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(Moore and Ayers 2011; Stafford and Berk 2011; Bargh and Shalev 2012; Barker, Copeland et al. 2012; Cain, Ansell et al. 2012; Chiu, Frangou et al. 2012; Davison and Kaplan 2012; Dickerman and Barnhill 2012; Fledderus, Bohlmeijer et al. 2012; Ginn and Horder 2012; Henderson and Joseph 2012; Herring, Puetz et al. 2012; Holtzheimer, Kelley et al. 2012; Kieler, Artama et al. 2012; Kripke, Langer et al. 2012; Lagerveld, Blonk et al. 2012; Leucht, Hierl et al. 2012; Markkula, Härkänen et al. 2012; McKnight, Adida et al. 2012; Nanni, Uher et al. 2012; Rosenthal, Learned et al. 2012; Sims, Sanghara et al. 2012; Spinelli 2012; Toker and Biron 2012; Wang, Patten et al. 2012; Williams, Barnhofer et al. 2012; Wollmer, de Boer et al. 2012)

Bargh, J. A. and I. Shalev (2012). "The substitutability of physical and social warmth in daily life." Emotion **12**(1): 154-162. http://www.ncbi.nlm.nih.gov/pubmed/21604871.

Classic and contemporary research on person perception has demonstrated the paramount importance of interpersonal warmth. Recent research on embodied cognition has shown that feelings of social warmth or coldness can be induced by experiences of physical warmth or coldness, and vice versa. Here we show that people tend to self-regulate their feelings of social warmth through applications of physical warmth, apparently without explicit awareness of doing so. In Study 1, higher scores on a measure of chronic loneliness (social coldness) were associated with an increased tendency to take warm baths or showers. In Study 2, a physical coldness manipulation significantly increased feelings of loneliness. In Study 3, needs for social affiliation and for emotion regulation, triggered by recall of a past rejection experience, were subsequently eliminated by an interpolated physical warmth experience. Study 4 provided evidence that people are not explicitly aware of the relationship between physical and social warmth (coldness), as they do not consider a target person who often bathes to be any lonelier than one who does not, with all else being equal. Together, these findings suggest that physical and social warmth are to some extent substitutable in daily life and that this substitution reflects an unconscious self-regulatory mechanism.

Barker, E. D., W. Copeland, et al. (2012). "Relative impact of maternal depression and associated risk factors on offspring psychopathology." The British Journal of Psychiatry **200**(2): 124-129. http://bjp.rcpsych.org/content/200/2/124.abstract.

Background: In general, mothers with depression experience more environmental and family risk factors, and lead riskier lifestyles, than mothers who are not depressed.AimsTo test whether the exposure of a child to risk factors associated with mental health adds to the prediction of child psychopathology beyond exposure to maternal depression. Method: In 7429 mother–offspring pairs participating in the Avon Longitudinal Study of Parents and Children in the UK, maternal depression was assessed when the children were aged 1.5 years; multiple risk factor exposures were examined between birth and 2 years of age; and DSM-IV-based externalising and internalising diagnoses were evaluated when the children were 7.5 years of age. Results: Children of clinically depressed mothers were exposed to more risk factors associated with maternal mental health. Maternal depression increased diagnoses of externalising and internalising disorders, but a substantial portion of these associations was explained by increased risk factor exposure (41% for externalising and 37% for internalising disorders). At the same time, these risk exposures significantly increased the odds of both externalising and internalising diagnoses, over and above the influence of maternal depression. Conclusions: Children of clinically depressed mothers are exposed to both maternal psychopathology and risks that are associated with maternal mental health. These results may explain why treating mothers with depression shows beneficial effects for children, but does not completely neutralise the increased risk of psychopathology and impairment.

Cain, N. M., E. B. Ansell, et al. (2012). "Interpersonal pathoplasticity in the course of major depression." J Consult Clin Psychol **80**(1): 78-86. http://www.ncbi.nlm.nih.gov/pubmed/22103955.

OBJECTIVE: The identification of reliable predictors of course in major depressive disorder (MDD) has been difficult. Evidence suggests that the co-occurrence of personality pathology is associated with longer time to MDD remission. Interpersonal pathoplasticity, the mutually influencing nonetiological relationship between psychopathology and interpersonal traits, offers an avenue for examining specific personality vulnerabilities that may be associated with depressive course. METHOD: This study examined 312 participants with and without a co-occurring personality disorder diagnosis who met criteria for a current MDD episode at baseline and who were followed for 10 years in the Collaborative Longitudinal Personality Disorders Study. RESULTS: Latent profile analysis (LPA) identified 6 interpersonal groups (extraverted, dominant, arrogant, cold, submissive, and unassuming), and circular statistical profile analysis confirmed group interpersonal distinctiveness. No significant differences between groups were found in comorbid Axis I disorders or baseline MDD severity. Chronicity and functioning analyses found significantly greater chronicity and poorer functioning in individuals with a submissive interpersonal style over 10 years. CONCLUSIONS: These findings support the relevance of interpersonal pathoplasticity in depressive course and that this heterogeneity has clinical significance. This study is the first to use LPA and circular profiles to examine interpersonal heterogeneity within a diagnostic group. The implications of these findings for therapeutic intervention, interpersonal functioning, and psychopathological course are discussed.

Chiu, C.-C., S. Frangou, et al. (2012). "Associations between n−3 PUFA concentrations and cognitive function after recovery from late-life depression." Am J Clin Nutr **95**(2): 420-427. http://www.ajcn.org/content/95/2/420.abstract.

Background: Lower concentrations of n−3 PUFAs have been reported to be associated with cognitive impairment and dementia, but also with depression—itself a potential risk factor for cognitive decline. Objective: The aims of this study were to investigate associations between n−3 PUFA concentrations in erythrocyte membrane or plasma and cognitive function in an at-risk sample of older people with previous major depression and to explore specificity with respect to cognitive domains. Design: A cross-sectional sample of 132 eligible participants who had recovered from major depression (mean ± SD age: 67.8 ± 6.6 y) were enrolled from outpatient psychiatric services. A series of cognitive tests and a structured questionnaire were administered. Fasting blood samples were collected for n−3 PUFA measurements.Results: Higher EPA and total n−3 PUFA concentrations and a lower ratio of arachidonic acid to EPA in erythrocyte membranes were associated with a higher cognitive composite score: independent of age and sex, but no longer significant after adjustment for education. No associations were found with plasma concentrations of any fatty acid. Considering individual cognitive tests, the strongest and most consistent correlations were found between immediate recall and concentrations of total n−3 PUFAs and α-linolenic acid (ALA) in erythrocytes, which were observed only in participants with recurrent depression. Conclusions: Total erythrocyte n−3 PUFA concentrations are positively associated with cognitive function, particularly immediate recall, in older people with previous depression. Lower concentrations of n−3 PUFAs or ALA in erythrocyte membranes may be good predictors for cognitive impairment in older people with previous recurrent depression.

Davison, K. M. and B. J. Kaplan (2012). "Food intake and blood cholesterol levels of community-based adults with mood disorders." BMC Psychiatry **12**(1): 10. http://www.ncbi.nlm.nih.gov/pubmed/22333556.

