactive protein (beta coefficient=-0.05; 95% confidence interval, -0.10 to -0.001) and log(e) interleukin-6 (beta coefficient=-0.06; 95% confidence interval, -0.09 to -0.03) at follow-up. CONCLUSIONS: Regular physical activity is associated with lower markers of inflammation over 10 years of follow-up and thus may be important in preventing the proinflammatory state seen with aging.

Hansen, T. (2012). ***"Parenthood and happiness: A review of folk theories versus empirical evidence."*** Social Indicators Research 108(1): 29-64. http://dx.doi.org/10.1007/s11205-011-9865-y

This paper reviews and compares folk theories and empirical evidence about the influence of parenthood on happiness and life satisfaction. The review of attitudes toward parenthood and childlessness reveals that people tend to believe that parenthood is central to a meaningful and fulfilling life, and that the lives of childless people are emptier, less rewarding, and lonelier, than the lives of parents. Most cross-sectional and longitudinal evidence suggest, however, that people are better off without having children. It is mainly children living at home that interfere with well-being, particularly among women, singles, lower socioeconomic strata, and people residing in less pronatalist societies — especially when these characteristics are combined. The discrepancy between beliefs and findings is discussed in relation to the various costs of parenting; the advantages of childlessness; adaptation and compensation among involuntarily childless persons; cognitive biases; and the possibility that parenthood confers rewards in terms of meaning rather than happiness.

Hawkes, N. (2012). ***"Poor health does not preclude a happy life, though it does increase the odds against it."*** BMJ 345. http://dx.doi.org/10.1136/bmj.e5073

The first results of the programme to measure national wellbeing in the United Kingdom show that 40% of people who rate their own health as bad or very bad nevertheless also report medium to high levels of satisfaction with life. The statisticians from the Office for National Statistics (ONS), which is responsible for the programme,1 were surprised that ill health did not have a greater effect on satisfaction, but there is no denying that good health makes a difference: 80% of people whose health was good or very good reported medium to high levels of life satisfaction, twice the proportion of those whose health was poor. So far, the nascent programme does not yet allow any deeper explanation of causes, except for a few obvious ones, such as a clear link between unemployment and low life satisfaction. It remains unclear, for example, why people of black Caribbean or African origin profess the lowest level of life satisfaction of any ethnic group (6.7 of a possible 10, compared with a score of 7.4 for white people), why the people of Rutland and of Bath and north east Somerset are so indecently satisfied with life (with more than 85% in both areas scoring high on this measure), or why Londoners endure chart topping levels of anxiety. The programme aimed to develop subjective measures of wellbeing, to be read in conjunction with traditional objective measures such as life expectancy and employment status. It does not seek, said Glenn Everett, its director, to define a single happiness index. "The measures will supplement and not supplant older measures," he said at a London press conference to launch the first year's findings. "And the distributions, not just the means, are important." A total of 150 000 people aged over 16 were interviewed as part of the Integrated Household Survey. This sample was large enough to enable breakdown by region, ethnicity, employment status, and other variables without unacceptable loss of statistical significance. Respondents were asked four questions in the year between April 2011 and March 2012: how satisfied they were with their lives nowadays; to what extent did they feel that the things they did in their lives were worthwhile; how happy they felt yesterday; and how anxious they felt yesterday. Three quarters (75.9%) rated their life satisfaction at 7 or more out of 10, while 80% gave the same rating for the worthwhile question. Just over one in 10 (10.9%) said that they were unhappy yesterday, with a score of less than 5 out of 10, while 21.8% scored their anxiety as high (more than five out of 10). So twice as many people are anxious as are unhappy. Women were more likely than men to profess themselves satisfied and to rate their own activities worthwhile but were also more likely to be anxious. Arabs were the most anxious ethnic group; and married or cohabiting people were the most satisfied. When analysed by age, life satisfaction follows the well established U shaped curve, higher in the years up to 39, lower in middle age, and then rising again in the 60s and 70s before a final decline in the 80s. The same trend was more emphatic for the "happy yesterday" question and, in the inverse sense, the "anxious yesterday" question. A quarter of 50-54 year olds were very anxious yesterday, for example, compared with 17% of 16-18 year olds and 19% of 75-79 year olds ... Richard Layard, an economist from the London School of Economics, a Labour peer, and a founder of the organisation Action for Happiness, took a gloomier view. Across every region, profession, age group, and ethnic group a considerable number of people are living very unhappy lives, he said. Somewhere between 21% and 27% of people in every UK region have life satisfaction scores described by the ONS as "very low" or "low." Across the UK as a whole the findings indicate that around 15 million people fall into these two categories. Layard said, "Our priority as a nation should be to help improve the lives of those people who are struggling the most. These data show that significant numbers of people are anxious and unhappy regardless of their occupation, ethnic background, or where they live. We need a much wider concept of deprivation than is usually used in public debate. A person is deprived not only if they lack income but if they lack the other means to enjoy life."

