36 bhma abstracts, february '12

Thirty six abstracts covering a multitude of stress, health & wellbeing related subjects including psychological benefits of "accepting" feeling sad, online courses for chronic back pain, nocebo effects, empathy, exercise & sexual function, dietary affected facial colouration & judged attractiveness, facial botox injections as a treatment for depression and much more.

(Moore and Ayers 2011; Stephen, Coetzee et al. 2011; Adler 2012; Bastian, Kuppens et al. 2012; Carpenter, Stoner et al. 2012; Colloca and Finniss 2012; Diener, Fujita et al. 2012; Eisenberger 2012; Engelen and Röttger-Rössler 2012; Green and Bieling 2012; Hamby, Finkelhor et al. 2012; Herring, Puetz et al. 2012; Hsiao, Shrewsberry et al. 2012; Human, Biesanz et al. 2012; Johansson, Skoog et al. 2012; Keyes, Eaton et al. 2012; Kripke, Langer et al. 2012; Lagerveld, Blonk et al. 2012; Larsson, Orsini et al. 2012; Li, Harmer et al. 2012; Masten, Telzer et al. 2012; McCullough, Peterson et al. 2012; McNaughton, Bates et al. 2012; Meyer, Masten et al. 2012; Moss and Oliver 2012; Mostofsky, Maclure et al. 2012; Mueller 2012; Nanni, Uher et al. 2012; Rosenthal, Learned et al. 2012; Sloane, Baillargeon et al. 2012; Stephen, Scott et al. 2012; Toker and Biron 2012; von Soest, Kvalem et al. 2012; Walter 2012; Wellenius, Burger et al. 2012; Wollmer, de Boer et al. 2012)

Adler, J. M. (2012). "Living into the story: agency and coherence in a longitudinal study of narrative identity development and mental health over the course of psychotherapy." J Pers Soc Psychol **102**(2): 367-389. https://sites.google.com/site/jonathanmadler/publications.

(Available in free full text) Narrative identity is the internalized, evolving story of the self that each person crafts to provide his or her life with a sense of purpose and unity. A proliferation of empirical research studies focused on narrative identity have explored its relationship with psychological well-being. The present study is the first prospective, multiwave longitudinal investigation to examine short-term personality change via an emphasis on narrative identity as it relates to mental health. Forty-seven adults wrote rich personal narratives prior to beginning psychotherapy and after every session over 12 assessment points while concurrently completing a measure of mental health. Narratives were coded for the themes of agency and coherence, which capture the dual aims of narrative identity: purpose and unity. By applying in-depth thematic coding to the stories of participants, the present study produced 47 case studies of intraindividual personality development and mental health. By employing multilevel modeling with the entire set of nearly 600 narratives, the present study also identified robust trends of individual differences in narrative changes as they related to improvements in mental health. Results indicated that, across participants, the theme of agency, but not coherence, increased over the course of time. In addition, increases in agency were related to improvements in participants' mental health. Finally, lagged growth curve models revealed that changes in the theme of agency occurred prior to the associated improvements in mental health. This finding remained consistent across a variety of individual-difference variables including demographics, personality traits, and ego development.

Bastian, B., P. Kuppens, et al. (2012). "Feeling bad about being sad: the role of social expectancies in amplifying negative mood." Emotion **12**(1): 69-80. http://www.ncbi.nlm.nih.gov/pubmed/21787076.

Our perception of how others expect us to feel has significant implications for our emotional functioning. Across 4 studies the authors demonstrate that when people think others expect them not to feel negative emotions (i.e., sadness) they experience more negative emotion and reduced well-being. The authors show that perceived social expectancies predict these differences in emotion and well-being both more consistently than-and independently of-personal expectancies and that they do so by promoting negative self-evaluation when experiencing negative emotion. We find evidence for these effects within Australia (Studies 1 and 2) as well as Japan (Study 2), although the effects of social expectancies are especially evident in the former (Studies 1 and 2). We also find experimental evidence for the causal role of social expectancies in negative emotional responses to negative emotional events (Studies 3 and 4). In short, when people perceive that others think they should feel happy, and not sad, this leads them to feel sad more frequently and intensely.

Carpenter, K. M., S. A. Stoner, et al. (2012). "An online self-help CBT intervention for chronic lower back pain." The Clinical Journal of Pain **28**(1): 14-22. http://journals.lww.com/clinicalpain/Fulltext/2012/01000/An_Online_Self_help_CBT_Intervention_for_Chronic.3.aspx.

Objectives: Research has shown that cognitive and behavioral therapies can effectively improve quality of life in chronic pain patients. Unfortunately, many patients lack access to cognitive and behavioral therapy treatments. We developed a pilot version of an interactive online intervention to teach self-management skills for chronic lower back pain, a leading cause of disability and work absenteeism. The objective of this randomized, controlled trial was to evaluate its efficacy. Methods: Individuals with chronic lower back pain were recruited over the Internet, screened by phone, and randomly assigned to receive access to the intervention (Wellness Workbook; WW) either immediately (intervention group) or after a 3-week delay (wait-list control). Participants (n=141, 83% female, 23% minority) were asked to complete the WW over 3 weeks. Self-report measures of pain, disability, disabling attitudes and beliefs, self-efficacy for pain control, and mood regulation were completed at baseline, week 3, and week 6. Results: Controlling for baseline individual differences in the outcome measures, multivariate analysis of covariance revealed that, at week 3, the intervention group scored better than the wait-list control group on all outcomes, including pain severity ratings. At week 6, after both groups had been exposed to the WW, there were no differences between groups. Discussion: Use of this pilot intervention seems to have had positive effects on a number of pain-related outcomes, including disability. Future research will evaluate the effectiveness of the completed intervention, with particular attention to quality of life and disability.

Colloca, L. and D. Finniss (2012). "Nocebo Effects, Patient-Clinician Communication, and Therapeutic Outcomes." JAMA: The Journal of the American Medical Association **307**(6): 567-568. http://jama.ama-assn.org/content/307/6/567.short.

