

30 healthy lifestyle abstracts

september '14 newsletter

(2014; Atherton, Robins et al. 2014; Brenner, Stock et al. 2014; Cuzick, Thorat et al. 2014; Davis, Manley et al. 2014; DeSteno, Li et al. 2014; Dombrowski, Knittle et al. 2014; Eastwick and Hunt 2014; Feinberg, Antonenko et al. 2014; Gebauer, Baumeister et al. 2014; Gerrits, van Oppen et al. 2014; Hoyt, Burnette et al. 2014; Huxhold, Miche et al. 2014; Jacka, Sacks et al. 2014; Jayasekara, English et al. 2014; Lundin 2014; McGrath, Petersen et al. 2014; Montoya and Horton 2014; Oyebode, Gordon-Dseagu et al. 2014; Sarris, O'Neil et al. 2014; Schaefer, Klose et al. 2014; Stahl, Albert et al. 2014; Stephan, Sutin et al. 2014; ten Brinke, Bolandzadeh et al. 2014; van Ockenburg, de Jonge et al. 2014; van Straten, Emmelkamp et al. 2014; Varga, Nettles et al. 2014; Volta, Bardella et al. 2014; Wang, Ouyang et al. 2014; Wong, Sin et al. 2014)

Abbass, A. A., S. R. Kisely, et al. (2014). **"Serum vitamin d levels in relation to schizophrenia: A systematic review and meta-analysis of observational studies."** *The Journal of Clinical Endocrinology & Metabolism* 0(0): jc.2014-1887. <http://press.endocrine.org/doi/abs/10.1210/jc.2014-1887>

Introduction: Although several observational studies have investigated the association between vitamin D status and schizophrenia, we are aware of no comprehensive meta-analysis in this regard. Objective: We aimed to conduct a systematic review and a meta-analysis of observational studies to summarize the available data on the association between serum vitamin D levels and schizophrenia. Methods: A systematic research on all published articles until October 2013 was conducted in PubMed, ISI (Web of science), SCOPUS, and Google Scholar. All observational studies that had measured serum vitamin D levels in schizophrenic patients were included in the systematic review. After considering exclusion criteria, we had 19 studies for the systematic review that were included in three separate meta-analyses: 1) a meta-analysis on mean levels of 25-hydroxyvitamin D [25(OH)D] (n = 13); 2) a meta-analysis on the prevalence of vitamin D deficiency (n = 8); 3) a meta-analysis on odds ratios (n = 8). Results: Findings from a meta-analysis on means revealed that the overall mean difference in serum 25(OH)D levels between schizophrenic patients and control participants was -5.91 ng/mL [95% confidence interval (CI) -10.68, -1.14]. Subgroup analyses based on study design, the patient's hospitalization status, study quality, and study location did not explain between-study heterogeneity; however, type of biomarker assessed [25-dihydroxyvitamin D3 vs 25(OH)D] could account for some degree of heterogeneity. Results from the meta-analysis on the prevalence of vitamin D deficiency indicated that the overall prevalence of vitamin D deficiency in schizophrenic patients was 65.3% (95% CI 46.4%-84.2%). Findings from the meta-analysis on odds ratios indicated that vitamin D-deficient persons were 2.16 times (95% CI 1.32, 3.56) more likely to have schizophrenia than those with vitamin D sufficiency. No evidence of heterogeneity was detected. Conclusion: We found a strong association between vitamin D deficiency and schizophrenia. However, randomized clinical trials are required to confirm our findings.

Atherton, O. E., R. W. Robins, et al. (2014). **"Personality correlates of risky health outcomes: Findings from a large internet study."** *Journal of Research in Personality* 50(0): 56-60. <http://www.sciencedirect.com/science/article/pii/S0092656614000208>

Numerous studies have documented the effects of personality on health outcomes. However, which traits are most relevant to health, and the precise magnitude of their effects, is inconsistent across studies. The present study used a large sample (N = 460,172) to replicate and extend the relations between the Big Five and three health-related outcomes: self-reported health, body mass index, and substance use. Low Conscientiousness predicted all outcomes, indicating that individuals who are less responsible and less self-controlled tend to report poorer health, be more overweight, and engage in more substance use. Individuals who were more emotionally unstable (high Neuroticism) reported poorer health, and individuals prone to seek out social experiences and rewards (high Extraversion) engaged in more frequent substance use.

Brenner, H., C. Stock, et al. (2014). **"Effect of screening sigmoidoscopy and screening colonoscopy on colorectal cancer incidence and mortality: Systematic review and meta-analysis of randomised controlled trials and observational studies."** *BMJ* 348. <http://www.bmj.com/content/348/bmj.g2467>

Objectives To review, summarise, and compare the evidence for effectiveness of screening sigmoidoscopy and screening colonoscopy in the prevention of colorectal cancer occurrence and deaths. Design Systematic review and meta-analysis of randomised controlled trials and observational studies. Data sources PubMed, Embase, and Web of Science. Two investigators independently extracted characteristics and results of identified studies and performed standardised quality ratings. Eligibility criteria Randomised controlled trials and observational studies in English on the impact of screening sigmoidoscopy and screening colonoscopy on colorectal cancer incidence and mortality in the general population at average risk. Results For screening sigmoidoscopy, four randomised controlled trials and 10 observational studies were identified that consistently found a major reduction in distal but not proximal colorectal cancer incidence and mortality. Summary estimates of reduction in distal colorectal cancer incidence and mortality were 31% (95% confidence intervals 26% to 37%) and 46% (33% to 57%) in intention to screen analysis, 42% (29% to 53%) and 61% (27% to 79%) in per protocol analysis of randomised controlled trials, and 64% (50% to 74%) and 66% (38% to 81%) in observational studies. For screening colonoscopy, evidence was restricted to six observational studies, the results of which suggest tentatively an even stronger reduction in distal colorectal cancer incidence and mortality, along with a significant reduction in mortality from cancer of the proximal colon. Indirect comparisons of results of observational studies on screening sigmoidoscopy and colonoscopy suggest a 40% to 60% lower risk of incident colorectal cancer and death from colorectal cancer after screening colonoscopy even though this incremental risk reduction was statistically significant for deaths from cancer of the proximal colon only. Conclusions Compelling and consistent evidence from randomised controlled trials and observational studies suggests that screening sigmoidoscopy and screening colonoscopy prevent most deaths from distal colorectal cancer. Observational studies suggest that colonoscopy compared with flexible sigmoidoscopy decreases mortality from cancer of the proximal colon. This added value should be examined in further research and weighed against the higher costs, discomfort, complication rates, capacities needed, and possible differences in compliance.