Jacka, F. N., M. Maes, et al. (2012). ***"Nutrient intakes and the common mental disorders in women."*** J Affect Disord 141(1): 79-85. http://www.ncbi.nlm.nih.gov/pubmed/22397891

BACKGROUND: There is an increasing recognition of the role of nutrition in depression and anxiety. Magnesium, folate and zinc have all been implicated in depressive illness, however there are few data on these nutrients in anxiety disorders and the data from population-studies are limited. AIMS: In a large, randomly-selected, population-based sample of women, this study aimed to examine the relationship between the dietary intakes of these three micronutrients and clinically determined depressive and anxiety disorders and symptoms. METHODS: Nutrient intakes were determined using a validated food frequency questionnaire. The General Health Questionnaire-12 measured psychological symptoms, and a clinical interview (Structured Clinical Interview for DSM-IV-TR, non-patient edition) assessed current depressive and anxiety disorders. RESULTS: After adjustments for energy intake, each standard deviation increase in the intake of zinc, magnesium and folate was associated with reduced odds ratio (OR) for major depression/dysthymia (zinc: OR=0.52, 95% confidence interval (CI) 0.31 to 0.88; magnesium: OR=0.60, 95% CI 0.37 to 0.96; folate: OR=0.66, 95% CI 0.45 to 0.97). There was also an inverse association between the intake of magnesium and zinc and GHQ-12 scores (zinc: zbeta=-0.16, 95% CI -0.29 to -0.04; magnesium: -0.14, 95% CI -0.26 to -0.03). These relationships were not confounded by age, socioeconomic status, education or other health behaviours. There was no relationship observed between any nutrient and anxiety disorders. CONCLUSION: These results demonstrate an association between the dietary intakes of magnesium, folate and zinc and depressive illnesses, although reverse causality and/or confounding cannot be ruled out as explanations.

Kelley, L. P., F. W. Weathers, et al. (2012). ***"Association of life threat and betrayal with posttraumatic stress disorder symptom severity."*** Journal of Traumatic Stress 25(4): 408-415. http://dx.doi.org/10.1002/jts.21727

The Diagnostic and Statistical Manual of Mental Disorders (4th ed., text rev.; DSM-IV-TR; American Psychiatric Association [APA], 2000) emphasizes life threat as the defining feature of psychological trauma. Recent theoretical and empirical work, however, indicates the need to identify and evaluate other key aspects of trauma. Betrayal has been proposed as a pertinent, distinct, and complementary factor that can explain effects of trauma not accounted for by life threat alone. This study examined the relationship between injury, perceived life threat (PLT), and betrayal with posttraumatic stress disorder (PTSD) symptom severity. Trauma-exposed college students (N = 185) completed self-report measures of trauma exposure and PTSD, as well as items regarding life threat, betrayal, and level of medical care received. In hierarchical regressions incorporating injury, PLT, and betrayal, betrayal was associated with all PTSD symptom clusters and PTSD total severity (f2 = .08), whereas PLT was associated with hyperarousal (f2 = .05) and PTSD total (f2 = .03), and injury had no association with PTSD symptoms. In a revised model with trauma type as an additional variable, betrayal was associated with avoidance (f2 = .03), numbing (f2 = .04), and PTSD total (f2 = .03), whereas PLT was associated with reexperiencing (f2 = .04), hyperarousal (f2 = .04), and PTSD total (f2 = .03), and injury was associated with avoidance (f2 = .03). These findings support the idea that betrayal is a core dimension of psychological trauma that may play an important role in the etiology of PTSD.

Kivimaki, M., S. T. Nyberg, et al. (2012). ***"Job strain as a risk factor for coronary heart disease: A collaborative meta-analysis of individual participant data."*** Lancet. http://www.ncbi.nlm.nih.gov/pubmed/22981903

BACKGROUND: Published work assessing psychosocial stress (job strain) as a risk factor for coronary heart disease is inconsistent and subject to publication bias and reverse causation bias. We analysed the relation between job strain and coronary heart disease with a meta-analysis of published and unpublished studies. METHODS: We used individual records from 13 European cohort studies (1985-2006) of men and women without coronary heart disease who were employed at time of baseline assessment. We measured job strain with questions from validated job-content and demand-control questionnaires. We extracted data in two stages such that acquisition and harmonisation of job strain measure and covariables occurred before linkage to records for coronary heart disease. We defined incident coronary heart disease as the first non-fatal myocardial infarction or coronary death. FINDINGS: 30 214 (15%) of 197 473 participants reported job strain. In 1.49 million person-years at risk (mean follow-up 7.5 years [SD 1.7]), we recorded 2358 events of incident coronary heart disease. After adjustment for sex and age, the hazard ratio for job strain versus no job strain was 1.23 (95% CI 1.10-1.37). This effect estimate was higher in published (1.43, 1.15-1.77) than unpublished (1.16, 1.02-1.32) studies. Hazard ratios were likewise raised in analyses addressing reverse causality by exclusion of events of coronary heart disease that occurred in the first 3 years (1.31, 1.15-1.48) and 5 years (1.30, 1.13-1.50) of follow-up. We noted an association between job strain and coronary heart disease for sex, age groups, socioeconomic strata, and region, and after adjustments for socioeconomic status, and lifestyle and conventional risk factors. The population attributable risk for job strain was 3.4%. INTERPRETATION: Our findings suggest that prevention of workplace stress might decrease disease incidence; however, this strategy would have a much smaller effect than would tackling of standard risk factors, such as smoking.

