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(Aune, Keum et al. 2016; Bellavia, Stilling et al. 2016; Birnbaum, Reis et al. 2016; Bradford, Stewart et al. 2016; Brooks, Schroeder et al. 2016; Dankel, Loenneke et al. 2016; Dankel, Loenneke et al. 2016; Dash, O'Neil et al. 2016; Grosso, Micek et al. 2016; Grosso, Micek et al. 2016; Hallgren, Helgadóttir et al. 2016; Hearing, Chang et al. 2016; Hudson and Fraley 2016; Kocsor, Saxton et al. 2016; Kruger 2016; Loprinzi 2016; Loprinzi 2016; Ma-Kellams and Lerner 2016; McNamara 2016; Mortensen, Damsgaard et al. 2016; Ponocny, Weismayer et al. 2016; Robinson, Wayne et al. 2016; Rutter, Flentje et al. 2016; Salmon, Cuthbertson et al. 2016; Smith, Tripkovic et al. 2016; Trevis, McLachlan et al. 2016; Tsugawa, Jena et al. 2016; Zhang, Brackbill et al. 2016; Aune, Giovannucci et al. 2017; Aune, Sen et al. 2017; Chou, Deyo et al. 2017; Chou, Deyo et al. 2017; Crump, Sundquist et al. 2017; Debrot, Meuwly et al. 2017; Forouzanfar, Liu et al. 2017; Jacka, O'Neil et al. 2017; Kant and Graubard 2017; Karukivi, Vahlberg et al. 2017; Kontis, Bennett et al. 2017; Kyrgiou, Kalliala et al. 2017; Martineau, Jolliffe et al. 2017; Maxwell, Muise et al. 2017; Ploubidis, Sullivan et al. 2017; Primack, Shensa et al. 2017; Scadding, Calderon et al. 2017; Stubbs, Koyanagi et al. 2017; Syse, Veenstra et al. 2017; Wilkes, Kydd et al. 2017)

Aune, D., E. Giovannucci, et al. (2017). ***"Fruit and vegetable intake and the risk of cardiovascular disease, total cancer and all-cause mortality-a systematic review and dose-response meta-analysis of prospective studies."*** Int J Epidemiol. https://academic.oup.com/ije/article/3039477/Fruit

(Free full text available) Background: Questions remain about the strength and shape of the dose-response relationship between fruit and vegetable intake and risk of cardiovascular disease, cancer and mortality, and the effects of specific types of fruit and vegetables. We conducted a systematic review and meta-analysis to clarify these associations. Methods: PubMed and Embase were searched up to 29 September 2016. Prospective studies of fruit and vegetable intake and cardiovascular disease, total cancer and all-cause mortality were included. Summary relative risks (RRs) were calculated using a random effects model, and the mortality burden globally was estimated; 95 studies (142 publications) were included. Results: For fruits and vegetables combined, the summary RR per 200 g/day was 0.92 [95% confidence interval (CI): 0.90-0.94, I 2 = 0%, n = 15] for coronary heart disease, 0.84 (95% CI: 0.76-0.92, I 2 = 73%, n = 10) for stroke, 0.92 (95% CI: 0.90-0.95, I 2 = 31%, n = 13) for cardiovascular disease, 0.97 (95% CI: 0.95-0.99, I 2 = 49%, n = 12) for total cancer and 0.90 (95% CI: 0.87-0.93, I 2 = 83%, n = 15) for all-cause mortality. Similar associations were observed for fruits and vegetables separately. Reductions in risk were observed up to 800 g/day for all outcomes except cancer (600 g/day). Inverse associations were observed between the intake of apples and pears, citrus fruits, green leafy vegetables, cruciferous vegetables, and salads and cardiovascular disease and all-cause mortality, and between the intake of green-yellow vegetables and cruciferous vegetables and total cancer risk. An estimated 5.6 and 7.8 million premature deaths worldwide in 2013 may be attributable to a fruit and vegetable intake below 500 and 800 g/day, respectively, if the observed associations are causal. Conclusions: Fruit and vegetable intakes were associated with reduced risk of cardiovascular disease, cancer and all-cause mortality. These results support public health recommendations to increase fruit and vegetable intake for the prevention of cardiovascular disease, cancer, and premature mortality.

Aune, D., N. Keum, et al. (2016). ***"Nut consumption and risk of cardiovascular disease, total cancer, all-cause and cause-specific mortality: A systematic review and dose-response meta-analysis of prospective studies."*** BMC Med 14(1): 207. https://www.ncbi.nlm.nih.gov/pubmed/27916000

BACKGROUND: Although nut consumption has been associated with a reduced risk of cardiovascular disease and all-cause mortality, data on less common causes of death has not been systematically assessed. Previous reviews missed several studies and additional studies have since been published. We therefore conducted a systematic review and meta-analysis of nut consumption and risk of cardiovascular disease, total cancer, and all-cause and cause-specific mortality. METHODS: PubMed and Embase were searched for prospective studies of nut consumption and risk of cardiovascular disease, total cancer, and all-cause and cause-specific mortality in adult populations published up to July 19, 2016. Summary relative risks (RRs) and 95% confidence intervals (CIs) were calculated using random-effects models. The burden of mortality attributable to low nut consumption was calculated for selected regions. RESULTS: Twenty studies (29 publications) were included in the meta-analysis. The summary RRs per 28 grams/day increase in nut intake was for coronary heart disease, 0.71 (95% CI: 0.63-0.80, I2 = 47%, n = 11), stroke, 0.93 (95% CI: 0.83-1.05, I2 = 14%, n = 11), cardiovascular disease, 0.79 (95% CI: 0.70-0.88, I2 = 60%, n = 12), total cancer, 0.85 (95% CI: 0.76-0.94, I2 = 42%, n = 8), all-cause mortality, 0.78 (95% CI: 0.72-0.84, I2 = 66%, n = 15), and for mortality from respiratory disease, 0.48 (95% CI: 0.26-0.89, I2 = 61%, n = 3), diabetes, 0.61 (95% CI: 0.43-0.88, I2 = 0%, n = 4), neurodegenerative disease, 0.65 (95% CI: 0.40-1.08, I2 = 5.9%, n = 3), infectious disease, 0.25 (95% CI: 0.07-0.85, I2 = 54%, n = 2), and kidney disease, 0.27 (95% CI: 0.04-1.91, I2 = 61%, n = 2). The results were similar for tree nuts and peanuts. If the associations are causal, an estimated 4.4 million premature deaths in the America, Europe, Southeast Asia, and Western Pacific would be attributable to a nut intake below 20 grams per day in 2013. CONCLUSIONS: Higher nut intake is associated with reduced risk of cardiovascular disease, total cancer and all-cause mortality, and mortality from respiratory disease, diabetes, and infections.

Aune, D., A. Sen, et al. (2017). ***"Body mass index, abdominal fatness, fat mass and the risk of atrial fibrillation: A systematic review and dose-response meta-analysis of prospective studies."*** Eur J Epidemiol. https://www.ncbi.nlm.nih.gov/pubmed/28194602

Different adiposity measures have been associated with increased risk of atrial fibrillation, however, results have previously only been summarized for BMI. We therefore conducted a systematic review and meta-analysis of prospective studies to clarify the association between different adiposity measures and risk of atrial fibrillation. PubMed and Embase databases were searched up to October 24th 2016. Summary relative risks (RRs) were calculated using random effects models. Twenty-nine unique prospective studies (32 publications) were included. Twenty-five studies (83,006 cases, 2,405,381 participants) were included in the analysis of BMI and atrial fibrillation. The summary RR was 1.28 (95% confidence interval: 1.20-1.38, I2 = 97%) per 5 unit increment in BMI, 1.18 (95% CI: 1.12-1.25, I2 = 73%, n = 5) and 1.32 (95% CI: 1.16-1.51, I2 = 91%, n = 3) per 10 cm increase in waist and hip circumference, respectively, 1.09 (95% CI: 1.02-1.16, I2 = 44%, n = 4) per 0.1 unit increase in waist-to-hip ratio, 1.09 (95% CI: 1.02-1.16, I2 = 94%, n = 4) per 5 kg increase in fat mass, 1.10 (95% CI: 0.92-1.33, I2 = 90%, n = 3) per 10% increase in fat percentage, 1.10 (95% CI: 1.08-1.13, I2 = 74%, n = 10) per 5 kg increase in weight, and 1.08 (95% CI: 0.97-1.19, I2 = 86%, n = 2) per 5% increase in weight gain. The association between BMI and atrial fibrillation was nonlinear, p nonlinearity < 0.0001, with a stronger association at higher BMI levels, however, increased risk was observed

even at a BMI of 22-24 compared to 20. In conclusion, general and abdominal adiposity and higher body fat mass increase the risk of atrial fibrillation.

Bellavia, A., F. Stilling, et al. (2016). ***"High red meat intake and all-cause cardiovascular and cancer mortality: Is the risk modified by fruit and vegetable intake?"*** The American Journal of Clinical Nutrition 104(4): 1137-1143. http://ajcn.nutrition.org/content/104/4/1137.abstract

Background: High red meat consumption is associated with a shorter survival and higher risk of cardiovascular disease (CVD), cancer, and all-cause mortality. Fruit and vegetable (FV) consumption is associated with a longer survival and lower mortality risk. Whether high FV consumption can counterbalance the negative impact of high red meat consumption is unknown. Objective: We evaluated 2 large prospective cohorts of Swedish men and women (the Swedish Mammography Cohort and the Cohort of Swedish Men) to determine whether the association between red meat consumption and the risk of all-cause, CVD, and cancer-specific mortality differs across amounts of FV intake. Design: The study population included 74,645 Swedish men and women. Red meat and FV consumption were assessed through a self-administered questionnaire. We estimated HRs of all-cause, CVD, and cancer mortality according to quintiles of total red meat consumption. We next investigated possible interactions between red meat and FV consumption and evaluated the dose-response associations at low, medium, and high FV intake. Results: Compared with participants in the lowest quintile of total red meat consumption, those in the highest quintile had a 21% increased risk of all-cause mortality (HR: 1.21; 95% CI: 1.13, 1.29), a 29% increased risk of CVD mortality (HR: 1.29; 95% CI: 1.14, 1.46), and no increase in the risk of cancer mortality (HR: 1.00; 95% CI: 0.88, 1.43). Results were remarkably similar across amounts of FV consumption, and no interaction between red meat and FV consumption was detected. Conclusion: High intakes of red meat were associated with a higher risk of all-cause and CVD mortality. The increased risks were consistently observed in participants with low, medium, and high FV consumption.