Nocebo effects are adverse events produced by negative expectations and represent the negative side of placebo effects. It is now recognized that nocebo effects exist and operate during routine treatments, negatively affecting clinical outcomes even when placebos are not administered. The nocebo effects and placebo effects are the direct result of the psychosocial context or therapeutic environment on a patient's mind, brain, and body. Both phenomena can be produced by multiple factors, such as verbal suggestions and past experience.1 In the case of nocebo effects, negative information and prior unsuccessful therapies may be particularly important in mediating undesirable outcomes to routine therapy. Therefore, consideration of nocebo effects in the context of patient-clinician communication and disclosure in routine practice may be valuable in both minimizing the nocebo component of a given therapy and improving outcomes. As with their placebo counterpart, nocebo responses demonstrate the powerful interaction between the therapeutic context …

Diener, E., F. Fujita, et al. (2012). "Purpose, Mood, and Pleasure in Predicting Satisfaction Judgments." Social Indicators Research **105**(3): 333-341. http://dx.doi.org/10.1007/s11205-011-9787-8.

We examined the extent to which satisfaction with life, with one's self, and with one's day are predicted by pleasure, purpose in life, interest, and mood. In a sample of 222 college students we found that both satisfaction with life and self-esteem were best predicted by positive feelings and an absence of negative feelings, as well as purpose in life. By contrast, satisfaction with individual days was predicted by negative feelings, and very strongly predicted by positive feelings, but not by purpose in life. In predicting life satisfaction purpose in life provided a buffering effect for lower levels of mood. People high in purpose in life reported high levels of life satisfaction even with moderate levels of mood. Thus, what makes a satisfying day is different from what makes a satisfying life or self. Life and self satisfaction were predicted significantly by purpose in life even after controlling for physical pleasure and affect balance, suggesting that they are more than just hedonic variables.

Eisenberger, N. I. (2012). "The neural bases of social pain: Evidence for shared representations with physical pain." Psychosomatic Medicine **74**(2): 126-135. http://www.psychosomaticmedicine.org/content/74/2/126.abstract.

Experiences of social rejection or loss have been described as some of the most "painful" experiences that we, as humans, face and perhaps for good reason. Because of our prolonged period of immaturity, the social attachment system may have co-opted the pain system, borrowing the pain signal to prevent the detrimental consequences of social separation. This review summarizes a program of research that has explored the idea that experiences of physical pain and social pain rely on shared neural substrates. First, evidence showing that social pain activates pain-related neural regions is reviewed. Then, studies exploring some of the expected consequences of such a physical pain–social pain overlap are summarized. These studies demonstrate that a) individuals who are more sensitive to one kind of pain are also more sensitive to the other and b) factors that increase or decrease one kind of pain alter the other in a similar manner. Finally, what these shared neural substrates mean for our understanding of socially painful experience is discussed.

Engelen, E.-M. and B. Röttger-Rössler (2012). "Current disciplinary and interdisciplinary debates on empathy." Emotion Review **4**(1): 3-8. http://emr.sagepub.com/content/4/1.toc?etoc.

Almost anybody writing in the field would declare that there is no accepted standard definition of empathy - either among the sciences and humanities or in the specific disciplines. However, even when accepting that there can be no all-time and universally valid definition, one can still try to clarify some aspects and establish a few landmarks that will help to ensure that the phenomenon with which various researchers are dealing is the same, or has at least important features in common. Although there is no established concept, several topics and discussions have proved to be crucial for the phenomenon that was once given this specially made-up label empathy by Edward Titchener (1909), who introduced this word into English at the beginning of the 20th century in order to translate the German term Einfühlung. The idea behind this special section on empathy is to present a range of the currently most lively topics and discussions to be found not only within several disciplines, but also across several disciplinary boundaries. Authors from different disciplines were asked to contribute to the field in a style that would be accessible for a broader range of interested readers. These contributions come from the following disciplines in which empathy is either an ongoing or an upcoming topic of academic interest: neuropsychology, developmental psychology, philosophy, literary studies, and anthropology. The commentators giving their views on the articles are sometimes experts on empathy from the same discipline as the authors and sometimes from adjoining ones.

Green, S. M. and P. J. Bieling (2012). "Expanding the Scope of Mindfulness-Based Cognitive Therapy: Evidence for Effectiveness in a Heterogeneous Psychiatric Sample." Cognitive and Behavioral Practice **19**(1): 174-180. http://www.sciencedirect.com/science/article/pii/S107772291100071X.

(Free full text available): Mindfulness-based interventions (e.g., MBSR; Kabat-Zinn, 1990; MBCT; Segal, Williams, & Teasdale, 2002) have demonstrated effectiveness in a number of distinct clinical populations. However, few studies have evaluated MBCT within a heterogeneous group of psychiatric adult outpatients. This study examined whether a wider variety of patients referred from a large, tertiary mood and anxiety outpatient clinic could benefit from such a program. Twenty-three psychiatric outpatients with mood and/or anxiety disorders (mean age = 53.65 years, SD = 10.73; 18 women) were included in this study. Each participant completed the Structured Clinical Interview for Diagnosis Axis I and measures of mood, life stress, and mindfulness skills, prior to the start of group and immediately following its completion. Paired t-test analyses were conducted and results revealed a significant improvement in mood and mindfulness skills in addition to a significant reduction in severity and total number of perceived life stressors. In summary, our results indicate that MBCT can effectively be administered to a group of patients whose diagnoses and difficulties may vary, who have significant comorbidity, and who are currently experiencing significant symptoms. This has important practical implications for offering this treatment within broader psychological and psychiatric service systems.

Hamby, S., D. Finkelhor, et al. (2012). "Teen Dating Violence: Co-Occurrence With Other Victimizations in the National Survey of Children's Exposure to Violence (NatSCEV)." Psychology of Violence. http://psycnet.apa.org/psycinfo/2012-03614-001/.