Klevens, J., R. Kee, et al. (2012). ***"Effect of screening for partner violence on women's quality of life: A randomized controlled trial."*** JAMA 308(7): 681-689. http://dx.doi.org/10.1001/jama.2012.6434

Context Although partner violence screening has been endorsed by many health organizations, there is insufficient evidence that it has beneficial health outcomes. Objective To determine the effect of computerized screening for partner violence plus provision of a partner violence resource list vs provision of a partner violence list only on women's health in primary care settings, compared with a control group. Design, Setting, and Participants A 3-group blinded randomized controlled trial at 10 primary health care centers in Cook County, Illinois. Participants were enrolled from May 2009-April 2010 and reinterviewed 1 year (range, 48-56 weeks) later. Participants were English- or Spanish-speaking women meeting specific inclusion criteria and seeking clinical services at study sites. Of 3537 women approached, 2727 were eligible, 2708 were randomized (99%), and 2364 (87%) were recontacted 1 year later. Mean age of participants was 39 years. Participants were predominantly non-Latina African American (55%) or Latina (37%), had a high school education or less (57%), and were uninsured (57%).Intervention Randomization into 3 intervention groups: (1) partner violence screen (using the Partner Violence Screen instrument) plus a list of local partner violence resources if screening was positive (n = 909); (2) partner violence resource list only without screen (n = 893); and (3) no-screen, no-partner violence list control group (n=898). Main Outcome Measures Quality of life (QOL, physical and mental health components) was the primary outcome, measured on the 12-item Short Form (scale range 0-100, mean of 50 for US population). Results At 1-year follow-up, there were no significant differences in the QOL physical health component between the screen plus partner violence resource list group (n = 801; mean score, 46.8; 95% CI, 46.1-47.4), the partner violence resource list only group (n = 772; mean score, 46.4; 95% CI, 45.8-47.1), and the control group (n = 791; mean score, 47.2; 95% CI, 46.5-47.8), or in the mental health component (screen plus partner violence resource list group [mean score, 48.3; 95% CI, 47.5-49.1], the partner violence resource list only group [mean score, 48.0; 95% CI, 47.2-48.9], and the control group [mean score, 47.8; 95% CI, 47.0-48.6]). There were also no differences between groups in days unable to work or complete housework; number of hospitalizations, emergency department, or ambulatory care visits; proportion who contacted a partner violence agency; or recurrence of partner violence. Conclusions Among women receiving care in primary care clinics, providing a partner violence resource list with or without screening did not result in improved health.

Lee, I. M., E. J. Shiroma, et al. (2012). ***"Effect of physical inactivity on major non-communicable diseases worldwide: An analysis of burden of disease and life expectancy."*** The Lancet 380(9838): 219-229. http://linkinghub.elsevier.com/retrieve/pii/S0140673612610319

Strong evidence shows that physical inactivity increases the risk of many adverse health conditions, including major non-communicable diseases such as coronary heart disease, type 2 diabetes, and breast and colon cancers, and shortens life expectancy. Because much of the world's population is inactive, this link presents a major public health issue. We aimed to quantify the effect of physical inactivity on these major non-communicable diseases by estimating how much disease could be averted if inactive people were to become active and to estimate gain in life expectancy at the population level. For our analysis of burden of disease, we calculated population attributable fractions (PAFs) associated with physical inactivity using conservative assumptions for each of the major non-communicable diseases, by country, to estimate how much disease could be averted if physical inactivity were eliminated. We used life-table analysis to estimate gains in life expectancy of the population. Worldwide, we estimate that physical inactivity causes 6% (ranging from 3·2% in southeast Asia to 7·8% in the eastern Mediterranean region) of the burden of disease from coronary heart disease, 7% (3·9-9·6) of type 2 diabetes, 10% (5·6-14·1) of breast cancer, and 10% (5·7-13·8) of colon cancer. Inactivity causes 9% (range 5·1-12·5) of premature mortality, or more than 5·3 million of the 57 million deaths that occurred worldwide in 2008. If inactivity were not eliminated, but decreased instead by 10% or 25%, more than 533,000 and more than 1·3 million deaths, respectively, could be averted every year. We estimated that elimination

of physical inactivity would increase the life expectancy of the world's population by 0·68 (range 0·41-0·95) years. Physical inactivity has a major health effect worldwide. Decrease in or removal of this unhealthy behaviour could improve health substantially. None.

Lewis, G. (2012). ***"Psychological distress and death from cardiovascular disease."*** BMJ 345. http://dx.doi.org/10.1136/bmj.e5177