ABSTRACT: BACKGROUND: A growing body of literature links nutrition to mood, especially in epidemiological surveys, but there is little information characterizing food intake in people with diagnosed mood disorders. METHODS: Food intake obtained from 3-day food records was evaluated in 97 adults with mood disorders, whose diagnoses were confirmed in structured interviews. Information from a population nutrition survey, national guidelines for nutritional intakes (Eating Well with Canada's Food Guide) and North American dietary guidelines (Dietary Reference Intakes) was utilized to evaluate the quality of their food intake. RESULTS: Compared to the regional nutrition survey data and national guidelines, a greater proportion of study participants consumed fewer of the recommended servings of grains ($p < 0.001$) and vegetables and fruits ($p < 0.05$), and less than the lower boundary of the Adequate Macronutrient Distribution Range (AMDR) for alpha-linolenic acid ($p < 0.001$). The study sample also had greater intakes of high-fat whole grain products ($p < 0.01$), processed meats ($p < 0.00001$), and higher sugar, fat or salty foods ($p < 0.00001$). Of the 1746 total meals and snacks consumed, 39% were from sources outside the home, suggesting a lack of time devoted to meal preparation. Finally, a subsample of 48 participants agreed to have blood tests: 44% had mild hypercholesterolemia (> 5.2 and less than or equal to 6.2 mmol/L) and 21% had hypercholesterolemia (> 6.2 mmol/L). CONCLUSIONS: Much research has proposed multiple ways in which healthier diets may exert protective effects on mental health. The results of this study suggest that adults with mood disorders could benefit from nutritional interventions to improve diet quality.

Dickerman, A. L. and J. W. Barnhill (2012). "Abnormal thyroid function tests in psychiatric patients: a red herring?" Am J Psychiatry **169**(2): 127-133. http://www.ncbi.nlm.nih.gov/pubmed/22318794.

Thyroid abnormalities can induce mood, anxiety, psychotic, and cognitive disorders. Thus, thyroid function tests are routinely checked in psychiatric patients. However, up to one-third of psychiatric patients may demonstrate thyroid function test abnormalities that do not reflect true thyroid disease, but rather are a manifestation of secondary effects on one or more levels of the hypothalamic-pituitary-thyroid (HPT) axis. Originally termed the euthyroid sick syndrome, this phenomenon is now more commonly referred to as "non-thyroidal illness." In psychiatric patients with non-thyroidal illness, patterns of thyroid function test abnormalities may vary considerably based upon factors such as the underlying psychiatric disorder, the presence of substance abuse, or even the use of certain psychiatric medications. Thus, any abnormal thyroid function tests in psychiatric patients should be viewed with skepticism. Given the fact that thyroid function test abnormalities seen in non-thyroidal illness usually resolve spontaneously, treatment is generally unnecessary, and may even be potentially harmful.

Fledderus, M., E. T. Bohlmeijer, et al. (2012). "Acceptance and commitment therapy as guided self-help for psychological distress and positive mental health: a randomized controlled trial." Psychol Med **42**(3): 485-495. http://www.ncbi.nlm.nih.gov/pubmed/21740624.

BACKGROUND: In order to reduce the high prevalence of depression, early interventions for people at risk of depression are warranted. This study evaluated the effectiveness of an early guided self-help programme based on acceptance and commitment therapy (ACT) for reducing depressive symptomatology. METHOD: Participants with mild to moderate depressive symptomatology were recruited from the general population and randomized to the self-help programme with extensive email support (n=125), the self-help programme with minimal email support (n=125) or to a waiting list control group (n=126). Participants completed measures before and after the intervention to assess depression, anxiety, fatigue, experiential avoidance, positive mental health and mindfulness. Participants in the experimental conditions also completed these measures at a 3-month follow-up. RESULTS: In the experimental conditions significant reductions in depression, anxiety, fatigue, experiential avoidance and improvements in positive mental health and mindfulness were found, compared with the waiting list condition (effect sizes Cohen's d=0.51-1.00). These effects were sustained at the 3-month follow-up. There were no significant differences between the experimental conditions on the outcome measures. CONCLUSIONS: The ACT-based self-help programme with minimal email support is effective for people with mild to moderate depressive symptomatology.

Ginn, S. and J. Horder (2012). "'One in four" with a mental health problem: the anatomy of a statistic." BMJ **344**. http://www.bmj.com/content/344/bmj.e1302.

Despite a lack of supporting evidence, the claim that one in four people will have a mental health problem at some point in their lives is a popular one. Where does this figure come from, and why does it persist, ask Stephen Ginn and Jamie Horder. "It's time to talk" is a campaign currently being promoted by Time to Change, a charity whose aim is to change attitudes to people with mental ill health. On the charity's website a banner tells us: "1 in 4 of us will experience a mental health problem at some point in our lives, but we still don't talk about it. What are we afraid of?" This "one in four" figure has also appeared in government speeches1 and NHS publications.2 It is the name of a short film and the title of a mental health magazine. Yet it is not always clear to what the figure refers. Time to Change seems to be referring to lifetime prevalence, while a 2010 advertising campaign by Islington Primary Care Trust stated, "One in four people will experience mental health problems each year." A statement on the Royal College of Psychiatrists' website reads, "One in four people has a mental health problem," implying point prevalence ... The one in four figure for mental illness prevalence is widely quoted, related variously to lifetime, yearly, or point prevalence. The evidence indicates that it is best supported as an estimate of yearly prevalence. However, estimates of the population prevalence of mental disorder should be approached with caution, as the methods used often have shortcomings. It is important that people know that mental illness is common and that treatment of mental disorder is essential, but it is not clear that championing a poorly supported prevalence figure is the way to achieve this.

Henderson, A. F. and A. P. Joseph (2012). "Motor vehicle accident or driver suicide? Identifying cases of failed driver suicide in the trauma setting." Injury **43**(1): 18-21. http://linkinghub.elsevier.com/retrieve/pii/S0020138311002968?showall=true.

Many authors have suggested that some road traffic crashes are disguised suicide attempts. A case report and literature review is used to explore this claim and to examine the frequency and risk factors associated with driver suicide. The author concludes the methodological difficulty of establishing the driver's intent of suicide accounts for an under-estimation of the frequency of this event and that many cases of driver suicide go unrecognised. Familiarity with the risk factors associated with driver suicide may assist in the identification of cases of failed driver suicide and referral to psychiatric services. *The BMJ - http://www.bmj.com/content/344/bmj.e851 - comments "At least one in 15 motor vehicle crashes are probably intentional but remain unrecognised as attempted driver suicide. An Injury review states that the identification of such disguised suicide attempts is difficult, and the methodological conundrum of proving drivers' intent has led to an underestimation of incidence (2012;43:18-21, doi:10.1016/j.injury.2011.06.192). Risk factors associated with driver suicide included being a young man; involvement in single occupancy crashes; not wearing seat belts; being involved in single vehicle, head on collisions into trees and poles; and the absence of evidence suggesting loss of control of the vehicle before impact."*

Herring, M. P., T. W. Puetz, et al. (2012). "Effect of exercise training on depressive symptoms among patients with a chronic illness: A systematic review and meta-analysis of randomized controlled trials." Arch Intern Med **172**(2): 101-111. http://archinte.ama-assn.org/cgi/content/abstract/172/2/101.

Background Physical inactivity and comorbid depressive symptoms are prevalent among patients with a chronic illness. To our knowledge, randomized controlled trials of the effects of exercise training on depressive symptoms among patients with a chronic illness have not been systematically reviewed. We estimated the population effect of exercise training on depressive symptoms and determined whether the effect varied according to patient characteristics and modifiable features of exercise exposure and clinical settings. Methods Articles published before June 1, 2011, were located using the Physical Activity Guidelines for Americans Scientific Database, Google Scholar, MEDLINE, PsycINFO, PubMed, and Web of Science. Ninety articles involving 10 534 sedentary patients with a chronic illness were selected. Included articles required (1) randomized allocation to an exercise intervention or nonexercise comparison condition and (2) a depression outcome assessed at baseline and at mid- and/or postintervention. Hedges d effect sizes were computed, study quality was evaluated, and random effects models were used to estimate sampling error and population variance of the observed effects. Results Exercise training significantly reduced depressive symptoms by a heterogeneous mean effect size delta ({Delta}) of 0.30 (95% CI, 0.25-0.36). Larger antidepressant effects were obtained when (1) baseline depressive symptoms were higher, (2) patients met recommended physical activity levels, and (3) the trial primary outcome, predominantly function related, was significantly improved among patients having baseline depressive symptoms indicative of mild-to-moderate depression. Conclusions Exercise reduces depressive symptoms among patients with a chronic illness. Patients with depressive symptoms indicative of mild-to-moderate depression and for whom exercise training improves function-related outcomes achieve the largest antidepressant effects.