Objective: To examine the co-occurrence of physical teen dating violence (TDV) with other forms of victimization. Method: The sample includes 1,680 youth aged 12 to 17 from the National Survey of Children's Exposure to Violence (NatSCEV), a nationally representative telephone survey of victimization experiences. Results: Every victim of physical TDV (100%) reported at least one other type of victimization. Physical TDV is very closely associated with several other forms of victimization in this sample, with adjusted odds ratio ranging from 1.48 to 17.13. The lifetime rate of TDV was 6.4% for all youth, but TDV rates reached 17% for youth who had been physically abused by a caregiver, 25% for youth who had been raped, and 50% for youth (<16 years) who had experienced statutory rape or sexual misconduct by a partner more than 5 years older. Victims of TDV reported, on average, twice as many other types of victimizations as those with no history of TDV. Conclusions: These data indicate that physical TDV is especially closely associated with some forms of child maltreatment, sexual victimization, and polyvictimization. Universal dating violence prevention programs designed for youth who have not yet, or just recently, started dating will typically include a large number of youth who have already been victimized by other forms of violence. Prevention curricula may be more effective if they address the needs of victimized youth, for example, by teaching skills for coping with prior victimization experiences. (Free full text downloadable from www.apa.org/pubs/journals/releases/vio-ofp-hamby.pdf).

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.

Hsiao, W., A. B. Shrewsberry, et al. (2012). "Exercise is associated with better erectile function in men under 40 as evaluated by the international index of erectile function." The Journal of Sexual Medicine **9**(2): 524-530. http://dx.doi.org/10.1111/j.1743-6109.2011.02560.x.

Introduction.Studies have shown an association between erectile dysfunction and sedentary lifestyle in middle-aged men, with a direct correlation between increased physical activity and improved erectile function. Whether or not this relationship is present in young, healthy men has yet to be demonstrated. Aim. The aim of this study was to assess the association between physical activity and erectile function in young, healthy men. Main Outcome Measures.The primary end points for our study were: (i) differences in baseline scores of greater than one point per question for the International Index of Erectile Function (IIEF); (ii) differences in baseline scores of greater than one point per question for each domain of the IIEF; (iii) exercise energy expenditure; and (iv) predictors of dysfunction as seen on the IIEF. Methods.The participants were men between the ages of 18 and 40 years old at an academic urology practice. Patients self-administered the Paffenbarger Physical Activity Questionnaire and the IIEF. Patients were stratified by physical activity into two groups: a sedentary group (≤1,400 calories/week) and an active group (>1,400 calories/week). Men presenting for the primary reason of erectile dysfunction or Peyronie's disease were excluded. Results. Seventy-eight patients had complete information in this study: 27 patients (34.6%) in the sedentary group (≤1,400 kcal/week) and 51 patients (65.4%) in the active group (>1,400 kcal/week). Sedentary lifestyle was associated with increased dysfunction in the following domains of the IIEF: erectile function (44.4% vs. 21.6%, P = 0.04), orgasm function (44.4% vs. 17.7%, P = 0.01), intercourse satisfaction (59.3% vs. 35.3%, P = 0.04), and overall satisfaction (63.0% vs. 35.3%, P = 0.02). There was a trend toward more dysfunction in the sedentary group for total score on the IIEF (44.4% vs. 23.5%, P = 0.057), while sexual desire domain scores were similar in both groups (51.9% vs. 41.2%, P = 0.37). Conclusions.We have demonstrated that increased physical activity is associated with better sexual function measured by a validated questionnaire in a young, healthy population. Further studies are needed on the long-term effects of exercise, or lack thereof, on erectile function as these men age.

Human, L. J., J. C. Biesanz, et al. (2012). "Your Best Self Helps Reveal Your True Self." Social psychological and personality science **3**(1): 23-30. http://spp.sagepub.com/content/3/1/23.abstract.

How does trying to make a positive impression on others impact the accuracy of impressions? In an experimental study, the impact of positive self-presentation on the accuracy of impressions was examined by randomly assigning targets to either "put their best face forward" or to a control condition with low self-presentation demands. First, self-presenters successfully elicited more positive impressions from others, being viewed as more normative and better liked than those less motivated to self-present. Importantly, self-presenters were also viewed with greater accuracy than control targets, being perceived more in line with their self-reported distinctive personality traits and their IQ test scores. Mediational analyses were consistent with the hypothesis that self-presenters were more engaging than controls, which in turn led these individuals to be viewed with greater distinctive self–other agreement. In sum, positive self-presentation facilitates more accurate impressions, indicating that putting one's best self forward helps reveal one's true self.

Johansson, L., I. Skoog, et al. (2012). "Midlife Psychological Distress Associated With Late-Life Brain Atrophy and White Matter Lesions: A 32-Year Population Study of Women." Psychosomatic Medicine **74**(2): 120-125. http://www.psychosomaticmedicine.org/content/74/2/120.abstract.

Objective Long-standing psychological distress increases the risk of dementia, especially Alzheimer's disease. The present study examines the relationship between midlife psychological distress and late-life brain atrophy and white matter lesions (WMLs), which are common findings on neuroimaging in elderly subjects.Methods A population-based sample of 1462 women, aged 38 to 60 years, was examined in 1968, with subsequent examinations in 1974, 1980, 1992, and 2000. Computed tomography (CT) of the brain was done in 379 survivors in 2000, and of those, 344 had responded to a standardized question about psychological distress in 1968, 1974, and 1980. WMLs, cortical atrophy, and central atrophy (ventricular sizes) were measured at CT scans. Results Compared with women reporting no distress, those reporting frequent or constant distress at one examination or more (in 1968, 1974, and 1980) more often had moderate-to-severe WMLs (multiadjusted odds ratio = 2.39, 95% confidence interval = 1.16–4.92) and moderate-to-severe temporal lobe atrophy (multiadjusted odds ratio = 2.51, 95% confidence interval = 1.04–6.05) on brain CT in 2000. Frequent/constant distress was also associated with central brain atrophy, that is, higher bicaudate ratio, higher cella media ratio, and larger third-ventricle width. Conclusions Long-standing psychological distress in midlife increases risks of cerebral atrophy and WMLs on CT in late life. More studies are needed to confirm these findings and to determine potential neurobiological mechanisms of these associations.