May be related in a dose-response manner, but it is not clear how to intervene: The association between psychiatric disorders and cardiovascular disease is often reported in observational studies, but the question of reverse causation has always loomed large. In a linked research study (doi:10.1136/bmj.e4933), Russ and colleagues investigated the association between psychological distress and death from cardiovascular disease (recorded on death certificates) by examining data on more than 60 000 people from 10 large cohort studies based on the Health Surveys for England. The authors excluded early deaths (in the first five years of follow-up) and therefore the likelihood of reverse causation. Although the possibility of confounding can never be completely excluded, after adjusting for several "lifestyle" factors and cardiovascular disease risk factors, the authors still found a dose-response association between psychological distress and death from cardiovascular disease. These findings add to evidence that suggests a causal association between psychological distress and cardiovascular disease. In the English health surveys used by Russ and colleagues, psychological distress was measured using the General Health Questionnaire (GHQ). This assessment of mental health status is widely used and shows good agreement with more detailed assessments of depression and anxiety, conditions that are best represented along a continuum of severity in population studies. No obvious point separates people who report symptoms of depression or anxiety that meet diagnostic criteria from those who report similar symptoms below the diagnostic threshold. The current study found that an increased risk of cardiovascular disease exists along the whole of this continuum in a dose-response manner. Forty per cent of the sample scored at least 1 on the GHQ, and an association with subsequent death from cardiovascular disease was seen even at these low scores. The prevalence of depression and anxiety disorders is about 7.5% in the United Kingdom. It is now clear that an association between psychological distress and cardiovascular disease exists well below the threshold that would lead to a diagnosis of depression or anxiety or require specific treatment ... It is difficult to make the leap from the current observational evidence to suggesting that reducing stressors in the environment or changing the psychological interpretation of stressors will help to prevent cardiovascular disease. But, if psychological stress and distress are causes of cardiovascular disease, what implications does this have for prevention and treatment? For those people who meet diagnostic criteria for depression and anxiety, several effective psychological and drug treatments are available. However, what should be done about the much larger numbers of people who report symptoms on the depression-anxiety continuum but do not meet diagnostic criteria? Obvious sources of stress such as workplace stress could be modified. It is also worth considering how societal stresses related to inequalities and socioeconomic status might contribute to the incidence of cardiovascular disease. However, an attempt to produce a stress-free existence seems utopian and ignores the idea of "good stress." People vary greatly in their response to stressors, and some people even seek out stressors to provide a challenge and a sense of achievement. Avoiding stressors might also lead to more anxiety in the long run. A more useful approach could be to change the psychological interpretation of stressors, because this might reduce their biological impact. Cognitive behavioural therapy is, in part, designed to help people change the way they interpret stressors and thereby reduce the impact of stress. Individual and group cognitive behavioural therapy has been shown to be an effective treatment for depression and anxiety, but not, sadly, for preserving the health of the English football team's supporters. Even if we could improve our understanding and use of cognitive theories in the population to increase resilience to stressors, there is currently no evidence that these methods can be disseminated to the population at large to help people reduce perceived stress.

Martinez-Gonzalez, M. A., F. Guillen-Grima, et al. (2012). ***"The Mediterranean diet is associated with a reduction in premature mortality among middle-aged adults."*** J Nutr 142(9): 1672-1678. http://www.ncbi.nlm.nih.gov/pubmed/22810987

The available large prospective studies supporting an inverse association between better adherence to the Mediterranean diet and lower mortality have mainly included older adults. It is not clear whether this inverse association is also present among younger individuals at lower mortality risk. Our aim was to assess the association between adherence to the Mediterranean diet and total mortality in middle-aged adults from the Seguimiento Universidad de Navarra (SUN) Project. We followed 15,535 Spanish university graduates for a mean of 6.8 y. Their mean age was 38 +/- 12 y, 59.6% were females, and all were initially free of cardiovascular disease, cancer, and diabetes. A validated FFQ was used to assess dietary habits. Adherence to the Mediterranean diet was categorized into 3 groups according to the Mediterranean Diet Score (low, 0-2 points; moderate, 3-5 points; and high, 6-9 points). The outcome variable was total mortality. Cox proportional hazards models were used to estimate HR and 95% CI. We adjusted the estimates for sex, age, years of university education, BMI, smoking, physical activity, television watching, history of depression and baseline hypertension, and hypercholesterolemia. We observed 125 deaths during 105,980 person-years of follow-up. The fully adjusted HR for moderate and high adherence were 0.58 (95% CI: 0.34, 0.99; P = 0.05) and 0.38 (95% CI: 0.21, 0.70; P = 0.002), respectively. For each 2-point increment in the Mediterranean Diet Score, the HR of death was 0.72 (95% CI: 0.58, 0.91; P = 0.006). Among highly educated, middle-aged adults, adherence to the traditional Mediterranean diet was associated with reduced risk of death.

Mishra, S. I., R. W. Scherer, et al. (2012). ***"Exercise interventions on health-related quality of life for cancer survivors."*** Cochrane Database Syst Rev 8: CD007566. http://www.ncbi.nlm.nih.gov/pubmed/22895961

BACKGROUND: Cancer survivors experience numerous disease and treatment-related adverse outcomes and poorer health-related quality of life (HRQoL). Exercise interventions are hypothesized to alleviate these adverse outcomes. HRQoL and its domains are important measures for cancer survivorship. OBJECTIVES: To evaluate the effectiveness of exercise on overall HRQoL and HRQoL domains among adult post-treatment cancer survivors. SEARCH METHODS: We searched the Cochrane Central Register of Controlled Trials (CENTRAL), PubMed, MEDLINE, EMBASE, CINAHL, PsycINFO, PEDRO, LILACS, SIGLE, SportDiscus, OTSeeker, and Sociological Abstracts from inception to October 2011 with no language or date restrictions. We also searched citations through Web of Science and Scopus, PubMed's related article feature, and several websites. We reviewed reference lists of included trials and other reviews in the field. SELECTION CRITERIA: We included all randomized controlled trials (RCTs) and controlled clinical trials (CCTs) comparing exercise interventions with usual care or other nonexercise intervention to assess overall HRQoL or at least one HRQoL domain in adults. Included trials tested exercise interventions that were initiated after completion of active cancer treatment. We excluded trials including people who were terminally ill, or receiving hospice care, or both, and where the majority of trial participants were undergoing active treatment for either the primary or recurrent cancer. DATA COLLECTION AND ANALYSIS: Five paired review authors independently extracted information on characteristics of included trials, data on effects of the intervention, and assessed risk of bias based on predefined criteria. Where possible, meta-analyses results were performed for HRQoL and HRQoL domains for the reported difference between baseline values and follow-up values using standardized mean differences (SMD) and a random-effects model by length of follow-up. We also reported the SMDs between mean follow-up values of exercise and control group. Because investigators used