Holtzheimer, P. E., M. E. Kelley, et al. (2012). "Subcallosal Cingulate Deep Brain Stimulation for Treatment-Resistant Unipolar and Bipolar Depression." Arch Gen Psychiatry **69**(2): 150-158. http://archpsyc.ama-assn.org/cgi/content/abstract/69/2/150.

Context Deep brain stimulation (DBS) may be an effective intervention for treatment-resistant depression (TRD), but available data are limited. Objective To assess the efficacy and safety of subcallosal cingulate DBS in patients with TRD with either major depressive disorder (MDD) or bipolar II disorder (BP). Design Open-label trial with a sham lead-in phase. Setting Academic medical center. Patients Men and women aged 18 to 70 years with a moderate-to-severe major depressive episode after at least 4 adequate antidepressant treatments. Ten patients with MDD and 7 with BP were enrolled from a total of 323 patients screened. Intervention Deep brain stimulation electrodes were implanted bilaterally in the subcallosal cingulate white matter. Patients received single-blind sham stimulation for 4 weeks followed by active stimulation for 24 weeks. Patients then entered a single-blind discontinuation phase; this phase was stopped after the first 3 patients because of ethical concerns. Patients were evaluated for up to 2 years after the onset of active stimulation. Main Outcome Measures Change in depression severity and functioning over time, and response and remission rates after 24 weeks were the primary efficacy end points; secondary efficacy end points were 1 year and 2 years of active stimulation. Results A significant decrease in depression and increase in function were associated with chronic stimulation. Remission and response were seen in 3 patients (18%) and 7 (41%) after 24 weeks (n = 17), 5 (36%) and 5 (36%) after 1 year (n = 14), and 7 (58%) and 11 (92%) after 2 years (n = 12) of active stimulation. No patient achieving remission experienced a spontaneous relapse. Efficacy was similar for patients with MDD and those with BP. Chronic DBS was safe and well tolerated, and no hypomanic or manic episodes occurred. A modest sham stimulation effect was found, likely due to a decrease in depression after the surgical intervention but prior to entering the sham phase. Conclusions The findings of this study support the long-term safety and antidepressant efficacy of subcallosal cingulate DBS for TRD and suggest equivalent safety and efficacy for TRD in patients with BP.

Kieler, H., M. Artama, et al. (2012). "Selective serotonin reuptake inhibitors during pregnancy and risk of persistent pulmonary hypertension in the newborn: population based cohort study from the five Nordic countries." BMJ **344**: d8012. http://www.ncbi.nlm.nih.gov/pubmed/22240235.

OBJECTIVE: To assess whether maternal use of selective serotonin reuptake inhibitors (SSRIs) increases the risk of persistent pulmonary hypertension in the newborn, and whether such an effect might differ between specific SSRIs. DESIGN: Population based cohort study using data from the national health registers. SETTING: Denmark, Finland, Iceland, Norway, and Sweden, 1996-2007. PARTICIPANTS: More than 1.6 million infants born after gestational week 33. MAIN OUTCOME MEASURES: Risks of persistent pulmonary hypertension of the newborn associated with early and late exposure to SSRIs during pregnancy and adjusted for important maternal and pregnancy characteristics. Comparisons were made between infants exposed and not exposed to SSRIs. RESULTS: Around 30 000 women had used SSRIs during pregnancy and 11 014 had been dispensed an SSRI later than gestational week 20. Exposure to SSRIs in late pregnancy was associated with an increased risk of persistent pulmonary hypertension in the newborn: 33 of 11 014 exposed infants (absolute risk 3 per 1000 liveborn infants compared with the background incidence of 1.2 per 1000); adjusted odds ratio 2.1 (95% confidence interval 1.5 to 3.0). The increased risks of persistent pulmonary hypertension in the newborn for each of the specific SSRIs (sertraline, citalopram, paroxetine, and fluoxetine) were of similar magnitude. Filling a prescription with SSRIs before gestational week 8 yielded slightly increased risks: adjusted odds ratio 1.4 (95% confidence interval 1.0 to 2.0). CONCLUSIONS: The risk of persistent pulmonary hypertension of the newborn is low, but use of SSRIs in late pregnancy increases that risk more than twofold. The increased risk seems to be a class effect.

Kripke, D. F., R. D. Langer, et al. (2012). "Hypnotics' association with mortality or cancer: a matched cohort study." BMJ Open **2**(1): e000850. http://www.ncbi.nlm.nih.gov/pubmed/22371848.

OBJECTIVES: An estimated 6%-10% of US adults took a hypnotic drug for poor sleep in 2010. This study extends previous reports associating hypnotics with excess mortality. SETTING: A large integrated health system in the USA. DESIGN: Longitudinal electronic medical records were extracted for a one-to-two matched cohort survival analysis. SUBJECTS: Subjects (mean age 54 years) were 10 529 patients who received hypnotic prescriptions and 23 676 matched controls with no hypnotic prescriptions, followed for an average of 2.5 years between January 2002 and January 2007. MAIN OUTCOME MEASURES: Data were adjusted for age, gender, smoking, body mass index, ethnicity, marital status, alcohol use and prior cancer. Hazard ratios (HRs) for death were computed from Cox proportional hazards models controlled for risk factors and using up to 116 strata, which exactly matched cases and controls by 12 classes of comorbidity. RESULTS: As predicted, patients prescribed any hypnotic had substantially elevated hazards of dying compared to those prescribed no hypnotics. For groups prescribed 0.4-18, 18-132 and >132 doses/year, HRs (95% CIs) were 3.60 (2.92 to 4.44), 4.43 (3.67 to 5.36) and 5.32 (4.50 to 6.30), respectively, demonstrating a dose-response association. HRs were elevated in separate analyses for several common hypnotics, including zolpidem, temazepam, eszopiclone, zaleplon, other benzodiazepines, barbiturates and sedative antihistamines. Hypnotic use in the upper third was associated with a significant elevation of incident cancer; HR=1.35 (95% CI 1.18 to 1.55). Results were robust within groups suffering each comorbidity, indicating that the death and cancer hazards associated with hypnotic drugs were not attributable to pre-existing disease. CONCLUSIONS: Receiving hypnotic prescriptions was associated with greater than threefold increased hazards of death even when prescribed <18 pills/year. This association held in separate analyses for several commonly used hypnotics and for newer shorter-acting drugs. Control of selective prescription of hypnotics for patients in poor health did not explain the observed excess mortality.

Lagerveld, S. E., R. W. Blonk, et al. (2012). "Work-focused treatment of common mental disorders and return to work: A comparative outcome study." J Occup Health Psychol **17**(2): 220-234. http://www.ncbi.nlm.nih.gov/pubmed/22308965.