Cuzick, J., M. A. Thorat, et al. (2014). **"Estimates of benefits and harms of prophylactic use of aspirin in the general population."** *Annals of Oncology*. <http://annonc.oxfordjournals.org/content/early/2014/07/30/annonc.mdu225.abstract>

(Free full text available) Background Accumulating evidence supports an effect of aspirin in reducing overall cancer incidence and mortality in the general population. We reviewed current data and assessed the benefits and harms of prophylactic use of aspirin in the general population. Methods The effect of aspirin for site-specific cancer incidence and mortality, cardiovascular events was collated from the most recent systematic reviews. Studies identified through systematic Medline search provided data regarding harmful effects of aspirin and baseline rates of harms like gastrointestinal bleeding and

peptic ulcer. Results The effects of aspirin on cancer are not apparent until at least 3 years after the start of use, and some benefits are sustained for several years after cessation in long-term users. No differences between low and standard doses of aspirin are observed, but there were no direct comparisons. Higher doses do not appear to confer additional benefit but increase toxicities. Excess bleeding is the most important harm associated with aspirin use, and its risk and fatality rate increases with age. For average-risk individuals aged 50–65 years taking aspirin for 10 years, there would be a relative reduction of between 7% (women) and 9% (men) in the number of cancer, myocardial infarction or stroke events over a 15-year period and an overall 4% relative reduction in all deaths over a 20-year period. Conclusions Prophylactic aspirin use for a minimum of 5 years at doses between 75 and 325 mg/day appears to have favourable benefit–harm profile; longer use is likely to have greater benefits. Further research is needed to determine the optimum dose and duration of use, to identify individuals at increased risk of bleeding, and to test effectiveness of *Helicobacter pylori* screening–eradication before starting aspirin prophylaxis.

Davis, J. M., A. R. Manley, et al. (2014). **"Randomized trial comparing mindfulness training for smokers to a matched control."** *Journal of Substance Abuse Treatment* 47(3): 213-221. <http://www.sciencedirect.com/science/article/pii/S0740547214000804>

Smoking continues to take an enormous toll on society, and although most smokers would like to quit, most are unsuccessful using existing therapies. These findings call on researchers to develop and test therapies that provide higher rates of long-term smoking abstinence. We report results of a randomized controlled trial comparing a novel smoking cessation treatment using mindfulness training to a matched control based on the American Lung Association's Freedom From Smoking program. Data were collected on 175 low socioeconomic status smokers in 2011–2012 in a medium sized midwestern city. A significant difference was not found in the primary outcome; intent-to-treat biochemically confirmed 6-month smoking abstinence rates were mindfulness = 25.0%, control = 17.9% ($p = 0.35$). Differences favoring the mindfulness condition were found on measures of urges and changes in mindfulness, perceived stress, and experiential avoidance. While no significant differences were found in quit rates, the mindfulness intervention resulted in positive outcomes.

DeSteno, D., Y. Li, et al. (2014). **"Gratitude: A tool for reducing economic impatience."** *Psychological Science* 25(6): 1262-1267. <http://pss.sagepub.com/content/25/6/1262.abstract>

The human mind tends to excessively discount the value of delayed rewards relative to immediate ones, and it is thought that "hot" affective processes drive desires for short-term gratification. Supporting this view, recent findings demonstrate that sadness exacerbates financial impatience even when the sadness is unrelated to the economic decision at hand. Such findings might reinforce the view that emotions must always be suppressed to combat impatience. But if emotions serve adaptive functions, then certain emotions might be capable of reducing excessive impatience for delayed rewards. We found evidence supporting this alternative view. Specifically, we found that (a) the emotion gratitude reduces impatience even when real money is at stake, and (b) the effects of gratitude are differentiable from those of the more general positive state of happiness. These findings challenge the view that individuals must tamp down affective responses through effortful self-regulation to reach more patient and adaptive economic decisions.

Dombrowski, S. U., K. Knittle, et al. (2014). **"Long term maintenance of weight loss with non-surgical interventions in obese adults: Systematic review and meta-analyses of randomised controlled trials."** *BMJ* 348. <http://www.bmj.com/content/348/bmj.g2646>

(Free full text available) Objective To systematically review and describe currently available approaches to supporting maintenance of weight loss in obese adults and to assess the evidence for the effectiveness of these interventions. Design Systematic review with meta-analysis. Data sources Medline, PsycINFO, Embase, and the Cochrane Central Register of Controlled Trials. Study selection Studies were identified through to January 2014. Randomised trials of interventions to maintain weight loss provided to initially obese adults (aged ≥ 18) after weight loss of $\geq 5\%$ body weight with long term (≥ 12 months) follow-up of weight change (main outcome) were included. Study appraisal and synthesis Potential studies were screened independently and in duplicate; study characteristics and outcomes were extracted. Meta-analyses were conducted to estimate the effects of interventions on weight loss maintenance with the inverse variance method and a random effects model. Results are presented as mean differences in weight change, with 95% confidence intervals. Results 45 trials involving 7788 individuals were included. Behavioural interventions focusing on both food intake and physical activity resulted in an average difference of -1.56 kg (95% confidence interval -2.27 to -0.86 kg; 25 comparisons, 2949 participants) in weight regain compared with controls at 12 months. Orlistat combined with behavioural interventions resulted in a -1.80 kg (-2.54 to -1.06 ; eight comparisons, 1738 participants) difference compared with placebo at 12 months. All orlistat studies reported higher frequencies of adverse gastrointestinal events in the experimental compared with placebo control groups. A dose-response relation for orlistat treatment was found, with 120 mg doses three times a day leading to greater weight loss maintenance (-2.34 kg, -3.03 to -1.65) compared with 60 mg and 30 mg three times a day (-0.70 kg, 95% confidence interval -1.92 to 0.52), $P=0.02$. Conclusions Behavioural interventions that deal with both diet and physical activity show small but significant benefits on weight loss maintenance.