many different HRQoL and HRQoL domain instruments and often more than one for the same domain, we selected the more commonly used instrument to include in the SMD meta-analyses. We also report the mean difference for each type of instrument separately. MAIN RESULTS: We included 40 trials with 3694 participants randomized to an exercise (n = 1927) or comparison (n = 1764) group. Cancer diagnoses in study participants included breast, colorectal, head and neck, lymphoma, and other. Thirty trials were conducted among participants who had completed active treatment for their primary or recurrent cancer and 10 trials included participants both during and post cancer treatment. Mode of the exercise intervention included strength training, resistance training, walking, cycling, yoga, Qigong, or Tai Chi. HRQoL and its domains were measured using a wide range of measures.The results suggested that exercise compared with control has a positive impact on HRQoL and certain HRQoL domains. Exercise resulted in improvement in: global HRQoL at 12 weeks' (SMD 0.48; 95% confidence interval (CI) 0.16 to 0.81) and 6 months' (0.46; 95% CI 0.09 to 0.84) follow-up, breast cancer concerns between 12 weeks' and 6 months' follow-up (SMD 0.99; 95% CI 0.41 to 1.57), body image/self-esteem when assessed using the Rosenberg Self-Esteem scale at 12 weeks (MD 4.50; 95% CI 3.40 to 5.60) and between 12 weeks' and 6 months' (mean difference (MD) 2.70; 95% CI 0.73 to 4.67) follow-up, emotional well-being at 12 weeks' follow-up (SMD 0.33; 95% CI 0.05 to 0.61), sexuality at 6 months' follow-up (SMD 0.40; 95% CI 0.11 to 0.68), sleep disturbance when comparing follow-up values by comparison group at 12 weeks' follow-up (SMD -0.46; 95% CI -0.72 to -0.20), and social functioning at 12 weeks' (SMD 0.45; 95% CI 0.02 to 0.87) and 6 months' (SMD 0.49; 95% CI 0.11 to 0.87) follow-up. Further, exercise interventions resulted in decreased anxiety at 12 weeks' follow-up (SMD -0.26; 95% CI -0.07 to -0.44), fatigue at 12 weeks' (SMD -0.82; 95% CI -1.50 to -0.14) and between 12 weeks' and 6 months' (SMD -0.42; 95% CI -0.02 to -0.83) follow-up, and pain at 12 weeks' follow-up (SMD -0.29; 95% CI -0.55 to -0.04) when comparing follow-up values by comparison group. Positive trends and impact of exercise intervention existed for depression and body image (when analyzing combined instruments); however, because few studies measured these outcomes the robustness of findings is uncertain.No conclusions can be drawn regarding the effects of exercise interventions on HRQoL domains of cognitive function, physical functioning, general health perspective, role function, and spirituality. Results of the review need to be interpreted cautiously owing to the risk of bias. All the trials reviewed were at high risk for performance bias. In addition, the majority of trials were at high risk for detection, attrition, and selection bias. AUTHORS' CONCLUSIONS: This systematic review indicates that exercise may have beneficial effects on HRQoL and certain HRQoL domains including cancer-specific concerns (e.g. breast cancer), body image/self-esteem, emotional well-being, sexuality, sleep disturbance, social functioning, anxiety, fatigue, and pain at varying follow-up periods. The positive results must be interpreted cautiously due to the heterogeneity of exercise programs tested and measures used to assess HRQoL and HRQoL domains, and the risk of bias in many trials. Further research is required to investigate how to sustain positive effects of exercise over time and to determine essential attributes of exercise (mode, intensity, frequency, duration, timing) by cancer type and cancer treatment for optimal effects on HRQoL and its domains.

Pasco, J. A., F. N. Jacka, et al. (2012). ***"Dietary Selenium and major depression: A nested case-control study."*** Complement Ther Med 20(3): 119-123. http://www.ncbi.nlm.nih.gov/pubmed/22500660

