Reference

Chapter 1

- 1. Kollesch, J. 1989. Knidos as the center of early scientific medicine in ancient Greece. Gesnerus 46 (1-2): 11-28.
- 2. Phillips, E.D. 1973. Greek medicine: Philosophy and medicine from Alcmaeon to Alexandrians. London: Thames and Hudson.
- 3. Littre, E. 1839-1861. Oeuvres completes d'Hippocrate. Paris: Baillière.
- 4. Rosner, F. 1965. The hygienic principles of Moses Maimonides. The Journal of the American Medical Association 194 (13); 1352-1354.
- 5. Franz, S.I., and G.V. Hamilton. 1905. The effects of exercise upon the retardation in conditions of depression. American Journal of Insanity 62: 239-256.
- 6. Campbell, D.D., and J.E. Davis. 1939-1940. Report of research and experimentation in exercise and recreational therapy. American Journal of Psychiatry 96: 915-933.
- 7. Vaux, C.L. 1926. A discussion of physical exercise and recreation. Occupational Therapy & Rehabilitation 5: 329-333.
- 8. Steele, T. 1972. Treatise of man. Rene Descartes. Cambridge, MA: Harvard University Press.
- 9. Whybrow, P.C., H.S. Akiskal, and W.T. McKinney. 1984. Mood disorders: Toward a new psychobiology. New York: Plenum.
- 10. Winters, E., ed. 1951. The collected works of Adolf Meyer. Baltimore: Johns Hopkins Press.
- 11. James, W. 1899. Talks to teachers on psychology: And to students on some of life's ideals. New York: Holt.
- 12. Bandura, A. 1977. Self-efficacy: Toward a unifying theory of behavioral change. Psychological Review 1984: 191-215.
- 13. Bandura, A. 1986. Social foundations of thought and action. Englewood Cliffs, NJ: Prentice Hall.
- 14. Meichenbaum, D. 1977. Cognitive-behavior modification: An integrative approach. New York: Plenum Press.
- Davis, H.P., M.R. Rosenzweig, L.A. Becker, and K.J. Sather. 1988. Biological psychology's relationships to psychology and neuroscience. American Psychologist 43: 359-371.
- U.S. Department of Health and Human Services (USDHHS). 2000. Healthy people 2010: Understanding and improving health. Washington, DC: U.S. Government Printing Office.
- 17. Morgan, W.P. 1969. A pilot investigation of physical working capacity in depressed and nondepressed psychiatric males. Research Quarterly 40 (Dec): 859-861.
- 18. Morgan, W.P. 1970. Physical working capacity in depressed and nondepressed psychiatric females: A preliminary study. American Corrective Therapy Journal 24 (Jan-Feb): 14-16.
- 19. Morgan, W.P., J.A. Roberts, and A.D. Feinerman. 1971. Psychologic effect of acute physical activity. Archives of Physical Medicine and Rehabilitation 52 (Sep): 422-425.
- 20. Morgan, W.P., K. Hirota, G.A. Weitz, and B. Balke. 1976. Hypnotic perturbation of perceived exertion: Ventilatory consequences. American Journal of Clinical Hypnosis 18 (3): 182-190.
- 21. Morgan, W.P. 1977. Involvement in vigorous physical activity with special reference to adherence. In Proceedings of the National College Physical Education Association, edited by L.I. Gedvilas and M.W. Kneer. Chicago: University of Illinois-Chicago Publications.
- 22. Morgan, W.P. 1979b. Negative addiction in runners. Physician and Sportsmedicine 7: 57-70.
- 23. Morgan, W.P. 1986. Presidential message. American Psychological Association Newsletter, Division 47, Exercise and Sport Psychology 1 (1): 1-2.
- Harris, S.S., C.J. Caspersen, G.H. DeFriese, and E.J. Estes. 1989. Physical activity counseling for healthy adults as a primary preventive intervention in the clinical setting. Report for the U.S. Preventive Services Task Force [published erratum appears in Journal of the American Medical Association, 1989 Oct 20; 262 (15): 2094] [see comments]. Journal of the American Medical Association 261 (June 23-30): 3588-3598.
- 25. Gelenberg, A.J., M.P. Freeman, J.C. Markowitz, et al. 2010. Practice guidelines for the treatment of patients with major depressive disorder. 3rd edition. American Psychiatric Association, 1-152, doi: 10.1176/appi.books.9780890423387.654001.
- Haskell, W.L., I.M. Lee, R.R. Pate, et al. 2007. Physical activity and public health: Updated recommendation for adults from the American College of Sports Medicine and the American Heart Association. Circulation 116:1081-1093.
- 27. U.S. Department of Health and Human Services (USDHHS). 2010. Healthy people 2020. Washington, DC: U.S. Government Printing Office.
- Finucane, M. M., Stevens, G. A., Cowan, M. J., Danaei, G., Lin, J. K., Paciorek, C. J., et al. (2011). National, regional, and global trends in bodymass index since 1980: Systematic analysis of health examination surveys and epidemiological studies with 960 country-years and 9.1 million participants. The Lancet. doi: 10.1016/ S0140-6736(10)62037-5.
- 29. James, W. 1899. Physical training in the educational curriculum. American Physical Education Review. Boston: American Association for the Advancement of Physical Education.

- 1. Campbell, D.T., and D.W. Fiske. 1959. Convergent and discriminant validation by the multitrait-multimethod matrix. Psychological Bulletin 56:81-105.
- 2. Cronbach, L.J., and P.E. Meehl. 1955. Construct validity in psychologicaltests. Psychological Bulletin 52: 281-302.
- 3. Messick, S. 1989. Validity. In Educational measurement, edited by R.L. Linn. 3rd ed. New York: Macmillan.
- 4. Thorndike, E.L. 1904. An introduction to the theory of mental and social measurements. New York: The Science Press.
- 5. Thurstone, L.L. 1931. The measurement of social attitudes. Journal of Abnormal & Social Psychology 26: 249-269.
- 6. Thurstone, L.L., and E.J. Chave. 1929. The measurement of attitude. Chicago: University of Chicago Press.
- 7. Likert, R. 1932. The method of constructing an attitude scale. Archives of Psychology 140: 44-53.
- 8. Guttman, L. 1950. The basis for scalogram analysis. In Measurement and prediction, edited by S.A. Stouffer. Princeton, NJ: Princeton University Press.
- 9. Osgood, C.E., G.J. Suci, and P.H. Tannenbaum. 1957. The measurement of meaning. Urbana: University of Illinois Press.
- 10. Tenebaum, G. 1999. The implementation of Thurstone's and Guttman's measurement ideas in Rasch analysis. International Journal of Sport Psychology 30: 3-16.
- Dishman, R.K., N.J. Thom, C.R. Rooks, R.W. Motl, C. Horwath, and C.R. Nigg. 2009. Failure of post-action stages of the transflueoretical model to predict change in regular physical activity: A multiethnic cohort study. Annals of Behavioral Medicine 37 (3): 280-293.
- 12. Dishman, R.K., R.J. Vandenberg, R.W. Motl, and C.R. Nigg. 2010. Using constructs of the transfheoretical model to predict classes of change in regular physical activity: A multi-ethnic longitudinal cohort study. Annals of Behavioral Medicine 40 (2): 150-163.
- Duncan, S.C., T.E. Duncan, L.A. Strycker, and N.R. Chaumeton. 2004. A multilevel approach to youth physical activity research. Exercise and Sport Sciences Reviews 32 (3): 95-99.
- King, A.C., L.A. Pruitt, S. Woo, et al. 2008. Effects of moderate-intensity exercise on polysomnographic and subjective sleep quality in older adults with mild to moderate sleep complaints. Journals of Gerontology: Series A: Biological Sciences & Medical Sciences 63 (9): 997-1004.
- De Moor, M.H., D.I. Boomsma, J.H. Stubbe, G. Willemsen, and E.J. de Geus. 2008. Testing causality in the association between regular exercise and symptoms of anxiety and depression. Archives of General Psychiatry 65 (8): 897-905.
- 16. Raudenbush, S.W., and A.S. Bryk. 2002. Hierarchical linear models: Applications and data analysis methods. Vol. 1. Thousand Oaks, CA:Sage.