Keyes, K. M., N. R. Eaton, et al. (2012). "Childhood maltreatment and the structure of common psychiatric disorders." The British Journal of Psychiatry **200**(2): 107-115. http://bjp.rcpsych.org/content/200/2/107.abstract.

Background: Previous research suggests that various types of childhood maltreatment frequently co-occur and confer risk for multiple psychiatric diagnoses. This non-specific pattern of risk may mean that childhood maltreatment increases vulnerability to numerous specific psychiatric disorders through diverse, specific mechanisms or that childhood maltreatment engenders a generalised liability to dimensions of psychopathology. Although these competing explanations have different implications for intervention, they have never been evaluated empirically. Aims: We used a latent variable approach to estimate the associations of childhood maltreatment with underlying dimensions of internalising and externalising psychopathology and with specific disorders after accounting for the latent dimensions. We also examined gender differences in these associations. Method: Data were drawn from a nationally representative survey of 34,653 US adults. Lifetime DSM-IV psychiatric disorders were assessed using the AUDADIS-IV. Physical, sexual and emotional abuse and neglect were assessed using validated measures. Analyses controlled for other childhood adversities and sociodemographics. Results: The effects were fully mediated through the latent liability dimensions, with an impact on underlying liability levels to internalising and externalising psychopathology rather than specific psychiatric disorders. Important gender differences emerged with physical abuse associated only with externalising liability in men, and only with internalising liability in women. Neglect was not significantly associated with latent liability levels. Conclusions: The association between childhood maltreatment and common psychiatric disorders operates through latent liabilities to experience internalising and externalising psychopathology, indicating that the

prevention of maltreatment may have a wide range of benefits in reducing the prevalence of many common mental disorders. Different forms of abuse have gender-specific consequences for the expression of internalising and externalising psychopathology, suggesting gender-specific aetiological pathways between maltreatment and psychopathology.

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."*

Larsson, S. C., N. Orsini, et al. (2012). "Dietary magnesium intake and risk of stroke: a meta-analysis of prospective studies." Am J Clin Nutr **95**(2): 362-366. http://www.ajcn.org/content/95/2/362.abstract.

Background: Prospective studies of dietary magnesium intake in relation to risk of stroke have yielded inconsistent results. Objective: We conducted a dose-response meta-analysis to summarize the evidence regarding the association between

magnesium intake and stroke risk. Design: Relevant studies were identified by searching PubMed and EMBASE from January 1966 through September 2011 and reviewing reference lists of retrieved articles. We included prospective studies that reported RRs with 95% CIs of stroke for ≥3 categories of magnesium intake. Results from individual studies were combined by using a random-effects model. Results: Seven prospective studies, with 6477 cases of stroke and 241,378 participants, were eligible for inclusion in the meta-analysis. We observed a modest but statistically significant inverse association between magnesium intake and risk of stroke. An intake increment of 100 mg Mg/d was associated with an 8% reduction in risk of total stroke (combined RR: 0.92; 95% CI: 0.88, 0.97), without heterogeneity among studies (P = 0.66, I2 = 0%). Magnesium intake was inversely associated with risk of ischemic stroke (RR: 0.91; 95% CI: 0.87, 0.96) but not intracerebral hemorrhage (RR: 0.96; 95% CI: 0.84, 1.10) or subarachnoid hemorrhage (RR: 1.01; 95% CI: 0.90, 1.14). Conclusion: Dietary magnesium intake is inversely associated with risk of stroke, specifically ischemic stroke. *(for sources of magnesium, see http://ods.od.nih.gov/factsheets/magnesium/).*

Li, F., P. Harmer, et al. (2012). "Tai chi and postural stability in patients with Parkinson's disease." N Engl J Med **366**(6): 511-519. http://www.ncbi.nlm.nih.gov/pubmed/22316445.

BACKGROUND: Patients with Parkinson's disease have substantially impaired balance, leading to diminished functional ability and an increased risk of falling. Although exercise is routinely encouraged by health care providers, few programs have been proven effective. METHODS: We conducted a randomized, controlled trial to determine whether a tailored tai chi program could improve postural control in patients with idiopathic Parkinson's disease. We randomly assigned 195 patients with stage 1 to 4 disease on the Hoehn and Yahr staging scale (which ranges from 1 to 5, with higher stages indicating more severe disease) to one of three groups: tai chi, resistance training, or stretching. The patients participated in 60-minute exercise sessions twice weekly for 24 weeks. The primary outcomes were changes from baseline in the limits-of-stability test (maximum excursion and directional control; range, 0 to 100%). Secondary outcomes included measures of gait and strength, scores on functional-reach and timed up-and-go tests, motor scores on the Unified Parkinson's Disease Rating Scale, and number of falls. RESULTS: The tai chi group performed consistently better than the resistance-training and stretching groups in maximum excursion (between-group difference in the change from baseline, 5.55 percentage points; 95% confidence interval [CI], 1.12 to 9.97; and 11.98 percentage points; 95% CI, 7.21 to 16.74, respectively) and in directional control (10.45 percentage points; 95% CI, 3.89 to 17.00; and 11.38 percentage points; 95% CI, 5.50 to 17.27, respectively). The tai chi group also performed better than the stretching group in all secondary outcomes and outperformed the resistance-training group in stride length and functional reach. Tai chi lowered the incidence of falls as compared with stretching but not as compared with resistance training. The effects of tai chi training were maintained at 3 months after the intervention. No serious adverse events were observed. CONCLUSIONS: Tai chi training appears to reduce balance impairments in patients with mild-to-moderate Parkinson's disease, with additional benefits of improved functional capacity and reduced falls.