Birnbaum, G. E., H. T. Reis, et al. (2016). ***"Intimately connected: The importance of partner responsiveness for experiencing sexual desire."*** J Pers Soc Psychol 111(4): 530-546. http://psycnet.apa.org/journals/psp/111/4/530/

Sexual desire tends to subside gradually over time, with many couples failing to maintain desire in their long-term relationships. Three studies employed complementary methodologies to examine whether partner responsiveness, an intimacy-building behavior, could instill desire for one's partner. In Study 1, participants were led to believe that they would interact online with their partner. In reality, they interacted with either a responsive or an unresponsive confederate. In Study 2, participants interacted face-to-face with their partner, and judges coded their displays of responsiveness and sexual desire. Study 3 used a daily experiences methodology to examine the mechanisms underlying the responsiveness-desire linkage. Overall, responsiveness was associated with increased desire, but more strongly in women. Feeling special and perceived partner mate value explained the responsiveness-desire link, suggesting that responsive partners were seen as making one feel valued as well as better potential mates for anyone and thus as more sexually desirable.

Bradford, K., J. W. Stewart, et al. (2016). ***"Avoid falling for a jerk(ette): Effectiveness of the premarital interpersonal choices and knowledge program among emerging adults."*** Journal of Marital and Family Therapy 42(4): 630-644. http://dx.doi.org/10.1111/jmft.12174

Premarital education may help emerging adults form healthy relationships, but evaluation research is needed, particularly with community samples. We studied emerging adults in the Premarital Interpersonal Choices and Knowledge (PICK) program, using a pre- to post- and a posttest-then-retrospective-pretest design to examine change in perceived relationship skills, partner selection, relational patterns, and relationship behaviors and attitudes. Mixed models analyses showed that scores for the treatment group (n = 682) increased from pre to post on all four outcomes. Changes in scores for the nonequivalent comparison group (n = 462) were nonsignificant. In addition, significant differences between pre- and retrospective prescores demonstrated evidence for response shift bias. The results suggest that the PICK program helps participants increase their knowledge regarding the components of healthy relationship formation.

Brooks, A. W., J. Schroeder, et al. (2016). ***"Don't stop believing: Rituals improve performance by decreasing anxiety."*** Organizational Behavior and Human Decision Processes 137: 71-85. http://www.sciencedirect.com/science/article/pii/S074959781630437X

From public speaking to first dates, people frequently experience performance anxiety. And when experienced immediately before or during performance, anxiety harms performance. Across a series of experiments, we explore the efficacy of a common strategy that people employ to cope with performance-induced anxiety: rituals. We define a ritual as a predefined sequence of symbolic actions often characterized by formality and repetition that lacks direct instrumental purpose. Using different instantiations of rituals and measures of anxiety (both physiological and self-report), we find that enacting rituals improves performance in public and private performance domains by decreasing anxiety. Belief that a specific series of behaviors constitute a ritual is a critical ingredient to reduce anxiety and improve performance: engaging in behaviors described as a "ritual" improved performance more than engaging in the same behaviors described as "random behaviors." (Available in free full text at http://www.hbs.edu/faculty/Pages/item.aspx?num=51401).

Chou, R., R. Deyo, et al. (2017). ***"Nonpharmacologic therapies for low back pain: A systematic review for an american college of physicians clinical practice guideline."*** Annals of Internal Medicine. http://dx.doi.org/10.7326/M16-2459

(Available in free full text) Background: A 2007 American College of Physicians guideline addressed nonpharmacologic treatment options for low back pain. New evidence is now available.Purpose:To systematically review the current evidence on nonpharmacologic therapies for acute or chronic nonradicular or radicular low back pain. Data Sources: Ovid MEDLINE (January 2008 through February 2016), Cochrane Central Register of Controlled Trials, Cochrane Database of Systematic Reviews, and reference lists. Study Selection: Randomized trials of 9 nonpharmacologic options versus sham treatment, wait list, or usual care, or of 1 nonpharmacologic option versus another. Data Extraction: One investigator abstracted data, and a second checked abstractions for accuracy; 2 investigators independently assessed study quality. Data Synthesis: The number of trials evaluating nonpharmacologic therapies ranged from 2 (tai chi) to 121 (exercise). New evidence indicates that tai chi (strength of evidence [SOE], low) and mindfulness-based stress reduction (SOE, moderate) are effective for chronic low back pain and strengthens previous findings regarding the effectiveness of yoga (SOE, moderate). Evidence continues to support the effectiveness of exercise, psychological therapies, multidisciplinary rehabilitation, spinal manipulation, massage, and acupuncture for chronic low back pain (SOE, low to moderate). Limited evidence shows that acupuncture is modestly effective for acute low back pain (SOE, low). The magnitude of pain benefits was small to moderate and generally short term; effects on function generally were smaller than effects on pain. Limitation: Qualitatively synthesized new trials with prior meta-analyses, restricted to English-language studies; heterogeneity in treatment techniques; and inability to exclude placebo effects. Conclusion: Several nonpharmacologic therapies for primarily chronic low back pain are associated with small to moderate, usually short-term effects on pain; findings include new evidence on mind–body interventions.

Chou, R., R. Deyo, et al. (2017). ***"Systemic pharmacologic therapies for low back pain: A systematic review for an american college of physicians clinical practice guideline."*** Annals of Internal Medicine. http://dx.doi.org/10.7326/M16-2458

(Available in free full text) Background: A 2007 American College of Physicians guideline addressed pharmacologic options for low back pain. New evidence and medications have now become available. Purpose: To review the current evidence on systemic pharmacologic therapies for acute or chronic nonradicular or radicular low back pain. Data Sources: Ovid MEDLINE (January 2008 through November 2016), Cochrane Central Register of Controlled Trials, Cochrane Database of Systematic Reviews, and reference lists. Study Selection: Randomized trials that reported pain, function, or harms of systemic medications versus placebo or another intervention. Data Extraction: One investigator abstracted data, and a second verified accuracy; 2 investigators independently assessed study quality. Data Synthesis: The number of trials ranged from 9 (benzodiazepines) to 70 (nonsteroidal anti-inflammatory drugs). New evidence found that acetaminophen was ineffective for acute low back pain, nonsteroidal anti-inflammatory drugs had smaller benefits for chronic low back pain than previously observed, duloxetine was effective for chronic low back pain, and benzodiazepines were ineffective for radiculopathy. For opioids, evidence remains limited to short-term trials showing modest effects for chronic low back pain; trials were not designed to assess serious harms. Skeletal muscle relaxants are effective for short-term pain relief in acute low back pain but caused sedation. Systemic corticosteroids do not seem to be effective. For effective interventions, pain relief was small to moderate and generally short-term; improvements in function were generally smaller. Evidence is insufficient to determine the effects of antiseizure medications. Limitations: Qualitatively synthesized new trials with prior meta-analyses. Only English-language studies were included, many of which had methodological shortcomings. Medications injected for local effects were not addressed. Conclusion: Several systemic medications for low back pain are associated with small to moderate, primarily short-term effects on pain. New evidence suggests that acetaminophen is ineffective for acute low back pain, and duloxetine is associated with modest effects for chronic low back pain.

Crump, C., J. Sundquist, et al. (2017). ***"Interactive effects of aerobic fitness, strength, and obesity on mortality in men."*** American Journal of Preventive Medicine 52(3): 353-361. http://dx.doi.org/10.1016/j.amepre.2016.10.002

Introduction Low aerobic fitness, low muscular strength, and obesity have been associated with premature mortality, but their interactive effects are unknown. This study examined interactions among these common, modifiable factors, to help inform more-effective preventive interventions. Methods This national cohort study included all 1,547,478 military conscripts in Sweden during 1969–1997 (97%–98% of all men aged 18 years each year). Aerobic fitness, muscular strength, and BMI measurements were examined in relation to all-cause and cardiovascular mortality through 2012 (maximum age, 62 years). Data were collected/analyzed in 2015–2016. Results Low aerobic fitness, low muscular strength, and obesity at age 18 years were independently associated with higher all-cause and cardiovascular mortality in adulthood. The combination of low aerobic fitness and muscular strength (lowest versus highest tertiles) was associated with twofold all-cause mortality (adjusted hazard ratio=2.01; 95% CI=1.93, 2.08; p<0.001; mortality rates per 100,000 person years, 247.2 vs 73.8), and 2.6-fold cardiovascular mortality (2.63; 95% CI=2.38, 2.91; p<0.001; 43.9 vs 8.3). These factors also had positive additive and multiplicative interactions in relation to all-cause mortality (their combined effect exceeded the sum or product of their separate effects; p<0.001), and were associated with higher mortality even among men with normal BMI. Conclusions Low aerobic fitness, low muscular strength, and obesity at age 18 years were associated with increased mortality in adulthood, with interactive effects between aerobic fitness and muscular strength. Preventive interventions should begin early in life and include both aerobic fitness and muscular strength, even among those with normal BMI.

Dankel, S. J., J. P. Loenneke, et al. (2016). ***"Determining the importance of meeting muscle-strengthening activity guidelines: Is the behavior or the outcome of the behavior (strength) a more important determinant of all-cause mortality?"*** Mayo Clinic proceedings 91(2): 166-174. http://europepmc.org/abstract/MED/26723715 http://dx.doi.org/10.1016/j.mayocp.2015.10.017

To determine whether the behavioral participation in muscle-strengthening activity (MSA) or the strength outcome produces the largest reduction in all-cause mortality risk.The 1999-2002 National Health and Nutritional Examination Survey was used, with follow-up of up to 12.6 years (mean, 9.9 years) (N=2773 adults aged ≥50 years). Participants were placed into 4 groups based on 2 dichotomously categorized variables: lower-extremity strength (LES) of the knee extensors (top quartile) and adherence to MSA guidelines (≥2 MSA sessions per week). Approximately 21% of the population died during follow-up.Compared with individuals not meeting MSA guidelines and not in top quartile for LES, the adjusted hazard ratios (HRs) and 95% CIs were as follows: (1) meets MSA guidelines but not in top quartile for LES (HR=0.96; 95% CI, 0.63-1.45; P=.84), (2) in top quartile for LES but does not meet MSA guidelines (HR=0.54; 95% CI, 0.42-0.71; P<.001), and (3) in top quartile for LES and meets MSA guidelines (HR=0.28; 95% CI, 0.12-0.66; P=.005). Further analyses revealed that individuals in the top quartile for LES who also met MSA and moderate to vigorous physical activity guidelines were at even further reduced risk for premature all-cause mortality (HR=0.23; 95% CI, 0.08-0.61; P=.005).These results demonstrate that muscle strength seems to be more important than the behavioral participation in MSA for reducing the risk of premature all-cause mortality.