- 17. Ployhart, R.E., and R.J. Vandenberg. 2010. Longitudinal research: The theory, design, and analysis of change. Journal of Management 36 (1): 94.
- O'Connell, A.A., and D.B. McCoach. 2004. Applications of hierarchical linear models for evaluations of health interventions: Demystifying the methods and interpretations of multilevel models. Evaluation & the Health Professions 27 (2): 119-151.
- 19. Singer, J.D., and J.B. Willett. 2003. Applied longitudinal data analysis: Modeling change and event occurrence. New York: Oxford University Press.
- 20. Caspersen, C.J., K.E. Powell, and G.M. Christenson. 1985. Physical activity, exercise, and physical fitness: Definitions and distinctions for healthrelated research. Public Health Reports 100: 126-131.
- 21. Dishman, R.K., and J. Buckworth 1996b. Increasing physical activity: A quantitative synthesis. Medicine & Science in Sports & Exercise 28 (6):706-719.
- 22. Dunn, A.L. 2009. The effectiveness of lifestyle physical activity interventions to reduce cardiovascular disease. American Journal of Lifestyle Medicine 3 (1): 11S-18S.
- Dunn, A.L., R.E. Andersen, and J.M. Jakicic. 1998. Lifestyle physical activity interventions. History, short- and long-term effects, and recommendations. American Journal of Preventive Medicine 15 (4): 398-412.
- Wilmore, J.H., A.S. Leon, D.C. Rao, J.S. Skinner, J. Gagnon, and C.Bouchard. 1997. Genetics, response to exercise, and risk factors: the HERITAGE Family Study. World Review of Nutrition & Dietetics 81: 72-83.
- 25. Dishman, R.K., R.A. Washburn, and D.A. Schoeller. 2001. Measurement of physical activity. Quest 53: 295-309.
- Prince, S., K. Adamo, M. Hamel, J. Hardt, S. Gorber, and M. Tremblay. 2008. A comparison of direct versus self-report measures for assessing physical activity in adults: A systematic review. International Journal of Behavioral Nutrition and Physical Activity 5 (1): 56.
- LaPorte, R.E., H.J. Montoye, and C.J. Caspersen. 1985. Assessment of physical activity in epidemiologic research: Problems and prospects. Public Health Reports 100 (Mar-Apr): 131-146.
- 28. Kriska, A.M., and C. Caspersen. 1997. Introduction to a collection of physical activity questionnaires. Medicine & Science in Sports & Exercise 29 (S6): S5-S9.
- 29. Durante, R., and B.E. Ainsworth. 1996. The recall of physical activity: Using a cognitive model of the question-answering process. Medicine & Science in Sports & Exercise 28 (10): 1282-1291.
- Prince, S., K. Adamo, M. Hamel, J. Hardt, S. Gorber, and M. Tremblay. 2008. A comparison of direct versus self-report measures for assessing physical activity in adults: A systematic review. International Journal of Behavioral Nutrition and Physical Activity 5 (1): 56.
- Owen, N., G.N. Healy, C.E. Matthews, and D.W. Dunstan. 2010. Too much sitting: The population health science of sedentary behavior. Exercise and Sport Sciences Reviews 38 (3): 105-113.
- Sallis, J.F., B.G. Simons-Morton, E.J. Stone, et al. 1992. Determinants of physical activity and interventions in youth. Medicine & Science in Sports & Exercise 24 (6): S248-S257.
- Bouchard, C., and T. Rankinen. 2001. Individual differences in response to regular physical activity. Medicine & Science in Sports & Exercise 33 (6 Suppl.): S446-S451; discussion S452-S453.
- Rankinen, T., T. Rice, M. Teran-Garcia, D.C. Rao, and C. Bouchard. 2010. FTO genotype is associated with exercise training-induced changes in body composition. Obesity 18 (2): 322-326.
- 35. Rankinen, T., S.M. Roth, M.S. Bray, et al. 2010. Advances in exercise, fitness, and performance genomics. Medicine & Science in Sports & Exercise 42 (5): 835-846.
- Deeny, S.P., D. Poeppel, J.B. Zimmerman, et al. 2008a. Exercise, APOE, and working memory: MEG and behavioral evidence for benefit of exercise in epsilon4 carriers. Biological Psychology 78 (2): 179-187.
- De Moor, M.H., A.L. Beem, J.H. Stubbe, D.I. Boomsma, and E.J. De Geus. 2006. Regular exercise, anxiety, depression and personality: A populationbased study. Preventive Medicine 42 (4): 273-279.
- Rethorst, C.D., D.M. Landers, C.T. Nagoshi, and J.T. Ross. 2010. Efficacy of exercise in reducing depressive symptoms across 5-HTTLPR genotypes. Medicine & Science in Sports & Exercise 42 (11): 2141-2147.
- De Moor, M.H., Y.J. Liu, D.I. Boomsma, et al. 2009. Genome-wide association study of exercise behavior in Dutch and American adults. Medicine & Science in Sports & Exercise 41 (10): 1887-1895.
- 40. De Moor, M.H., G. Willemsen, I. Rebollo-Mesa, J.H. Stubbe, E.J. De Geus, and D.I. Boomsma. 2011. Exercise participation in adolescents and their parents: Evidence for genetic and generation specific environmental effects. Behavior Genetics 41 (2): 211-222.
- 41. Stubbe, J.H., D.I. Boomsma, J.M. Vink, et al. 2006. Genetic influences on exercise participation in 37,051 twin pairs from seven countries. PLoSONE 1: e22.
- 42. Rankinen, T., A. Zuberi, Y.C. Chagnon, et al. 2006. The human obesity gene map: The 2005 update. Obesity 14 (4): 529-644.
- 43. Bray, M.S., J.M. Hagberg, L. Perusse, et al. 2009. The human gene map for performance and health-related fitness phenotypes: The 2006 2007 update. Medicine & Science in Sports & Exercise 41 (1): 35-73.
- 44. Stenson, P.D., M. Mort, E.V. Ball, et al. 2009. The Human Gene Mutation Database: 2008 update. Genome Medicine 1 (1): 13.
- 45. Bouchard, C., M.A. Sarzynski, T.K. Rice, et al. 2011. Genomic predictors of the maximal O uptake response to standardized exercise training programs. Journal of Applied Physiology 110 (5): 1160-1170.
- 46. Morgan, W.P. 1997. Methodological considerations. In Physical activity and mental health, edited by W. P. Morgan. From The series in psychology and behavioral medicine. Washington, DC: Taylor & Francis.

- 1. James, W. 1899. Physical training in the educational curriculum. American Physical Education Review. Boston: American Association for the Advancement of Physical Education.
- 2. Kandel, E.R. 1998. A new intellectual framework for psychiatry. American Journal of Psychiatry. 155: 457-469.
- Rosenzweig, M.R., A.L. Leiman, and S.M. Breedlove. 1999a. Biological psychology: An introduction to behavioral, cognitive, and clinical neuroscience. 2nd ed. Sunderland, MA: Sinauer Associates.
- Berntson, G.G., J.T. Cacioppo, and K.S. Quigley. 1991. Autonomic determinism: The modes of autonomic control, the doctrine of autonomic space, and the laws of autonomic constraint. Psychological Review 98 (Oct): 459-487.
- Berntson, G.G., J.T. Cacioppo, and K.S. Quigley. 1993. Cardiac psychophysiology and autonomic space in humans: Empirical perspectives and conceptual implications. Psychological Bulletin 114 (2): 296-322.
- Tsuji, H., M.G. Larson, F.J. J. Venditti, et al. 1996. Impact of reduced heart rate variability on risk for cardiac events: The Framingham Study. Circulation 94: 2850-2855.
- 7. Rasmussen, P., P. Brassard, H. Adser, et al. 2009. Evidence for a release of brain-derived neurotrophic factor from the brain during exercise. Experimental Physiology 94 (10): 1062-1069.
- Akil, H., C. Owens, H. Gutstein, L. Taylor, E. Curran, and S. Watson. 1998. Endogenous opioids: Overview and current issues. Drug and Alcohol Dependence 51 (1-2): 127-140.
- 9. Evans, C.J. 1988. The opioid peptides. In The opiate receptors, edited by G.W. Pasternak. New York: Humana Press.
- Heimer, L., D.S. Zahm, L. Churchill, P.W. Kalivas, and C. Wohltmann. 1991. Specificity in the projection patterns of accumbal core and shell in the rat. Neuroscience 41 (1): 89-125.

- 11. Smith, K.S., and K.C. Berridge. 2007. Opioid limbic circuit for reward:Interaction between hedonic hotspots of nucleus accumbens and ventral pallidum. Journal of Neuroscience 27 (7): 1594-1605.
- 12. Perrine, S.A., I.S. Sheikh, C.A. Nwaneshiudu, J.A. Schroeder, and E.M. Unterwald. 2008. Withdrawal from chronic administration of cocaine decreases delta opioid receptor signaling and increases anxiety and depression-like behaviors in the rat. Neuropharmacology 54 (2): 355-364.
- Torregrossa, M.M., E.M. Jutkiewicz, H.I. Mosberg, G. Balboni, S.J. Watson, and J.H. Woods. 2006. Peptidic delta opioid receptor agonists produce antidepressant-like effects in the forced swim test and regulate BDNF mRNA expression in rats. Brain Research 1069 (1): 172-181.
- 14. Jonsdottir, I.H. 2000. Special feature for the Olympics: Effects of exercise on the immune system: Neuropeptides and their interaction with exercise and immune function. Immunology and Cell Biology 78 (5): 562 570.
- Land, B.B., M.R. Bruchas, S. Schattauer, et al. 2009. Activation of the kappa opioid receptor in the dorsal raphe nucleus mediates the aversive effects of stress and reinstates drug seeking. Proceedings of the National Academy of Sciences of the United States of America 106 (45): 19168-19173.
- 16. Mansour, A., C.A. Fox, H. Akil, and S.J. Watson. 1995. Opioid-receptor mRNA expression in the rat CNS: Anatomical and functional implications. Trends in Neurosciences 18 (1): 22-29.
- 17. Nestler, E.J., and W.A. Carlezon, Jr. 2006. The mesolimbic dopamine reward circuit in depression. Biological Psychiatry 59 (12): 1151 1159.
- Shippenberg, T.S., and W. Rea. 1997. Sensitization to the behavioral effects of cocaine: Modulation by dynorphin and kappa-opioid receptor agonists. Pharmacology, Biochemistry, and Behavior 57 (3): 449-455.
- 19. Dishman, R.K., and P.J. O'Connor. 2009. Lessons in exercise neurobiology: The case of endorphins. Mental Health and Physical Activity 2 (1): 4-9.
- 20. Dishman, R.K., and P.V. Holmes. 2012. Exercise and opioids: Animal models. In Functional neuroimaging in exercise and sport sciences, edited by H. Boecker, C.H. Hillman, L. Scheef, and H. Strüder. New York: Springer.
- Holets, V.R., T. Hokfelt, A. Rokaeus, L. Terenius, and M. Goldstein. 1988. Locus coeruleus neurons in the rat containing neuropeptide Y, tyrosine hydroxylase or galanin and their efferent projections to the spinal cord, cerebral cortex and hypothalamus. Neuroscience 24 (Mar): 893-906.
- 22. Soares, J., P.V. Holmes, K.J. Renner, G.L. Edwards, B.N. Bunnell, and R.K. Dishman. 1999. Brain noradrenergic responses to footshock after chronic activity-wheel running. Behavioral Neuroscience 113 (Jun): 558-566.
- O'Neal, H., J.D. Van Hoomissen, P.V. Holmes, and R.K. Dishman. 2001. Preprogalanin messenger RNA levels are increased in rat locus coeruleus after exercise training. Neuroscience Letters. 299 (1-2): 69-72.
- 24. Zhang, H.N., and M.C. Ko. 2009. Seizure activity involved in the upregulation of BDNF mRNA expression by activation of central mu opioid receptors. Neuroscience 161 (1): 301-310.
- 25. Binder, D.K., and H.E. Scharfman. 2004. Brain-derived neurotrophic factor. Growth factors 22 (3): 123-131.
- 26. Adlard, P.A., and C.W. Cotman. 2004. Voluntary exercise protects against stress-induced decreases in brain-derived neurotrophic factor protein expression. Neuroscience 124 (4): 985-992.
- 27. Berchtold, N.C., G. Chinn, M. Chou, J.P. Kesslak, and C.W. Cotman. 2005. Exercise primes a molecular memory for brain-derived neurotrophic factor protein induction in the rat hippocampus. Neuroscience 133 (3): 853-861.
- Gomez-Pinilla, F., S. Vaynman, and Z. Ying. 2008. Brain-derived neurotrophic factor functions as a metabotrophin to mediate the effects of exercise on cognition. European Journal of Neuroscience 28 (11): 2278-2287.
- 29. Neeper, S.A., F. Gomez-Pinilla, J. Choi, and C.W. Cotman. 1996. Physical activity increases mRNA for brain-derived neurotrophic factor and nerve growth factor in rat brain. Brain Research 726 (1-2): 49-56.
- Van Hoomissen, J.D., P.V. Holmes, A.S. Zellner, A. Poudevigne, and R.K. Dishman. 2004. Effects of beta-adrenoreceptor blockade during chronic exercise on contextual fear conditioning and mRNA for galanin and brainderived neurotrophic factor. Behavioral Neuroscience 118 (6): 1378 1390.
- 31. van Praag, H. 2009. Exercise and the brain: Something to chew on. Trends in Neurosciences 32 (5): 283-290.
- Matthews, V.B., M.B. Astrom, M.H. Chan, et al. 2009. Brain-derived neurotrophic factor is produced by skeletal muscle cells in response to contraction and enhances fat oxidation via activation of AMP-activated protein kinase. Diabetologia 52 (7): 1409-1418.
- 33. Sparling, P.B., A. Giuffrida, D. Piomelli, L. Rosskopf, and A. Dietrich. 2003. Exercise activates the endocannabinoid system. Neuroreport 14 (17): 2209-2211.
- Dittrich, S.M., V. Günther, G. Franz, M. Burtscher, B. Holzner, and M. Kopp. 2008. Aerobic exercise with relaxation: Influence on pain and psychological well-being in female migraine patients. Clinical Journal of Sport Medicine 18 (4): 363 365.doi:10.1097/JSM.0b013e31817efac9.
- 35. Ginsberg, H.N., and S.C. Woods. 2009. The endocannabinoid system: Potential for reducing cardiometabolic risk. Obesity 17 (10): 1821-1829.
- Dubreucq, S., M. Koehl, D.N. Abrous, G. Marsicano, and F. Chaouloff.2010. CB1 receptor deficiency decreases wheel-running activity: Consequences on emotional behaviours and hippocampal neurogenesis. Experimental Neurology 224 (1): 106-113.
- 37. Fuss, J., and P. Gass. 2010. Endocannabinoids and voluntary activity in mice: Runner's high and long-term consequences in emotional behaviors. Experimental neurology 224 (1): 103-105.
- 38. Levi, A., J.D. Eldridge, and B.M. Paterson. 1985. Molecular cloning of a gene sequence regulated by nerve growth factor. Science 229 (4711): 393-395.
- Alder, J., S. Thakker-Varia, D.A. Bangasser, et al. 2003. Brain-derived neurotrophic factor-induced gene expression reveals novel actions of VGF in hippocampal synaptic plasticity. Journal of Neuroscience 23 (34):10800-10808.
- 40. Hahm, S., T.M. Mizuno, T.J. Wu, et al. 1999. Targeted deletion of the Vgf gene indicates that the encoded secretory peptide precursor plays a novel role in the regulation of energy balance. Neuron 23 (3):537-548.
- Levi, A., G.L. Ferri, E. Watson, R. Possenti, and S.R. Salton. 2004. Processing, distribution, and function of VGF, a neuronal and endocrine peptide precursor. Cellular and Molecular Neurobiology 24 (4): 517-533.
- 42. Bozdagi, O., E. Rich, S. Tronel, et al. 2008. The neurotrophin-inducible gene Vgf regulates hippocampal function and behavior through a brain-derived neurotrophic factor-dependent mechanism. Journal of Neuroscience 28 (39): 9857-9869.
- 43. Hunsberger, J.G., S.S. Newton, A.H. Bennett, et al. 2007. Antidepressant actions of the exercise-regulated gene VGF. Nature Medicine 13 (12):1476-1482.
- 44. Clark, P.J., T.K. Bhattacharya, D.S. Miller, and J.S. Rhodes. 2011. Induction of c-Fos, Zif268, and Arc from acute bouts of voluntary wheel running in new and preexisting adult mouse hippocampal granule neurons. Neuroscience 184: 16-27.
- 45. Rhodes, J.S., S.C. Gammie, and T. Garland, Jr. 2005. Neurobiology of mice selected for high voluntary wheel-running activity. Integrative and Comparative Biology 45 (3): 438-455.
- 46. Kovacs, K.J. 1998. C-Fos as a transcription factor: A stressful (re)view from a functional map. Neurochemistry International 33 (Oct): 287-297.
- 47. Nakabeppu, Y., and D. Nathans. 1991. A naturally occurring truncated form of FosB that inhibits Fos/Jun transcriptional activity. Cell 64 (4): 751-759.
- Greenwood, B.N., and M. Fleshner. 2011. Exercise, stress resistance, and central serotonergic systems. Exercise and Sport Sciences Reviews 39 (3): 140-149.
 Werme, M., C. Messer, L. Olson, et al. 2002. Delta FosB regulates wheel running. Journal of Neuroscience 22 (18): 8133-8138.
- Garland, T., S.A. Kelly, J.L. Malisch, et al. 2011. How to run far: Multiple solutions and sex-specific responses to selective breeding for high voluntary activity levels. Proceedings of the Royal Society B: Biological Sciences 278 (1705): 574-581.
- 51. Swallow, J.G., P.A. Carter, and T. Garland, Jr. 1998. Artificial selection for increased wheel-running behavior in house mice. Behavior Genetics 28 (3): 227-237.
- 52. Koch, L.G., and S.L. Britton. 2001. Artificial selection for intrinsic aerobic endurance running capacity in rats. Physiological Genomics 5 (1): 45-52.