Eastwick, P. W. and L. L. Hunt (2014). **"Relational mate value: Consensus and uniqueness in romantic evaluations."** *Journal of Personality and Social Psychology* 106(5): 728-751. <http://psycnet.apa.org/journals/psp/106/5/728/>

Classic evolutionary and social exchange perspectives suggest that some people have more mate value than others because they possess desirable traits (e.g., attractiveness, status) that are intrinsic to the individual. This article broadens mate value in 2 ways to incorporate relational perspectives. First, close relationships research suggests an alternative measure of mate value: whether someone can provide a high quality relationship. Second, person perception research suggests that both trait-based and relationship quality measures of mate value should contain a mixture of target variance (i.e., consensus about targets, the classic conceptualization) and relationship variance (i.e., unique ratings of targets). In Study 1, participants described their personal conceptions of mate value and revealed themes consistent with classic and relational approaches. Study 2 used a social relations model blocked design to assess target and relationship variances in participants' romantic evaluations of opposite-sex classmates at the beginning and end of the semester. In Study 3, a one-with-many design documented target and relationship variances among long-term opposite-sex acquaintances. Results generally revealed more relationship variance than target variance; participants' romantic evaluations were more likely to be unique to a particular person rather than consensual. Furthermore, the relative dominance of relationship to target variance was stronger for relational measures of mate value (i.e., relationship quality projections) than classic trait-based measures (i.e., attractiveness, resources). Finally, consensus decreased as participants got to know one another better, and long-term acquaintances in Study 3 revealed enormous amounts of relationship variance. Implications for the evolutionary, close relationships, and person-perception literatures are discussed.

Feinberg, M., O. Antonenko, et al. (2014). **"Gut check: Reappraisal of disgust helps explain liberal–conservative differences on issues of purity."** *Emotion* 14(3): 513-521. <http://psycnet.apa.org/journals/emo/14/3/513/>

Disgust plays an important role in conservatives' moral and political judgments, helping to explain why conservatives and liberals differ in their attitudes on issues related to purity. We examined the extent to which the emotion-regulation strategy reappraisal drives the disgust-conservatism relationship. We hypothesized that disgust has less influence on the political and moral judgments of liberals because they tend to regulate disgust reactions through emotional reappraisal more than conservatives. Study 1a found that a greater tendency to reappraise disgust was negatively associated with conservatism, independent of disgust sensitivity. Study 1b replicated this finding, demonstrating that the effect of reappraisal is unique to disgust. In Study 2, liberals condemned a disgusting act less than conservatives, and did so to the extent that they reappraised their initial disgust response. Study 3 manipulated participants' use of reappraisal when exposed to a video of men kissing. Conservatives instructed to reappraise their emotional reactions subsequently expressed more support for same-sex marriage than conservatives in the control condition, demonstrating attitudes statistically equivalent to liberal participants.

Gebauer, J. E., R. F. Baumeister, et al. (2014). **"Satisfaction-adaptation principles in sexual desire: Exploring gender differences across the life span."** *Social Psychological and Personality Science* 5(2): 176-184. <http://spp.sagepub.com/content/5/2/176.abstract>

Sexual desire may change according to two principles: the satisfaction principle (high sexual opportunity/frequency decreases sexual desire) and the adaptation principle (high sexual opportunity/frequency increases sexual desire). We explore the workings of these opposing principles separately for both genders across the adult life span. Two tests within a large (N = 181,546) and cross-cultural (11 countries) data set revealed that the satisfaction principle accounts for sexual desire in men throughout the entire life and it accounts for sexual desire in women until their mid-30s. From that point onward, however, the pattern of female sexual desire becomes increasingly consistent with the adaptation principle. What sets older women apart from younger women and men of all ages? We discuss several mechanisms, with a focus on the satisfaction principle's evolutionary value in life phases of high reproductive capacity and the adaptation principle's evolutionary value in life phases of low reproductive capacity.

Gerrits, M., P. van Oppen, et al. (2014). **"Pain, not chronic disease, is associated with the recurrence of depressive and anxiety disorders."** *BMC Psychiatry* 14(1): 187. <http://www.biomedcentral.com/1471-244X/14/187>

(Available in free full text) BACKGROUND: Studies suggest that poor physical health might be associated with increased depression and anxiety recurrence. The objectives of this study were to determine whether specific chronic diseases and pain characteristics are associated with depression and anxiety recurrence and to examine whether such associations are mediated by subthreshold depressive or anxiety symptoms. METHODS: 1122 individuals with remitted depressive or anxiety disorder (Netherlands Study of Depression and Anxiety) were followed up for a period of four years. The impact of specific chronic diseases and pain characteristics on recurrence was assessed using Cox regression and mediation analyses. RESULTS: Chronic diseases were not associated with recurrence. Neck (HR 1.45, $p < .01$), chest (HR 1.65, $p < .01$), abdominal (HR 1.52, $p < .01$) pain, an increase in the number of pain locations (HR 1.10, $p < .01$) and pain severity (HR 1.18, $p = .01$) were associated with an increased risk of depression recurrence but not anxiety. Subthreshold depressive symptoms mediated the associations between pain and depression recurrence. CONCLUSIONS: Pain, not chronic disease, increases the likelihood of depression recurrence, largely through its association with aggravated subthreshold depressive symptoms. These findings support the idea of the existence of a mutually reinforcing mechanism between pain and depression and are indicative of the importance of shedding light on neurobiological links in order to optimize pain and depression management.