Dankel, S. J., J. P. Loenneke, et al. (2016). ***"Dose-dependent association between muscle-strengthening activities and all-cause mortality: Prospective cohort study among a national sample of adults in the USA."*** Archives of cardiovascular diseases. http://europepmc.org/abstract/MED/27591819 http://dx.doi.org/10.1016/j.acvd.2016.04.005

We have a limited understanding of the association between behavioural participation in muscle-strengthening activities (MSA) and all-cause mortality.To determine the effect of MSA on all-cause mortality, and examine a potential dose-response relationship between the frequency with which MSA are performed and the incidence of all-cause mortality.Individuals (8772 adults aged≥20years) from the 2003-2006 National Health and Nutritional Examination Survey were evaluated for baseline characteristics, then followed for an average of 6.7years. MSA were assessed at baseline as the number of self-reported sessions completed within the past 30days. Analyses were performed in 2015.Only 18.6% of individuals met MSA guidelines (2-3 MSA sessions/week) at baseline, while those performing any form of MSA had a 23% reduced risk of all-cause mortality (hazard ratio [HR]: 0.77; 95% confidence interval: 0.60-0.98; P=0.04). Additionally, we created a five-category variable to determine whether a dose-response relationship existed between MSA and premature mortality; only individuals performing 8-14 sessions over a 30-day period (current MSA guidelines) had a reduced risk of all-cause mortality (HR: 0.70; P=0.02). Results were similar for CVD-specific mortality.The national recommendations that 2-3 MSA sessions be performed per week appear to be most effective at reducing the risk of premature all-cause mortality; however, despite these recommendations, the majority of the adult population in the USA still fails to perform any MSA. Future studies should determine strategies for increasing adherence to these established guidelines.

Dash, S. R., A. O'Neil, et al. (2016). ***"Diet and common mental disorders: The imperative to translate evidence into action."*** Frontiers in Public Health 4: 81. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4850164/

(Available in free full text) The globalization of the food industry has lead to substantial dietary changes across developed and developing economies, comprising a shift toward the consumption of higher energy, less nutritious foods at the expense of traditional, more healthful, dietary patterns. These dietary changes have led to clear public health challenges as the burden of obesity and other diet-related non-communicable disorders (NCDs) continue to rise. In 2015, the Global Burden of Disease study identified unhealthy diet as the leading cause of early mortality worldwide. At the same time, mental and substance use disorders are recognized as the leading contributors to global disability. Of these, the common mental disorders (CMDs) – depression and anxiety – contribute the greatest proportion of disability, accounting for 40.5 and 14.6% of disease burden respectively. Only recently has it been recognized that unhealthy diet and CMDs are related: unhealthy diet is a significant risk factor not only for NCDs, such as cardiovascular diseases, some cancers, and diabetes, but also for CMDs. Dietary interventions may, thus, provide a far-reaching and low risk public health opportunity for the prevention and treatment of CMDs.

Debrot, A., N. Meuwly, et al. (2017). ***"More than just sex: Affection mediates the association between sexual activity and well-being."*** Personality and Social Psychology Bulletin 43(3): 287-299. http://journals.sagepub.com/doi/abs/10.1177/0146167216684124

Positive interpersonal interactions such as affection are central to well-being. Sex is associated with greater individual well-being, but little is known about why this occurs. We predicted that experienced affection would account for the association between sex and well-being. Cross-sectional results indicated that affection mediated the association between sex and both life satisfaction (Study 1) and positive emotions (however, among men only in Study 2). In Study 3, an experience sampling study with 106 dual-earner couples with children, affection mediated the association between sex and increased positive affect in daily life. Cross-lagged analyses in Study 3 to 4 supported the predicted direction of the associations. Moreover, the strength of the daily association between sex and positive affect predicted both partners' relationship satisfaction 6 months later. Our findings underscore the importance of affection and positive affect for understanding how sex promotes well-being and has long-term relational benefits. The paper starts by quoting Anais Nin - "Only the united beat of sex and heart together can create ecstasy" and goes on in its introductory section to say: "Decades of research indicate that social relationships are a basic human need (Baumeister & Leary, 1995), as they are crucial for health and well-being (e.g., Holt-Lunstad, Smith, Layton, & Brayne, 2010). Most studies linking close relationships to well-being have focused on social support, while neglecting the importance of nonverbal interactions, such as sex or touch (Gallace & Spence, 2010; Impett, Muise, & Peragine, 2014). Sexual activity in romantic relationships is a nonverbal interaction often experienced as highly intimate (e.g., Muise & Impett, 2016). Moreover, the literature suggests a robust positive association between sexual frequency and well-being (e.g., Blanchflower & Oswald, 2004; Muise, Schimmack, & Impett, 2016). However, little is known about what accounts for this association. Sexuality research has tended to neglect relational aspects of sexuality (Impett et al., 2014). As illustrated by Anaïs Nin's quote, sex should be the most rewarding when coupled with an affectionate connection to the partner. This article aims to merge research on sexuality with research on close relationships (Diamond, 2013) to test the hypothesis that sexual activity is associated with affectionate experiences with the partner, in turn promoting positive emotions and well-being. Sexuality and Well-Being The link between having an active and satisfying sexual life and individual well-being has received strong support. In a large nationally representative U.S. sample, sexual frequency was associated with greater general happiness (Blanchflower & Oswald, 2004). In a large international study, sexual frequency and sexual satisfaction were associated with greater life happiness in older adults (Laumann et al., 2006). In addition, Muise, Schimmack, et al. (2016) underscore the relevance of these basic findings: the size of the difference in well-being for people having sex once a week, compared with those having sex less than once a month, was greater than the size of the difference in well-being for those making US$75,000 compared with US$25,000 a year—a US$50,000 difference." [See too the excellent BPS Digest discussion of this article at https://digest.bps.org.uk/2017/02/27/its-all-the-cuddling-psychologists-explore-why-people-who-have-more-sex-are-happier/].

Forouzanfar, M. H., P. Liu, et al. (2017). ***"Global burden of hypertension and systolic blood pressure of at least 110 to 115 mm hg, 1990-2015."*** JAMA 317(2): 165-182. http://dx.doi.org/10.1001/jama.2016.19043

(Available in free full text) Importance Elevated systolic blood (SBP) pressure is a leading global health risk. Quantifying the levels of SBP is important to guide prevention policies and interventions.Objective To estimate the association between SBP of at least 110 to 115 mm Hg and SBP of 140 mm Hg or higher and the burden of different causes of death and disability by age and sex for 195 countries and territories, 1990-2015. Design A comparative risk assessment of health loss related to SBP. Estimated distribution of SBP was based on 844 studies from 154 countries (published 1980-2015) of 8.69 million participants. Spatiotemporal Gaussian process regression was used to generate estimates of mean SBP and adjusted variance for each age, sex, country, and year. Diseases with sufficient evidence for a causal relationship with high SBP (eg, ischemic heart disease, ischemic stroke, and hemorrhagic stroke) were included in the primary analysis. Main Outcomes and Measures Mean SBP level, cause-specific deaths, and health burden related to SBP (≥110-115 mm Hg and also ≥140 mm Hg) by age, sex, country, and year. Results Between 1990-2015, the rate of SBP of at least 110 to 115 mm Hg increased from 73 119 (95% uncertainty interval [UI], 67 949-78 241) to 81 373 (95% UI, 76 814-85 770) per 100 000, and SBP of 140 mm Hg or higher increased from 17 307 (95% UI, 17 117-17 492) to 20 526 (95% UI, 20 283-20 746) per 100 000. The estimated annual death rate per 100 000 associated with SBP of at least 110 to 115 mm Hg increased from 135.6 (95% UI, 122.4-148.1) to 145.2 (95% UI 130.3-159.9) and the rate for SBP of 140 mm Hg or higher increased from 97.9 (95% UI, 87.5-108.1) to 106.3 (95% UI, 94.6-118.1). Loss of disability-adjusted life-years (DALYs) associated with SBP of at least 110 to 115 mm Hg increased from 148 million (95% UI, 134-162 million) to 211 million (95% UI, 193-231 million), and for SBP of 140 mm Hg or higher, the loss increased from 95.9 million (95% UI, 87.0-104.9 million) to 143.0 million (95% UI, 130.2-157.0 million). The largest numbers of SBP-related deaths were caused by ischemic heart disease (4.9 million [95% UI, 4.0-5.7 million]; 54.5%), hemorrhagic stroke (2.0 million [95% UI, 1.6-2.3 million]; 58.3%), and ischemic stroke (1.5 million [95% UI, 1.2-1.8 million]; 50.0%). In 2015, China, India, Russia, Indonesia, and the United States accounted for more than half of the global DALYs related to SBP of at least 110 to 115 mm Hg. Conclusions and Relevance In international surveys, although there is uncertainty in some estimates, the rate of elevated SBP (≥110-115 and ≥140 mm Hg) increased substantially between 1990 and 2015, and DALYs and deaths associated with elevated SBP also increased. Projections based on this sample suggest that in 2015, an estimated 3.5 billion adults had SBP of at least 110 to 115 mm Hg and 874 million adults had SBP of 140 mm Hg or higher.

Grosso, G., A. Micek, et al. (2016). ***"Coffee, tea, caffeine and risk of depression: A systematic review and dose–response meta-analysis of observational studies."*** Molecular Nutrition & Food Research 60(1): 223-234. http://dx.doi.org/10.1002/mnfr.201500620

Scope: The aim of the study was to systematically review and analyze results from observational studies on coffee, caffeine, and tea consumption and association or risk of depression. Methods and results: Embase and PubMed databases were searched from inception to June 2015 for observational studies reporting the odds ratios or relative risks (RRs) and 95% confidence intervals (CI) of depression by coffee/tea/caffeine consumption. Random effects models, subgroup analyses, and dose–response analyses were performed. Twelve studies with 23 datasets were included in the meta-analysis, accounting for a

total of 346 913 individuals and 8146 cases of depression. Compared to individuals with lower coffee consumption, those with higher intakes had pooled RR of depression of 0.76 (95% CI: 0.64, 0.91). Dose–response effect suggests a nonlinear J-shaped relation between coffee consumption and risk of depression with a peak of protective effect for 400 mL/day. A borderline nonsignificant association between tea consumption and risk of depression was found (RR 0.70, 95% CI: 0.48, 1.01), while significant results were found only for analysis of prospective studies regarding caffeine consumption (RR = 0.84, 95% CI: 0.75, 0.93). Conclusion: This study suggests a protective effect of coffee and, partially, of tea and caffeine on risk of depression.