- 53. Koch, L.G., and S.L. Britton. 2008. Development of animal models to test the fundamental basis of gene-environment interactions. Obesity 16 (Suppl. 3):S28-S32.
- Murray, P.S., J.L. Groves, B.J. Pettett, et al. 2010. Locus coeruleus galanin expression is enhanced after exercise in rats selectively bred for high capacity for aerobic activity. Peptides 31 (12): 2264-2268.
- Geisser, M.E., W. Wang, M. Smuck, L.G. Koch, S.L. Britton, and R. Lydic. 2008. Nociception before and after exercise in rats bred for high and low aerobic capacity. Neuroscience Letters 443 (1): 37-40.
- Jónás, I., K.A. Schubert, A.C. Reijne, et al. 2010. Behavioral traits are affected by selective breeding for increased wheel-running behavior in mice. Behavior Genetics 40 (4): 542-550.
- 57. Waters, R.P., K.J. Renner, C.H. Summers, et al. 2010. Selection for intrinsic endurance modifies endocrine stress responsiveness. Brain Research 1357: 53-61.
- Foley, T.E., B.N. Greenwood, H.E. Day, L.G. Koch, S.L.Britton, and M. Fleshner. 2006. Elevated central monoamine receptor mRNA in rats bred for high endurance capacity: Implications for central fatigue. Behavioural Brain Research 174 (1): 132-142.
- Mathes, W.F., D.L. Nehrenberg, R. Gordon, K. Hua, T. Garland, Jr., and D. Pomp. 2010. Dopaminergic dysregulation in mice selectively bred for excessive exercise or obesity. Behavioural Brain Research 210 (2): 155-163.
- 60. Holmes, P.V. 2003. Rodent models of depression: Reexamining validity without anthropomorphic inference. Critical Reviews inNeurobiology 15 (2): 143-174.
- 61. Yoo, H.S., B.N. Bunnell, J.B. Crabbe, L.R. Kalish, and R.K. Dishman. 2000. Failure of neonatal clomipramine treatment to alter forced swim immobility: Chronic treadmill or activity-wheel running and imipramine. Physiology & Behavior 70 (3-4): 407-411.
- 62. Dishman, R.K., A.L. Dunn, S.D. Youngstedt, et al. 1996. Increased open field locomotion and decreased striatal GABAa binding after activity wheel running. Physiology and Behavior 60 (3): 699-705.
- Sciolino N.R., R.K. Dishman, and P.V. Holmes. 2012. Voluntary exercise offers anxiolytic potential and amplifies galanin gene expression in the locus coeruleus of the rat. Behavioural Brain Research. 233 (1): 191-200.
- 64. Sciolino N.R., P.V. Holmes. 2012. Exercise offers anxiolytic potential: A role for stress and brain noradrenergic-galaninergic mechanisms. Neuroscience and Biobehaviol Reviews. Jul 5. [Epub ahead of print].
- 65. Burghardt, P.R., L.J. Fulk, G.A. Hand, and M.A. Wilson. 2004. The effects of chronic treadmill and wheel running on behavior in rats. Brain Research 1019 (1-2): 84-96.
- 66. Salam, J.N., J.H. Fox, E.M. Detroy, M.H. Guignon, D.F. Wohl, and W.A.Falls. 2009. Voluntary exercise in C57 mice is anxiolytic across several measures of anxiety. Behavioural Brain Research 197 (1): 31-40.
- Anderson, B.J., D.N. Rapp, D.H. Baek, D.P. McCloskey, P.S. Coburn-Litvak, and J.K. Robinson. 2000. Exercise influences spatial learning in the radial arm maze. Physiology & Behavior 70 (5): 425-429.
- Fordyce, D.E., and R.P. Farrar. 1991a. Enhancement of spatial learning in F344 rats by physical activity and related learning-associated alterations in hippocampal and cortical cholinergic functioning. Behavioural Brain Research 46 (2): 123-133.
- 69. Fordyce, D.E., and R.P. Farrar. 1991b. Physical activity effects on hippocampal and parietal cortical cholinergic function and spatial learning in F344 rats. Behavioural Brain Research 43 (2): 115-123.
- Fordyce, D.E., and J.M. Wehner. 1993. Physical activity enhances spatial learning performance with an associated alteration in hippocampal protein kinase C activity in C57BL/6 and DBA/2 mice. Brain Research. 619(1-2): 111-119.
- Leggio, M.G., L. Mandolesi, F. Federico, et al. 2005. Environmental enrichment promotes improved spatial abilities and enhanced dendritic growth in the rat. Behavioural Brain Research 163 (1): 78 90.
- van Praag, H., B.R. Christie, T.J. Sejnowski, and F.H. Gage. 1999. Running enhances neurogenesis, learning, and long-term potentiation in mice. Proceedings of the National Academy of Sciences of the United States of America 96 (23): 13427-13431.
- 73. Vaynman, S., Z. Ying, and F. Gomez-Pinilla. 2004. Hippocampal BDNF mediates the efficacy of exercise on synaptic plasticity and cognition. European Journal of Neuroscience 20 (10): 2580-2590.
- Greenwood, B.N., P.V. Strong, T.E. Foley, and M. Fleshner. 2009. A behavioral analysis of the impact of voluntary physical activity on hippocampus-dependent contextual conditioning. Hippocampus. 19 (10): 988-1001. doi: 10.1002/hipo.20534.
- Van Hoomissen, J., J. Kunrath, R. Dentlinger, A. Lafrenz, M. Krause, and A. Azar. 2011. Cognitive and locomotor/exploratory behavior after chronic exercise in the olfactory bulbectomy animal model of depression. Behavioural Brain Research 222 (1): 106-116.
- Van Hoomissen, J.D., P.V. Holmes, A.S. Zellner, A. Poudevigne, and R.K. Dishman. 2004. Effects of beta-adrenoreceptor blockade during chronic exercise on contextual fear conditioning and mRNA for galanin and brainderived neurotrophic factor. Behavioral Neuroscience 118 (6): 1378-1390.
- Rhyu, I.J., J.A. Bytheway, S.J. Kohler, et al. 2010. Effects of aerobic exercise training on cognitive function and cortical vascularity in monkeys. Neuroscience 167 (4): 1239-1248.
- 78. Harlow, H.F., and J.A. Bromer. 1938. A test apparatus for monkeys. The Psychological Record 2: 434-436.
- 79. Koob, G.F., and M. Le Moal. 1997. Drug abuse: Hedonic homeostatic dysregulation. Science 278 (5335): 52-58.
- 80. Berridge, K.C., and T.E. Robinson. 1998. What is the role of dopamine in reward: Hedonic impact, reward learning, or incentive salience? Brain Research. Brain Research Reviews 28 (3): 309-369.
- Wang, G.J., N.D. Volkow, J.S. Fowler, et al. 2000. PET studies of the effects of aerobic exercise on human striatal dopamine release. Journal of Nuclear Medicine 41 (Aug): 1352-1356.
- Rasmussen, K., D.A. Morilak, and B.L. Jacobs. 1986. Single unit activity of locus coeruleus neurons in the freely moving cat. I. During naturalistic behaviors and in response to simple and complex stimuli. Brain Research 371 (Apr 23): 324-334.
- Veasey, S.C., C.A. Fornal, C.W. Metzler, and B.L. Jacobs. 1995. Response ofserotonergic caudal raphe neurons in relation to specific motor activities in freely moving cats. Journal of Neuroscience 15 (Jul): 5346 5359.
- Burgess, M.L., J.M. Davis, T.K. Borg, and J. Buggy. 1991. Intracranial selfstimulation motivates treadmill running in rats. Journal of Applie Physiology 71 (Oct): 1593-1597.
- Wilson, C.A., J.R. Pearson, A.J. Hunter, P.A. Tuohy, and A.P. Payne. 1986. The effect of neonatal manipulation of hypothalamic serotonin levels on sexual activity in the adult rat. Pharmacology, Biochemistry, and Behavior 24 (May): 1175-1183.
- Pagliari, R., and L. Peyrin. 1995. Norepinephrine release in the rat frontal cortex under treadmill exercise: A study with microdialysis. Journal of Applied Physiology 78 (Jun): 2121-2130.
- Meeusen, R., I. Smolders, S. Sarre, et al. 1997. Endurance training effects on neurotransmitter release in rat striatum: An in vivo microdialysis study. Acta Psychiatrica Scandinavica 159 (Apr): 335-341.
- 88. Nunez, P.L., and R. Srinivasan. 2006. Electric fields of the brain: The neurophysics of EEG. New York: Oxford University Press.
- Zago, S., R. Ferrucci, S. Marceglia, and A. Priori. 2009. The Mosso method for recording brain pulsation: The forerunner of functional neuroimaging. NeuroImage 48 (4): 652-656.
- 90. Roy, C.S., and C.S. Sherrington. 1890. On the regulation of the blood-supply of the brain. Journal of Physiology 11 (1-2): 85-158.
- 91. Cohen, M.S., and S.Y. Bookheimer. 1994. Localization of brain functionusing magnetic resonance imaging. Trends in Neurosciences 17 (Jul): 268-277.

