

A New Paradigm for Depression in New Mothers

Kathleen Kendall-Tackett, Ph.D., IBCLC

Department of Pediatrics

Texas Tech University School of Medicine

Kathleen.kendall-tackett@ttuhsc.edu

kkendallt@aol.com

www.GraniteScientific.com

www.BreastfeedingMadeSimple.com

- Amir, L.H., Dennerstein, L., Garland, S.M., Fisher, J., & Farish, S.J. (1996). Psychological aspects of nipple pain in lactating women. *Journal of Psychosomatic Obstetrics and Gynecology*, 17, 53-58.
- Ansara, D., Cohen, M. M., Gallop, R., Kung, R., Kung, R., & Schei, B. (2005). Predictors of women's physical health problems after childbirth. *Journal of Psychosomatic Obstetrics & Gynecology*, 26, 115-125.
- Babyak, M., Blumenthal, J.A., Herman, S., Khatri, P., Doraiswamy, M., Moore, K., Craighead, W. E., Baldewicz, T.T., & Krishnan, K.R. (2000). Exercise treatment for major depression: Maintenance of therapeutic benefit at 10 months. *Psychosomatic Medicine*, 62, 633-638.
- Balch, P. (2002). *Prescription for herbal healing*. New York: Avery.
- Beck, C.T. (2004). Post-traumatic stress disorder due to childbirth. *Nursing Research*, 53, 216-224.
- Blumenthal, J. A., Babyak, M.A., Doraiswamy, P.M., Watkins, L., Hoffman, B.M., Barbour, K.A., et al. (2007). Exercise and pharmacotherapy in the treatment of major depressive disorder. *Psychosomatic Medicine*, 69, 587-596.
- Bratman, S., & Girman, A.M. (2003). *Handbook of herbs and supplements and their therapeutic uses*. St Louis: Mosby.
- Calder, P. C. (2008, in press). Polyunsaturated fatty acids, inflammation and inflammatory diseases. In K. A. Kendall-Tackett (Ed.), *The psychoneuroimmunology of chronic disease: The link between negative mental states, inflammation, and chronic illness*. Washington, DC: American Psychological Association.
- Cappuccio, F.P., Taggart, F.M., Kandala, N-B, Currie, A., Peile, E., Stranges, S., & Miller, M.A. (2008). Meta-analysis of short sleep duration and obesity in children and adults. *Sleep*, 31, 619-626.

- Capuron, L., Ravaut, A., Neveu, P.J., Miller, A.H., Maes, M., & Dantzer, R. (2002). Association between decreased serum tryptophan concentrations and depressive symptoms in cancer patients undergoing cytokine therapy. *Molecular Psychiatry*, 7, 468-473.
- Carmichael, C. L., & Reis, H.T. (2005). Attachment, sleep quality, and depressed affect. *Health Psychology*, 24, 526-531.
- Corwin, E.J., Bozoky, I., Pugh, L.C., & Johnston, N. (2003). Interleukin-1beta elevation during the postpartum period. *Annals of Behavioral Medicine*, 25, 41-47.
- Coussons-Read, M. E., Okun, M.L., Schmitt, M.P., & Giese, S. (2005). Prenatal stress alters cytokine levels in a manner that may endanger human pregnancy. *Psychosomatic Medicine*, 67, 625-631.
- Dayan, J., Creveuil, C., Marks, M.N., Conroy, S., Herlicoviez, M., Dreyfus, M., & Tordjman, S. (2006). Prenatal depression, prenatal anxiety, and spontaneous preterm birth: A prospective cohort study among women with early and regular care. *Psychosomatic Medicine*, 68, 938-946.
- Ferrucci, L., Cherubini, A., Bandinelli, S., Bartali, B., Corsi A., Lauretani, F., Martin, A., Andres-Lacueva, C., Senin, U., & Guralnik, J.M. (2006). Relationship of plasma polyunsaturated fatty acids to circulating inflammatory markers. *Journal of Clinical Endocrinology & Metabolism*, 91, 439-446.
- Galea, S., Vlahov, D., Resnick, H., Ahern, J., Susser, E., Gold, J., et al. (2003). Trends of probable post-traumatic stress disorder in New York City after the September 11 terrorist attacks. *American Journal of Epidemiology*, 158, 514-524.
- Geraciotti, T. D. J., Carpenter, L. L., Owens, M. J., Baker, D. G., Ekhtator, N. N., Horn, P. S., et al. (2006). Elevated cerebrospinal fluid substance P concentrations in posttraumatic stress disorder and major depression. *American Journal of Psychiatry*, 63, 637-643.
- Glynn, L.M., Schetter, C.D., Hobel, C.J., & Sandman, C.A. (2008). Pattern of perceived stress and anxiety in pregnancy predicts preterm birth. *Health Psychology*, 27, 43-51.
- Grajeda, R., & Perez-Escamilla, R. (2002). Stress during labor and delivery is associated with delayed onset of lactation among urban Guatemalan women. *Journal of Nutrition*, 132, 3055-3060.
- Groër, M. (2005). Differences between exclusive breastfeeders, formula-feeders, and controls: A study of stress, mood, and endocrine variables. *Biological Research for Nursing*, 7, 106-117.