OBJECTIVES AND METHODS: Alterations in redox biology are established in depression; however, there are no prospective epidemiological data on redox-active selenium in depression. We aimed to determine if low levels of dietary selenium are associated with an increased risk for de novo major depressive disorder (MDD). In this nested case-control study, women aged 20 years or more were identified from a randomly selected cohort being followed prospectively for the Geelong Osteoporosis Study. Cases were individuals with incident MDD, identified using the Structured Clinical Interview for DSM-IV-TR (SCID-I/NP); controls had no such history. Dietary selenium intake was measured using a food frequency questionnaire at baseline, together with anthropometric and lifestyle measures. RESULTS: Eighteen women who developed de novo MDD were classified as cases; there were 298 controls. Low dietary selenium intakes increased the likelihood of developing MDD; OR 2.74 (95%CI 0.95-7.89). After adjusting for age and SES, compared with a high selenium intake, a low intake (<8.9 mug/MJ/day) was associated with an approximate trebling of the likelihood for developing de novo MDD; OR 2.95 (95%CI 1.00-8.72). Smoking, alcohol consumption and physical activity did not confound the association. CONCLUSION: These data suggest that lower dietary selenium intakes are associated with an increased risk of subsequent de novo MDD. We propose that selenium's function as an antioxidant, and as a constituent of selenoproteins that are important in redox homeostasis, warrants further investigation as a risk factor for depression, and suggest a potentially novel modifiable factor in the primary prevention and management of depression.

Reavley, N. J., A. J. Mackinnon, et al. (2012). ***"Quality of information sources about mental disorders: A comparison of Wikipedia with centrally controlled web and printed sources."*** Psychological Medicine 42(08): 1753-1762. http://dx.doi.org/10.1017/S003329171100287X

Background Although mental health information on the internet is often of poor quality, relatively little is known about the quality of websites, such as Wikipedia, that involve participatory information sharing. The aim of this paper was to explore the quality of user-contributed mental health-related information on Wikipedia and compare this with centrally controlled information sources. Method Content on 10 mental health-related topics was extracted from 14 frequently accessed websites (including Wikipedia) providing information about depression and schizophrenia, Encyclopaedia Britannica, and a psychiatry textbook. The content was rated by experts according to the following criteria: accuracy, up-to-dateness, breadth of coverage, referencing and readability. Results Ratings varied significantly between resources according to topic. Across all topics, Wikipedia was the most highly rated in all domains except readability. Conclusions The quality of information on depression and schizophrenia on Wikipedia is generally as good as, or better than, that provided by centrally controlled websites, Encyclopaedia Britannica and a psychiatry textbook.

Ritchie, T. D. and F. B. Bryant (2012). ***"Positive state mindfulness: A multidimensional model of mindfulness in relation to positive experience."*** International Journal of Wellbeing 2(3): 150-181

The present research tested Langer's theory of mindfulness in the context of positive experiences: positive state mindfulness. In Study 1 (N1 = 586, N2 = 415) confirmatory factor analyses indicated that a three-factor model (Focused Attention, Novelty Appreciation, Open-Ended Expectations) fit the data well and explained responses better than a one-factor model. In support of construct validity, Study 2 (N3 = 239, N4 = 126) suggested that each dimension had a different pattern of associations with unidimensional trait measures of mindfulness, savoring beliefs, trait absorption, uncertainty tolerance, need for structure, and need for cognition. Study 3 (N5 = 46) revealed that each dimension correlated uniquely with the positive affect, self-esteem, interpersonal connectedness, and the overall rehearsal frequency associated with positive autobiographical events. In support of criterion validity in Study 4, in Experiment 1 (N6 = 46) a boredom task decreased Novelty Appreciation, and in Experiment 2 (N7 = 92) a problem-solving task increased Focused Attention. Our data suggest that positive mindfulness is more than the absence of mindlessness and that it includes three distinct dimensions. We discuss the utility of positive mindfulness in both research and practice.

Russ, T. C., E. Stamatakis, et al. (2012). ***"Association between psychological distress and mortality: Individual participant pooled analysis of 10 prospective cohort studies."*** BMJ 345: e4933. http://www.bmj.com/content/345/bmj.e4933

(Free full text available): OBJECTIVE: To quantify the link between lower, subclinically symptomatic, levels of psychological distress and cause-specific mortality in a large scale, population based study. DESIGN: Individual participant meta-analysis of 10 large prospective cohort studies from the Health Survey for England. Baseline psychological distress measured by the 12 item General Health Questionnaire score, and mortality from death certification. PARTICIPANTS: 68,222 people from general population samples of adults aged 35 years and over, free of cardiovascular disease and cancer, and living in private households in England at study baseline. MAIN OUTCOME MEASURES: Death from all causes (n = 8365), cardiovascular disease including cerebrovascular disease (n = 3382), all cancers (n = 2552), and deaths from external causes (n = 386). Mean follow-up was 8.2 years (standard deviation 3.5). RESULTS: We found a dose-response association between psychological distress across the full range of severity and an increased risk of mortality (age and sex adjusted hazard ratio for General Health Questionnaire scores of 1-3 v score 0: 1.20, 95% confidence interval 1.13 to 1.27; scores 4-6: 1.43, 1.31 to 1.56; and scores 7-12: 1.94, 1.66 to 2.26; P<0.001 for trend). This association remained after adjustment for somatic comorbidity plus behavioural and socioeconomic factors. A similar association was found for cardiovascular disease deaths and deaths from external causes. Cancer death was only associated with psychological distress at higher levels. CONCLUSIONS: Psychological distress is associated with increased risk of mortality from several major causes in a dose-response pattern. Risk of mortality was raised even at lower levels of distress.