Grosso, G., A. Micek, et al. (2016). ***"Dietary n-3 pufa, fish consumption and depression: A systematic review and meta-analysis of observational studies."*** Journal of Affective Disorders 205: 269-281. //www.sciencedirect.com/science/article/pii/S0165032716307546

Background Fish consumption and n-3 polyunsaturated fatty acids (PUFA) have been hypothesized to exert preventive effects toward depressive disorders, but findings are contrasting. We aimed to systematically review and perform meta-analysis of results from observational studies exploring the association between fish, n-3 PUFA dietary intake, and depression. Methods A search on the main bibliographic source of the observational studies up to August 2015 was performed. Random-effects models of the highest versus the lowest (reference) category of exposure and dose-response meta-analysis were performed. Results A total of 31 studies including 255,076 individuals and over 20,000 cases of depression, were examined. Analysis of 21 datasets investigating relation between fish consumption and depression resulted in significant reduced risk (RR=0.78, 95% CI: 0.69, 0.89), with a linear dose-response despite with moderate heterogeneity. Pooled risk estimates of depression for extreme categories of both total n-3 PUFA and fish-derived n-3 PUFA [eicosapentaenoic acid (EPA)+docosahexaenoic acid (DHA)] resulted in decreased risk for the highest compared with the lowest intake (RR=0.78, 95% CI: 0.67, 0.92 and RR=0.82, 95% CI: 0.73, 0.92, respectively) and dose-response analysis revealed a J-shaped association with a peak decreased risk for 1.8 g/d intake of n-3 PUFA (RR=0.30, 95% CI: 0.09, 0.98). Limitation Design of the studies included and confounding due to lack adjustment for certain variables may exist. Conclusions The present analysis supports the hypothesis that dietary n-3 PUFA intake are associated with lower risk of depression.

Hallgren, M., B. Helgadóttir, et al. (2016). ***"Exercise and internet-based cognitive–behavioural therapy for depression: Multicentre randomised controlled trial with 12-month follow-up."*** The British Journal of Psychiatry 209(5): 414-420

Background Evidence-based treatment of depression continues to grow, but successful treatment and maintenance of treatment response remains limited. Aims To compare the effectiveness of exercise, internet-based cognitive–behavioural therapy (ICBT) and usual care for depression. Method A multicentre, three-group parallel, randomised controlled trial was conducted with assessment at 3 months (post-treatment) and 12 months (primary end-point). Outcome assessors were masked to group allocation. Computer-generated allocation was performed externally in blocks of 36 and the ratio of participants per group was 1:1:1. In total, 945 adults with mild to moderate depression aged 18–71 years were recruited from primary healthcare centres located throughout Sweden. Participants were randomly assigned to one of three 12-week interventions: supervised group exercise, clinician-supported ICBT or usual care by a physician. The primary outcome was depression severity assessed by the Montgomery–Åsberg Depression Rating Scale (MADRS). Results The response rate at 12-month follow-up was 84%. Depression severity reduced significantly in all three treatment groups in a quadratic trend over time. Mean differences in MADRS score at 12 months were 12.1 (ICBT), 11.4 (exercise) and 9.7 (usual care). At the primary end-point the group × time interaction was significant for both exercise and ICBT. Effect sizes for both interventions were small to moderate. Conclusions The long-term treatment effects reported here suggest that prescribed exercise and clinician-supported ICBT should be considered for the treatment of mild to moderate depression in adults.

Hearing, C. M., W. C. Chang, et al. (2016). ***"Physical exercise for treatment of mood disorders: A critical review."*** Curr Behav Neurosci Rep 3: 350-359. http://paperity.org/p/78253682/physical-exercise-for-treatment-of-mood-disorders-a-critical-review

(Available in free full text) The purpose of this review is to critically assess the evidence for exercise as an adjunct intervention for major depressive disorder and bipolar disorder, chronic conditions characterized by frequent comorbid conditions as well as interepisodic symptoms with poor quality of life and impaired functioning. Individuals with these mood disorders are at higher risk of cardiovascular disease and premature death in part because of increased rates of obesity, inactivity, and diabetes mellitus compared to the general population. Exercise may not only mitigate the increased risk of cardiovascular disease, but could also potentially improve the long term outcomes of mood disorders. Recent findings We conducted a literature review on the impact of exercise on mood disorders and associated comorbid conditions as well as possible biological mechanisms. We found that exercise impacts both the physical health parameters of mood disorders as well as mental health outcomes. Exercise also positively impacts conditions frequently comorbid with mood disorders (i.e. anxiety, pain, and insomnia). There are multiple candidate biomarkers for exercise, with brain-derived neurotrophic factor and oxidative stress as two main promising components of exercise's anti-depressant effect. Summary Exercise appears to be a promising adjunct treatment for mood disorders. We conclude with recommendations for future research of exercise as an adjunct intervention for mood disorders.

Hudson, N. W. and R. C. Fraley (2016). ***"Adult attachment and perceptions of closeness."*** Personal Relationships: n/a-n/a. http://dx.doi.org/10.1111/pere.12166

An online sample of more than 150,000 participants was used to examine whether—in addition to predicting how much intimacy people want—attachment styles also predict how people define and perceive intimacy. Results indicated that, as compared with relatively secure individuals, people with high levels of attachment anxiety required more time, affection, and self-disclosure to construe a relationship as "close." Additionally, anxious individuals perceived less intimacy in relationship vignettes than did their less anxious peers. In contrast, highly avoidant individuals required less time, affection, and self-disclosure to define a relationship as "close," and they perceived more intimacy in vignettes than did their more secure peers. These findings indicate that people who are relatively anxious not only want more intimacy in their relationships, but they are also less likely to perceive intimacy, as compared with their less anxious peers. Conversely, people high in avoidance not only want less intimacy, but they are also more sensitive to its presence, as compared with their less avoidant peers.

Jacka, F. N., A. O'Neil, et al. (2017). ***"A randomised controlled trial of dietary improvement for adults with major depression (the 'smiles' trial)."*** BMC Medicine 15(1): 23. http://dx.doi.org/10.1186/s12916-017-0791-y

(Available in free full text) Background The possible therapeutic impact of dietary changes on existing mental illness is largely unknown. Using a randomised controlled trial design, we aimed to investigate the efficacy of a dietary improvement program for the treatment of major depressive episodes. Methods 'SMILES' was a 12-week, parallel-group, single blind, randomised controlled trial of an adjunctive dietary intervention in the treatment of moderate to severe depression. The intervention consisted of seven individual nutritional consulting sessions delivered by a clinical dietician. The control condition comprised a social support protocol to the same visit schedule and length. Depression symptomatology was the primary

endpoint, assessed using the Montgomery–Åsberg Depression Rating Scale (MADRS) at 12 weeks. Secondary outcomes included remission and change of symptoms, mood and anxiety. Analyses utilised a likelihood-based mixed-effects model repeated measures (MMRM) approach. The robustness of estimates was investigated through sensitivity analyses. Results We assessed 166 individuals for eligibility, of whom 67 were enrolled (diet intervention, n = 33; control, n = 34). Of these, 55 were utilising some form of therapy: 21 were using psychotherapy and pharmacotherapy combined; 9 were using exclusively psychotherapy; and 25 were using only pharmacotherapy. There were 31 in the diet support group and 25 in the social support control group who had complete data at 12 weeks. The dietary support group demonstrated significantly greater improvement between baseline and 12 weeks on the MADRS than the social support control group, $t(60.7) = 4.38$, $p < 0.001$, Cohen's $d = -1.16$. Remission, defined as a MADRS score <10, was achieved for 32.3% (n = 10) and 8.0% (n = 2) of the intervention and control groups, respectively ($\chi 2$ (1) = 4.84, p = 0.028); number needed to treat (NNT) based on remission scores was 4.1 (95% CI of NNT 2.3–27.8). A sensitivity analysis, testing departures from the missing at random (MAR) assumption for dropouts, indicated that the impact of the intervention was robust to violations of MAR assumptions. Conclusions These results indicate that dietary improvement may provide an efficacious and accessible treatment strategy for the management of this highly prevalent mental disorder, the benefits of which could extend to the management of common co-morbidities.

Kant, A. K. and B. I. Graubard (2017). ***"A prospective study of water intake and subsequent risk of all-cause mortality in a national cohort."*** The American Journal of Clinical Nutrition 105(1): 212-220. http://ajcn.nutrition.org/content/105/1/212.abstract

Background: Water, an essential nutrient, is believed to be related to a variety of health outcomes. Published studies have examined the association of fluid or beverage intake with risk of mortality from coronary diseases, diabetes, or cancer, but few studies have examined the association of total water intake with all-cause mortality. Objective: We examined prospective risk of mortality from all causes in relation to intakes of total water and each of the 3 water sources.Design: We used public-domain, mortality-linked water intake data from the NHANES conducted in 1988–1994 and 1999–2004 for this prospective cohort study (n = 12,660 women and 12,050 men; aged ≥25 y). Mortality follow-up was completed through 31 December 2011. We used sex-specific Cox proportional hazards regression methods that were appropriate for complex surveys to examine the independent associations of plain water, beverage water, water in foods, and total water with multiple covariate–adjusted risk of mortality from all causes. Results: Over a median of 11.4 y of follow-up, 3504 men and 3032 women died of any cause in this cohort. In men, neither total water intake nor each of the individual water source variables (plain water, water in beverages, and water in foods) was independently related with risk of all-cause mortality. In women, risk of mortality increased slightly in the highest quartile of total or plain water intake but did not approach the Bonferroni-corrected level of significance of $P < 0.002$. Conclusions: There was no survival advantage in association with higher total or plain water intake in men or women in this national cohort. The slight increase in risk of mortality noted in women with higher total and plain water intakes may be spurious and requires further investigation.

Karukivi, M., T. Vahlberg, et al. (2017). ***"Clinical importance of personality difficulties: Diagnostically sub-threshold personality disorders."*** BMC Psychiatry 17(1): 16. http://dx.doi.org/10.1186/s12888-017-1200-y

(Available in free full text) Background Current categorical classification of personality disorders has been criticized for overlooking the dimensional nature of personality and that it may miss some sub-threshold personality disturbances of clinical significance. We aimed to evaluate the clinical importance of these conditions. For this, we used a simple four-level dimensional categorization based on the severity of personality disturbance. Methods The sample consisted of 352 patients admitted to mental health services. All underwent diagnostic assessments (SCID-I and SCID-II) and filled in questionnaires concerning their social situation and childhood adversities, and other validated tools, including the Beck Depression Inventory (BDI), Alcohol Use Disorders Identification Test (AUDIT), health-related quality of life (15D), and the five-item Mental Health Index (MHI-5). The patients were categorized into four groups according to the level of personality disturbance: 0 = No personality disturbance, 1 = Personality difficulty (one criterion less than threshold for one or more personality disorders), 2 = Simple personality disorder (one personality disorder), and 3 = Complex/Severe personality disorder (two or more personality disorders or any borderline and antisocial personality disorder). Results The proportions of the groups were as follows: no personality disturbance 38.4% (n = 135), personality difficulty 14.5% (n = 51), simple personality disorder 19.9% (n = 70), and complex/severe personality disorder 24.4% (n = 86). Patients with no personality disturbance were significantly differentiated ($p < 0.05$) from the other groups regarding the BDI, 15D, and MHI-5 scores as well as the number of Axis I diagnoses. Patients with complex/severe personality disorders stood out as being worst off. Social dysfunction was related to the severity of the personality disturbance. Patients with a personality difficulty or a simple personality disorder had prominent symptoms and difficulties, but the differences between these groups were mostly non-significant. Conclusions An elevated severity level of personality disturbance is associated with an increase in psychiatric morbidity and social dysfunction. Diagnostically sub-threshold personality difficulties are of clinical significance and the degree of impairment corresponds to actual personality disorders. Since these two groups did not significantly differ from each other, our findings also highlight the complexity related to the use of diagnostic thresholds for separate personality disorders.