- Groër, M. W., Davis, M. W., & Hemphill, J. (2002). Postpartum stress: Current concepts and the possible protective role of breastfeeding. *Journal of Obstetric, Gynecologic, & Neonatal Nursing*, 31(4), 411-417.
- Groër, M., Davis, K., & Casey, B. (2005a). Neuroendocrine and immune relationships in postpartum fatigue. *MCN*, 30, 133-138.
- Groër, M.W., Davis, M.W., Smith, K., Casey, K., Kramer, V., & Bukovsky, E. (2005b). Immunity, inflammation and infection in postpartum breast and formula feeders. *American Journal of Reproductive Immunology*, 54, 222-231.
- Groër, M. W., & Morgan, K. (2007). Immune, health and endocrine characteristics of depressed postpartum mothers. *Psychoneuroendocrinology*, 32(2), 133-139.
- Hamer, M., & Steptoe, A. (2007). Association between physical fitness, parasympathetic control, and proinflammatory responses to mental stress. *Psychosomatic Medicine*, 69, 660-666.
- Hamilton, N.A., Catley, D., & Karlson, C. (2007). Sleep and the affective response to stress and pain. *Health Psychology*, 26, 288-295.
- Heinrichs, M., Meinlschmidt, G., Neumann, I., Wagner, S., Kirschbaum, C., Ehlert, U., et al. (2001). Effects of suckling on hypothalamic-pituitary-adrenal axis responses to psychosocial stress in postpartum lactating women. *Journal of Clinical Endocrinology & Metabolism*, 86, 4798-4804.
- Hibbeln, J.R. (2002). Seafood consumption, the DHA content of mothers' milk and prevalence rates of postpartum depression: A cross-national, ecological analysis. *Journal of Affective Disorder*, 69, 15-29.
- Jones, N.A., McFall, B.A., & Diego, M.A. (2004). Patterns of brain electrical activity in infants of depressed mothers who breastfeed and bottle feed: The mediating role of infant temperament. *Biological Psychology*, 67, 103-124.
- Kendall-Tackett, K.A. (2010). *Depression in new mothers: Causes, consequences and treatment options, 2nd Edition*. London: Routledge.
- Kendall-Tackett, K. A. (2007). Cardiovascular disease and metabolic syndrome as sequelae of violence against women: A psychoneuroimmunology approach. *Trauma, Violence and Abuse*, 8, 117-126.
- Kiecolt-Glaser, J. K., Belury, M.A., Porter, K., Beversdoft, D., Lemeshow, S., & Glaser, R. (2007). Depressive symptoms, omega-6: omega-3 fatty acids, and inflammation in older adults. *Psychosomatic Medicine*, 69, 217-224.