Sakamoto, Y., S. Ebihara, et al. (2012). ***"Fall prevention using olfactory stimulation with lavender odor in elderly nursing home residents: A randomized controlled trial."*** Journal of the American Geriatrics Society 60(6): 1005-1011. http://dx.doi.org/10.1111/j.1532-5415.2012.03977.x

Objectives To investigate the effects of lavender olfactory stimulation intervention on fall incidence in elderly nursing home residents. Design Randomized placebo-controlled trial. Setting Three randomly selected nursing homes in northern Japan. Participants One hundred and forty-five nursing home residents aged 65 and older. Intervention Participants were randomly assigned to the lavender (n = 73) or placebo group (n = 72) for a 360-day study period. The lavender group received continuous olfactory stimulation from a lavender patch. The placebo group received an unscented patch. Measurement The primary outcome measure was resident falls. Other measurements taken at baseline and 12 months included functional ability (assessed using the Barthel Index), cognitive function (Mini-Mental State Examination (MMSE)), and behavioral and psychological problems associated with dementia (Cohen-Mansfield Agitation Inventory (CMAI)). Results There were fewer fallers in the lavender group (n = 26) than in the placebo group (n = 36) (hazard ratio (HR)=0.57, 95% confidence interval (CI) = 0.34–0.95) and a lower incidence rate in the lavender group (1.04 per person-year) than in the placebo group (1.40 per person-year) (incidence rate ratio = 0.51, 95% CI = 0.30–0.88). The lavender group also had a significant decrease in CMAI score (P = .04) from baseline to follow-up in a per protocol analysis. Conclusion Lavender olfactory stimulation may reduce falls and agitation in elderly nursing home residents; further research is necessary to confirm these findings.

Sarris, J., S. Moylan, et al. (2012). ***"Complementary medicine, exercise, meditation, diet, and lifestyle modification for anxiety disorders: A review of current evidence."*** Evid Based Complement Alternat Med 2012: 809653. http://www.ncbi.nlm.nih.gov/pubmed/22969831

Use of complementary medicines and therapies (CAM) and modification of lifestyle factors such as physical activity, exercise, and diet are being increasingly considered as potential therapeutic options for anxiety disorders. The objective of this metareview was to examine evidence across a broad range of CAM and lifestyle interventions in the treatment of anxiety disorders. In early 2012 we conducted a literature search of PubMed, Scopus, CINAHL, Web of Science, PsycInfo, and the Cochrane Library, for key studies, systematic reviews, and metaanalyses in the area. Our paper found that in respect to treatment of generalized anxiety or specific disorders, CAM evidence revealed current support for the herbal medicine Kava. One isolated study shows benefit for naturopathic medicine, whereas acupuncture, yoga, and Tai chi have tentative supportive evidence, which is hampered by overall poor methodology. The breadth of evidence does not support homeopathy for treating anxiety. Strong support exists for lifestyle modifications including adoption of moderate exercise and mindfulness meditation, whereas dietary improvement, avoidance of caffeine, alcohol, and nicotine offer encouraging preliminary data. In conclusion, certain lifestyle modifications and some CAMs may provide a beneficial role in the treatment of anxiety disorders.

Saxon, D. and M. Barkham (2012). ***"Patterns of therapist variability: Therapist effects and the contribution of patient severity and risk."*** J Consult Clin Psychol 80(4): 535-546. http://www.ncbi.nlm.nih.gov/pubmed/22663902

OBJECTIVE: To investigate the size of therapist effects using multilevel modeling (MLM), to compare the outcomes of therapists identified as above and below average, and to consider how key variables--in particular patient severity and risk and therapist caseload--contribute to therapist variability and outcomes. METHOD: We used a large practice-based data set comprising patients referred to the U.K.'s National Health Service primary care counseling and psychological therapy services between 2000 and 2008. Patients were included if they had received >/=2 sessions of 1-to-1 therapy (including an assessment), had a planned ending to treatment, and completed the Clinical Outcomes in Routine Evaluation-Outcome Measure (CORE-OM; Barkham et al., 2001; Barkham, Mellor-Clark, Connell, & Cahill, 2006; Evans et al., 2002) at pre- and post-treatment. The study sample comprised 119 therapists and 10,786 patients, whose mean age was 42.1 years (71.5% were female). MLM, including Markov chain Monte Carlo procedures, was used to derive estimates to produce therapist effects and to analyze therapist variability. RESULTS: The model yielded a therapist effect of 6.6% for average patient severity, but it ranged from 1% to 10% as patient non-risk scores increased. Recovery rates for individual therapists ranged from 23.5% to 95.6%, and greater patient severity and greater levels of aggregated patient risk in a therapist's caseload were associated with poorer outcomes. CONCLUSIONS: The size of therapist effect was similar to those found elsewhere, but the effect was greater for more severe patients. Differences in patient outcomes between those therapists identified as above or below average were large, and greater therapist risk caseload, rather than non-risk caseload, was associated with poorer patient outcomes. [Correction Notice: An Erratum for this article was reported in Vol 80(4) of Journal of Consulting and Clinical Psychology (see record 2012-16576-001). In the article's Appendix, the symbol β in line 1 of the model should be repeated in lines 3 and 4, rather than B.]