The aim of this study was to compare the effectiveness of two individual-level psychotherapy interventions: (a) treatment as usual consisting of cognitive-behavioral therapy (CBT) and (b) work-focused CBT (W-CBT) that integrated work aspects early into the treatment. Both interventions were carried out by psychotherapists with employees on sick leave because of common mental disorders (depression, anxiety, or adjustment disorder). In a quasi-experimental design, 12-month follow-up data of 168 employees were collected. The CBT group consisted of 79 clients, the W-CBT group of 89. Outcome measures were duration until return to work (RTW), mental health problems, and costs to the employer. We found significant effects on duration until RTW in favor of the W-CBT group: full RTW occurred 65 days earlier. Partial RTW occurred 12 days earlier. A significant decrease in mental health problems was equally present in both conditions. The average financial advantage for the employer of an employee in the W-CBT group was estimated at $5,275 U.S. dollars compared with the CBT group. These results show that through focusing more and earlier on work-related aspects and RTW, functional recovery in work can be substantially speeded up within a regular psychotherapeutic setting. This result was achieved without negative side effects on psychological complaints over the course of 1 year. Integrating work-related aspects into CBT is, therefore, a fruitful approach with benefits for employees and employers alike. *MedicalXpress - http://medicalxpress.com/news/2012-02-work-focused-psychotherapy-employees-sooner.html - comments "Employees on sick leave with common mental health disorders such as depression and anxiety fully returned to work sooner when therapy deals with work-related problems and how to get back on the job, according to new research published by the American Psychological Association. Employees who received this therapy and returned to work sooner did not suffer adverse effects and showed significant improvement in mental health over the course of one year, according to the article, published online in APA's Journal of Occupational Health Psychology. "People with depression or anxiety may take a lot of sick leave to address their problems," said the study's lead author, Suzanne Lagerveld, of the Netherlands Organization for Applied Scientific Research (TNO). "However, focusing on how to return to work is not a standard part of therapy. This study shows that integrating return-to-work strategies into therapy leads to less time out of work with little to no compromise in people's psychological well-being over the course of one year." The study, conducted in the Netherlands, followed 168 employees, of whom 60 percent were women, on sick leave due to psychological problems such as anxiety, adjustment disorder and minor depression. Seventy-nine employees from a variety of jobs received standard, evidence-based cognitive-behavioral therapy, while the rest received cognitive-behavioral therapy that included a focus on work and the process of returning to work. Cognitive-behavioral therapy is based on the idea that people's thoughts, rather than external factors such as people, situations or events, cause feelings and behaviors. Cognitive-behavioral therapists encourage their clients to change the way they think in order to feel better even if the situation does not change. Behavioral techniques such as gradual exposure to difficult situations are often used within cognitive-behavioral therapy. In the work-focused group, psychotherapists addressed work issues in an early phase and used work and the workplace as mechanisms or context to improve the client's mental health. For example, therapists consistently explained to their clients how work can offer structure and self-esteem, characteristics beneficial to clients' recovery. They also helped clients draft a detailed, gradual plan for returning to work, focusing on how the client would engage in specific tasks and activities. Clients in both groups received treatment for about 12 sessions over an average of six months. The researchers checked in with them at three-month intervals for one year, shortly before treatment began. Those in the work-focused group fully returned to work on average 65 days earlier than the participants in the standard therapy group, and they started a partial return to work 12 days earlier. Those in the work-focused therapy engaged in more steps to fully return to work, gradually increasing their hours and duties. Almost all the participants in the study – 99 percent – had at least partially returned to work at the one-year follow-up. Most participants resumed work gradually, with only 7 percent going directly from full sick leave to full-time work. All participants had fewer mental health problems over the course of treatment, no matter which type of therapy they received, with the most dramatic decrease in symptoms occurring in the first few months. "Being out of work has a direct effect on people's well-being. Those who are unable to participate in work lose a valuable source of social support and interpersonal contacts," said Lagerveld. "They might lose part of their income and consequently tend to develop even more psychological symptoms. We've demonstrated that employees on sick leave with mental disorders can benefit from interventions that enable them to return to work." The savings to an employer whose employee went back to work earlier was estimated at 20 percent, which amounted to about a $5,275 gain in U.S. dollars per employee, according to the article. This was based solely on wages paid during sick leave and did not include additional costs of productivity loss and hiring replacements."*

Leucht, S., S. Hierl, et al. (2012). "Putting the efficacy of psychiatric and general medicine medication into perspective: review of meta-analyses." The British Journal of Psychiatry **200**(2): 97-106. http://bjp.rcpsych.org/content/200/2/97.abstract.

BackgroundThe efficacy of psychopharmacological treatments has been called into question. Psychiatrists are unfamiliar with the effectiveness of common medical drugs.AimsTo put the efficacy of psychiatric drugs into the perspective of that of major medical drugs.MethodWe searched Medline and the Cochrane Library for systematic reviews on the efficacy of drugs compared with placebo for common medical and psychiatric disorders, and systematically presented the effect sizes for primary efficacy outcomes.ResultsWe included 94 meta-analyses (48 drugs in 20 medical diseases, 16 drugs in 8 psychiatric disorders). There were some general medical drugs with clearly higher effect sizes than the psychotropic agents, but the psychiatric drugs were not generally less efficacious than other drugs.ConclusionsAny comparison of different outcomes in different diseases can only serve the purpose of a qualitative perspective. The increment of improvement by drug over placebo must be viewed in the context of the disease's seriousness, suffering induced, natural course, duration, outcomes, adverse events and societal values.

Markkula, N., T. Härkänen, et al. (2012). "Mortality in people with depressive, anxiety and alcohol use disorders in Finland." The British Journal of Psychiatry **200**(2): 143-149. http://bjp.rcpsych.org/content/200/2/143.abstract.

Background: Mental disorders are associated with increased mortality, but population-based surveys with reliable diagnostic procedures controlling for somatic health status are scarce.AimsTo assess excess mortality associated with depressive, anxiety and alcohol use disorders and the principal causes of death. Method: In a nationally representative sample of Finns aged 30–70 years, psychiatric disorders were diagnosed with the Composite International Diagnostic Interview. After an 8-year follow-up period, vital status and cause of death of each participant was obtained from national registers. Results: After adjusting for sociodemographic factors, health status and smoking, depressive (hazard ratio (HR) = 1.97) and alcohol use disorders (HR = 1.72) were statistically significantly associated with mortality. Risk of unnatural death was increased among individuals diagnosed with anxiety disorders or alcohol dependence. Conclusions: Individuals with depressive and alcohol use disorders have an increased mortality risk comparable with many chronic somatic conditions, that is only partly attributable to differences in sociodemographic, somatic health status and hazardous health behaviour.

McKnight, R. F., M. Adida, et al. (2012). "Lithium toxicity profile: a systematic review and meta-analysis." The Lancet **379**(9817): 721-728. http://linkinghub.elsevier.com/retrieve/pii/S014067361161516X.

Lithium is a widely used and effective treatment for mood disorders. There has been concern about its safety but no adequate synthesis of the evidence for adverse effects. We aimed to undertake a clinically informative, systematic toxicity

profile of lithium. We undertook a systematic review and meta-analysis of randomised controlled trials and observational studies. We searched electronic databases, specialist journals, reference lists, textbooks, and conference abstracts. We used a hierarchy of evidence which considered randomised controlled trials, cohort studies, case-control studies, and case reports that included patients with mood disorders given lithium. Outcome measures were renal, thyroid, and parathyroid function; weight change; skin disorders; hair disorders; and teratogenicity. We screened 5988 abstracts for eligibility and included 385 studies in the analysis. On average, glomerular filtration rate was reduced by −6·22 mL/min (95% CI −14·65 to 2·20, p=0·148) and urinary concentrating ability by 15% of normal maximum (weighted mean difference −158·43 mOsm/kg, 95% CI −229·78 to −87·07, p<0·0001). Lithium might increase risk of renal failure, but the absolute risk was small (18 of 3369 [0·5%] patients received renal replacement therapy). The prevalence of clinical hypothyroidism was increased in patients taking lithium compared with those given placebo (odds ratio [OR] 5·78, 95% CI 2·00—16·67; p=0·001), and thyroid stimulating hormone was increased on average by 4·00 iU/mL (95% CI 3·90—4·10, p<0·0001). Lithium treatment was associated with increased blood calcium (+0·09 mmol/L, 95% CI 0·02—0·17, p=0·009), and parathyroid hormone (+7·32 pg/mL, 3·42—11·23, p<0·0001). Patients receiving lithium gained more weight than did those receiving placebo (OR 1·89, 1·27—2·82, p=0·002), but not those receiving olanzapine (0·32, 0·21—0·49, p<0·0001). We recorded no significant increased risk of congenital malformations, alopecia, or skin disorders. Lithium is associated with increased risk of reduced urinary concentrating ability, hypothyroidism, hyperparathyroidism, and weight gain. There is little evidence for a clinically significant reduction in renal function in most patients, and the risk of end-stage renal failure is low. The risk of congenital malformations is uncertain; the balance of risks should be considered before lithium is withdrawn during pregnancy. Because of the consistent finding of a high prevalence of hyperparathyroidism, calcium concentrations should be checked before and during treatment.