Masten, C. L., E. H. Telzer, et al. (2012). "Time spent with friends in adolescence relates to less neural sensitivity to later peer rejection." Soc Cogn Affect Neurosci **7**(1): 106-114. http://www.ncbi.nlm.nih.gov/pubmed/21183457.

Involvement with friends carries many advantages for adolescents, including protection from the detrimental effects of being rejected by peers. However, little is known about the mechanisms through which friendships may serve their protective role at this age, or the potential benefit of these friendships as adolescents transition to adulthood. As such, this investigation tested whether friend involvement during adolescence related to less neural sensitivity to social threats during young adulthood. Twenty-one adolescents reported the amount of time they spent with friends outside of school using a daily diary. Two years later they underwent an fMRI scan, during which they were ostensibly excluded from an online ball-tossing game by two same-age peers. Findings from region of interest and whole brain analyses revealed that spending more time with friends during adolescence related to less activity in the dorsal anterior cingulate cortex and anterior insula--regions previously linked with negative affect and pain processing--during an experience of peer rejection 2 years later. These findings are consistent with the notion that positive relationships during adolescence may relate to individuals being less sensitive to negative social experiences later on.

McCullough, M. L., J. J. Peterson, et al. (2012). "Flavonoid intake and cardiovascular disease mortality in a prospective cohort of US adults." Am J Clin Nutr **95**(2): 454-464. http://www.ajcn.org/content/95/2/454.abstract.

Background: Flavonoids are plant-based phytochemicals with cardiovascular protective properties. Few studies have comprehensively examined flavonoid classes in relation to cardiovascular disease mortality. Objective: We examined the association between flavonoid intake and cardiovascular disease (CVD) mortality among participants in a large, prospective US cohort.Design: In 1999, a total of 38,180 men and 60,289 women in the Cancer Prevention Study II Nutrition Cohort with a mean age of 70 and 69 y, respectively, completed questionnaires on medical history and lifestyle behaviors, including a 152-item food-frequency questionnaire. Cox proportional hazards modeling was used to calculate multivariate-adjusted hazard RRs and 95% CIs for associations between total flavonoids, 7 flavonoid classes, and CVD mortality. Results: During 7 y of follow-up, 1589 CVD deaths in men and 1182 CVD deaths in women occurred. Men and women with total flavonoid intakes in the top (compared with the bottom) quintile had a lower risk of fatal CVD (RR: 0.82; 95% CI: 0.73, 0.92; P-trend = 0.01). Five flavonoid classes—anthocyanidins, flavan-3-ols, flavones, flavonols, and proanthocyanidins—were individually associated with lower risk of fatal CVD (all P-trend < 0.05). In men, total flavonoid intakes were more strongly associated with stroke mortality (RR: 0.63; 95% CI: 0.44, 0.89; P-trend = 0.04) than with ischemic heart disease (RR: 0.90; 95% CI: 0.72, 1.13). Many associations appeared to be nonlinear, with lower risk at intakes above the referent category. Conclusions: Flavonoid consumption was associated with lower risk of death from CVD. Most inverse associations appeared with intermediate intakes, suggesting that even relatively small amounts of flavonoid-rich foods may be beneficial. *(for dietary sources, see http://flavo.vtt.fi/flavonoidsources.htm).*

McNaughton, S. A., C. J. Bates, et al. (2012). "Diet quality Is associated with all-cause mortality in adults aged 65 years and older." The Journal of Nutrition **142**(2): 320-325. http://jn.nutrition.org/content/142/2/320.abstract.

Diet quality indices assess compliance with dietary guidelines and represent a measure of healthy dietary patterns. Few studies have compared different approaches to assessing diet quality in the same cohort. Our analysis was based on 972 participants of the British Diet and Nutrition Survey of people aged 65 y and older in 1994/1995 and who were followed-up for mortality status until 2008. Dietary intake was measured via a 4-d weighed food record. Three measures of diet quality were used: the Healthy Diet Score (HDS), the Recommended Food Score (RFS), and the Mediterranean Diet Score (MDS). HR for all-cause mortality were obtained using Cox regression adjusted for age, sex, energy intake, social class, region, smoking, physical activity, and BMI. After adjustment for confounders, the MDS was significantly associated with mortality [highest vs. lowest quartile; HR = 0.78 (95% CI = 0.62–0.98)]. Similarly, the RFS was also associated with mortality [HR = 0.67 (95 % CI = 0.52–0.86)]; however, there were no significant associations for the HDS [HR = 0.99 (95% CI = 0.79–1.24)]. The HDS was not a predictor of mortality is this population, whereas the RFS and the MDS were both associated with all-cause mortality. Simple measures of diet quality using food-based indicators can be useful predictors of longevity.

Meyer, M. L., C. L. Masten, et al. (2012). "Empathy for the social suffering of friends and strangers recruits distinct patterns of brain activation." Soc Cogn Affect Neurosci. http://www.ncbi.nlm.nih.gov/pubmed/22355182.

Humans observe various peoples' social suffering throughout their lives, but it is unknown whether the same brain mechanisms respond to people we are close to and strangers' social suffering. To address this question, we had participant's complete functional magnetic resonance imaging (fMRI) while observing a friend and stranger experience social exclusion. Observing a friend's exclusion activated affective pain regions associated with the direct (i.e. firsthand) experience of exclusion [dorsal anterior cingulate cortex (dACC) and insula], and this activation correlated with self-reported self-other overlap with the friend. Alternatively, observing a stranger's exclusion activated regions associated with thinking about the traits, mental states and intentions of others ['mentalizing'; dorsal medial prefrontal cortex (DMPFC), precuneus, and temporal pole]. Comparing activation from observing friend's vs stranger's exclusion showed increased activation in brain regions associated with the firsthand experience of exclusion (dACC and anterior insula) and with thinking about the self [medial prefrontal cortex (MPFC)]. Finally, functional connectivity analyses demonstrated that MPFC and affective pain regions activated in concert during empathy for friends, but not strangers. These results suggest empathy for friends' social suffering relies on emotion sharing and self-processing mechanisms, whereas empathy for strangers' social suffering may rely more heavily on mentalizing systems.