Hoyt, C. L., J. L. Burnette, et al. (2014). **"Obesity is a disease": Examining the self-regulatory impact of this public-health message.** *Psychological Science* 25(4): 997-1002. <http://pss.sagepub.com/content/25/4/997.abstract>

In the current work, we examined the impact of the American Medical Association's recent classification of obesity as a disease on weight-management processes. Across three experimental studies, we highlighted the potential hidden costs associated with labeling obesity as a disease, showing that this message, presented in an actual New York Times article, undermined beneficial weight-loss self-regulatory processes. A disease-based, relative to an information-based, weight-management message weakened the importance placed on health-focused dieting and reduced concerns about weight among obese individuals—the very people whom such public-health messages are targeting. Further, the decreased concern about weight predicted higher-calorie food choices. In addition, the disease message, relative to a message that obesity is not a disease, lowered body-image dissatisfaction, but this too predicted higher-calorie food choices. Thus, although defining obesity as a disease may be beneficial for body image, results from the current work emphasize the negative implications of this message for self-regulation.

Huxhold, O., M. Miche, et al. (2014). **"Benefits of having friends in older ages: Differential effects of informal social activities on well-being in middle-aged and older adults."** *The Journals of Gerontology Series B: Psychological Sciences and Social Sciences* 69(3): 366-375. <http://psychsocgerontology.oxfordjournals.org/content/69/3/366.abstract>

(Free full text available) Objectives. It has been considered a fact that informal social activities promote well-being in old age, irrespective of whether they are performed with friends or family members. Fundamental differences in the relationship quality between family members (obligatory) and friends (voluntary), however, suggest differential effects on well-being. Further, age-related changes in networks suggest age-differential effects of social activities on well-being, as older adults cease emotionally detrimental relationships. Method. Longitudinal representative national survey study with middle-aged ($n = 2,830$) and older adults ($n = 2,032$). Age-differential effects of activities with family members and friends on changes in life satisfaction, positive affect (PA), and negative affect (NA) were examined in latent change score models. Results. In the middle-aged group, activities with friends and families increased PA and life satisfaction and were unrelated to NA. In the older age group, family activities increased both PA and NA and were unrelated to changes in life satisfaction, but activities with friends increased PA and life satisfaction and decreased NA. Discussion. Social activities differentially affect different facets of well-being. These associations change with age. In older adults, the effects of social activities with friends may become more important and may act as a buffer against negative effects of aging.

Jacka, F., G. Sacks, et al. (2014). **"Food policies for physical and mental health."** *BMC Psychiatry* 14(1): 132. <http://www.biomedcentral.com/1471-244X/14/132>

(Available in free full text) Noncommunicable diseases (NCDs) account for the largest burden of early mortality and are predicted to cost the global community more than US \$30 trillion over the next 20 years. Unhealthy dietary habits, in large part driven by substantial changes to global food systems, are recognised as major contributors to many of the common NCDs, including cardiovascular disease, cancer and diabetes. Recent evidence now indicates that unhealthy diets are also risk factors for mental disorders, particularly depression and dementia. This affords substantial scope to leverage on the established and developing approaches to the nutrition-related NCDs to address the large global burden of these mental disorders and reinforces the imperative for governments take substantial actions in regards to improving the food environment and consequent population health via policy initiatives.

Jayasekara, H., D. R. English, et al. (2014). **"Alcohol consumption over time and risk of death: A systematic review and meta-analysis."** *American Journal of Epidemiology* 179(9): 1049-1059. <http://aje.oxfordjournals.org/content/179/9/1049.abstract>

The results from the few cohort studies that have measured usual alcohol consumption over time have not been summarized. We therefore conducted a systematic review and meta-analysis to quantify mortality risk. Pertinent studies were identified by searching the Medline, Web of Science, Cumulative Index to Nursing and Allied Health Literature (CINAHL) Plus, and Scopus databases through August 2012 using broad search criteria. Studies reporting relative mortality risks for quantitatively defined categories of alcohol consumption over time were eligible. Nine cohort studies published during 1991–2010 (comprising 62,950 participants and 10,490 deaths) met the inclusion criteria. For men, there was weak evidence of lower mortality risk with low levels of alcohol intake over time but higher mortality risk for those with intakes over 40 g/day compared with abstainers using a random-effects model (P for nonlinearity = 0.02). The pooled relative risks were 0.90 (95% confidence interval: 0.81, 0.99) for 1–29 g/day, 1.19 (95% confidence interval: 0.89, 1.58) for 30–59 g/day, and 1.52 (95% confidence interval: 0.78, 2.98) for 60 or more g/day compared with abstinence. There was moderate between-study heterogeneity but no evidence of publication bias. Studies including women were extremely scarce. Our findings include a curvilinear association between drinking over time and mortality risk for men overall and widespread disparity in methods used to capture exposure and report results.

Lundin, K. E. (2014). **"Non-celiac gluten sensitivity - why worry?"** *BMC Medicine* 12(1): 86. <http://www.biomedcentral.com/1741-7015/12/86>

(Free full text available) Wheat, once thought to be a critical ingredient in a healthy diet, has become a major threat, according to public opinion. The term non-celiac gluten sensitivity has been widely adopted to describe a clinical entity characterized by symptoms induced by gluten without the diagnostic criteria found in other gluten-related disorders. However, it has not been shown that gluten per se is involved, and it can be debated if the condition is a disease. Nevertheless, a large number of individuals go gluten-free, avoiding wheat, rye and barley, even without a defined medical cause. In a study in *BMC Medicine*, Volta and colleagues from Italy report on a large, multicenter attempt to enumerate the prevalence of non-celiac gluten sensitivity in secondary gastroenterology care. They found that approximately 3% of their more than 12,000 patients fulfilled their criteria for non-celiac gluten sensitivity. However, we are still challenged with finding stricter clinical criteria for the condition, developing a usable clinical approach for gluten challenge in these individuals, and understanding the pathogenesis of the condition. Please see related article <http://www.biomedcentral.com/1741-7015/12/85>.