Moore, D. and S. Ayers (2011). "A review of postnatal mental health websites: help for healthcare professionals and patients." Arch Womens Ment Health **14**(6): 443-452. http://dx.doi.org/10.1007/s00737-011-0245-z.

The internet offers an accessible and cost-effective way to help women suffering with various types of postnatal mental illness and also can provide resources for healthcare professionals. Many websites on postnatal mental illness are available, but there is little information on the range or quality of information and resources offered. The current study therefore aimed to review postnatal health websites and evaluate their quality on a variety of dimensions. A systematic review of postnatal health websites was conducted. Searches were carried out on four search engines (Google, Yahoo, Ask Jeeves and Bing) which are used by 98% of web users. The first 25 websites found for each key word and their hyperlinks were assessed for inclusion in the review. Websites had to be exclusively dedicated to postnatal mental health or have substantial information on postnatal mental illness. Eligible websites (n = 114) were evaluated for accuracy of information, available resources and quality. Results showed that information was largely incomplete and difficult to read; available help was limited and website quality was variable. The top five postnatal mental illness websites were identified for (1) postnatal mental illness sufferers and (2) healthcare professionals. It is hoped these top websites can be used by healthcare professionals both for their own information and to advise patients on quality online resources. *MedicalXpress - http://medicalxpress.com/news/2012-02-uk-online-advice-postnatal-depression.html - comments: "Researchers at the University of Sussex have identified the top five internet sites offering support for women struggling with postnatal mental illness such as depression or anxiety. Around 10-15 per cent of new mothers are diagnosed with postnatal mental illnesses, while around one in four women may have significant post-birth distress without meeting the criteria for a disorder. Many women turn to the internet to seek advice and reassurance over these conditions. Health psychologists Donna Moore and Dr. Susan Ayers sorted through thousands of web sites and whittled down their selection to the top five sites for new mothers seeking information about postnatal depression and anxiety and the top five for healthcare professionals looking for ways to support patients. For mums they are: http://www.panda.org.au; http://www.hapis.org.uk; http://www.postpartumhealthalliance.org; http://www.postpartum.net & http://www.pndsa.co.za. And for health professionals: http://www.postpartum.net; http://www.postpartumhealthalliance.org; www.babybluesconnection.org; http://www.postpartumsupport.com; http://www.postpar … rt.com. The research, published in the journal Archives of Women's Mental Health, offers the latest systematic survey of web advice for postnatal psychological problems and serves as an authoritative guide to most reliable sites. Women can suffer from various psychological problems after having a baby that range from mild baby blues to more severe depression, anxiety and psychosis. The researchers found that although there were thousands of sites devoted to postnatal depression (typing "postnatal depression" into Google returned more than a million results), the quality was extremely variable, with very few sites offering the full spectrum of easily accessed support, advice, information and reassurance about the different psychological problems women might encounter. Many sites were hard to navigate, suffered from poorly edited content or had information that was out of date or just plain wrong. Information focused on symptoms rather than risk factors or the potential negative impact of not dealing with the illness on children and families as well as the sufferer. There was some information on treatment, but it was generally superficial. Most websites rarely had prominent information on what the users should do if they have thoughts of harming themselves or their infant. Donna Moore says: "Most web sites did encourage women to seek medical help. However, information tended to be about depressive symptoms and largely ignored other forms of postnatal illness, namely anxiety, post traumatic stress disorder and puerperal psychosis. This could reinforce the common misconception that postnatal mental illness is solely depression or simply an extension of the 'baby blues'. Mothers need to know what the signs of the illness are and treatment options and health professionals need to know all the facts for effective screening. It is essential that web sites provide accurate and comprehensive information and advice for mothers and their families. Mothers need to be informed that if they get help they will get better." Dr. Ayers says:"The internet is often the first port of call for people worried about health issues. This is particularly the case for women suffering from depressive illness following the birth of a baby because they many find it difficult to leave the house with a young infant and, like all mental health issues, there is the fear of being stigmatised. Using the internet, therefore, provides a way of seeking reassurance, information and advice anonymously from home. Effective web sites are therefore important in directing women to the professional help they need while giving them the confidence to ask for it." To identify the best sites, the researchers searched for sites using the four main search engines using the terms "postnatal depression", "postnatal illness", "postpartum depression" and "postpartum illness". The first 25 web sites for each key term were selected for review. Each site had to be exclusively dedicated to postnatal mental health or have substantial information on postnatal mental illness. They were evaluated for accuracy of information, available resources and quality. A total of 114 sites were eventually surveyed. It is hoped that through this systematic review, the top web sites will be used by healthcare professionals and help with the creation of new online resources, based on knowledge of how sufferers use web resources. Donna Moore and Susan Ayers are currently investigating how women with postnatal distress use and benefit from resources on the internet. Accurate information on all symptoms is essential for healthcare professionals screening for postnatal mental illness and sufferers and their families deciding whether to get help."*

Nanni, V., R. Uher, et al. (2012). "Childhood maltreatment predicts unfavorable course of illness and treatment outcome in depression: a meta-analysis." Am J Psychiatry **169**(2): 141-151. http://www.ncbi.nlm.nih.gov/pubmed/22420036.

OBJECTIVES: Evidence suggests that childhood maltreatment may negatively affect not only the lifetime risk of depression but also clinically relevant measures of depression, such as course of illness and treatment outcome. The authors

conducted the first meta-analysis to examine the relationship between childhood maltreatment and these clinically relevant measures of depression. METHOD: The authors conducted searches in MEDLINE, PsycINFO, and Embase for articles examining the association of childhood maltreatment with course of illness (i.e., recurrence or persistence) and with treatment outcome in depression that appeared in the literature before December 31, 2010. Recurrence was defined in terms of number of depressive episodes. Persistence was defined in terms of duration of current depressive episode. Treatment outcome was defined in terms of either a response (a 50% reduction in depression severity rating from baseline) or remission (a decrease in depression severity below a predefined clinical significance level). RESULTS: A meta-analysis of 16 epidemiological studies (23,544 participants) suggested that childhood maltreatment was associated with an elevated risk of developing recurrent and persistent depressive episodes (odds ratio=2.27, 95% confidence interval [CI]=1.80-2.87). A meta-analysis of 10 clinical trials (3,098 participants) revealed that childhood maltreatment was associated with lack of response or remission during treatment for depression (odds ratio=1.43, 95% CI=1.11-1.83). Meta-regression analyses suggested that the results were not significantly affected by publication bias, choice of outcome measure, inclusion of prevalence or incidence samples, study quality, age of the sample, or lifetime prevalence of depression. CONCLUSIONS: Childhood maltreatment predicts unfavorable course of illness and treatment outcome in depression.

Rosenthal, D. G., N. Learned, et al. (2012). "Characteristics of Fathers with Depressive Symptoms." Matern Child Health J. http://www.ncbi.nlm.nih.gov/pubmed/22362259.