Kocsor, F., T. K. Saxton, et al. (2016). ***"Preference for faces resembling opposite-sex parents is moderated by emotional closeness in childhood."*** Personality and Individual Differences 96: 23-27. http://www.sciencedirect.com/science/article/pii/S0191886916301209

Several studies have found that individuals select partners who resemble their parents. The evidence for this effect seems stronger in relation to opposite-sex than same-sex parents, although the ultimate-level biological explanations put forward to explain these preferences do not seem to require that they need to be built on the appearance of the opposite-sex parent, rather than any other immediate family member. We set out to revisit this question, while assessing face preferences rather than partner choice. Face preferences might uncover more subtle effects than partner choice, as they can elucidate preferences in an unconstrained environment. We presented participants with faces manipulated to resemble their mother, father or self, but did not find that they selected these faces as more suitable for relationships than control faces. However, consistent with previous work, participants who reported less childhood rejection by their opposite-sex parent selected faces that resembled that parent significantly more frequently than control faces. Taken together with previous work, opposite-sex parental faces seem more important than same-sex parental faces in shaping partner preferences, and childhood relationships seem to modify potential attraction to parent-resembling faces. Despite some inconsistent findings, this effect has been detected across the different methodologies used to assess preferences.

Kontis, V., J. E. Bennett, et al. (2017). ***"Future life expectancy in 35 industrialised countries: Projections with a bayesian model ensemble."*** The Lancet. http://www.sciencedirect.com/science/article/pii/S0140673616323819

(Available in free full text) Summary Background Projections of future mortality and life expectancy are needed to plan for health and social services and pensions. Our aim was to forecast national age-specific mortality and life expectancy using an

approach that takes into account the uncertainty related to the choice of forecasting model. Methods We developed an ensemble of 21 forecasting models, all of which probabilistically contributed towards the final projections. We applied this approach to project age-specific mortality to 2030 in 35 industrialised countries with high-quality vital statistics data. We used age-specific death rates to calculate life expectancy at birth and at age 65 years, and probability of dying before age 70 years, with life table methods. Findings Life expectancy is projected to increase in all 35 countries with a probability of at least 65% for women and 85% for men. There is a 90% probability that life expectancy at birth among South Korean women in 2030 will be higher than 86·7 years, the same as the highest worldwide life expectancy in 2012, and a 57% probability that it will be higher than 90 years. Projected female life expectancy in South Korea is followed by those in France, Spain, and Japan. There is a greater than 95% probability that life expectancy at birth among men in South Korea, Australia, and Switzerland will surpass 80 years in 2030, and a greater than 27% probability that it will surpass 85 years. Of the countries studied, the USA, Japan, Sweden, Greece, Macedonia, and Serbia have some of the lowest projected life expectancy gains for both men and women. The female life expectancy advantage over men is likely to shrink by 2030 in every country except Mexico, where female life expectancy is predicted to increase more than male life expectancy, and in Chile, France, and Greece where the two sexes will see similar gains. More than half of the projected gains in life expectancy at birth in women will be due to enhanced longevity above age 65 years. Interpretation There is more than a 50% probability that by 2030, national female life expectancy will break the 90 year barrier, a level that was deemed unattainable by some at the turn of the 21st century. Our projections show continued increases in longevity, and the need for careful planning for health and social services and pensions.

Kruger, M. e. (2016). ***"Novel concepts and controversies surrounding omega-3 polyunsaturated fatty acid."*** Journal of Nutrition & Intermediary Metabolism 5: 1-116. http://www.sciencedirect.com/science/journal/23523859/5/supp/C

This freely downloadable edition of the journal contains a whole series of articles on omega-3 fatty acids.

Kyrgiou, M., I. Kalliala, et al. (2017). ***"Adiposity and cancer at major anatomical sites: Umbrella review of the literature."*** BMJ 356

(Available in free full text) Objective To evaluate the strength and validity of the evidence for the association between adiposity and risk of developing or dying from cancer. Design Umbrella review of systematic reviews and meta-analyses.Data sources PubMed, Embase, Cochrane Database of Systematic Reviews, and manual screening of retrieved references.Eligibility criteria Systematic reviews or meta-analyses of observational studies that evaluated the association between indices of adiposity and risk of developing or dying from cancer. Data synthesis Primary analysis focused on cohort studies exploring associations for continuous measures of adiposity. The evidence was graded into strong, highly suggestive, suggestive, or weak after applying criteria that included the statistical significance of the random effects summary estimate and of the largest study in a meta-analysis, the number of cancer cases, heterogeneity between studies, 95% prediction intervals, small study effects, excess significance bias, and sensitivity analysis with credibility ceilings. Results 204 meta-analyses investigated associations between seven indices of adiposity and developing or dying from 36 primary cancers and their subtypes. Of the 95 meta-analyses that included cohort studies and used a continuous scale to measure adiposity, only 12 (13%) associations for nine cancers were supported by strong evidence. An increase in body mass index was associated with a higher risk of developing oesophageal adenocarcinoma; colon and rectal cancer in men; biliary tract system and pancreatic cancer; endometrial cancer in premenopausal women; kidney cancer; and multiple myeloma. Weight gain and waist to hip circumference ratio were associated with higher risks of postmenopausal breast cancer in women who have never used hormone replacement therapy and endometrial cancer, respectively. The increase in the risk of developing cancer for every 5 kg/m2 increase in body mass index ranged from 9% (relative risk 1.09, 95% confidence interval 1.06 to 1.13) for rectal cancer among men to 56% (1.56, 1.34 to 1.81) for biliary tract system cancer. The risk of postmenopausal breast cancer among women who have never used HRT increased by 11% for each 5 kg of weight gain in adulthood (1.11, 1.09 to 1.13), and the risk of endometrial cancer increased by 21% for each 0.1 increase in waist to hip ratio (1.21, 1.13 to 1.29). Five additional associations were supported by strong evidence when categorical measures of adiposity were included: weight gain with colorectal cancer; body mass index with gallbladder, gastric cardia, and ovarian cancer; and multiple myeloma mortality. Conclusions Although the association of adiposity with cancer risk has been extensively studied, associations for only 11 cancers (oesophageal adenocarcinoma, multiple myeloma, and cancers of the gastric cardia, colon, rectum, biliary tract system, pancreas, breast, endometrium, ovary, and kidney) were supported by strong evidence. Other associations could be genuine, but substantial uncertainty remains. Obesity is becoming one of the biggest problems in public health; evidence on the strength of the associated risks may allow finer selection of those at higher risk of cancer, who could be targeted for personalised prevention strategies.

Loprinzi, P. D. (2016). ***"Epidemiological investigation of muscle-strengthening activities and cognitive function among older adults."*** Chronic illness 12(2): 157-162. http://europepmc.org/abstract/MED/27048445
http://dx.doi.org/10.1177/1742395316641998

Limited research has examined the association of muscle-strengthening activities and executive cognitive function among older adults, which was this study's purpose. Data from the 1999-2002 NHANES were employed (N = 2157; 60-85 years). Muscle-strengthening activities were assessed via self-report, with cognitive function assessed using the digit symbol substitution test. After adjusting for age, age-squared, gender, race-ethnicity, poverty level, body mass index, C-reactive protein, smoking, comorbid illness and physical activity, muscle-strengthening activities were significantly associated with cognitive function (βadjusted = 3.4; 95% CI: 1.7-5.1; P < 0.001). Compared to those not engaging in aerobic exercise and not meeting muscle-strengthening activity guidelines, those doing 1 (βadjusted = 3.7; 95% CI: 1.9-5.4; P < 0.001) and both (βadjusted = 6.6; 95% CI: 4.8-8.3; P < 0.001) of these behaviors had a significantly higher executive cognitive function score. In conclusion, muscle-strengthening activities are associated with executive cognitive function among older U.S. adults, underscoring the importance of promoting both aerobic exercise and muscle-strengthening activities to older adults.

Loprinzi, P. D. (2016). ***"Health behavior characteristics and all-cause mortality."*** Preventive medicine reports 3: 276-278.
http://europepmc.org/abstract/MED/27419026
http://europepmc.org/articles/PMC4929208?pdf=render
http://europepmc.org/articles/PMC4929208
http://dx.doi.org/10.1016/j.pmedr.2016.03.013

To examine the potential dose-response relationship between four positive health characteristics (i.e., normal body mass index, physically active, healthy diet and non-smoker) and all-cause mortality. Data from the 2003-2006 NHANES were used (20 + years; N = 5844), with follow-up through 2011. Participants wore an ActiGraph 7164 accelerometer over a period of up to 7 days to assess physical activity. Dietary behavior and smoking were assessed via self-report. Body mass index was measured using standard procedures. There was a clear dose-response relationship between the number of positive health characteristics and all-cause mortality. After adjusting for age, gender, race-ethnicity and comorbid illness, and compared to those with 0 positive health characteristics, those with 1, 2, 3, and 4, respectively, had a 39% (HR = 0.61; 95% CI: 0.40-0.94),

48% (HR = 0.52; 95% CI: 0.34-0.80), 62% (HR = 0.38; 95% CI: 0.22-0.64) and 88% (HR = 0.12; 95% CI: 0.05-0.29) reduced risk of all-cause mortality. Adoption of more positive health characteristics is associated with greater survival.

Ma-Kellams, C. and J. Lerner (2016). ***"Trust your gut or think carefully? Examining whether an intuitive, versus a systematic, mode of thought produces greater empathic accuracy."*** J Pers Soc Psychol 111(5): 674-685. http://psycnet.apa.org/journals/psp/111/5/674/

Cultivating successful personal and professional relationships requires the ability to accurately infer the feelings of others-that is, to be empathically accurate. Some are better at this than others, a difference which may be explained in part by mode of thought. Specifically, empathically accurate people may tend to rely more on intuitive rather than systematic thought when perceiving others. Or it may be the reverse: systematic thought may increase empathic accuracy. To determine which view is supported by the evidence, we conducted 4 studies examining relations between mode of thought (intuitive vs. systematic) and empathic accuracy. Study 1 revealed a lay belief that empathic accuracy arises from intuitive modes of thought. Studies 2 through 4, each using executive-level professionals as participants, demonstrated that, contrary to lay beliefs, people who tend to rely on intuitive thinking also tend to exhibit lower empathic accuracy. This pattern held when participants inferred others' emotional states based on (a) in-person face-to-face interactions with partners (Study 2) as well as on (b) pictures with limited facial cues (Study 3). Study 4 confirmed that the relationship is causal: experimentally inducing systematic (as opposed to intuitive) thought led to improved empathic accuracy. In sum, evidence regarding personal and social processes in these 4 samples of working professionals converges on the conclusion that, contrary to lay beliefs, empathic accuracy arises more from systematic thought than from gut intuition.