McGrath, J. J., L. Petersen, et al. (2014). **"A comprehensive assessment of parental age and psychiatric disorders."** *JAMA Psychiatry* 71(3): 301-309. <http://dx.doi.org/10.1001/jamapsychiatry.2013.4081>

Importance There has been recent interest in the findings that the offspring of older fathers have an increased risk of both de novo mutations and neuropsychiatric disorders. However, the offspring of younger parents are also at risk for some adverse mental health outcomes. **Objective** To determine the association between maternal and paternal age and a comprehensive range of mental health disorders. **Design, Setting, and Participants** A comprehensive, population-based record linkage study using the Danish Psychiatric Central Research Register from January 1, 1995, through December 31, 2011. A total of 2 894 688 persons born in Denmark from January 1, 1955, through December 31, 2006, were followed up during the study period. **Exposures** Maternal and paternal age at the time of offspring's birth. **Main Outcomes and Measures** We examined a broad range of International Classification of Diseases–defined mental disorders, including substance use; schizophrenia and related disorders; mood disorders; neurotic, stress-related, and somatoform disorders; eating disorders; specific personality disorders; and a range of developmental and childhood disorders. The incidence rate ratios for each mental disorder outcome were estimated by log linear Poisson regression with adjustments for the calendar period, age, sex, and age of the other parent. **Results** The cohort was observed for 42.7 million person-years, during which 218 441 members of the cohort had their first psychiatric contact for any psychiatric disorder. Based on the overall risk of psychiatric disorders, the offspring of younger and older parents were at increased risk compared with those of parents aged 25 to 29 years. When the offspring were examined for particular disorders, the nature of the relationship changed. For example, the offspring of older fathers were at an increased risk of schizophrenia and related disorders, mental retardation, and autism spectrum disorders. In contrast, the offspring of young mothers (and to a lesser extent young fathers) were at an increased risk for substance use disorders, hyperkinetic disorders, and mental retardation. **Conclusions and Relevance** The offspring of younger mothers and older fathers are at risk for different mental health disorders. These differences can provide clues to the complex risk architecture underpinning the association between parental age and the mental health of offspring.

Montoya, R. M. and R. S. Horton (2014). **"A two-dimensional model for the study of interpersonal attraction."** *Personality and Social Psychology Review* 18(1): 59-86. <http://psr.sagepub.com/content/18/1/59.abstract>

We describe a model for understanding interpersonal attraction in which attraction can be understood as a product of the initial evaluations we make about others. The model posits that targets are evaluated on two basic dimensions, capacity and willingness, such that affective and behavioral attraction result from evaluations of (a) a target's capacity to facilitate the perceiver's goals/needs and (b) a target's potential willingness to facilitate those goals/needs. The plausibility of the two-dimensional model of attraction is evaluated vis-à-vis the extant literature on various attraction phenomena including the reciprocity of liking effect, pratfall effect, matching hypothesis, arousal effects, and similarity effect. We conclude that considerable evidence across a wide range of phenomena supports the idea that interpersonal attraction is principally determined by inferences about the target's capacity and willingness.

Oyebode, O., V. Gordon-Dseagu, et al. (2014). **"Fruit and vegetable consumption and all-cause, cancer and cvd mortality: Analysis of health survey for england data."** *Journal of Epidemiology and Community Health*. <http://jech.bmj.com/content/early/2014/03/03/jech-2013-203500.abstract>

(Available in free full text): Background Governments worldwide recommend daily consumption of fruit and vegetables. We examine whether this benefits health in the general population of England. Methods Cox regression was used to estimate HRs and 95% CI for an association between fruit and vegetable consumption and all-cause, cancer and cardiovascular mortality, adjusting for age, sex, social class, education, BMI, alcohol consumption and physical activity, in 65 226 participants aged 35+ years in the 2001–2008 Health Surveys for England, annual surveys of nationally representative random samples of the non-institutionalised population of England linked to mortality data (median follow-up: 7.7 years). Results Fruit and vegetable consumption was associated with decreased all-cause mortality (adjusted HR for 7+ portions 0.67 (95% CI 0.58 to 0.78), reference category <1 portion). This association was more pronounced when excluding deaths within a year of baseline (0.58 (0.46 to 0.71)). Fruit and vegetable consumption was associated with reduced cancer (0.75 (0.59–0.96)) and cardiovascular mortality (0.69 (0.53 to 0.88)). Vegetables may have a stronger association with mortality than fruit (HR for 2 to 3 portions 0.81 (0.73 to 0.89) and 0.90 (0.82 to 0.98), respectively). Consumption of vegetables (0.85 (0.81 to 0.89) per portion) or salad

(0.87 (0.82 to 0.92) per portion) were most protective, while frozen/canned fruit consumption was apparently associated with increased mortality (1.17 (1.07 to 1.28) per portion). Conclusions A robust inverse association exists between fruit and vegetable consumption and mortality, with benefits seen in up to 7+ portions daily. Further investigations into the effects of different types of fruit and vegetables are warranted.