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.babyblueconnection.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."*

Moss, M. and L. Oliver (2012). "Plasma 1,8-cineole correlates with cognitive performance following exposure to rosemary essential oil aroma." Therapeutic Advances in Psychopharmacology. http://tpp.sagepub.com/content/early/2012/02/24/2045125312436573.abstract.

Objective: The mode of influence of the aromas of plant essential oils on human behaviour is largely unclear. This study was designed to assess the potential pharmacological relationships between absorbed 1,8-cineole following exposure to rosemary aroma, cognitive performance and mood. Methods: Twenty healthy volunteers performed serial subtraction and visual information processing tasks in a cubicle diffused with the aroma of rosemary. Mood assessments were made pre and post testing, and venous blood was sampled at the end of the session. Pearson correlations were carried out between serum levels of

1,8-cineole, cognitive performance measures and change in mood scores. Results: Here we show for the first time that performance on cognitive tasks is significantly related to concentration of absorbed 1,8-cineole following exposure to rosemary aroma, with improved performance at higher concentrations. Furthermore, these effects were found for speed and accuracy outcomes, indicating that the relationship is not describing a speed–accuracy trade off. The relationships between 1,8-cineole levels and mood were less pronounced, but did reveal a significant negative correlation between change in contentment and plasma 1,8-cineole levels.Conclusion: These findings suggest that compounds absorbed from rosemary aroma affect cognition and subjective state independently through different neurochemical pathways. *MedicalXpress - http://medicalxpress.com/news/2012-02-rosemary-scent-boost-brain.html - comments "Hailed since ancient times for its medicinal properties, we still have a lot to learn about the effects of rosemary. Now researchers writing in Therapeutic Advances in Psychopharmacology, published by SAGE, have shown for the first time that blood levels of a rosemary oil component correlate with improved cognitive performance. Rosemary (Rosmarinus officinalis) is one of many traditional medicinal plants that yield essential oils. But exactly how such plants affect human behaviour is still unclear. Mark Moss and Lorraine Oliver, working at the Brain, Performance and Nutrition Research Centre at Northumbria University, UK designed an experiment to investigate the pharmacology of 1,8-cineole (1,3,3-trimethyl-2-oxabicyclo[2,2,2]octane), one of rosemary's main chemical components. The investigators tested cognitive performance and mood in a cohort of 20 subjects, who were exposed to varying levels of the rosemary aroma. Using blood samples to detect the amount of 1,8-cineole participants had absorbed, the researchers applied speed and accuracy tests, and mood assessments, to judge the rosemary oil's affects. Results indicate for the first time in human subjects that concentration of 1,8-cineole in the blood is related to an individual's cognitive performance – with higher concentrations resulting in improved performance. Both speed and accuracy were improved, suggesting that the relationship is not describing a speed–accuracy trade off. Meanwhile, although less pronounced, the chemical also had an effect on mood. However, this was a negative correlation between changes in contentment levels and blood levels of 1,8-cineole, which is particularly interesting because it suggests that compounds given off by the rosemary essential oil affect subjective state and cognitive performance through different neurochemical pathways. The oil did not appear to improve attention or alertness, however. Terpenes like 1,8-cineole can enter the blood stream via the nasal or lung mucosa. As small, fat-soluble organic molecules, terpenes can easily cross the blood–brain barrier. Volatile 1,8-cineole is found in many aromatic plants, including eucalyptus, bay, wormwood and sage in addition to rosemary, and has already been the subject of a number of studies, including research that suggests it inhibits acetylcholinesterase (AChE) and butyrylcholinesterase enzymes, important in brain and central nervous system neurochemistry: rosemary components may prevent the breakdown of the neurotransmitter acetylcholine. "Only contentedness possessed a significant relationship with 1,8-cineole levels, and interestingly to some of the cognitive performance outcomes, leading to the intriguing proposal that positive mood can improve performance whereas aroused mood cannot," said Moss. Typically comprising 35-45% by volume of rosemary essential oil, 1,8-cineole may possess direct pharmacological properties. However, it is also possible that detected blood levels simply serve as a marker for relative levels of other active compounds present in rosemary oil, such as rosmarinic acid and ursolic acid, which are present at much lower concentrations."*

Mostofsky, E., M. Maclure, et al. (2012). "Risk of Acute Myocardial Infarction After the Death of a Significant Person in One's Life / Clinical Perspective." Circulation **125**(3): 491-496. http://circ.ahajournals.org/content/125/3/491.abstract.

Background—Acute psychological stress is associated with an abrupt increase in the risk of cardiovascular events. Intense grief in the days after the death of a significant person may trigger the onset of acute myocardial infarction (MI), but this relationship has not been systematically studied. Methods and Results—We conducted a case-crossover analysis of 1985 participants from the multicenter Determinants of Myocardial Infarction Onset Study interviewed during index hospitalization for an acute MI between 1989 and 1994. We compared the observed number of deaths in the days preceding MI symptom onset with its expected frequency based on each patient's control information, defined as the occurrence of deaths in the period from 1 to 6 months before infarction. Among the 1985 subjects, 270 (13.6%) experienced the loss of a significant person in the prior 6 months, including 19 within 1 day of their MI. The incidence rate of acute MI onset was elevated 21.1-fold (95% confidence interval, 13.1–34.1) within 24 hours of the death of a significant person and declined steadily on each subsequent day. The absolute risk of MI within 1 week of the death of a significant person is 1 excess MI per 1394 exposed individuals at low (5%) 10-year MI risk and 1 per 320 among individuals at high (20%) 10-year risk. Conclusions—Grief over the death of a significant person was associated with an acutely increased risk of MI in the subsequent days. The impact may be greatest among individuals at high cardiovascular risk.