Martineau, A. R., D. A. Jolliffe, et al. (2017). ***"Vitamin d supplementation to prevent acute respiratory tract infections: Systematic review and meta-analysis of individual participant data."*** BMJ 356. http://www.bmj.com/content/356/bmj.i6583

(Available in free full text) Objectives To assess the overall effect of vitamin D supplementation on risk of acute respiratory tract infection, and to identify factors modifying this effect. Design Systematic review and meta-analysis of individual participant data (IPD) from randomised controlled trials. Data sources Medline, Embase, the Cochrane Central Register of Controlled Trials, Web of Science, ClinicalTrials.gov, and the International Standard Randomised Controlled Trials Number registry from inception to December 2015. Eligibility criteria for study selection Randomised, double blind, placebo controlled trials of supplementation with vitamin D3 or vitamin D2 of any duration were eligible for inclusion if they had been approved by a research ethics committee and if data on incidence of acute respiratory tract infection were collected prospectively and prespecified as an efficacy outcome. Results 25 eligible randomised controlled trials (total 11 321 participants, aged 0 to 95 years) were identified. IPD were obtained for 10 933 (96.6%) participants. Vitamin D supplementation reduced the risk of acute respiratory tract infection among all participants (adjusted odds ratio 0.88, 95% confidence interval 0.81 to 0.96; P for heterogeneity < 0.001). In subgroup analysis, protective effects were seen in those receiving daily or weekly vitamin D without additional bolus doses (adjusted odds ratio 0.81, 0.72 to 0.91) but not in those receiving one or more bolus doses (adjusted odds ratio 0.97, 0.86 to 1.10; P for interaction=0.05). Among those receiving daily or weekly vitamin D, protective effects were stronger in those with baseline 25-hydroxyvitamin D levels < 25 nmol/L (adjusted odds ratio 0.30, 0.17 to 0.53) than in those with baseline 25-hydroxyvitamin D levels ≥25 nmol/L (adjusted odds ratio 0.75, 0.60 to 0.95; P for interaction=0.006). Vitamin D did not influence the proportion of participants experiencing at least one serious adverse event (adjusted odds ratio 0.98, 0.80 to 1.20, P=0.83). The body of evidence contributing to these analyses was assessed as being of high quality. Conclusions Vitamin D supplementation was safe and it protected against acute respiratory tract infection overall. Patients who were very vitamin D deficient and those not receiving bolus doses experienced the most benefit.

Maxwell, J. A., A. Muise, et al. (2017). ***"How implicit theories of sexuality shape sexual and relationship well-being."*** J Pers Soc Psychol 112(2): 238-279. https://www.ncbi.nlm.nih.gov/pubmed/27808534

How do people believe they can best maintain sexual satisfaction in their romantic relationships? In the current research, we draw upon the literature on implicit theories of relationships to develop and validate a scale examining 2 types of lay beliefs about how sexual satisfaction can be maintained over time. Individuals high in sexual growth beliefs think that sexual satisfaction is attained from hard work and effort, whereas individuals high in sexual destiny beliefs think that sexual satisfaction is attained through finding a compatible sexual partner. Across 6 studies (2 cross-sectional online studies, a 21-day daily experience study, 2 dyadic studies, and an experimental manipulation; N = 1,896), we find evidence that those higher in sexual growth beliefs experience higher relationship and sexual satisfaction, and have partners who are more satisfied. Conversely, the effects of sexual destiny beliefs on satisfaction are contingent upon signs of partner compatibility: When individuals high in sexual destiny beliefs experience greater sexual disagreements in their relationship, they experience lower relationship quality. These results are independent of general relationship implicit beliefs, providing evidence for the uniqueness of these 2 constructs and the importance of examining implicit beliefs in the domain of sexuality. Overall, these results provide novel evidence that individuals' lay beliefs about maintaining sexual satisfaction are important for understanding the quality of their sex lives and relationships.

McNamara, R. K. (2016). ***"Role of omega-3 fatty acids in the etiology, treatment, and prevention of depression: Current status and future directions."*** Journal of Nutrition & Intermediary Metabolism 5: 96-106. http://www.sciencedirect.com/science/article/pii/S2352385915300153

(Available in free full text) Over the past three decades a body of translational evidence has implicated dietary deficiency in long-chain omega-3 (LCn-3) fatty acids, including eicosapenaenoic acid (EPA) and docosahexaenoic acid (DHA), in the pathophysiology and etiology of major depressive disorder (MDD). Cross-national and cross-sectional data suggest that greater habitual intake of preformed EPA + DHA is associated with reduced risk for developing depressive symptoms and syndromal MDD. Erythrocyte EPA and DHA composition is highly correlated with habitual fish or fish oil intake, and case-control studies have consistently observed lower erythrocyte EPA and/or DHA levels in patients with MDD. Low erythrocyte EPA + DHA composition may also be associated with increased risk for suicide and cardiovascular disease, two primary causes of excess premature mortality in MDD. While controversial, dietary EPA + DHA supplementation may have antidepressant properties and may augment the therapeutic efficacy of antidepressant medications. Neuroimaging and rodent neurodevelopmental studies further suggest that low LCn-3 fatty acid intake or biostatus can recapitulate central pathophysiological features associated with MDD. Prospective findings suggest that low LCn-3 fatty acid biostatus increases risk for depressive symptoms in part by augmenting pro-inflammatory responsivity. When taken collectively, these translational findings provide a strong empirical foundation in support of dietary LCn-3 fatty acid deficiency as a modifiable risk factor for MDD. This review provides an overview of this translational evidence and then discusses future directions including strategies to translate this evidence into routine clinical screening and treatment algorithms.

Mortensen, C., C. T. Damsgaard, et al. (2016). ***"Estimation of the dietary requirement for vitamin d in white children aged 4–8 y: A randomized, controlled, dose-response trial."*** The American Journal of Clinical Nutrition 104(5): 1310-1317. http://ajcn.nutrition.org/content/104/5/1310.abstract

Background: Children in northern latitudes are at high risk of vitamin D deficiency during winter because of negligible dermal vitamin D3 production. However, to our knowledge, the dietary requirement for maintaining the nutritional adequacy of vitamin D in young children has not been investigated. Objective: We aimed to establish the distribution of vitamin D intakes required to maintain winter serum 25-hydroxyvitamin D [25(OH)D] concentrations above the proposed cutoffs (25, 30, 40, and 50 nmol/L) in white Danish children aged 4–8 y living at 55°N. Design: In a double-blind, randomized, controlled trial 119 children (mean age: 6.7 y) were assigned to 0 (placebo), 10, or 20 μg vitamin D3/d supplementation for 20 wk. We measured anthropometry, dietary vitamin D, and serum 25(OH)D with liquid chromatography–tandem mass spectrometry at baseline and endpoint. Results: The mean ± SD baseline serum 25(OH)D was 56.7 ± 12.3 nmol/L (range: 28.7–101.4 nmol/L). Serum 25(OH)D increased by a mean ± SE of 4.9 ± 1.3 and 17.7 ± 1.8 nmol/L in the groups receiving 10 and 20 μg vitamin D3/d, respectively, and decreased by 24.1 ± 1.2 nmol/L in the placebo group ($P < 0.001$). A nonlinear model of serum 25(OH)D as a function of total vitamin D intake (diet and supplements) was fit to the data. The estimated vitamin D intakes required to maintain winter serum 25(OH)D >30 (avoiding deficiency) and >50 nmol/L (ensuring adequacy) in 97.5% of participants were 8.3 and 19.5 μg/d, respectively, and 4.4 μg/d was required to maintain serum 25(OH)D >40 nmol/L in 50% of participants. Conclusions: Vitamin D intakes between 8 and 20 μg/d are required by white 4- to 8-y-olds during winter in northern latitudes to maintain serum 25(OH)D >30–50 nmol/L depending on chosen serum 25(OH)D threshold.

Ploubidis, G. B., A. Sullivan, et al. (2017). ***"Psychological distress in mid-life: Evidence from the 1958 and 1970 british birth cohorts."*** Psychological Medicine 47(2): 291-303. https://www.cambridge.org/core/article/div-class-title-psychological-distress-in-mid-life-evidence-from-the-1958-and-1970-british-birth-cohorts-div/43F04DCFE2E3771DED949BB02068F02D

Background This paper addresses the levels of psychological distress experienced at age 42 years by men and women born in 1958 and 1970. Comparing these cohorts born 12 years apart, we ask whether psychological distress has increased, and, if so, whether this increase can be explained by differences in their childhood conditions. Method Data were utilized from two well-known population-based birth cohorts, the National Child Development Study and the 1970 British Cohort Study. Latent variable models and causal mediation methods were employed.ResultsAfter establishing the measurement equivalence of psychological distress in the two cohorts we found that men and women born in 1970 reported higher levels of psychological distress compared with those born in 1958. These differences were more pronounced in men (b = 0.314, 95% confidence interval 0.252–0.375), with the magnitude of the effect being twice as strong compared with women (b = 0.147, 95% confidence interval 0.076–0.218). The effect of all hypothesized early-life mediators in explaining these differences was modest. Conclusions Our findings have implications for public health policy, indicating a higher average level of psychological distress among a cohort born in 1970 compared with a generation born 12 years earlier. Due to increases in life expectancy, more recently born cohorts are expected to live longer, which implies – if such differences persist – that they are likely to spend more years with mental health-related morbidity compared with earlier-born cohorts.

Ponocny, I., C. Weismayer, et al. (2016). ***"Are most people happy? Exploring the meaning of subjective well-being ratings."*** Journal of Happiness Studies 17(6): 2635-2653. http://dx.doi.org/10.1007/s10902-015-9710-0

(Available in free full text) The claim that most people are happy and satisfied, assuming that high self-ratings on numerical scales indicate good lives, is cross-checked against extensive verbal reports in a large-scale mixed-methods validation study. For a sample of 500 qualitative interviews conducted in Austria, the usual 10-point-scale self-ratings of life satisfaction and happiness were linked to the content of respondents' actual narrations. Additionally, the narrated well-being was classified according to an alternative evaluation scheme by external raters. The results show that many persons report substantial restrictions to their hedonic experience in spite of high or even very high ratings, and that the narrated well-being evaluation is much more critical than the self-rating. Therefore it is argued that a naïve interpretation of high self-rating values as top life experience systematically ignores negative aspects of life. The claimed predominance of happiness should be substantially reformulated. In particular, more attention should be drawn to resilient satisfaction in the presence of substantial psychological burden, and to the non-negligible group of highly positive life satisfaction ratings which lack evidence of corresponding hedonic experience in the life narratives.