- Konsman, J.P., Parnet, P., & Dantzer, R. (2002). Cytokine-induced sickness behaviour: Mechanisms and implications. *Trends in Neurosciences*, 25, 154-158.
- Maes, M., Christophe, A., Bosmans, E., Lin, A., & Neels, H. (2000). In humans, serum polyunsaturated fatty acid levels predict the response of proinflammatory cytokines to psychologic stress. *Biological Psychiatry*, 47, 910-920.
- McGovern, P., Dowd, B., Gjerdingen, D., Gross, C.R., Kenney, S., Ukestad, L., McCaffrey, D., & Lundberg, U. (2006). Postpartum health of employed mothers 5 weeks after childbirth. *Annals of Family Medicine*, 4, 159-167.
- Mezzacappa, E.S., & Katkin, E.S. (2002). Breastfeeding is associated with reduced perceived stress and negative mood in mothers. *Health Psychology*, 21, 187-193.
- Motivala, S. J., Sarfatti, A., Olmos, L., & Irwin, M. R. (2005). Inflammatory markers and sleep disturbance in major depression. *Psychosomatic Medicine*, 67(2), 187-194.
- Noaghiul, S., & Hibbeln, J.R. (2003). Cross-national comparisons of seafood consumption and rates of bipolar disorders *American Journal of Psychiatry*, 160, 2222-2227.
- O'Brien, S.M., Scott, L.V., & Dinan, T.G. (2006). Antidepressant therapy and C-reactive protein levels. *British Journal of Psychiatry*, 188, 449-452
- Rees, A.-M., Austin, M-P., & Parker, G. (2005). Role of omega-3 fatty acids as a treatment for depression in the perinatal period. *Australia & New Zealand Journal of Psychiatry*, 39, 274-280.
- Ross, L. E., Murray, B. J., & Steiner, M. (2005). Sleep and perinatal mood disorders: A critical review. *Journal of Psychiatry & Neuroscience*, 30, 247-256.
- Simopoulos, A.P. (2002). Omega-3 fatty acids in inflammation and autoimmune diseases. *Journal of the American College of Nutrition*, 21, 495-505.
- Smuts, C. M., Huang, M., Mundy, D., Plasse, T., Major, S., & Carlson, S.E. (2003). A randomized trial of docosahexaenoic acid supplementation during the third trimester of pregnancy. *Obstetrics & Gynecology*, 101, 469-479.
- Suarez, E. C., & Goforth, H. (2008, in press). Sleep and inflammation: A potential link to chronic diseases. In K. A. Kendall-Tackett (Ed.), *The psychoneuroimmunology of chronic disease: The link between negative mental states, inflammation, and chronic illness*. Washington, DC: American Psychological Association.
- Sublette, M. E., Hibbeln, J.R., Galfalvy, H., Oquendo, M.A., & Mann, J.J. (2006). Omega-3 polyunsaturated essential fatty acid status as a predictor of future suicide risk. *American Journal of Psychiatry*, 163, 1100-1102.

- Tanskanen, A., Hibbeln, J.R., Tuomilehto, J., Uutela, A., Haukkala, A., Viinamaki, H., Lehtonen, J., & Vartiainen, E. (2001). Fish consumption and depressive symptoms in the general population of Finland. *Psychiatric Services*, 52, 529-531.
- Troxel, W. M., Cyranowski, J.M., Hall, M., Frank, E., & Buysse, D.J. (2007). Attachment anxiety, relationship context, and sleep in women with recurrent major depression. *Psychosomatic Medicine*, 69, 692-699.
- Wang, C., Chung, M., Lichtenstein, A., Balk, E., Kupelnick, B., DeVine, D., et al. (2004). *Effects of omega-3 fatty acids on cardiovascular disease* (Vol. AHRQ Publication No. 04-E009-1). Rockville, MD: Agency for Healthcare Research and Quality.