- 92. Horowitz, A.L. 1995. MRI physics for radiologists: A visual approach. 3rd ed. New York: Springer-Verlag.
- Ogawa, S., T.M. Lee, A.S. Nayak, and P. Glynn. 1990. Oxygenation sensitive contrast in magnetic resonance image of rodent brain at high magnetic fields. Magnetic Resonance in Medicine 14 (1): 68-78.
- Huppert, T.J., R.D. Hoge, S.G. Diamond, M.A. Franceschini, and D.A. Boas.2006. A temporal comparison of BOLD, ASL, and NIRS hemodynamic responses to motor stimuli in adult humans. NeuroImage 29 (2): 368-382.
- 95. Colcombe, S.J., A.F. Kramer, K.I. Erickson, et al. 2004. Cardiovascular fitness, cortical plasticity, and aging. Proceedings of the National Academy of Science 101 (9): 3316-3321.
- Williams, D.S., J.A. Detre, J.S. Leigh, and A.P. Koretsky. 1992. Magnetic resonance imaging of perfusion using spin inversion of arterial water. Proceedings of the National Academy of Sciences of the United States of America 89 (1): 212-216.
- 97. Buxton, R.B. 2009. Introduction to functional magnetic resonance imaging: Principles and techniques. Cambridge, UK: Cambridge University Press.
- 98. Brown, G.G., J.E. Perthen, T.T. Liu, and R.B. Buxton. 2007. A primer on functional magnetic resonance imaging. Neuropsychology Review. 17 (2): 107-25. doi: 10.1007/s11065-007-9028-8.
- Smith, J.C., E.S. Paulson, D.B. Cook, M.D. Verber, and Q. Tian. 2010. Detecting changes in human cerebral blood flow after acute exercise using arterial spin labeling: Implications for fMRI. Journal of Neuroscience Methods 191 (2): 258-262.
- 100.Madden, D.J., J. Spaniol, M.C. Costello, et al. 2009. Cerebral white matter integrity mediates adult age differences in cognitive performance. Journal of Cognitive Neuroscience 21 (2): 289-302.
- 101. Marks, B.L., D.J. Madden, B. Bucur, et al. 2007. Role of aerobic fitness and aging on cerebral white matter integrity. Annals of the New York Academy of Sciences 1097: 171-174.
- 102. Bullitt, E., F.N. Rahman, J.K. Smith, et al. 2009. The effect of exercise on the cerebral vasculature of healthy aged subjects as visualized by MR angiography. American Journal of Neuroradiology 30 (10): 1857-1863.
- 103. Hamaoka, T., K.K. McCully, V. Quaresima, K. Yamamoto, and B. Chance. 2007. Near-infrared spectroscopy/imaging for monitoring muscle oxygenation and oxidative metabolism in healthy and diseased humans. Journal of Biomedical Optics. 12 (6): 062105. doi: 10.1117/1.2805437.
- 104. Perrey, S. 2008. Non-invasive NIR spectroscopy of human brain function during exercise. Methods 45 (4): 289-299.
- 105. Rooks, C.R., N.J. Thom, K.K. McCully, and R.K. Dishman. 2010. Effects of incremental exercise on cerebral oxygenation measured by near-infrared spectroscopy: A systematic review. Progress in Neurobiology 92 (2): 134-150.
- 106. Wolf, M., M. Ferrari, and V. Quaresima. 2007. Progress of near-infrared spectroscopy and topography for brain and muscle clinical applications. Journal of Biomedical Optics 12: 062104. doi: 10.1117/1.2804899.

PART TOW

- 1. World Health Organization. 2008. Global burden of disease: 2004 update. Geneva: World Health Organization.
- Weissman, M. M., R. C. Bland, G. J. Canino, C. Faravelli, S. Greenwald, H. G. Hwu, P. R. Joyce, E. G. Karam, C. K. Lee, J. Lellouch, J. P. Lepine, S. C. Newman, M. Rubio-Stipec, J. E. Wells, P. J. Wickramaratne, H. Wittchen, and E. K. Yeh. 1996. Cross-national epidemiology of major depression and bipolar disorder. Journal of the American Medical Association. 276 (Jul 24-31): 293-299.
- Weissman, M. M., R. C. Bland, G. J. Canino, C. Faravelli, S. Greenwald, H. G. Hwu, P. R. Joyce, E. G. Karam, C. K. Lee, J. Leeouch, S. C. Newman, M. A. Oakley-Browne, M. Rubio-Stipec, J. E. Wells, P. J. Wickramaratne, H. Wittchen, and E. K. Yeh. 1997. The cross-national epidemiology of panic disorder. Archives of General Psychiatry 54: 305-309.
- Kessler, R.C., K.A. McGonagle, S. Zhao, et al. 1994. Lifetime and 12-monthprevalence of DSM-III-R psychiatric disorders in the United States: Results from the National Comorbidity Survey. Archives of General Psychiatry 51: 8-19.
- Reeves, W.C., T.W. Strine, L.A. Pratt, et al. 2011. Mental illness surveillance among adults in the United States. Morbidity and Mortality Weekly Report Surveillance Summaries. 60(Suppl. 3): 1-29.corrected.
- 6. Friedman, H.S., and S. Booth-Kewley. 1987. The "disease-prone personality". A meta-analytic view of the construct. American Psychologist. 42 (6): 539-55.
- 7. Franz, S.I., and G.V. Hamilton. 1905. The effects of exercise upon the retardation in conditions of depression. American Journal of Insanity 62: 239-256.
- Conn, V.S., A.R. Hafdahl, P.S. Cooper, L.M. Brown, and S.L. Lusk. 2009. Meta-analysis of workplace physical activity interventions. American Journal of Preventive Medicine 37 (4): 330-339.
- Netz, Y., M.J. Wu, B.J. Becker, and G. Tenenbaum. 2005. Physical activity and psychological well-being in advanced age: A meta-analysis of intervention studies. Psychology and Aging 20 (2): 272-284.
- 10. Reed, J., and S. Buck. 2009. The effect of regular aerobic exercise on positive-activated affect: A meta-analysis. Psychology of Sport and Exercise 10 (6): 581-594.
- 11. Schechtman, K.B., and M.G. Ory. 2001. The effects of exercise on the quality of life of frail older adults: A preplanned meta-analysis of the FICSIT trials. Annals of Behavioral Medicine 23 (3): 186-197.
- Speck, R.M., K.S. Courneya, L.C. Masse, S. Duval, and K.H. Schmitz. 2010. An update of controlled physical activity trials in cancer survivors: A systematic review and meta-analysis. Journal of Cancer Survivorship: Research and Practice 4 (2): 87-100.
- Gillison, F.B., S.M. Skevington, A. Sato, M. Standage, and S. Evangelidou.2009. The effects of exercise interventions on quality of life in clinical and healthy populations: A meta-analysis. Social Science & Medicine 68 (9):1700-1710.

- 1. Bernard, C.L. 1867. Rapport sur les progres et la marche de la physiologie generale. Paris: Baillière.
- 2. Cannon, W.B. 1929. Organization for physiological homeostasis. Physiological Review 9: 399-431.
- 3. Hartman, F.A., K.A. Brownell, and J.E. Lockwood. 1932. Cortin as a general tissue hormone. American Journal of Physiology 101: 50.
- 4. Selye, H. 1936. A syndrome produced by diverse nocuous agents. Nature 138: 32.
- 5. Selye, H. 1950. Stress. Montreal: Acta.
- 6. Michael, E.D. 1957. Stress adaptations through exercise. American Association for Health, Physical Education, and Recreation: Research Quarterly 28: 50-54.
- Sothmann, M.S., J. Buckworth, R.P. Claytor, R.H. Cox, J.E. White-Welkley, and R.K. Dishman. 1996. Exercise training and the cross-stressor adaptation hypothesis. Exercise and Sport Sciences Reviews 24: 267-287.
- 8. McEwen, B.S. 1998. Protective and damaging effects of stress mediators. New England Journal of Medicine 338: 171-179.
- 9. Frankenhaeuser, M. 1971. Behavior and circulating catecholamines. Brain Research 31 (Aug 20): 241-262.
- Mason, J.W., J.T. Maher, L.H. Hartley, E. Mougey, M.J. Perlow, and L.G. Jones. 1976. Selectivity of corticosteroid and catecholamine responses to various natural stimuli. In Psychopathology of human adaptation, edited by G. Serban, 147-171. New York: Plenum.
- 11. Lazarus, R.S. 1993. From psychological stress to the emotions: A history of changing outlooks. Annual Review of Psychology 44: 1-21.
- 12. deVries, H.A., and G.M. Adams. 1972. Electromyographic comparisons of single doses of exercise and meprobamate as to effects on muscular relaxation. American Journal of Physical Medicine 51: 130-141.