Primack, B. A., A. Shensa, et al. (2017). ***"Social media use and perceived social isolation among young adults in the u.S."*** Am J Prev Med. https://www.ncbi.nlm.nih.gov/pubmed/28279545

INTRODUCTION: Perceived social isolation (PSI) is associated with substantial morbidity and mortality. Social media platforms, commonly used by young adults, may offer an opportunity to ameliorate social isolation. This study assessed associations between social media use (SMU) and PSI among U.S. young adults. METHODS: Participants were a nationally representative sample of 1,787 U.S. adults aged 19-32 years. They were recruited in October-November 2014 for a cross-sectional survey using a sampling frame that represented 97% of the U.S. POPULATION: SMU was assessed using both time and frequency associated with use of 11 social media platforms, including Facebook, Twitter, Google+, YouTube, LinkedIn, Instagram, Pinterest, Tumblr, Vine, Snapchat, and Reddit. PSI was measured using the Patient-Reported Outcomes Measurement Information System scale. In 2015, ordered logistic regression was used to assess associations between SMU and SI while controlling for eight covariates. RESULTS: In fully adjusted multivariable models that included survey weights, compared with those in the lowest quartile for SMU time, participants in the highest quartile had twice the odds of having greater PSI (AOR=2.0, 95% CI=1.4, 2.8). Similarly, compared with those in the lowest quartile, those in the highest quartile of SMU frequency had more than three times the odds of having greater PSI (AOR=3.4, 95% CI=2.3, 5.1). Associations were linear ($p<0.001$ for all), and results were robust to all sensitivity analyses. CONCLUSIONS: Young adults with high SMU seem to feel more socially isolated than their counterparts with lower SMU. Future research should focus on determining directionality and elucidating reasons for these associations.

Robinson, J. K., J. D. Wayne, et al. (2016). ***"Early detection of new melanomas by patients with melanoma and their partners using a structured skin self-examination skills training intervention: A randomized clinical trial."*** JAMA Dermatology 152(9): 979-985. http://dx.doi.org/10.1001/jamadermatol.2016.1985

Importance More than 1 million patients with melanoma in the United States are at risk to develop a second primary melanoma. Early detection of melanoma improves survival. Patients with melanoma may be able to self-manage care with their skin-check partners ("partners") and alert the physician when a concerning lesion is identified, thus providing an important adjunct to yearly skin examinations by a physician. Objective To evaluate the effect of a structured skin self-examination (SSE) intervention for patients with melanoma and their partners ("dyads") on SSE performance and the detection of new melanomas by the dyad or the physician. Design, Setting, and Participants Randomized clinical trial with 24-month follow-up assessments. Patients with stage 0 to IIB melanoma and their skin-check partners participated from June 6, 2011, to April 24, 2015.Interventions Dyads of patients and their partners were randomly assigned to receive the skills training intervention or

customary care (control group). Main Outcomes and Measures The main outcome was frequency of SSE performance. The secondary outcome was detection of a new or recurrent melanoma by the dyad or physician. The tertiary outcome was the number of unscheduled physician appointments for concerning lesions. Results The study cohort comprised 494 participants. The patient population was 51.2% (253 of 494) female and had a mean (SD) age of 55 (10) years. Patients in the intervention arms had significantly increased SSEs with their partners at 4, 12, and 24 months ($P < .001$ for all) compared with the control group (mean differences, 1.57 [95% CI, 1.29-1.85], 0.72 [95% CI, 0.39-1.06], and 0.94 [95% CI, 0.58-1.30], respectively). Patients in the intervention arms identified new melanomas more than those in the control group ($\chi 21 = 28.77$, $P < .01$ [$n = 51$ melanomas in situ] and $\chi 21 = 6.43$, $P < .05$ [$n = 18$ invasive melanomas]) and did not increase physician visits. Conclusions and Relevance Patients with melanoma and their partners reliably performed SSE after participating in a structured skills training program lasting approximately 30 minutes, with reinforcement every 4 months by the study dermatologist. Accurate SSE by those at risk to develop melanoma may enhance early detection and relieve some of the burden on health services to provide continuing follow-up to a growing population of eligible patients.

Rutter, T. M., A. Flentje, et al. (2016). ***"Sexual orientation and treatment-seeking for depression in a multilingual worldwide sample."*** Journal of Affective Disorders 206: 87-93. //www.sciencedirect.com/science/article/pii/S016503271630060X

Background Prior research has found higher rates of mental health problems among sexual minority individuals. We examine treatment-seeking for depression, as well as its relationship with sexual orientation, in a large, multilingual, international sample. Method Participants in an automated, quintilingual internet-based depression screening tool were screened for depression, and completed several background measures, including sexual orientation (with an option to decline to state) and past and current depression treatment seeking. Results 3695 participants screened positive for current or past depression and responded to the sexual orientation question. Those who declined to state their sexual orientation were far less likely to seek any treatment than individuals endorsing any orientation; they were especially unlikely to seek psychotherapy. Individuals identifying as bisexual sought both psychotherapy and alternative treatments at a higher rate than other groups. An interaction was observed between sexual orientation and gender, such that lesbian women were especially likely to have used psychotherapy. Other variables that emerged as significant predictors of treatment-seeking for depression included age and participant's language. Limitations Limitations include possible misinterpretation of translated terms due to regional differences, and possible limits to generalizability due to this study being conducted on the internet. Conclusions Our results suggest that individuals who decline to state their sexual orientation may be more likely to forgo effective treatments for depression. Further studies of depression service utilization should focus on developing treatment modalities that could better engage sexual minority individuals, especially those who are reluctant to disclose their orientation.

Salmon, C., A. M. Cuthbertson, et al. (2016). ***"The relationship between birth order and prosociality: An evolutionary perspective."*** Personality and Individual Differences 96: 18-22. http://www.sciencedirect.com/science/article/pii/S0191886916301210

Much of the research on birth order has focused on individual differences in personality traits, with relatively few studies focused on aspects of social behavior other than sibling conflict. However, one would predict that the differences in parental investment and niche differentiation that shape personality differences between siblings would also influence other social relationships. In particular, middleborns may be more likely to prioritize non-kin relationships. This study investigated the impact of birth order on a number of measures of prosocial behavior. Results suggest that birth order has a moderate effect on prosociality such that later birth orders exhibit greater prosociality. However, both the linear and quadratic effects were significant and the quadratic was negative indicating that the greatest increase in prosociality is seen between first and secondborns, the rate of change decelerates as birth order and prosociality increase.

Scadding, G. W., M. A. Calderon, et al. (2017). ***"Effect of 2 years of treatment with sublingual grass pollen immunotherapy on nasal response to allergen challenge at 3 years among patients with moderate to severe seasonal allergic rhinitis: The grass randomized clinical trial."*** JAMA 317(6): 615-625. http://dx.doi.org/10.1001/jama.2016.21040

Importance Sublingual immunotherapy and subcutaneous immunotherapy are effective in seasonal allergic rhinitis. Three years of continuous treatment with subcutaneous immunotherapy and sublingual immunotherapy has been shown to improve symptoms for at least 2 years following discontinuation of treatment.Objective To assess whether 2 years of treatment with grass pollen sublingual immunotherapy, compared with placebo, provides improved nasal response to allergen challenge at 3-year follow-up.Design, Setting, and Participants A randomized double-blind, placebo-controlled, 3–parallel-group study performed in a single academic center, Imperial College London, of adult patients with moderate to severe seasonal allergic rhinitis (interfering with usual daily activities or sleep). First enrollment was March 2011, last follow-up was February 2015.Interventions Thirty-six participants received 2 years of sublingual immunotherapy (daily tablets containing 15 μg of major allergen Phleum p 5 and monthly placebo injections), 36 received subcutaneous immunotherapy (monthly injections containing 20 μg of Phleum p 5 and daily placebo tablets) and 34 received matched double-placebo. Nasal allergen challenge was performed before treatment, at 1 and 2 years of treatment, and at 3 years (1 year after treatment discontinuation).Main Outcomes and Measures Total nasal symptom scores (TNSS; range; 0 [best] to 12 [worst]) were recorded between 0 and 10 hours after challenge. The minimum clinically important difference for change in TNSS within an individual is 1.08. The primary outcome was TNSS comparing sublingual immunotherapy vs placebo at year 3. Subcutaneous immunotherapy was included as a positive control. The study was not powered to compare sublingual immunotherapy with subcutaneous immunotherapy.Results Among 106 randomized participants (mean age, 33.5 years; 34 women [32.1%]), 92 completed the study at 3 years. In the intent-to-treat population, mean TNSS score for the sublingual immunotherapy group was 6.36 (95% CI, 5.76 to 6.96) at pretreatment and 4.73 (95% CI, 3.97 to 5.48) at 3 years, and for the placebo group, the score was 6.06 (95% CI, 5.23 to 6.88) at pretreatment and 4.81 (95% CI, 3.97 to 5.65) at 3 years. The between-group difference (adjusted for baseline) was −0.18 (95% CI, −1.25 to 0.90; [$P = .75$]).Conclusions and Relevance Among patients with moderate to severe seasonal allergic rhinitis, 2 years of sublingual grass pollen immunotherapy was not significantly different from placebo in improving the nasal response to allergen challenge at 3-year follow-up.

Smith, T. J., L. Tripkovic, et al. (2016). ***"Estimation of the dietary requirement for vitamin d in adolescents aged 14–18 y: A dose-response, double-blind, randomized placebo-controlled trial."*** The American Journal of Clinical Nutrition 104(5): 1301-1309. http://ajcn.nutrition.org/content/104/5/1301.abstract

Background: Adolescents are a population group at high risk of low vitamin D status, yet the evidence base for establishing dietary vitamin D requirements remains weak. Objective: The aim was to establish the distribution of vitamin D intakes required to maintain serum 25-hydroxyvitamin D [25(OH)D] concentrations above proposed cutoffs (25, 30, 40, and 50 nmol/L) during winter in white males and females (14–18 y of age) in the United Kingdom (51°N). Design: In a dose-response

trial, 110 adolescents (aged 15.9 ± 1.4 y; 43% males) were randomly assigned to receive 0, 10, or 20 μg vitamin D3 supplements/d for 20 wk during winter. A nonlinear regression model was fit to total vitamin D intake and postintervention serum 25(OH)D concentrations, and regression-predicted values estimated the vitamin D intakes required to maintain serum 25(OH)D concentrations above specific cutoffs. Results: Mean ± SD serum 25(OH)D concentrations increased from 49.2 ± 12.0 to 56.6 ± 12.4 nmol/L and from 51.7 ± 13.4 to 63.9 ± 10.6 nmol/L in the 10- and 20-μg/d groups, respectively, and decreased in the placebo group from 46.8 ± 11.4 to 30.7 ± 8.6 nmol/L (all P ≤ 0.001). Vitamin D intakes required to maintain 25(OH)D concentrations >25 and >30 nmol/L in 97.5% of adolescents were estimated to be 10.1 and 13.1 μg/d, respectively, and 6.6 μg/d to maintain 50% of adolescents at concentrations >40 nmol/L. Because the response of 25(OH)D reached a plateau at 46 nmol/L, there is uncertainty in estimating the vitamin D intake required to maintain 25(OH)D concentrations >50 nmol/L in 97.5% of adolescents, but it exceeded 30 μg/d. Conclusion: Vitamin D intakes between 10 and ~30 μg/d are required by white adolescents during winter to maintain serum 25(OH)D concentrations >25–50 nmol/L, depending on the serum 25(OH)D threshold chosen.