Extensive research shows maternal depression to be associated with poorer child outcomes, and characteristics of these mothers have been described. Recent research describes associations of paternal depressive symptoms and child behavioral and emotional outcomes, but characteristics of these fathers have not been investigated. This study describes characteristics of fathers with depressive symptoms in the USA. Utilizing data from 7,247 fathers and mothers living in households with children aged 5-17 years who participated in the Medical Expenditure Panel Survey 2004-2006, the Patient Health Questionnaire-2 was used to assess parental depressive symptoms, the Short Form-12 was used to examine paternal and maternal physical health, the Columbia Impairment Scale was used to measure child behavioral or emotional problems, and the Children with Special Health Care Needs Screener was used to identify children with special health care needs. In multivariate analyses, poverty (AOR 1.52; 95% CI 1.05-2.22), maternal depressive symptoms (AOR 5.77; 95% CI 4.18-7.95), living with a child with special health care needs (AOR 1.42, 95% CI 1.04-1.94), poor paternal physical health (AOR 3.31; 95% CI 2.50-4.38) and paternal unemployment (AOR 6.49; 95% CI 4.12-10.22) were independently associated with increased rates of paternal depressive symptoms. These are the first data that demonstrate that poverty, paternal physical health problems, having a child with special health care needs, maternal depressive symptoms, and paternal unemployment are independently associated with paternal depressive symptoms, with paternal unemployment associated with the highest rates of such problems. *MedicalXpress - http://medicalxpress.com/news/2012-02-characteristics-fathers-depressive-symptoms.html - comments "Voluminous research literature attests to the multiple negative consequences of maternal depression and depressive symptoms for the health and development of children. In contrast, there is a profound paucity of information about depressive symptoms in fathers according to a follow up study by NYU School of Medicine researchers in the February 23rd online edition of Maternal and Child Health Journal. In late 2011 lead investigator, Michael Weitzman, MD, professor of Pediatrics and Environmental Medicine and his co-authors identified, for the first time ever, in a large and nationally representative sample, increased rates of mental health problems of children whose fathers had depressive symptoms. In that paper, 6% of children with neither a mother or a father with depressive symptoms, 15% of those with a father, 20% of those with a mother, and 25% of children with both a mother and a father with depressive symptoms had evidence of emotional or behavioral problems. "While the finding of increased rates of mental health problems among children whose fathers had depressive symptoms was not surprising in our earlier study, the fact that no prior large scale studies had investigated this issue is truly remarkable, as is the finding that one out of every four children with both a mother and a father with symptoms of depression have mental health problems" said Weitzman. He also noted that the findings highlighted "the urgent need to recognize the roles of fathers in the lives of children and families in clinical and public policy formulation and implementation, to further explore ways in which the mental health of fathers influence the health and function of our nation's children, and to structure our health and human services so as to identify and effectively treat fathers who are depressed or suffering from other mental health problems. A first step is to identify which of our nation's fathers are at increased risk for depression, which is the main reason that we undertook the current study" The current paper, again using a large and nationally representative sample of households in the USA (7,247 households in which mothers, fathers and children lived), is the first paper to investigate characteristics of fathers that are independently associated with increased rates of depressive symptoms. Overall, 6% of all fathers had scores suggesting that they were suffering from depressive symptom. Using previously widely used measures of fathers', mothers' and children's physical and mental health, as well as numerous other family and child characteristics, such as maternal and paternal age, race, marital status, and educational attainment, as well as child age, these data demonstrate the following factors being independently associated with increased rates of fathers' depressive symptoms: living in poverty (1.5 times as common as not living in poverty); living with a child with special health care needs (1.4 times as common); living with a mother with depressive symptoms (5.75 times as common); poor paternal physical health (3.31 times as common) and paternal unemployment (6.50 times as common). While the findings of poverty, having a child with special health care needs, and living with a mother with depressive symptoms are not unexpected, the fact that fathers' unemployment is by far the strongest predictor of depressive symptoms is a brand new, and unique finding with profound implications for the health and development of children in this time of extremely high rates of unemployment. "The findings reported in the current paper demonstrate factors that could help identify fathers who might benefit from clinical screening for depression, and we believe the results are particularly salient given the current financial crisis and concurrent increase in unemployment in the USA" said Dr. Weitzman. "Also of serious concern is the fact that living with a mother who herself has depressive symptoms is almost associated with almost as large an increased rate of paternal depressive symptoms as is paternal unemployment. Fathers play profoundly important roles in the lives of children and families, and are all too often forgotten in our efforts to help children. These new findings, we hope, will be useful to much needed efforts to develop strategies to identify and treat the very large number of fathers with depression."*

Sims, H., H. Sanghara, et al. (2012). "Text message reminders of appointments: a pilot intervention at four community mental health clinics in London." Psychiatr Serv **63**(2): 161-168. http://www.ncbi.nlm.nih.gov/pubmed/22302334.

OBJECTIVE: Forgetting is commonly stated as a reason for missing mental health appointments. The authors examined the effect of short message service (SMS), or text message, reminders on the attendance of appointments at four community mental health clinics in London. METHODS: Attendance of outpatient appointments roughly between March and June of 2008 (N=648), 2009 (N=1,081), and 2010 (N=1,088) was examined. Reminder messages were sent seven and five days before an appointment in 2009 and seven and three days before an appointment in 2010; patients in the 2008 sample received no reminder messages. Appointment attendance during the sample periods was compared by using multiple logistic regression analysis and adjusting for sociodemographic and clinical confounders. RESULTS: Missed appointments accounted for 36% of appointments in 2008, 26% of appointments in 2009, and 27% of appointments in 2010. The relative risk reduction in failed attendance was 28% between the 2008 and 2009 samples and 25% between the 2008 and 2010 samples. Attendance rates

were significantly higher for the 2009 and 2010 samples than for the 2008 sample (p<.001) but did not differ between the two intervention periods. CONCLUSIONS: SMS-based technology can offer a time-, labor-, and cost-efficient strategy for encouraging engagement with psychiatric outpatient services. In England alone, a reduction of 25% to 28% in missed outpatient clinic appointments would translate to national cost savings of more than pound150 million, or $245 million, per year, and likely have clinical benefits as well.

Spinelli, M. (2012). "Antidepressant treatment during pregnancy." American Journal of Psychiatry **169**(2): 121-124. http://dx.doi.org/10.1176/appi.ajp.2011.11111622.

(Available in free full text): Currently, the medical literature contains studies of more than 20,000 pregnancy outcomes for women exposed to antidepressants. This literature has been helpful in identifying possible effects of this exposure on the outcome of pregnancy. The results of studies that demonstrate increased risk for adverse pregnancy or birth events are frequently publicized in the media, which has resulted in many pregnant women refusing medication. Some law firms have seized on this information to seek plaintiffs to bring lawsuits. Many clinicians hear of positive studies through the media or see advertisements from law firms, scan the medical literature for abstracts, and may conclude that the risks of medication to the mother and fetus outweigh possible benefits. However, negative studies receive minimal media attention ... We saw an inappropriate decline in the prescription of antidepressants for adolescents and young adults because of a Food and Drug Administration black box warning about suicidality. However, untreated depression itself has a far greater impact on suicidal behavior than the adverse effects of the antidepressants. Psychiatrists have generally used appropriate judgment in prescribing antidepressants and psychotherapies for this patient population, but other physicians did not. We now need to communicate clearly about the risks and benefits of treatment for depressed pregnant women if we wish to avoid similar adverse consequences to their well-being and the well-being of their infants.

Stafford, L. and M. Berk (2011). "The use of statins after a cardiac intervention is associated with reduced risk of subsequent depression: proof of concept for the inflammatory and oxidative hypotheses of depression?" J Clin Psychiatry **72**(9): 1229-1235. http://www.ncbi.nlm.nih.gov/pubmed/21208591.