- Smith, J.C., K.A. Nielson, J.L. Woodard, et al. 2010. Interactive effects of physical activity and APOE-e4 on Bold semantic memory activation in healthy elders. NeuroImage. 54: 635-644. doi: 10.1016/j.neuroimage.2010.07.070.
- Crabbe, J.B., and R.K. Dishman. 2001. Exercise and brain electrocortical activity: A quantitative synthesis. Medicine and Science in Sports and Exercise. 32 (suppl. 5): S43, S38.
- Jackson, E.M., and R.K. Dishman. 2002. Hemodynamic responses to stress among black women: Fitness and parental hypertension. Medicine & Science in Sports & Exercise 34 (7): 1097-1104; discussion 1105.
- 16. Mitchell J.H, and P.B. Raven. 1994. Cardiovascular adaptation to physical activity. In Physical activity, fitness, and health: International proceedings and consensus statement, edited by C. Bouchard, R.J. Shephard, and T. Stephens. Champaign, IL: Human Kinetics.
- 17. Rowell, L.B. 1993. Human cardiovascular control. New York: Oxford University Press.
- Spalding, T.W., L.S. Jeffers, S.W. Porges, and B.D. Hatfield. 2000. Vagal and cardiac reactivity to psychological stressors in trained and untrained men. Medicine and Science in Sports and Exercise. 32 (3): 581-91.
- 19. Buckworth, J., R.K. Dishman, and K.J. Cureton. 1994. Effects of aerobic fitness on cardiovascular reactivity and the carotid baroreflex in women with parental hypertension. Medicine & Science in Sports & Exercise 26 (Suppl. 5): S198.
- Graham, R.E., A. Zeichner, L.J. Peacock, and R.K. Dishman. 1996. Bradycardia during baroreflex stimulation and active or passive stressor tasks: Cardiorespiratory fitness and hostility. Psychophysiology 33: 566-575.
- Soares, J., P.V. Holmes, K.J. Renner, G.L. Edwards, B.N. Bunnell, and R.K. Dishman. 1999. Brain noradrenergic responses to footshock after chronic activity-wheel running. Behavioral Neuroscience 113 (Jun): 558-566.
- 22. Dishman, R.K., J.M. Warren, S.D. Youngstedt, et al. 1995. Activity-wheel running attenuates suppression of natural killer cell activity after footshock. Journal of Applied Physiology 78 (Apr): 1547-1554.
- Dishman, R.K., S. Hong, J. Soares, et al. 2000. Activity-wheel running blunts suppression of splenic natural killer cell cytotoxicity after sympathectomy and footshock. Physiology & Behavior 71 (3-4): 297-304.
- 24. Sinyor, D., S.G. Schwartz, F. Peronnet, G. Brisson, and P. Seraganian. 1983. Aerobic fitness level and reactivity to psychosocial stress: Physiological, biochemical, and subjective measures. Psychosomatic Medicine 45 (Jun): 205-217.
- Sothmann, M.S., A.B. Gustafson, T.L. Garthwaite, T.S. Horn, and B.A. Hart. 1988. Cardiovascular fitness and selected adrenal hormone responses to cognitive stress. Endocrine Research 14: 59-69.
- Blaney, J., Sothmann, M., Raff, H., Hart, B., & Horn, T. (1990). Impact of exercise training on plasma adrenocorticotropin response to a well-learned vigilance task. Psychoneuroendocrinology, 15(5-6), 453-462.
- Dishman, R.K., K.J. Renner, S.D. Youngstedt, et al. 1997. Activity wheel running reduces escape latency and alters brain monoamine levels after footshock. Brain Research Bulletin 42: 399-406.
- White-Welkley, J.E., B.N. Bunnell, E.H. Mougey, J.L. Meyerhoff, and R.K. Dishman. 1995. Treadmill training and estradiol moderate hypothalamicpituitary- adrenal cortical responses to acute running and immobilization. Physiology and Behavior 57: 533-540.
- 29. White-Welkley, J.E., G.L. Warren, B.N. Bunnell, E.H. Mougey, J.L. Meyerhoff, and R.K. Dishman. 1996. Treadmill exercise training and estradiol increase plasma ACTH and prolactin after novel footshock. Journal of Applied Physiology 80 (Mar): 931-939.
- Crews, D.J., and D.M. Landers. 1987. A meta-analytic review of aerobic fitness and reactivity to psychosocial stressors. Medicine & Science in Sports & Exercise 19 (Suppl. 5): S114-S120.
- Forcier, K., L.R. Stroud, G.D. Papandonatos, et al. 2006. Links between physical fitness and cardiovascular reactivity and recovery to psychological stressors: A metaanalysis. Health Psychology 25 (6): 723-739.
- 32. Sloan, R.P., P.A. Shapiro, R.E. DeMeersman, et al. 2011. Impact of aerobic training on cardiovascular reactivity to and recovery from challenge. Psychosomatic Medicine 73 (2): 134-141.
- 33. Allen, M.T., and M.D. Crowell. 1989. Patterns of autonomic response during laboratory stressors. Psychophysiology 26: 603-614.
- Dishman, R.K., E.M. Jackson, and Y. Nakamura. 2002. Influence of fitness and gender on blood pressure responses during active or passive stress. Psychophysiology 39 (5): 568-576.
- Clutter, W., D. Bier, S. Shah, and P.E. Cryer. 1980. Epinephrine: Plasma metabolic clearance rates and physiologic thresholds for metabolic and hemodynamic actions in man. Journal of Clinical Investigation 66: 94-101.
- Silverberg, A.B., S.D. Shah, M.W. Haymond, and P.E. Cryer. 1978. Norepinephrine: Hormone and neurotransmitter in man. American Journal of Physiology 234: E252-E256.
- Sehested J., G. Reinicke, K. Ishino, et al. 1995. Blunted humoral responses to mental stress and physical exercise in cardiac transplant recipients. European Heart Journal 166: 852-858.
- Shapiro, P.A., R.P. Sloan, J.T. Bigger, Jr., E. Bagiella, and J.M. Gorman. 1994. Cardiac denervation and cardiovascular reactivity to psychological stress. American Journal of Psychiatry 1518: 1140-1147.
- 39. Jackson, E.M., and R.K. Dishman 2006. Cardiorespiratory fitness and laboratory stress: A meta-regression analysis. Psychophysiology 43 (1): 57-72.
- Dishman, R.K., Y. Nakamura, E.M. Jackson, and C.A. Ray. 2003. Blood pressure and muscle sympathetic nerve activity during cold pressor stress: Fitness and gender. Psychophysiology 40 (3): 370-380.
- Hamer, M., A. Taylor, and A. Steptoe. 2006. The effect of acute aerobicexercise on stress related blood pressure responses: A systematic review and meta-analysis. Biological Psychology 71 (2): 183-190.
- 42. MacDonald, J.R. 2002. Potential causes, mechanisms, and implications of post exercise hypotension. Journal of Human Hypertension 16 (4): 225-236.
- Rooks, C.R., K.K. McCully, and R.K. Dishman. 2011. Acute exercise improves endothelial function despite increasing vascular resistance during stress in smokers and nonsmokers. Psychophysiology 48 (9): 1299-1308.
- 44. Netz, Y., M.J. Wu, B.J. Becker, and G. Tenenbaum. 2005. Physical activity and psychological well-being in advanced age: A meta-analysis of intervention studies. Psychology and Aging 20 (2): 272-284.
- 45. Reed, J., and S. Buck. 2009. The effect of regular aerobic exercise on positive-activated affect: A meta-analysis. Psychology of Sport and Exercise 10 (6): 581-594.
- 46. Abu-Omar, K., A. Rutten, and V. Lehtinen. 2004. Mental health and physical activity in the European Union. Sozial- und Praventivmedizin 49 (5): 301-309.
- Wolin, K.Y., R.J. Glynn, G.A. Colditz, I.M. Lee, and I. Kawachi. 2007. Long-term physical activity patterns and health-related quality of life in U.S. women. American Journal of Preventive Medicine 32 (6): 490-499.
- Heesch, K.C., N.W. Burton, and W.J. Brown. 2011. Concurrent and prospective associations between physical activity, walking and mental health in older women. Journal of Epidemiology and Community Health 65 (9): 807-813.
- Sagatun, A., A.J. Sogaard, E. Bjertness, R. Selmer, and S. Heyerdahl. 2007. The association between weekly hours of physical activity and mental health: A three-year follow-up study of 15-16-year-old students in the city of Oslo, Norway. BMC Public Health 7: 155.
- Morey, M.C., D.C. Snyder, R. Sloane, et al. 2009. Effects of home-based diet and exercise on functional outcomes among older, overweight long-term cancer survivors: RENEW: A randomized controlled trial. Journal of the American Medical Association 301 (18): 1883-1891.

51. Martin, C.K., T.S. Church, A.M. Thompson, C.P. Earnest, and S.N. Blair. 2009. Exercise dose and quality of life: A randomized controlled trial. Archives of Internal Medicine 169 (3): 269-278.