Sinha, R., A. J. Cross, et al. (2012). ***"Caffeinated and decaffeinated coffee and tea intakes and risk of colorectal cancer in a large prospective study."*** Am J Clin Nutr 96(2): 374-381. http://ajcn.nutrition.org/content/96/2/374.abstract

Background: Coffee and tea are widely consumed globally and are rich sources of potential chemopreventive compounds. Epidemiologic data for coffee and tea intakes in relation to colorectal cancer remain unclear. Despite differences in gut physiology, few studies have conducted investigations by anatomic subsites. Objective: We evaluated coffee and tea intakes (caffeinated and decaffeinated) in relation to colon (proximal and distal) and rectal cancers. Design: The NIH-AARP Diet and Health Study included 489,706 men and women who completed a baseline (1995–1996) self-administered questionnaire of demographics, diet, and lifestyle. Over a median of 10.5 y of follow-up, we identified 2863 proximal colon, 1993 distal colon,

and 1874 rectal cancers. Multivariable HRs and 95% CIs were estimated by using Cox regression. Results: Approximately 16% of participants drank ≥4 cups coffee/d. Compared with nondrinkers, drinkers of 4–5 cups coffee/d (HR: 0.85; 95% CI: 0.75, 0.96) and ≥6 cups coffee/d (HR: 0.74; 95% CI: 0.61, 0.89; P-trend < 0.001) had a lower risk of colon cancer, particularly of proximal tumors (HR for ≥6 cups/d: 0.62; 95% CI: 0.49, 0.81; P-trend < 0.0001). Results were similar to those overall for drinkers of predominantly caffeinated coffee. Although individual HRs were not significant, there was a significant P-trend for both colon and rectal cancers for people who drank predominantly decaffeinated coffee. No associations were observed for tea. Conclusions: In this large US cohort, coffee was inversely associated with colon cancer, particularly proximal tumors. Additional investigations of coffee intake and its components in the prevention of colorectal cancer by subsites are warranted.

Svendal, G., M. Berk, et al. (2012). ***"The use of hormonal contraceptive agents and mood disorders in women."*** J Affect Disord 140(1): 92-96. http://www.ncbi.nlm.nih.gov/pubmed/22537684

BACKGROUND: Mood disorders are a major cause of disability in developed countries, and contraceptive agents among the most widely used medications. The relationship between contraceptive agents and mood is unclear. The aim of this study was therefore to investigate the association between current contraception use and mood disorders in a random population-based sample of women. METHODS: This study examined epidemiological data obtained from 498 women aged 20-50year participating in the Geelong Osteoporosis Study (GOS). Mood disorders were diagnosed using a clinical interview (SCID-I/NP) and information on medication use and other lifestyle factors were documented. RESULTS: After adjusting for age and socioeconomic status (SES), women taking progestin-only contraceptive agents had an increased likelihood of a current mood disorder (OR 3.0 95%CI: 1.1-7.8, p=0.03). In contrast, women taking combined contraceptive agents had a decreased likelihood of a current mood disorder, adjusting this for age and SES (OR 0.3 95%CI: 0.1, 0.9 p=0.03). These findings were not explained by weight, physical activity level, past depression, number of medical conditions or cigarette smoking. LIMITATIONS: This study is cross-sectional, which precludes any determination regarding the direction of the relationships. CONCLUSIONS: These data suggest a protective effect of the combined contraceptive pill, and a deleterious effect of progestin only agents in regards to mood disorders.

Wang, C., C. Fang, et al. (2012). ***"Cranberry-containing products for prevention of urinary tract infections in susceptible populations: A systematic review and meta-analysis of randomized controlled trials."*** Archives of Internal Medicine 172(13): 988-996. http://dx.doi.org/10.1001/archinternmed.2012.3004

Background Urinary tract infection (UTI) is one of the most commonly acquired bacterial infections. Cranberry-containing products have long been used as a folk remedy to prevent UTIs. The aims of this study were to evaluate cranberry-containing products for the prevention of UTI and to examine the factors influencing their effectiveness.Methods MEDLINE, EMBASE, and the Cochrane Central Register of Controlled Trials were systemically searched from inception to November 2011 for randomized controlled trials that compared prevention of UTIs in users of cranberry-containing products vs placebo or nonplacebo controls. There were no restrictions for language, population, or publication year.Results Thirteen trials, including 1616 subjects, were identified for qualitative synthesis from 414 potentially relevant references; 10 of these trials, including a total of 1494 subjects, were further analyzed in quantitative synthesis. The random-effects pooled risk ratio (RR) for cranberry users vs nonusers was 0.62 (95% CI, 0.49-0.80), with a moderate degree of heterogeneity (I2 = 43%) after the exclusion of 1 outlier study. On subgroup analysis, cranberry-containing products seemed to be more effective in several subgroups, including women with recurrent UTIs (RR, 0.53; 95% CI, 0.33-0.83) (I2 = 0%), female populations (RR, 0.49; 95% CI, 0.34-0.73) (I2 = 34%), children (RR, 0.33; 95% CI, 0.16-0.69) (I2 = 0%), cranberry juice drinkers (RR, 0.47; 95% CI, 0.30-0.72) (I2 = 2%), and subjects using cranberry-containing products more than twice daily (RR, 0.58; 95% CI, 0.40-0.84) (I2 = 18%).Conclusions Our findings indicate that cranberry-containing products are associated with protective effect against UTIs. However, this result should be interpreted in the context of substantial heterogeneity across trials.