Sarris, J., A. O'Neil, et al. (2014). **"Lifestyle medicine for depression."** *BMC Psychiatry* 14(1): 107.
<http://www.biomedcentral.com/1471-244X/14/107>

(Free full text available) The prevalence of depression appears to have increased over the past three decades. While this may be an artefact of diagnostic practices, it is likely that there are factors about modernity that are contributing to this rise. There is now compelling evidence that a range of lifestyle factors are involved in the pathogenesis of depression. Many of these factors can potentially be modified, yet they receive little consideration in the contemporary treatment of depression, where medication and psychological intervention remain the first line treatments. "Lifestyle Medicine" provides a nexus between public health promotion and clinical treatments, involving the application of environmental, behavioural, and psychological principles to enhance physical and mental wellbeing. This may also provide opportunities for general health promotion and potential prevention of depression. In this paper we provide a narrative discussion of the major components of Lifestyle Medicine, consisting of the evidence-based adoption of physical activity or exercise, dietary modification, adequate relaxation/sleep and social interaction, use of mindfulness-based meditation techniques, and the reduction of recreational substances such as nicotine, drugs, and alcohol. We also discuss other potential lifestyle factors that have a more nascent evidence base, such as environmental issues (e.g. urbanisation, and exposure to air, water, noise, and chemical pollution), and the increasing human interface with technology. Clinical considerations are also outlined. While data supports that some of these individual elements are modifiers of overall mental health, and in many cases depression, rigorous research needs to address the long-term application of Lifestyle Medicine for depression prevention and management. Critically, studies exploring lifestyle modification involving multiple lifestyle elements are needed. While the judicious use of medication and psychological techniques are still advocated, due to the complexity of human illness/wellbeing, the emerging evidence encourages a more integrative approach for depression, and an acknowledgment that lifestyle modification should be a routine part of treatment and preventative efforts.

Schaefer, R., P. Klose, et al. (2014). **"Efficacy, tolerability, and safety of hypnosis in adult irritable bowel syndrome: Systematic review and meta-analysis."** *Psychosomatic Medicine* 76(5): 389-398 310.1097/PSY.000000000000039.
[http://journals.lww.com/psychosomaticmedicine/Fulltext/2014/06000/Efficacy, Tolerability, and Safety of Hypnosis in.10.aspx](http://journals.lww.com/psychosomaticmedicine/Fulltext/2014/06000/Efficacy,_Tolerability,_and_Safety_of_Hypnosis_in.10.aspx)

Objective: To assess the efficacy, tolerability, and safety of hypnosis in adult irritable bowel syndrome by a meta-analysis of randomized controlled trials. Methods: Studies were identified by a literature search of the databases Allied and Complementary Medicine Database, Central Register of Controlled Trials, Cumulative Index to Nursing and Allied Health Literature, PubMed, PsycINFO, and Scopus (from inception to June 30, 2013). Primary outcomes were adequate symptom relief, global gastrointestinal score, and safety. Summary relative risks (RRs) with number needed to treat (NNT) and standardized mean differences (SMDs) with 95% confidence intervals (95% CIs) were calculated using random-effects models. Results: Eight randomized controlled trials with a total of 464 patients and a median of 8.5 (7–12) hypnosis sessions over a median of 12 (5–12) weeks were included into the analysis. At the end of therapy, hypnosis was superior to control conditions in producing adequate symptom relief (RR, 1.69 [95% CI = 1.14–2.51]; NNT, 5 [3–10]) and in reducing global gastrointestinal score (SMD, 0.32 [95% CI = –0.56 to –0.08]). At long-term follow-up, hypnosis was superior to controls in adequate symptom relief (RR, 2.17 [95% CI = 1.22–3.87]; NNT, 3 [2–10]), but not in reducing global gastrointestinal score (SMD, –0.57 [–1.40 to 0.26]). One (0.4%) of 238 patients in the hypnosis group dropped out due to an adverse event (panic attack). Conclusion: This meta-analysis demonstrated that hypnosis was safe and provided long-term adequate symptom relief in 54% of patients with irritable bowel syndrome refractory to conventional therapy.

Stahl, S. T., S. M. Albert, et al. (2014). **"Coaching in healthy dietary practices in at-risk older adults: A case of indicated depression prevention."** *Am J Psychiatry* 171(5): 499-505.
<http://ajp.psychiatryonline.org/article.aspx?articleid=1866171>

Prevention of major depressive disorder is important because current treatments are only partially adequate in reducing symptom burden and promoting health-related quality of life. Lifestyle interventions may be a desirable prevention strategy for reasons of patient preference, particularly among older patients from minority groups. Using evidence from a randomized depression prevention trial for older adults, the authors found that coaching in healthy dietary practices was potentially effective in protecting at-risk older adults from developing incident episodes of major depression. The authors describe the dietary coaching program (highlighted in a case example) as well as the feasibility and potential efficacy of the program within the context of evidence-based interventions for preventing episodes of major depression and mitigating symptoms of depression. Older adults receiving dietary coaching experienced a low incidence of major depressive episodes and exhibited a 40%-50% decrease in depressive symptoms, as well as enhanced well-being, during the initial 6-week intervention; these gains were sustained over 2 years. The authors also describe why lifestyle interventions like coaching in healthy dietary practices may hold promise as effective, practical, nonstigmatizing interventions for preventing episodes of major depressive disorder in older adults with subsyndromal depressive symptoms.

Stephan, Y., A. R. Sutin, et al. (2014). **"Physical activity and personality development across adulthood and old age: Evidence from two longitudinal studies."** *Journal of Research in Personality* 49(0): 1-7.
<http://www.sciencedirect.com/science/article/pii/S0092656613001487>

Personality traits are associated with a number of health-related factors; less is known about how such factors contribute to adult personality development. Based on evidence for the protective role of physical activity for individual functioning, the present study tests whether physical activity contributes to personality stability and change. Using longitudinal data from the Midlife in the United States study (N = 3758) and the Health and Retirement Study (N = 3774), we found that more physically active individuals declined less on conscientiousness, extraversion, openness and agreeableness, and had higher rank-order stability and profile consistency over time. These findings suggest that physical activity may help preserve personality stability and prevent maladaptive personality changes across adulthood and old age.

ten Brinke, L. F., N. Bolandzadeh, et al. (2014). **"Aerobic exercise increases hippocampal volume in older women with probable mild cognitive impairment: A 6-month randomised controlled trial."** *British Journal of Sports Medicine*.
<http://bjsm.bmj.com/content/early/2014/03/04/bjsports-2013-093184.abstract>