- 1. Steinhardt, M., and R.K. Dishman. 1989. Reliability and validity of expected outcomes and barriers for habitual physical activity. Journal of Occupational Medicine 31 (6): 536-546.
- Thayer, R.E., J.R. Newman, and T.M. McClain. 1994. Self-regulation of mood: Strategies for changing a bad mood, raising energy, and reducing tension. Journal of Personality and Social Psychology 67 (Nov): 910-925.
- Averill, J. R., G. L. Clore, J. E. LeDoux, J. Panksepp, D. Watson, L. A. Clark, P. Ekman, and R. J. Davidson. 1994. What influences the subjective experience of emotion? In The nature of emotions: Fundamental questions.edited by P. Ekman and R.J. Davidson. New York: Oxford University Press.
- 4. Batson, C.D., L.L. Shaw, and K.C. Oleson. 1992. Differentiating affect, mood, and emotion: Toward functionally based conceptual distinctions. In Emotion: Review of personality and social psychology, vol. 13, edited by M.S. Clark. Newbury Park, CA: Sage.
- 5. Thayer, R.E. 1989. The biopsychology of mood and arousal. New York: Oxford University Press.
- 6. Tellegen, A. 1985. Structures of mood and personality their relevance to assessing anxiety, with emphasis on self-report. In Anxiety and the Anxiety Disorders, edited by A.H. Tuma, and J. Maser. Hillsdale, NJ: Erlbaum.
- 7. Davidson, R.J. 1998a. Affective style and affective disorders: Perspectives from affective neuroscience. Cognition & Emotion 12 (3): 307-330.
- Lang, P.J., M.M. Bradley, and B.N. Cuthbert. 1998. Emotion, motivation, and anxiety: Brain mechanisms and psychophysiology. Biological Psychiatry 44 (Dec 15): 1248-1263.
- 9. Smith, J.C., and J.B. Crabbe. 2000. Emotion and exercise. International Journal of Sport Psychology 31 (2): 156-174.
- 10. Lazarus, R.S. 1991. Emotion theory and psychotherapy. in Emotion, Psychotherapy, and Change: edited by J.D. Safran and L.S. Greenberg. New York: Guilford Press.
- 11. Cacioppo, J.T., D.J. Klein, G.G. Bernsten, and E. Hatfield. 1993. The psychophysiology of emotion. In Handbook of emotions, edited by M. Lewis and J.M. Haviland. New York: Guilford Press.
- 12. Watson, D., and A. Tellegen. 1985. Toward a consensual structure of mood. Psychological Bulletin 98 (2): 219-235.
- 13. Ekkekakis, P., and S.J. Petruzzello. 2002. Analysis of the affect measurement conundrum in exercise psychology: IV. A conceptual case for the affect circumplex. Psychology of Sport and Exercise 3 (1): 35-63.
- 14. Carver, C.S., and E. Harmon-Jones. 2009a. Anger is an approach-related affect: Evidence and implications. Psychological Bulletin 135 (2): 183-204.
- 15. Russell, J.A. 1980. A circumplex model of affect. Journal of Personality and Social Psychology. 39 (6): 1161-1178.
- 16. Lazarus, R.S. 2006. Emotions and interpersonal relationships: Toward a person-centered conceptualization of emotions and coping. Journal of Personality 74 (1): 9-46.
- 17. Carver, C.S., and J. Connor-Smith. 2010. Personality and coping. Annual Review of Psychology 61: 679-704.
- 18. Lazarus, R.S. 1993. From psychological stress to the emotions: A history of changing outlooks. Annual Review of Psychology 44: 1-21.
- 19. Lazarus, R.S., and S. Folkman. 1984. Stress, appraisal, and coping. New York: Springer.
- 20. Frijda, N.H. 1986. The emotions. New York: Cambridge University Press.
- 21. Darwin, C. 1872. The expression of the emotions in man and animals.London: Murray.
- 22. Zajonc, R.B. 1985. Emotions and facial expression. Science 230 (4726): 608-687.
- 23. Ekman, P., and W.V. Friesen. 1971. Constants across cultures in the face and emotion. Journal of Personality & Social Psychology 17: 124-129.
- 24. James, W. 1884. What is an emotion? Mind 9: 188-205.
- 25. Kunst-Wilson, W.R., and R.B. Zajonc. 1980. Affective discrimination of stimuli that cannot be recognized. Science 207 (4430): 557-558.
- 26. Carlson, N. R. 1998. Physiology of behavior. 6th ed. Needham Heights, MA: Allyn and Bacon.
- Rosenzweig, M.R., A.L. Leiman, and S.M. Breedlove. 1999b. Emotions, aggression, and stress. In Biological psychology: An introduction to behavioral, cognitive, and clinical neuroscience, edited by M.R. Rosenzweig, A.L. Leiman, and S.M. Breedlove. 2nd ed. Sunderland, MA: Sinauer Associates, Inc.
- Clore, G.L., N. Schwarz, and M. Conway. 1994. Affective causes and consequences of social information processing. In Handbook of social cognition, Vol.1: Basic processes; Vol.2: Applications, edited by R.S.
- 29. Davidson, R.J. 2000. Cognitive neuroscience needs affective neuroscience (and vice versa). Brain and Cognition. 42 (1): 89-92. doi: 10.1006/brcg.1999.1170.
- 30. Gauvin, L., and J.C. Spence. 1998. Measurement of exercise-induced changes in feeling states, affect, mood, and emotions. In Advances in sport and exercise psychology measurement, edited by J.L. Duda. Morgantown, WV: Fitness Information Technology.
- 31. Lang, P.J. 1995. The emotion probe: Studies of motivation and attention. American Psychologist 50 (5): 372-385.
- 32. Schneirla, T. 1959. An evolutionary and developmental theory of biphasic processes underlying approach and withdrawal. In Nebraska Symposium on Motivation, edited by M. Jones. Lincoln: University of Nebraska Press.
- 33. Konorski, J. 1967. Integrative activity of the brain: An interdisciplinary approach. Chicago: University of Chicago Press.
- 34. Osgood, C.E., G.J. Suci, and P.H. Tannenbaum. 1957. The measurement of meaning. Urbana: University of Illinois Press.
- 35. Bradley, M.M., and P.J. Lang. 1994. Measuring emotion: The Self-Assessment Manikin and the semantic differential. Journal of Behavior Therapy and Experimental Psychiatry. 25 (1): 49-59.
- 36. Schaefer, E.S., and R. Plutchik. 1966. Interrelationships of emotions, traits, and diagnostic constructs. Psychological Reports 18: 399 410.
- 37. Leary, T.F. 1957. Interpersonal diagnosis of personality: New York: Ronald Press.
- Wiggins, J.S., P. Trapnell, and N. Phillips. 1988. Psychometric and geometric characteristics of the Revised Interpersonal Adjective Scales (IASóR). Multivariate Behavioral Research 23: 517-530.
- 39. Mehrabian, A. 1970. A semantic space for nonverbal behavior. Journal of Consulting and Clinical Psychology. 35 (2): 248-257.
- 40. Mehrabian, A, and J.A. Russell. 1974. An approach to environmental psychology. Cambridge, MA: MIT.
- 41. Watson, D., L.A. Clark, and A. Tellegen. 1988. Development and validation of brief measures of positive and negative affect: The PANAS scales. Journal of Personality & Social Psychology 54 (6): 1063-1070.
- 42. Carver, C.S. 2004. Negative affects deriving from the behavioral approach system. Emotion 4 (1): 3-22.
- 43. Harmon-Jones, E., C. Harmon-Jones, L. Abramson, and C.K. Peterson. 2009. PANAS positive activation is associated with anger. Emotion 9 (2): 183-196.
- 44. Tomarken, A.J., and D.H. Zald. 2009. Conceptual, methodological, and empirical ambiguities in the linkage between anger and approach: comment on Carver and Harmon-Jones (2009). Psychological Bulletin. 135 (2): 209-214; discussion 215-217. doi: 10.1037/a0014735.
- 45. Watson, D. 2009. Locating anger in the hierarchical structure of affect: Comment on Carver and Harmon-Jones (2009). Psychological Bulletin 135 (2): 205-208; discussion 215-217.
- 46. Roberts, W.R. (trans). 1924. Rhetorica: The Works of Aristotle, Vol.11. Oxford: Clarendon Press. Rpt. 1954 in Aristotle, "Rhetoric" and "Poetics" (trans. Roberts & Ingram Bywater). New York: Modern Library.
- 47. Lang, P.J. 2000. Emotion and motivation: Attention, perception, and action. Journal of Sport & Exercise Psychology 20: S122-S140.
- 48. Phan, K.L., T. Wager, S.F. Taylor, and I. Liberzon. 2002. Functional neuroanatomy of emotion: A meta-analysis of emotion activation studies in PET and fMRI.

NeuroImage 16 (2): 331-348.