Mueller, J. S. (2012). "Why individuals in larger teams perform worse." Organizational Behavior and Human Decision Processes **117**(1): 111-124. http://www.sciencedirect.com/science/article/pii/S0749597811001105.

Research shows that individuals in larger teams perform worse than individuals in smaller teams; however, very little field research examines why. The current study of 212 knowledge workers within 26 teams, ranging from 3 to 19 members in size, employs multi-level modeling to examine the underlying mechanisms. The current investigation expands upon Steiner's (1972) model of individual performance in group contexts identifying one missing element of process loss, namely relational loss. Drawing from the literature on stress and coping, relational loss, a unique form of individual level process, loss occurs when an employee perceives that support is less available in the team as team size increases. In the current study, relational loss mediated the negative relationship between team size and individual performance even when controlling for extrinsic motivation and perceived coordination losses. This suggests that larger teams diminish perceptions of available support which would otherwise buffer stressful experiences and promote performance.

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."*

Sloane, S., R. Baillargeon, et al. (2012). "Do infants have a sense of fairness?" Psychological Science **23**(2): 196-204. http://pss.sagepub.com/content/23/2/196.abstract.

Two experiments examined infants' expectations about how an experimenter should distribute resources and rewards to other individuals. In Experiment 1, 19-month-olds expected an experimenter to divide two items equally, as opposed to unequally, between two individuals. The infants held no particular expectation when the individuals were replaced with inanimate objects, or when the experimenter simply removed covers in front of the individuals to reveal the items (instead of distributing them). In Experiment 2, 21-month-olds expected an experimenter to give a reward to each of two individuals when both had worked to complete an assigned chore, but not when one of the individuals had done all the work while the other played. The infants held this expectation only when the experimenter could determine through visual inspection who had worked and who had not. Together, these results provide converging evidence that infants in the 2nd year of life already possess context-sensitive expectations relevant to fairness. *(MedicalXpress comments - http://medicalxpress.com/news/2012-02-babies-fair.html - "That's not fair!" It's a common playground complaint. But how early do children acquire this sense of fairness? Before they're 2, says a new study. "We found that 19- and 21-month-old infants have a general expectation of fairness, and they can apply it appropriately to different situations," says University of Illinois psychology graduate student Stephanie Sloane, who conducted the study with UI's Renée Baillargeon and David Premack of the University of Pennsylvania. The findings appear in Psychological Science, a journal published by the Association for Psychological Science. In each of two experiments, babies watched live scenarios unfold. In the first, 19-month-olds saw two giraffe puppets dance around at the back of a stage. An experimenter arrived with two toys on a tray and said, "I have toys!" "Yay!" said the giraffes. Then the experimenter gave one toy to each giraffe or both to one of them. The infants were timed gazing at the scene until they lost interest. Longer looking times indicated that something was odd—unexpected—to the baby. In this experiment, three-quarters of the infants looked longer when one giraffe got both toys. In the second experiment, two women faced each other with a pile of small toys between them and an empty plastic box in front of each of them. An experimenter said, "Wow! Look at all these toys. It's time to clean them up." In one scenario, one woman dutifully put the toys away, while the other kept playing—but the*

experimenter gave a reward to both the worker and the slacker. In another scenario, both women put the toys away and both got a reward. The observing 21-month-old infants looked reliably longer when the worker and the slacker were rewarded equally. "We think children are born with a skeleton of general expectations about fairness," explains Sloane, "and these principles and concepts get shaped in different ways depending on the culture and the environment they're brought up in." Some cultures value sharing more than others, but the ideas that resources should be equally distributed and rewards allocated according to effort are innate and universal. Other survival instincts can intervene. Self-interest is one, as is loyalty to the in-group—your family, your tribe, your team. It's much harder to abide by that abstract sense of fairness when you want all the cookies—or your team is hungry. That's why children need reminders to share and practice in the discipline of doing the right thing in spite of their desires. Still, says Sloane, "helping children behave more morally may not be as hard as it would be if they didn't have that skeleton of expectations." This innate moral sense might also explain the power of early trauma, Sloane says. Aside from fairness, research has shown that small children expect people not to harm others and to help others in distress. "If they witness events that violate those expectations in extreme ways, it could explain why these events have such negative and enduring consequences.")

Stephen, I. D., V. Coetzee, et al. (2011). "Carotenoid and melanin pigment coloration affect perceived human health." Evolution and Human Behavior **32**(3): 216-227. http://www.sciencedirect.com/science/article/pii/S1090513810001169.

The links between appearance and health influence human social interactions and are medically important, yet the facial cues influencing health judgments are unclear, and few studies describe connections to actual health. Increased facial skin yellowness (CIELab b*) and lightness (L*) appear healthy in Caucasian faces, but it is unclear why. Skin yellowness is primarily affected by melanin and carotenoid pigments. Melanin (dark and yellow) enhances photoprotection and may be involved in immune defense, but may contribute to vitamin D deficiency. Carotenoids (yellow) signal health in bird and fish species, and are associated with improved immune defense, photoprotection and reproductive health in humans. We present three studies investigating the contribution of carotenoid and melanin to skin color and the healthy appearance of human faces. Study 1 demonstrates similar perceptual preferences for increased skin L* and b* in UK-based Caucasian and black South African populations. Study 2 shows that individuals with higher dietary intakes of carotenoids and fruit and vegetables have increased skin b* values and show skin reflectance spectra consistent with enhanced carotenoid absorption. Study 3 shows that, to maximize apparent facial health, participants choose to increase empirically derived skin carotenoid coloration more than melanin coloration in the skin portions of color-calibrated face photographs. Together our studies link skin carotenoid coloration to both perceived health and healthy diet, establishing carotenoid coloration as a valid cue to human health which is perceptible in a way that is relevant to mate choice, as it is in bird and fish species.