Background Mild cognitive impairment (MCI) is a well-recognised risk factor for dementia and represents a vital opportunity for intervening. Exercise is a promising strategy for combating cognitive decline by improving brain structure and function. Specifically, aerobic training (AT) improved spatial memory and hippocampal volume in healthy community-dwelling

older adults. In older women with probable MCI, we previously demonstrated that resistance training (RT) and AT improved memory. In this secondary analysis, we investigated: (1) the effect of RT and AT on hippocampal volume and (2) the association between change in hippocampal volume and change in memory. Methods 86 women aged 70–80 years with probable MCI were randomly assigned to a 6-month, twice-weekly programme of: (1) AT, (2) RT or (3) balance and tone training (BAT; ie, control). At baseline and trial completion, participants performed a 3T MRI scan to determine hippocampal volume. Verbal memory and learning were assessed by Rey's Auditory Verbal Learning Test. Results Compared with the BAT group, AT significantly improved left, right and total hippocampal volumes ($p \leq 0.03$). After accounting for baseline cognitive function and experimental group, increased left hippocampal volume was independently associated with reduced verbal memory and learning performance as indexed by loss after interference ($r = 0.42$, $p = 0.03$). Conclusions Aerobic training significantly increased hippocampal volume in older women with probable MCI. More research is needed to ascertain the relevance of exercise-induced changes in hippocampal volume on memory performance in older adults with MCI. Trial registration number NCT00958867.

van Ockenburg, S. L., P. de Jonge, et al. (2014). **"Does neuroticism make you old? Prospective associations between neuroticism and leukocyte telomere length."** *Psychological Medicine* 44(04): 723-729. <http://dx.doi.org/10.1017/S0033291713001657>

Background Telomere attrition, causing accelerated aging, might be one of the mechanisms through which neuroticism leads to somatic disease and increased all-cause mortality. In the current study we investigated whether neuroticism is prospectively associated with shorter telomere length (TL), a biological marker of aging. Method Participants were 3432 adults (mean age 52.9 years, range 32–79). Data were collected at baseline (T1) and at two follow-up visits after 4 years (T2) and 6 years (T3). Neuroticism was assessed using the 12-item neuroticism scale of the Revised Eysenck Personality Questionnaire (EPQ-R) at T2 and T3. TL was measured by a monochrome multiplex quantitative polymerase chain reaction (PCR) assay at T1, T2 and T3. A linear mixed model was used to assess whether neuroticism could predict TL prospectively after adjusting for age, sex, body mass index (BMI), frequency of sports, smoking status, presence of chronic diseases and level of education. Results Neuroticism was a significant negative predictor of TL at follow-up ($B = -0.004$, $p = 0.044$) after adjusting for sex, age, baseline TL and various biological and lifestyle factors. Conclusions High neuroticism is significantly and prospectively associated with telomere attrition independent of lifestyle and other risk factors.

van Straten, A., J. Emmelkamp, et al. (2014). **"Guided internet-delivered cognitive behavioural treatment for insomnia: A randomized trial."** *Psychological Medicine* 44(07): 1521-1532. <http://dx.doi.org/10.1017/S0033291713002249>

Background Insomnia is a prevalent problem with a high burden of disease (e.g. reduced quality of life, reduced work capacity) and a high co-morbidity with other mental and somatic disorders. Cognitive behavioural therapy (CBT) is effective in the treatment of insomnia but is seldom offered. CBT delivered through the Internet might be a more accessible alternative. In this study we examined the effectiveness of a guided Internet-delivered CBT for adults with insomnia using a randomized controlled trial (RCT). Method A total of 118 patients, recruited from the general population, were randomized to the 6-week guided Internet intervention ($n = 59$) or to a wait-list control group ($n = 59$). Patients filled out an online questionnaire and a 7-day sleep diary before (T0) and after (T1) the 6-week period. The intervention group received a follow-up questionnaire 3 months after baseline (T2). Results Almost three-quarters (72.9%) of the patients completed the whole intervention. Intention-to-treat (ITT) analysis showed that the treatment had statistically significant medium to large effects ($p < 0.05$; Cohen's d between 0.40 and 1.06), and resulted more often in clinically relevant changes, on all sleep and secondary outcomes with the exception of sleep onset latency (SOL) and number of awakenings (NA). There was a non-significant difference in the reduction in sleep medication between the intervention (a decrease of 6.8%) and control (an increase of 1.8%) groups ($p = 0.20$). Data on longer-term effects were inconclusive. Conclusions This study adds to the growing body of literature that indicates that guided CBT for insomnia can be delivered through the Internet. Patients accept the format and their sleep improves.

Varga, C. M., C. D. Nettles, et al. (2014). **"The interplay of stress and attachment in individuals weathering loss of employment."** *Journal of Research in Personality* 50(0): 23-32. <http://www.sciencedirect.com/science/article/pii/S0092656614000075>

This study addressed two questions concerning the interplay between adult romantic attachment and exposure to stressful circumstances: do stressful events predict fluctuation in romantic attachment during a period of unemployment, and does attachment measured at one point predict later changes in stressors? Stressors and attachment were measured over a six month period following involuntary job loss for a sample of 426 adults. Autoregressive models found evidence for both the stress-effects and stress-generation hypotheses, with more stressors associated with prospective decreases in attachment, and lower attachment associated with prospective increases in stressors. These findings support a more dynamic formulation of the interplay between attachment and exposure to stressors over the months following job loss.