- 49. Vytal, K., and S. Hamann. 2010. Neuroimaging support for discrete neural correlates of basic emotions: A voxel-based meta-analysis. Journal of Cognitive Neuroscience 22 (12): 2864-2885.
- 50. Chida, Y., and A. Steptoe. 2009. The association of anger and hostility with future coronary heart disease: A meta-analytic review of prospective evidence. Journal of the American College of Cardiology 53 (11): 936-946.
- 51. Spielberger, C.D., R.L. Gorsuch, R. Lushene, P.R. Vagg, and G.A. Jacobs. 1983. Manual for the State-Trait Anxiety Inventory. Palo Alto, CA: Consulting Psychologists Press.
- 52. Ekman, P., W.V. Friesen, and P. Ellsworth. 1972 Emotion in the human face: Guidelines for research and an integration of findings. New York: Pergamon Press.
- 53. Barrett, L.F., and T.D. Wager. 2006. The structure of emotion: Evidence from neuroimaging studies. Current Directions in Psychological Science 15: 79-85.
- 54. Cacioppo, J.T., G.G. Berntson, J.T. Larsen, K.M. Poehlmann, and T.A. Ito. 2000. The psychophysiology of emotion. In Handbook of emotions, edited by M. Lewis, J.M. Haviland-Jones, and L.F. Barrett. New York: Guilford Press.
- 55. Zajonc, R.B., and D.N. McIntosh. 1992. Emotions research: Some promising questions and some questionable promises. Psychological Science 3 (1): 70-74.
- 56. Papez, J.W. 1937. A proposed mechanism of emotion. Archives of neurology and psychiatry. 38 (4): 725-743.
- 57. Olds, J., and P. Milner. 1954. Positive reinforcement produced by electrical stimulation of septal area and other regions of rat brain. Journal of Comparative and Physiological Psychology 47 (6): 419-427.
- Fernandez de Molina, A. and R.W. Hunsperger 1962. Organization of the subcortical system governing defense and flight reactions in the cat. Journal of Physiology, 160(2): 200-213.
- 59. Gray, J.A. 1973. The structure of the emotions and the limbic system. In Physiology, emotion and psychosomatic illness, edited by J. Willis. Amsterdam: Elsevier.
- 60. Gray, J.A. 1994b. Three fundamental emotion systems. In The nature of emotion: Fundamental questions, edited by P. Ekman and R.J. Davidson. New York: Oxford University Press.
- 61. Gray, J.A. 1987. The neuropsychology of anxiety: An enquiry into the functions of the septo-hippocampal system. Oxford, UK: Clarendon Press.
- 62. Carver, C.S., and T.L. White. 1994. Behavioral inhibition, behavioral activation, and affective responses to impending reward and punishment: The BIS/BAS Scales. Journal of Personality and Social Psychology 67 (2): 319-333.
- 63. Torrubia, R., C. Avila, J. Moltó, and X. Caseras. 2001. The Sensitivity to Punishment and Sensitivity to Reward Questionnaire (SPSRQ) as a measure of Gray's anxiety and impulsivity dimensions. Personality and Individual Differences 31 (6): 837-862.
- 64. Gray, J.A. 1994a. Personality dimensions and emotion systems. In The nature of emotion: Fundamental questions, edited by P. Ekman and R.J. Davidson. New York: Oxford University Press.
- 65. Panksepp, J. 1998. The sources of fear and anxiety in the brain. In Affective neuroscience: The foundations of human and animal emotions, edited by J. Panksepp. New York: Oxford University Press.
- Garavan, H., J.C. Pendergrass, T.J. Ross, E.A. Stein, and R.C. Risinger. 2001. Amygdala response to both positively and negatively valenced stimuli. Neuroreport 12 (12): 2779-2783.
- 67. Georges, F., and G. Aston-Jones. 2001. Potent regulation of midbrain dopamine neurons by the bed nucleus of the stria terminalis. Journal of Neuroscience 21 (16): RC160.
- 68. Davidson, R.J., and W. Irwin. 1999. The functional neuroanatomy of emotion and affective style. Trends in Cognitive Sciences 3 (1): 11-21.
- 69. Murphy, F.C., I. Nimmo-Smith, and A.D. Lawrence. 2003. Functional neuroanatomy of emotions: A meta-analysis. Cognitive, Affective & Behavioral Neuroscience 3 (3): 207-233.
- 70. Sabatinelli, D., E.E. Fortune, Q. Li, et al. 2011. Emotional perception: A meta-analyses of face and natural scene processing. NeuroImage 54 (3): 2524-2533.
- 71. Thom, N.J., B.A. Clementz, O'Connor P.J., and R.K. Dishman. 2012. The effects of an acute bout of moderate intensity exercise on anger. Athens, GA: University of Georgia.
- Carlson, J.M., D. Foti, L.R. Mujica-Parodi, E. Harmon-Jones, and G. Hajcak. 2011. Ventral striatal and medial prefrontal BOLD activation is correlated with rewardrelated electrocortical activity: A combined ERP and fMRI study. NeuroImage 57 (4): 1608-1616.
- 73. LeDoux, J.E. 1994. Emotion, memory, and the brain. Scientific American (June): 50-57.
- 74. Davis, M. 1997. The neurophysiological basis of acoustic startle modulation: Research on fear motivation and sensory gating. In Attention and orienting: Sensory and motivational processes, edited by P.J. Lang, R.F. Simons, and M. Balaban. Mahwah, NJ: Erlbaum.
- Lee, Y., D.E. Lopez, E.G. Meloni, and M. Davis. 1996. A primary acoustic startle pathway: Obligatory role of cochlear root neurons and the nucleus reticularis pontis caudalis. Journal of Neuroscience 16 (Jun 1): 3775-3789.
- 76. Cuthbert, B.N., M.M. Bradley, and P.J. Lang. 1996. Probing picture perception: Activation and emotion. Psychophysiology 33 (2): 103-111.
- 77. Macmillan, M.B. 2000. Restoring Phineas Gage. Journal of the History of Neurosciences 9: 42-62.
- Damasio, H., T. Grabowski, R. Frank, A.M. Galaburda, and A.R. Damasio. 1994. The return of Phineas Gage: Clues about the brain from the skull of a famous patient [published erratum appears in Science 1994 Aug 26; 265 (5176): 1159]. Science 264 (May 20): 1102-1105.
- 79. Harlow, J.M. 1868. Recovery from the passage of an iron bar through the head. Publication of the Massachusetts Medical Society. 2: 327-347.
- 80. Lazarus, R.S. 1966. Psychological stress and the coping process. New York: McGraw-Hill.
- 81. Ellis, A. 1957. Rational psychotherapy and individual psychology. Journal of Individual Psychology 13: 38-44.
- 82. Kobasa, S.C., S.R. Maddi, and S. Kahn. 1982. Hardiness and health: A prospective study. Journal of Personality and Social Psychology 42 (1): 168-177.
- 83. Tiger, L. 1979. Optimism: The biology of hope. New York: Simon and Schuster.
- 84. Digman, J.M. 1990. Personality structure: Emergence of the five-factor model. Annual Review of Psychology 41 (1): 417-440.
- 85. Goldberg, L.R. 1981. Language and individual differences: The search for universals in personality lexicons. In Review of personality and social psychology, edited by L. Wheeler. Beverly Hills, CA: Sage.
- 86. McCrae, R.R., and P.T. Costa. 2003. Personality in adulthood: A five-factor theory perspective. New York: The Guilford Press.
- Connor-Smith, J.K., and C. Flachsbart. 2007. Relations between personality and coping: A meta-analysis. Journal of Personality and Social Psychology 93 (6): 1080-1107.
- 88. Nes, L.S., and S.C. Segerstrom. 2006. Dispositional optimism and coping: A meta-analytic review. Personality and Social Psychology Review 10 (3):235-251.
- 89. Seligman, M.E.P., and M. Csikszentmihalyi. 2000. Positive psychology: An introduction. American Psychologist 55 (1): 5-14.
- 90. Lazarus, R.S. 2003b. The Lazarus manifesto for positive psychology and psychology in general. Psychological Inquiry, 14: 173-189.
- 91. Peterson, C., and M.E.P. Seligman. 2004. Character strengths and virtues: A handbook and classification. New York: Oxford University Press.
- 92. Cloninger, C.R. 2005. Character strengths and virtues: A handbook and classification. American Journal of Psychiatry 162 (4): 820-821.
- 93. Lazarus, R. S. 2003a. Does the positive psychology movement have legs? Psychological Inquiry, 14: 93-109.
- 94. Watson, D., and L.A. Clark. 1994. The vicissitudes of mood: A schematic model. In The nature of emotion: Fundamental questions, edited by P. Ekman and R.J. Davidson. New York: Oxford University Press.
- 95. Ekman, P. 1994. Moods, emotions, and traits. In The nature of emotion: Fundamental questions, edited by P. Ekman and R.J. Davidson. New York: Oxford University

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- 96. Gauvin, L., W.J. Rejeski, and B.A. Reboussin. 2000. Contributions of acute bouts of vigorous physical activity to explaining diurnal variations in feeling states in active, middle-aged women. Health Psychology 19 (4): 365-375.
- 97. Berger, B.G., D.R. Owen, R.W. Motl, and L. Parks. 1998. Relationship between expectancy of psychological benefits and mood alteration in joggers. International Journal of Sport Psychology 29 (1): 1 16.
- Tieman, J.G., L.J. Peacock, K.J. Cureton, and R.K. Dishman. 2001. Acoustic startle eyeblink response after acute exercise. International Journal of Neuroscience 106: 21-33.
- Bozoian, S., W.J. Rejeski, and E. McAuley. 1994. Self-efficacy influences feeling states associated with acute exercise. Journal of Sport & Exercise Psychology 16 (3): 326-333.
- 100. Hsiao, E.T., and R.E. Thayer. 1998. Exercising for mood regulation: The importance of experience. Personality & Individual Differences 24 (6): 829-836.
- 101. Yeung, R.R. 1996. The acute effects of exercise on mood state. Journal of Psychosomatic Research 40 (2): 123-141.
- 102. McNair, D.M., M. Lorr, and L.F. Droppleman. 1981. Manual for the Profile of Mood States. San Diego, CA: Educational and Industrial Testing Service.
- 103. Watson, D., L.A. Clark, and A. Tellegen. 1988. Development and validation of brief measures of positive and negative affect: The PANAS scales. Journal of Personality & Social Psychology 54 (6): 1063-1070.
- 104. Russell, J.A., A. Weiss, and G.A. Mendelsohn. 1989. Affect Grid: A singleitem scale of pleasure and arousal. Journal of Personality & Social Psychology 57 (3): 493-502.
- 105. Hardy, C.J., and W.J. Rejeski. 1989. Not what, but how one feels: The measurement of affect during exercise. Journal of Sport & Exercise Psychology 11 (3): 304-317.

106. Gauvin, L. and W.J. Rejeski. 1993. The exercise-induced feeling inventory: Development and initial validation. Journal of Sport & Exercise Psychology 15 (4): 403-423.