Stubbs, B., A. Koyanagi, et al. (2017). ***"Physical activity and anxiety: A perspective from the world health survey."*** Journal of Affective Disorders 208: 545-552. http://www.sciencedirect.com/science/article/pii/S0165032716313131

AbstractBackground Despite the known benefits of physical activity (PA) among people with anxiety, little is known about PA levels in people with anxiety at the population level. This study explored the global prevalence of anxiety and its association with PA. Methods Cross-sectional, community-based data from the World Health Survey was analyzed. Prevalence of anxiety was estimated for 237,964 individuals (47 countries). PA was categorized as low, moderate, and high based on the International Physical Activity Questionnaire (short form). The association between PA and anxiety was assessed by multivariable logistic regression. Results The overall global prevalence of anxiety was 11.4% (47 countries). Across 38 countries with available data on PA, 62.5%, 20.2%, and 17.3% of the sample engaged in high, moderate, and low levels of PA respectively. The prevalence of low physical activity in those with and without anxiety was 22.9% vs. 16.6% (p<0.001) (38 countries, n=184,920). In the pooled model adjusted for socio-demographics, depression, and country, individuals engaging in low PA (vs. high PA) had 1.32 (95% CI=1.17–1.47) times higher odds for anxiety than those with high PA. Female sex, older age, lower education and wealth, and depression were also associated with low PA. At the individual country level, there was a significant positive association between low PA and anxiety in 17 of the 38 countries. Conclusion Low PA levels are associated with increased prevalence of anxiety. There is a need for longitudinal research to establish the directionality of the relationships observed.

Syse, A., M. Veenstra, et al. (2017). ***"Changes in health and health behavior associated with retirement."*** Journal of Aging and Health 29(1): 99-127. http://journals.sagepub.com/doi/abs/10.1177/0898264315624906

(Available in free full text) Objectives: While poor health contributes to early work exits, it is less clear how early work exits affect health. This study therefore examines changes in health associated with retirement. Method: Survey data from gainfully employed individuals aged 57 to 66 in 2002 were used to assess changes in health status and behaviors associated with retirement (49%) 5 years later (N = 546). Results: Compared with workers, retirees were more likely to report improvements in mental health (odds ratio [OR] = 1.67), and less likely to report mental health deteriorations (OR = 0.56). Retirees were more likely to both increase (OR = 2.03) and reduce (OR = 1.87) their alcohol intake, and to increase physical activity (OR = 2.01) and lose weight (OR = 1.75). Discussion: As welfare states aim to extend working life to counteract repercussions of population aging, findings on possible health benefits for retirees may warrant more focus on the pros and cons of a prolonged working life.

Trevis, K. J., N. M. McLachlan, et al. (2016). ***"Psychological mediators of chronic tinnitus: The critical role of depression."*** Journal of Affective Disorders 204: 234-240. http://www.sciencedirect.com/science/article/pii/S0165032716307261

Background Maintenance of chronic tinnitus has been proposed to result from a vicious cycle of hypervigilance occurring when a phantom sound is associated with anxiety and limbic system overactivity. Depression, obsessive-compulsiveness, illness attitudes and coping strategies are known to impact tinnitus, but their relationship with the vicious cycle is unknown. As such, we aimed to identify psychological mediators of the vicious cycle. We also examined the relationship between coping strategies and any identified mediators to facilitate the translation of our research to treatment settings. Methods We comprehensively assessed a heterogeneous community sample of 81 people with chronic tinnitus who completed measures assessing their tinnitus and psychological wellbeing. Specifically, we examined the mediating role of depressive symptoms, illness attitudes, and obsessive-compulsiveness in the vicious cycle. Results While the predicted relationship between tinnitus handicap and anxiety was observed, this was fully mediated by depressive symptoms. In addition, we identified avoidant behaviours and self-blame as maladaptive coping strategies in people with chronic tinnitus and depressive symptoms, identifying potential new treatment targets. Limitations This work requires replication in a clinical cohort of people with chronic tinnitus, and further investigations of the role of coping strategies. Conclusions These results extend our understanding of the complex role of psychology in the experience of tinnitus, highlighting the importance of depressive symptoms that may be underpinned by functional disruption of specific neurocognitive networks. We have also identified depressive symptoms and maladaptive coping strategies as new treatment targets to improve the health wellbeing of people with chronic tinnitus.

Tsugawa, Y., A. B. Jena, et al. (2016). ***"Comparison of hospital mortality and readmission rates for medicare patients treated by male vs female physicians."*** JAMA Internal Medicine. http://dx.doi.org/10.1001/jamainternmed.2016.7875

(Available in free full text) Importance Studies have found differences in practice patterns between male and female physicians, with female physicians more likely to adhere to clinical guidelines and evidence-based practice. However, whether patient outcomes differ between male and female physicians is largely unknown.Objective To determine whether mortality and readmission rates differ between patients treated by male or female physicians. Design, Setting, and Participants We analyzed a 20% random sample of Medicare fee-for-service beneficiaries 65 years or older hospitalized with a medical condition and treated by general internists from January 1, 2011, to December 31, 2014. We examined the association between physician sex and 30-day mortality and readmission rates, adjusted for patient and physician characteristics and hospital fixed effects (effectively comparing female and male physicians within the same hospital). As a sensitivity analysis, we examined only physicians focusing on hospital care (hospitalists), among whom patients are plausibly quasi-randomized to physicians based on the physician's specific work schedules. We also investigated whether differences in patient outcomes varied by specific condition or by underlying severity of illness.Main Outcomes and Measures Patients' 30-day mortality and readmission rates. Results A total of 1 583 028 hospitalizations were used for analyses of 30-day mortality (mean [SD] patient age, 80.2 [8.5] years; 621 412 men and 961 616 women) and 1 540 797 were used for analyses of readmission (mean [SD] patient age, 80.1 [8.5] years; 602 115 men and 938 682 women). Patients treated by female physicians had lower 30-day mortality (adjusted mortality, 11.07% vs 11.49%; adjusted risk difference, −0.43%; 95% CI, −0.57% to −0.28%; P<.001; number needed to treat

to prevent 1 death, 233) and lower 30-day readmissions (adjusted readmissions, 15.02% vs 15.57%; adjusted risk difference, −0.55%; 95% CI, −0.71% to −0.39%; P< .001; number needed to treat to prevent 1 readmission, 182) than patients cared for by male physicians, after accounting for potential confounders. Our findings were unaffected when restricting analyses to patients treated by hospitalists. Differences persisted across 8 common medical conditions and across patients' severity of illness.Conclusions and Relevance Elderly hospitalized patients treated by female internists have lower mortality and readmissions compared with those cared for by male internists. These findings suggest that the differences in practice patterns between male and female physicians, as suggested in previous studies, may have important clinical implications for patient outcomes.

Wilkes, C., R. Kydd, et al. (2017). ***"Upright posture improves affect and fatigue in people with depressive symptoms."*** Journal of Behavior Therapy and Experimental Psychiatry 54: 143-149.
http://www.sciencedirect.com/science/article/pii/S0005791616301719

Abstract Background and objectives Slumped posture is a diagnostic feature of depression. While research shows upright posture improves self-esteem and mood in healthy samples, little research has investigated this in depressed samples. This study aimed to investigate whether changing posture could reduce negative affect and fatigue in people with mild to moderate depression undergoing a stressful task. Methods Sixty-one community participants who screened positive for mild to moderate depression were recruited into a study purportedly on the effects of physiotherapy tape on cognitive function. They were randomized to sit with usual posture or upright posture and physiotherapy tape was applied. Participants completed the Trier Social Stress Test speech task. Changes in affect and fatigue were assessed. The words spoken by the participants during their speeches were analysed. Results At baseline, all participants had significantly more slumped posture than normative data. The postural manipulation significantly improved posture and increased high arousal positive affect and fatigue compared to usual posture. The upright group spoke significantly more words than the usual posture group, used fewer first person singular personal pronouns, but more sadness words. Upright shoulder angle was associated with lower negative affect and lower anxiety across both groups. Limitations The experiment was only brief and a non-clinical sample was used. Conclusions This preliminary study suggests that adopting an upright posture may increase positive affect, reduce fatigue, and decrease self-focus in people with mild-to-moderate depression. Future research should investigate postural manipulations over a longer time period and in samples with clinically diagnosed depression.

Zhang, J., D. Brackbill, et al. (2016). ***"Support or competition? How online social networks increase physical activity: A randomized controlled trial."*** Preventive Medicine Reports 4: 453-458.
http://www.ncbi.nlm.nih.gov/pmc/articles/PMC5008041/

(Available in free full text) To identify what features of online social networks can increase physical activity, we conducted a 4-arm randomized controlled trial in 2014 in Philadelphia, PA. Students (n = 790, mean age = 25.2) at an university were randomly assigned to one of four conditions composed of either supportive or competitive relationships and either with individual or team incentives for attending exercise classes. The social comparison condition placed participants into 6-person competitive networks with individual incentives. The social support condition placed participants into 6-person teams with team incentives. The combined condition with both supportive and competitive relationships placed participants into 6-person teams, where participants could compare their team's performance to 5 other teams' performances. The control condition only allowed participants to attend classes with individual incentives. Rewards were based on the total number of classes attended by an individual, or the average number of classes attended by the members of a team. The outcome was the number of classes that participants attended. Data were analyzed using multilevel models in 2014. The mean attendance numbers per week were 35.7, 38.5, 20.3, and 16.8 in the social comparison, the combined, the control, and the social support conditions. Attendance numbers were 90% higher in the social comparison and the combined conditions (mean = 1.9, SE = 0.2) in contrast to the two conditions without comparison (mean = 1.0, SE = 0.2) (p = 0.003). Social comparison was more effective for increasing physical activity than social support and its effects did not depend on individual or team incentives.