Stephen, I. D., I. M. L. Scott, et al. (2012). "Cross-cultural effects of color, but not morphological masculinity, on perceived attractiveness of men's faces." Evolution and Human Behavior. http://www.sciencedirect.com/science/article/pii/S1090513811001103.

Much attractiveness research has focused on face shape. The role of masculinity (which for adults is thought to be a relatively stable shape cue to developmental testosterone levels) in male facial attractiveness has been examined, with mixed results. Recent work on the perception of skin color (a more variable cue to current health status) indicates that increased skin redness, yellowness, and lightness enhance apparent health. It has been suggested that stable cues such as masculinity may be less important to attractiveness judgments than short-term, more variable health cues. We examined associations between male facial attractiveness, masculinity, and skin color in African and Caucasian populations. Masculinity was not found to be associated with attractiveness in either ethnic group. However, skin color was found to be an important predictor of attractiveness judgments, particularly for own-ethnicity faces. Our results suggest that more plastic health cues, such as skin color, are more important than developmental cues such as masculinity. Further, unfamiliarity with natural skin color variation in other ethnic groups may limit observers' ability to utilize these color cues.

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."

von Soest, T., I. L. Kvalem, et al. (2012). "Predictors of cosmetic surgery and its effects on psychological factors and mental health: a population-based follow-up study among Norwegian females." Psychological Medicine **42**(03): 617-626. http://dx.doi.org/10.1017/S0033291711001267.

Background: There is limited information about psychological predictors of cosmetic surgery and how cosmetic surgery influences subsequent changes in mental health and overall appearance satisfaction. To date, there is a lack of studies examining this issue, whereby representative population samples are assessed at an age before cosmetic surgery is typically conducted and followed up after such surgery has commonly been performed. Method: We obtained data from a survey study following 1597 adolescent females from a representative Norwegian sample over a 13-year period. Participants provided information on cosmetic surgery, appearance satisfaction, mental health, risky sexual behavior, drug use and conduct problems at two time-points (overall response rate 67%). Results: Of all participants, 78 (4.9%) reported having undergone cosmetic surgery, of whom 71 were operated on during the course of the study and seven before the first data collection. Symptoms of depression and anxiety [odds ratio (OR) 1.66, 95% confidence interval (CI) 1.07–2.57] and a history of deliberate self-harm (OR 2.88, 95% CI 1.46–5.68), parasuicide (OR 3.29, 95% CI 1.53–7.08) and illicit drug use (OR 2.46, 95% CI 1.07–5.82) predicted prospective cosmetic surgery. Moreover, those who underwent surgery during the course of the study experienced a greater increase than other females in symptoms of depression and anxiety ($t=2.07$, $p=0.04$) and eating problems ($t=2.71$, $p<0.01$). Patients' use of alcohol also increased more than among non-patients ($t=2.47$, $p=0.01$). Conclusions: A series of mental health symptoms predict cosmetic surgery. Cosmetic surgery does not in turn seem to alleviate such mental health problems.

Walter, H. (2012). "Social Cognitive Neuroscience of Empathy: Concepts, Circuits, and Genes." Emotion review **4**(1): 9-17. http://emr.sagepub.com/content/4/1/9.abstract.

This article reviews concepts of, as well as neurocognitive and genetic studies on, empathy. Whereas cognitive empathy can be equated with affective theory of mind, that is, with mentalizing the emotions of others, affective empathy is about sharing emotions with others. The neural circuits underlying different forms of empathy do overlap but also involve rather specific brain areas for cognitive (ventromedial prefrontal cortex) and affective (anterior insula, midcingulate cortex, and possibly inferior frontal gyrus) empathy. Furthermore, behavioral and imaging genetic studies provide evidence for a genetic basis for empathy, indicating a possible role for oxytocin and dopamine as well as for a genetic risk variant for schizophrenia near the gene ZNF804A.

Wellenius, G. A., M. R. Burger, et al. (2012). "Ambient Air Pollution and the Risk of Acute Ischemic Stroke." Arch Intern Med **172**(3): 229-234. http://archinte.ama-assn.org/cgi/content/abstract/172/3/229.

Background The link between daily changes in level of ambient fine particulate matter (PM) air pollution (PM <2.5 {micro}m in diameter [PM2.5]) and cardiovascular morbidity and mortality is well established. Whether PM2.5 levels below current US National Ambient Air Quality Standards also increase the risk of ischemic stroke remains uncertain. Methods We reviewed the medical records of 1705 Boston area patients hospitalized with neurologist-confirmed ischemic stroke and abstracted data on the time of symptom onset and clinical characteristics. The PM2.5 concentrations were measured at a central monitoring station. We used the time-stratified case-crossover study design to assess the association between the risk of ischemic stroke onset and PM2.5 levels in the hours and days preceding each event. We examined whether the association with PM2.5 levels differed by presumed ischemic stroke pathophysiologic mechanism and patient characteristics. Results The estimated odds ratio (OR) of ischemic stroke onset was 1.34 (95% CI, 1.13-1.58) ($P < .001$) following a 24-hour period classified as moderate (PM2.5 15-40 {micro}g/m3) by the US Environmental Protection Agency's (EPA) Air Quality Index compared with a 24-hour period classified as good ([≤]15 {micro}g/m3). Considering PM2.5 levels as a continuous variable, we found the estimated odds ratio of ischemic stroke onset to be 1.11 (95% CI, 1.03-1.20) ($P = .006$) per interquartile range increase in PM2.5 levels (6.4 {micro}g/m3). The increase in risk was greatest within 12 to 14 hours of exposure to PM2.5 and was most strongly associated with markers of traffic-related pollution. Conclusion These results suggest that exposure to PM2.5 levels considered generally safe by the US EPA increase the risk of ischemic stroke onset within hours of exposure.

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."