Volta, U., M. Bardella, et al. (2014). **"An Italian prospective multicenter survey on patients suspected of having non-celiac gluten sensitivity."** *BMC Medicine* 12(1): 85. <http://www.biomedcentral.com/1741-7015/12/85>

(Free full text available) BACKGROUND: Non-celiac gluten sensitivity (NCGS) is still an undefined syndrome with several unsettled issues despite the increasing awareness of its existence. We carried out a prospective survey on NCGS in Italian centers for the diagnosis of gluten-related disorders, with the aim of defining the clinical picture of this new syndrome and to establish roughly its prevalence compared with celiac disease. METHODS: From November 2012 to October 2013, 38 Italian centers (27 adult gastroenterology, 5 internal medicine, 4 pediatrics, and 2 allergy) participated in this prospective survey. A questionnaire was used in order to allow uniform and accurate collection of clinical, biochemical, and instrumental data. RESULTS: In total, 486 patients with suspected NCGS were identified in this 1-year period. The female/male ratio was 5.4 to 1, and the mean age was 38 years (range 3-81). The clinical picture was characterized by combined gastrointestinal (abdominal pain, bloating, diarrhea and/or constipation, nausea, epigastric pain, gastroesophageal reflux, aphthous stomatitis) and systemic manifestations (tiredness, headache, fibromyalgia-like joint/muscle pain, leg or arm numbness, 'foggy mind,' dermatitis or skin rash, depression, anxiety, and anemia). In the large majority of patients, the time lapse between gluten ingestion and the appearance of symptoms varied from a few hours to 1 day. The most frequent associated disorders were irritable bowel syndrome (47%), food intolerance (35%) and IgE-mediated allergy (22%). An associated autoimmune disease was detected in 14% of cases. Regarding family history, 18% of our patients had a relative with celiac disease, but no correlation was found between NCGS and positivity for HLA-DQ2/-DQ8. IgG anti-gliadin antibodies were detected in 25% of the patients tested. Only a proportion of patients underwent duodenal biopsy; for those that did, the biopsies showed normal intestinal mucosa (69%) or mild increase in intraepithelial lymphocytes (31%). The ratio between suspected NCGS and new CD diagnoses, assessed in 28 of the participating centers, was 1.15 to 1. CONCLUSIONS: This prospective survey shows that NCGS has a strong correlation with female gender and adult age. Based on our results, the prevalence of NCGS seems to be only slightly higher than that of celiac disease. Please see related article <http://www.biomedcentral.com/1741-7015/12/86>.

Wang, X., Y. Ouyang, et al. (2014). ***Fruit and vegetable consumption and mortality from all causes, cardiovascular disease, and cancer: Systematic review and dose-response meta-analysis of prospective cohort studies.***

(Available in free full text) Objective To examine and quantify the potential dose-response relation between fruit and vegetable consumption and risk of all cause, cardiovascular, and cancer mortality. Data sources Medline, Embase, and the Cochrane library searched up to 30 August 2013 without language restrictions. Reference lists of retrieved articles. Study selection Prospective cohort studies that reported risk estimates for all cause, cardiovascular, and cancer mortality by levels of fruit and vegetable consumption. Data synthesis Random effects models were used to calculate pooled hazard ratios and 95% confidence intervals and to incorporate variation between studies. The linear and non-linear dose-response relations were evaluated with data from categories of fruit and vegetable consumption in each study. Results Sixteen prospective cohort studies were eligible in this meta-analysis. During follow-up periods ranging from 4.6 to 26 years there were 56 423 deaths (11 512 from cardiovascular disease and 16 817 from cancer) among 833 234 participants. Higher consumption of fruit and vegetables was significantly associated with a lower risk of all cause mortality. Pooled hazard ratios of all cause mortality were 0.95 (95% confidence interval 0.92 to 0.98) for an increment of one serving a day of fruit and vegetables (P=0.001), 0.94 (0.90 to 0.98) for fruit (P=0.002), and 0.95 (0.92 to 0.99) for vegetables (P=0.006). There was a threshold around five servings of fruit and vegetables a day, after which the risk of all cause mortality did not reduce further. A significant inverse association was observed for cardiovascular mortality (hazard ratio for each additional serving a day of fruit and vegetables 0.96, 95% confidence interval 0.92 to 0.99), while higher consumption of fruit and vegetables was not appreciably associated with risk of cancer mortality. Conclusions This meta-analysis provides further evidence that a higher consumption of fruit and vegetables is associated with a lower risk of all cause mortality, particularly cardiovascular mortality.

Wong, J. M., N. L. Sin, et al. (2014). ***"A comparison of Cook-Medley hostility subscales and mortality in patients with coronary heart disease: Data from the heart and soul study."*** *Psychosomatic Medicine* 76(4): 311-317
310.1097/PSY.0000000000000059.

http://journals.lww.com/psychosomaticmedicine/Fulltext/2014/05000/A_Comparison_of_Cook_Medley_Hostility_Subcales.10.aspx

Objective: Hostility is associated with adverse outcomes in patients with coronary heart disease (CHD). However, assessment tools used to evaluate hostility in epidemiological studies vary widely. Methods: We administered nine subscales of the Cook-Medley Hostility Scale (CMHS) to 656 outpatients with stable CHD between 2005 and 2007. We used Cox proportional hazards models to determine the association between each hostility subscales and all-cause mortality. We also performed an item analysis using logistic regression to determine the association between each CMHS item and all-cause mortality. Results: There were 136 deaths during 1364 person-years of follow-up. Four of nine CMHS subscales were predictive of mortality in age-adjusted analyses, but only one subscale (the seven-item Williams subscale) was predictive of mortality in multivariable analyses. After adjustment for age, sex, education, smoking, history of heart failure, diabetes, and high-density lipoprotein, each standard deviation increase in the Williams subscale was associated with a 20% increased mortality rate (hazard ratio = 1.20, 95% confidence interval = 1.00–1.43, p = .046), and participants with hostility scores in the highest quartile were twice as likely to die as those in the lowest quartile (hazard ratio = 2.00, 95% confidence interval = 1.10–3.65, p = .023). Conclusions: Among nine variations of the CMHS that we evaluated, a seven-item version of the Williams subscale was the most strongly associated with mortality. Standardizing the assessment of hostility in future epidemiological studies may improve our understanding of the relationship between hostility and mortality in patients with CHD.