OBJECTIVE: Depression is associated with immune activation as well as oxidative stress. Statins have in vitro and in vivo antiinflammatory and antioxidative properties. We prospectively investigated whether the use of statins was associated with a reduced risk of development of depression in individuals who have had a cardiac event or intervention. METHOD: Participants were recruited between May 2005 and March 2006 from the Geelong Hospital, Geelong, Australia, a tertiary hospital in regional Australia that serves a catchment area shown to be representative of the broader Australian community. Patients who were hospitalized for angioplasty, myocardial infarction, or coronary artery bypass graft surgery (N = 193) were followed up prospectively for 9 months to assess development of depression. Depression data were collected 3 months postdischarge (T1) by structured clinical interview (using the Mini International Neuropsychiatric Interview, version 5) and 9 months postdischarge (T2) by self-report (using the Hospital Anxiety and Depression Scale). Major depressive disorder, minor depression, and dysthymia were diagnosed according to Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition criteria. Data on statins were collected from medical records. The association between statin therapy and depression was tested using both linear and logistic regression models controlling for clinical, psychological, and demographic confounders. RESULTS: At discharge, 157 participants (81.3%) were receiving statin therapy. Adjusting for possible confounders, taking statins at discharge had a protective effect on depression at T1, reducing the likelihood of dysthymia, minor depression, or major depression by 69% (95% CI, 0.097-0.972; P = .045). At the T2 end point, statin therapy again had a protective effect and was associated with a 79% reduction in the likelihood of depression (95% CI, 0.052-0.876; P = .032). The linear regression model to predict depression at T2 was significantly different from zero (F(11,180) = 8.686, P < .001) and explained 36.3% of the variance in depression. CONCLUSIONS: The use of statins was associated with significant reduction in the risk of depression in individuals who have had a cardiac event. This supports the role of oxidative and inflammatory processes in depression and opens the door to rational and novel pathophysiologically based therapies distinct from conventional antidepressants.

Toker, S. and M. Biron (2012). "Job burnout and depression: Unraveling their temporal relationship and considering the role of physical activity." J Appl Psychol. http://www.ncbi.nlm.nih.gov/pubmed/22229693.

Job burnout and depression have been generally found to be correlated with one another. However, evidence regarding the job burnout-depression association is limited in that most studies are cross-sectional in nature. Moreover, little is known about factors that may influence the job burnout-depression association, other than individual or organizational factors (e.g., gender, supervisor support). The current study seeks to address these gaps by (a) unraveling the temporal relationship between job burnout and depression and (b) examining whether the job burnout-depression association may be contingent upon the degree to which employees engage in physical activity. On the basis of a full-panel 3-wave longitudinal design with a large sample of employees (N = 1,632), latent difference score modeling indicated that an increase in depression from Time 1 to Time 2 predicts an increase in job burnout from Time 2 to Time 3, and vice versa. In addition, physical activity attenuated these effects in a dose-response manner, so that the increase in job burnout and depression was strongest among employees who did not engage in physical activity and weakest to the point of nonsignificance among those engaging in high physical activity. *MedicalXpress - http://medicalxpress.com/news/2012-02-calories-gym-burnout.html - comments "Obesity can be a dangerous risk to our physical health, but according to a Tel Aviv University researcher, avoiding the gym can also take a toll on our mental health, leading to depression and greater burnout rates at work. Dr. Sharon Toker of TAU's Recanati Faculty of Management, working with Dr. Michal Biron from the University of Haifa, discovered that employees who found the time to engage in physical activity were less likely to experience a deterioration of their mental health, including symptoms of burnout and depression. The best benefits were achieved among those exercising for four hours per week - they were approximately half as likely to experience deterioration in their mental state as those who did no physical activity. Drs. Toker and Biron say that employers will benefit from encouraging the physical fitness of their employees. If the fight against obesity isn't enough of an incentive, inspiring workers to be physically active lessens high heath costs, reduces absenteeism, and increases productivity in the workplace. Their research was recently published in the Journal of Applied Psychology. Though depression and burnout are connected, they are not the same entity, says Dr. Toker. Depression is a clinical mood disorder, and burnout is defined by physical, cognitive, and emotional exhaustion. But both contribute towards a "spiral of loss" where the loss of one resource, such as a job, could have a domino effect and lead to the loss of other resources such as one's home, marriage, or sense of self-worth. Originally designed to examine the relationship between depression and burnout, the study assessed the personal, occupational, and psychological states of 1,632 healthy Israeli workers in both the private and public sectors. Participants completed questionnaires when they came to medical clinics for routine check-ups and had three follow-up appointments over a period of nine years. Findings indicate that an increase in depression predicts an increase in job burnout over time, and vice versa. But for the first time, the researchers also considered the participants' levels of physical activity, defined as any activity that increases the heart rate and brings on a sweat. The participants were divided into four groups: one that did not engage in physical activity; a second that did 75 to 150 minutes of physical activity a week; a third that did 150 to 240 minutes a week; and a fourth that did more than 240 minutes a week. Depression and burnout rates were clearly the highest among the group*

that did not participate in physical activity. The more physical activity that participants engaged in, the less likely they were to experience elevated depression and burnout levels during the next three years. The optimal amount of physical activity was a minimum of 150 minutes per week, where its benefits really started to take effect. In those who engaged in 240 minutes of physical activity or more, the impact of burnout and depression was almost nonexistent. But even 150 minutes a week will have a highly positive impact, says Dr. Toker, helping people to deal with their workday, improving self-efficacy and self-esteem, and staving off the spiral of loss. If they're feeling stressed at work, employees can always ask the boss to effect changes, such as providing more opportunities for emotional support in the workplace. But if the organization is unwilling to change, workers can turn to physical activities in their leisure time as an effective stress management tool. Far-sighted employers can benefit by building a gym on company grounds or subsidizing memberships to gyms in the community, and by allowing for flexible work hours to encourage employees to make physical activity an integral part of their day, suggests Dr. Toker. Such a strategy pays business dividends in the long run."

Wang, J. L., S. B. Patten, et al. (2012). "Predictors of 1-year outcomes of major depressive disorder among individuals with a lifetime diagnosis: a population-based study." Psychological Medicine **42**(02): 327-334. http://dx.doi.org/10.1017/S0033291711001218.

Background: Examining predictors of the outcomes of major depressive disorder (MDD) is important for clinical practice and population health. There are few population-based longitudinal studies on this topic. The objectives of this study were to (1) estimate the proportions of persistent and recurrent MDD among those with MDD over 1 year, and (2) identify demographic, socio-economic, workplace psychosocial and clinical factors associated with the outcomes. Method: From a population-based longitudinal study of the working population, participants with a lifetime diagnosis of MDD were selected (n=834). They were classified into two groups: those with and those without current MDD. The proportions of 1-year persistence and recurrence of MDD were estimated. MDD was assessed by the World Health Organization (WHO) Composite International Diagnostic Interview, CIDI-Auto 2.1, by telephone. Results: The proportions of persistent and recurrent MDD in 1 year were 38.5% [95% confidence interval (CI) 31.1–46.5] and 13.3% (95% CI 10.2–17.1) respectively. Long working hours, negative thinking and having co-morbid social phobia were predictive of persistence of MDD. Perceived work–family conflict, the severity of a major depressive episode and symptoms of depressed mood were significantly associated with the recurrence of MDD. Conclusions: Clinical and psychosocial factors are important in the prognosis of MDD. The factors associated with persistence and recurrence of MDD may be different. More large longitudinal studies on this topic are needed so that clinicians may predict potential outcomes based on the clinical profile and provide interventions accordingly. They may also take clinical action to change relevant psychosocial factors to minimize the chance of persistence and/or recurrence of MDD.

Williams, J. M., T. Barnhofer, et al. (2012). "Pre-adult onset and patterns of suicidality in patients with a history of recurrent depression." J Affect Disord **138**(1-2): 173-179. http://www.ncbi.nlm.nih.gov/pubmed/22310035.

BACKGROUND: This report assesses the association between age of onset of major depression and later suicidality in a sample of 276 recurrently depressed patients recruited for the Oxford/Bangor Staying Well after Depression (SWAD) Trial, and interviewed when in remission. METHODS: The study enrolled adult patients with a history of at least three episodes of non-psychotic major depressive disorder from primary care and psychiatric care practices and through community advertisements. At study entry, all participants estimated the age of their first onset of a major depressive episode and completed both self-report and interview-based assessments of past and current suicidal ideation and behavior. Participants were divided into pre-adult and adult onset groups using a cut-off age of 18. RESULTS: Forty-eight percent of the sample reported a pre-adult age of onset. Pre-adult age of onset was significantly associated with suicidality, both from self-report and from interviewer assessment even when adjusting for differences in age, gender, employment status, length of the disorder and early adversity. LIMITATIONS: Relevant variables were all assessed through retrospective reports. CONCLUSIONS: Pre-adult age of onset is closely associated with risk for and severity of later suicidality, replicating, in a sample of patients assessed when in remission, findings from studies that assessed patients when currently depressed. The association of pre-adult age of onset with suicidality is not due to differences in sociodemographic variables, length of the disorder and early adversity.

Wollmer, M. A., C. de Boer, et al. (2012). "Facing depression with botulinum toxin: A randomized controlled trial." Journal of Psychiatric Research(0). http://www.sciencedirect.com/science/article/pii/S0022395612000386.

(Free full text available) Positive effects on mood have been observed in subjects who underwent treatment of glabellar frown lines with botulinum toxin and, in an open case series, depression remitted or improved after such treatment. Using a randomized double-blind placebo-controlled trial design we assessed botulinum toxin injection to the glabellar region as an adjunctive treatment of major depression. Thirty patients were randomly assigned to a verum (onabotulinumtoxinA, n = 15) or placebo (saline, n = 15) group. The primary end point was change in the 17-item version of the Hamilton Depression Rating Scale six weeks after treatment compared to baseline. The verum and the placebo groups did not differ significantly in any of the collected baseline characteristics. Throughout the sixteen-week follow-up period there was a significant improvement in depressive symptoms in the verum group compared to the placebo group as measured by the Hamilton Depression Rating Scale ($F(6,168) = 5.76$, $p < 0.001$, $\eta 2 = 0.17$). Six weeks after a single treatment scores of onabotulinumtoxinA recipients were reduced on average by 47.1% and by 9.2% in placebo-treated participants ($F(1,28) = 12.30$, $p = 0.002$, $\eta 2 = 0.31$, $d = 1.28$). The effect size was even larger at the end of the study ($d = 1.80$). Treatment-dependent clinical improvement was also reflected in the Beck Depression Inventory, and in the Clinical Global Impressions Scale. This study shows that a single treatment of the glabellar region with botulinum toxin may shortly accomplish a strong and sustained alleviation of depression in patients, who did not improve sufficiently on previous medication. It supports the concept, that the facial musculature not only expresses, but also regulates mood states. *Medscape Psychiatry - http://www.medscape.com/viewarticle/760131?src=mpnews&spon=12 - commented on 13th March: "For patients with chronic major depression that does not sufficiently respond to other treatments, a single injection of botulinum neurotoxin into the glabellar muscle of the forehead to relieve frown lines appears to lead to strong and sustained improvement of the depression. Tillmann Kruger, MD, Associate Professor in the Department of Psychiatry, Social Psychiatry and Psychotherapy at Hannover Medical School in Hannover, Germany, reported here at the 20th European Congress of Psychiatry that these findings support the concept that facial musculature not only expresses mood states but also affects mood. Dr. Tillmann Kruger: He explained that frowning expresses negative emotions such as anger, fear, or sadness. A facial feedback hypothesis says that the frown itself reinforces negative emotions, with the implication that suppressing frowning will help to relieve the negative emotions. "The theory is pretty old, and it says that many or most of the emotions we have develop somewhere in the brain, and some of them are expressed in your face, for example...and this is again received and sent back to the central nervous system by this proprioceptive feedback," he told Medscape Medical News. He said that in some cases of depression, there are signs of increased glabellar muscle activity. Single Injection: To test the hypothesis, Dr. Kruger and colleague Axel Wollmer, MD, of the Psychiatric Hospital of the University of Basel in Switzerland, performed a randomized, double-blind, placebo-controlled trial using an injection of onabotulinumtoxinA (29 units for women, almost 40 units for men) or placebo into a total of 5 points in the procerus and corrugator muscles in the glabellar region of 30 patients with chronic major depression. Patients were 25 to 65 years old; they had a moderate to severe glabellar frown line and were undergoing stable*

treatment with antidepressant medication. The primary endpoint was the Hamilton Depression Rating Scale (HAM-D17, an expert-rated instrument) score 6 weeks after treatment compared with baseline. The investigators found that a single injection session led to diminished frown lines (P < .001) and to strong and sustained improvement in the depression in these patients who had not responded sufficiently to previous treatments. At 2 weeks, patients showed an improvement of mood, with a -5 point change on the self-reported Beck Depression Inventory (BDI) scale. There was only a slight improvement of mood in the placebo-treated patients. The botulinum-treated patients showed an almost 50% reduction in their HAM-D17 scores from 22 at baseline to about 12 at 6 weeks compared with only a 9% improvement in the HAM-D17 scores for the placebo group. The reductions in HAM-D17 scores were significant at all times points from 2 to 16 weeks (P < .001 at 16 weeks); similarly, the BDI score at 16 weeks was significantly improved compared with baseline (P < .01). More than 80% of the botulinum group had at least a partial response vs only a 25% partial response in the placebo group. A full response, meaning at least a 50% reduction on the HAM-D17 scale, occurred in 60% of the botulinum group but in only 13% of the placebo group. A full remission at 6 weeks, being a HAM-D17 score of 7 or less, occurred in 33% of the botulinum group. Dr. Kruger noted that typically among depressed patients, there is a fairly strong placebo effect, which he did not see in his patients. He explained the low rate and level of improvement in the placebo group as a result of the high proportion of participants with chronic depression and resistance to multiple previous therapies. Botulinum was later offered to patients in the placebo group. No patients dropped out of the study in either group. Facial Feedback Theory: "Not all glabellar frown lines have to disappear to guarantee a good psychological effect," Dr. Kruger said, and full remissions have been observed in patients with residual frown lines. "We think, regarding possible mechanisms, that the reduced proprioceptive feedback — the facial feedback theory — is the most important one. I think this is something that works 24 hours per day," he added. There may also be some effect of social feedback in that friends and family may tell patients that they do not look so angry. Dr. Kruger said that botulinum is able to travel in a retrograde direction via nerve fibers to the central nervous system, but given the small amount of drug used, he thought this mechanism would not explain the effects seen. However, when asked whether a more appropriate control than placebo injections would be botulinum injections into a cranial muscle that did not affect frowning, he agreed that such a procedure would be a good control for a possible effect of botulinum not related to the relief of frown lines. Therefore, it is still possible that botulinum acted through a mechanism other than relief of frown lines. Dr. Kruger said the study also showed that botulinum injections had excellent safety and tolerability. "It may be even economic because it's only a single injection [session], and it works for more than 16 weeks, as we have seen," he said, but the study needs to be validated in larger trials. At present, botulinum is not indicated for treatment of depression. "But Botox has an indication to treat glabellar frown lines...and if someone has frown lines and has a depression and says, 'I want to have them away, these frown lines,' you can, of course, use it," Dr. Kruger noted. Not Ready for Prime Time: Session moderator Frank Padberg, MD, Associate Professor and Director of the Brain Stimulation Laboratory in the Department of Psychiatry and Psychotherapy at Ludwig Maximilian University in Munich, Germany, commented to Medscape Medical News that the study was a pilot with a small sample size, "so you have to be, of course, cautious in interpreting the results, and it's of course difficult to have a good placebo control because the patients are aware that something changes or changes not," with botulinum or with placebo. "So the placebo response in rather treatment-resistant patients was quite low, and that's often a problem in pilot studies" because of less than adequate blinding, so "a significant effect comes out due to a low placebo response rate," he said. "But the data were interesting, and the effect was quite robust of the injection leading to improvement over a period of 6 weeks...so the basic principle of treatment seemed to work in this group." "The mechanisms of action are not clear," Dr. Padberg cautioned. "That is the main issue, but it is an interesting pilot work." In addition, patients in the study had to have frown lines, so it is a question of how many patients may be eligible for this sort of treatment. And he feels it is still too early to use this therapy outside of clinical trials."