- 107. McAuley, E., and K.S. Courneya. 1994. The Subjective Exercise Experiences Scale (SEES): Development and preliminary validation. Journal of Sport & Exercise Psychology 16 (2): 163-177.
- 108. Ekkekakis, P., and S.J. Petruzzello. 2000. Analysis of the affect measurement conundrum in exercise psychology. Psychology of Sport and Exercise 1: 71-88.
- 109. Crocker, P.R.E. 1997. A confirmatory factor analysis of the Positive Affect Negative Affect Schedule (PANAS) with a youth sport sample. Journal of Sport & Exercise Psychology 19 (1): 91-97.
- 110. Russell, J.A., M. Lewicka, and T. Niit. 1989. A cross-cultural study of a circumplex model of affect. Journal of Personality & Social Psychology 57 (5): 848-856.
- 111. Ekkekakis, P., and S.J. Petruzzello. 2001a. Analysis of the affect measurement conundrum in exercise psychology: II. A conceptual and methodological critique of the Exercise-induced Feeling Inventory. Psychology of Sport and Exercise 2 (1): 1-26.
- 112. Ekkekakis, P., and S.J. Petruzzello. 2001b. Analysis of the affect measurement conundrum in exercise psychology. III. A conceptual and methodological critique of the Subjective Exercise Experiences Scale. Psychology of Sport and Exercise 2 (4): 205-232.
- 113. Reed, J., and D.S. Ones. 2006. The effect of acute aerobic exercise on positive activated affect: A meta-analysis. Psychology of Sport and Exercise 7 (5): 477-514.
- 114. Ekkekakis, P., G. Parfitt, and S.J. Petruzzello. 2011. The pleasure and displeasure people feel when they exercise at different intensities: Decennial update and progress towards a tripartite rationale for exercise intensity prescription. Sports Medicine 41 (8): 641-671.
- 115. Kopp, M., M. Steinlechner, G. Ruedl, L. Ledochowski, G. Rumpold, and A.H. Taylor. 2012. Acute effects of brisk walking on affect and psychological well-being in individuals with type 2 diabetes. Diabetes Research and Clinical Practice. 25(1): 25-29. doi: 10.1016/j.diabres.2011.09.017.
- 116. Martin Ginis, K.A., and A.E. Latimer. 2007. The effects of single bouts of body-weight supported treadmill training on the feeling states of people with spinal cord injury. Spinal Cord 45 (1): 11112-11115.
- 117. Poole, L., A. Steptoe, A.J. Wawrzyniak, S. Bostock, E.S. Mitchell, and M. Hamer. 2011. Associations of objectively measured physical activity with daily mood ratings and psychophysiological stress responses in women. Psychophysiology 48 (8): 1165-1172.
- 118. Hoffman, M.D., and D.R. Hoffman. 2008. Exercisers achieve greater acute exercise-induced mood enhancement than nonexercisers. Archives of Physical Medicine and Rehabilitation 89 (2): 358-363.
- 119. Rudolph, D. L. and J. G. Kim. 1996. Mood responses to recreational sport and exercise in a Korean sample. Journal of Social Behavior & Personality 11 (4): 841-849.
- 120. Martin Ginis, K.A., S.M. Burke, and Lise Gauvin. 2007. Exercising with others exacerbates the negative effects of mirrored environments on sedentary women's feeling states. Psychology & Health 22 (8): 945-962.
- 121. Wankel, L.M., and J.M. Sefton. 1989. A season-long investigation of fun in youth sports. Journal of Sport & Exercise Psychology 11 (4): 355-366.
- 122. O'Connor, P.J., R.D. Carda, and B.K. Graf. 1991. Anxiety and intense running exercise in the presence and absence of interpersonal competition. International Journal of Sports Medicine 12: 423-426.
- 123. Berger, B.G. and R.W. Motl. 2000. Exercise and mood: A selective review and synthesis of research employing the profile of mood states. Journal of Applied Sport Psychology 12: 69-92.
- 124. Anderson, R.J., and S. Brice. 2011. The mood-enhancing benefits of exercise: Memory biases augment the effect. Psychology of Sport and Exercise 12 (2): 79-82.
- 125. Abrantes, A.M., D.R. Strong, A. Cohn, et al. 2009. Acute changes in obsessions and compulsions following moderate-intensity aerobic exercise among patients with obsessive-compulsive disorder. Journal of Anxiety Disorders 23 (7): 923-927.
- 126. Thom, N.J., B.A. Clementz, O'Connor P.J., and R.K. Dishman. 2012. The effects of an acute bout of moderate intensity exercise on anger. Athens, GA: University of Georgia.
- 127.Bartholomew, J.B. 1999. The effect of resistance exercise on manipulated preexercise mood states for male exercisers. Journal of Sport & Exercise Psychology (21): 39-51.
- 128. Bryne, A. and D.G. Bryne. 1993. The effect of exercise on depression, anxiety and other mood states: a review. Journal of Psychosomatic Research 17: 565-574.
- 129. Reed, J., and S. Buck. 2009. The effect of regular aerobic exercise on positive-activated affect: A meta-analysis. Psychology of Sport and Exercise 10 (6): 581-594.
- 130. Yang, C.Y., J.C. Tsai, Y.C. Huang, and C.C. Lin. 2011. Effects of a homebased walking program on perceived symptom and mood status in postoperative breast cancer women receiving adjuvant chemotherapy. Journal of Advanced Nursing 67 (1): 158-168.
- 131. Mutrie, N., A.M Campbell, F. Whyte, et al. 2007. Benefits of supervised group exercise programme for women being treated for early stage breast cancer: Pragmatic randomised controlled trial. BMJ 334 (7592): 517.
- 132. Dalgas, U., E. Stenager, J. Jakobsen, et al. 2010. Fatigue, mood and quality of life improve in MS patients after progressive resistance training. Multiple Sclerosis 16 (4): 480-490.
- 133. Driver, S., and A. Ede. 2009. Impact of physical activity on mood after TBI. Brain Injury 23 (3): 203-212.
- 134. Annesi, J.J., J.L. Unruh, C.N. Marti, S. Gorjala, and G. Tennant. 2011. Effects of the Coach Approach intervention on adherence to exercise in obese women: Assessing mediation of social cognitive theory factors. Research Quarterly for Exercise and Sport. 82 (1): 99-108.
- 135. Tsutsumi, T., B.M. Don, L.D. Zaichkowsky, K. Takenaka, K. Oka, and T. Ohno. 1998. Comparison of high and moderate intensity of strength training on mood and anxiety in older adults. Perceptual & Motor Skills 87 (3, Pt 1): 1003-1011.
- 136. Etnier, J.L., K.S. Matt, D.M. Landers, and S.M. Arent. 2005. Dose-response and mechanistic issues in the resistance training and affect relationship. Journal of Sport and Exercise Psychology 27 (1): 92-110.

- 137. Steinberg, H., B.R. Nicholls, E.A. Sykes, et al. 1998. Weekly exercise consistently reinstates positive mood. European Psychologist 3 (4): 271-280.
- 138. Hughes, C.F., C. Uhlmann, and J.W. Pennebaker. 1994. The body's response to processing emotional trauma: Linking verbal text with autonomic activity. Journal of Personality 62 (Dec): 565-585.
- 139. Cacioppo, J.T., R.E. Petty, M.E. Losch, and H.S. Kim. 1986. Electromyographic activity over facial muscle regions can differentiate the valence and intensity of affective reactions. Journal of Personality and Social Psychology 50: 260-268.
- 140. Greenwald, M.K., E.W. Cook, III, and P.J. Lang. 1989. Affective judgment and psychophysiological response: Dimensional covariation in the evaluation of pictorial stimuli. Journal of Psychophysiology 3: 51-64.
- 141. Ekman, P. 1989. The argument and evidence about universals in facial expressions of emotions. In Handbook of psychophysiology: The biological psychology of emotions and social processes, edited by H. Wagner and A. Manstead. London: Wiley.
- 142. Ekman, P., and W.V. Friesen. 1976. Measuring facial movement. Journal of Environmental Psychology and Nonverbal Behavior 11: 56-75.
- 143. Bartlett, M.S., J.C. Hager, P. Ekman, and T.J. Sejnowski, 1999. Measuring facial expressions by computer image analysis. Psychophysiology 36: 253-263.
- 144. Ekman, P., R.J. Davidson, and W.V. Friesen. 1990. The Duchenne smile: Emotional expression and brain physiology II. Journal of Personality and Social Psychology 582: 342-353.
- 145. Davis, M., W.A. Falls, S. Campeau, and M. Kim. 1993. Fear-potentiated startle: A neural and pharmacological analysis. Behavioural Brain Research 58 (1-2): 175-198.
- 146. Meloni, E.G., and M. Davis. 1999. Enhancement of the acoustic startle response in rats by the dopamine D-sub-1 receptor agonist SKF 82958. Psychopharmacology 144 (4): 373-380.
- 147. Barkley, R.A. 1998. Attention-deficit hyperactivity disorder: A handbook for diagnosis and treatment. 2nd ed. New York: Guilford Press.
- 148. Tantillo M, C.M. Kesick, G.W. Hynd, R.K. Dishman. 2002. The effects of exercise on children with attention-deficit hyperactivity disorder. Medicine and Science in Sports and Exercise 34(2): 203-212.
- 149. Smith, J.C., P.J. O'Connor, J.B. Crabbe, and R.K. Dishman. 2002. Emotional responsiveness after low- and moderate-intensity exercise and seated rest. Medicine & Science in Sports & Exercise 34 (7): 1158-1167.
- 150. Fillingim, R.B., D.L. Roth, and E.W. Cook. 1992. The effects of aerobic exercise on cardiovascular, facial EMG, and self-report responses to emotional imagery. Psychosomatic Medicine 54 (1): 109-120.
- 151. Davidson, R.J., P. Ekman, C.D. Saron, J.A. Senulius, and W.V. Friesen. 1990. Approach-withdrawal and cerebral asymmetry: Emotional expression and brain physiology I. Journal of Personality and Social Psychology 58: 330-341.
- 152. Bonnet, M., M.M. Bradley, P.J. Lang, and J. Requin. 1995. Modulation of spinal reflexes: Arousal, pleasure, action. Psychophysiology 32 (4): 367-372.
- 153. deVries, H.A., R.A. Wiswell, R. Bulbulian, and T. Moritani. 1981. Tranquilizer effect of exercise. Acute effects of moderate aerobic exercise on spinal reflex activation level. American Journal of Physical Medicine 60 (Apr): 57-66.
- 154. deVries, H.A., C.P. Simard, R.A. Wiswell, E. Heckathorne, and V. Carabetta. 1982. Fusimotor system involvement in the tranquilizer effect of exercise. American Journal of Physical Medicine 61 (Jun): 111-122.
- 155. Bulbulian, R., and B.L. Darabos. 1986. Motor neuron excitability: The Hoffmann reflex following exercise of low and high intensity. Medicine & Science in Sports & Exercise 18 (Dec): 697-702.
- 156. Petruzzello, S.J., and A.K. Tate. 1997. Brain activation, affect, and aerobic exercise: An examination of both state-independent and state-dependent relationships. Psychophysiology 34 (5): 527-533.
- 157. Davidson, R.J. 1998b. Anterior electrophysiological asymmetries, emotion, and depression: Conceptual and methodological conundrums. Psychophysiology 35 (5): 607-614.
- 158. Petruzzello, S.J., and D.M. Landers. 1994. State anxiety reduction and exercise: Does hemispheric activation reflect such changes? Medicine & Science in Sports & Exercise 26 (8): 1028-1035.
- 159. Crabbe, J.B., J.C. Smith, and R.K. Dishman. 2007. Emotional & electroencephalographic responses during affective picture viewing after exercise. Physiology & Behavior 90 (2-3): 394-404.
- 160. Crabbe, J.B., and R.K. Dishman. 2004. Brain electrocortical activity during and after exercise: A quantitative synthesis. Psychophysiology 41 (4): 563-574.
- 161. Irwin, W., R.J. Davidson, M.J. Lowe, B.J. Mock, J.A. Sorenson, and P.A. Turski. 1996. Human amygdala activation detected with echo-planar functional magnetic resonance imaging. Neuroreport 711: 1765-1769.
- 162. LaBar, K.S., J.C. Gatenby, J.C. Gore, J.E. Ledoux, and E.A. Phelps. 1998. Human amygdala activation during conditioned fear acquisition and extinction: A mixedtrial fMRI study. Neuron 205: 937-945.
- 163. Woo, M., S. Kim, J. Kim, S.J. Petruzzello, and B.D. Hatfield. 2009. Examining the exercise-affect dose-response relationship: Does duration influence frontal EEG asymmetry? International Journal of Psychophysiology 72 (2): 166-172.
- 164. Dishman, R.K., R.J. Vandenberg, R.W. Motl, and C.R. Nigg. 2010. Using constructs of the transfheoretical model to predict classes of change in regular physical activity: A multi-ethnic longitudinal cohort study. Annals of Behavioral Medicine 40 (2): 150-163.
- 165. Motl, R.W., P.J. O'Connor, and R.K. Dishman. 2004. Effects of cycling exercise on the soleus H-reflex and state anxiety among men with low or high trait anxiety. Psychophysiology 41 (1): 96-105.
- 166. O'Connor, P.J., J.S. Raglin, and E.W. Martinsen. 2000. Physical activity, anxiety and anxiety disorders. International Journal of Sport Psychology 31 (2): 136-155.
- 167. Weiser, P.C., R.A. Kinsman, and D.A. Stamper. 1973. Task-specific symptomatology changes resulting from prolonged submaximal bicycle riding. Medicine & Science in Sports & Exercise 5: 79-85.
- 168. Hall, E.E., P. Ekkekakis, and S.J. Petruzzello. 2002. The affective beneficence of vigorous exercise revisited. British Journal of Health Psychology 7 (Pt 1): 47-66.
- 169. Ekkekakis, P., E.E. Hall, and S.J. Petruzzello. 2008. The relationship between exercise intensity and affective responses demystified: To crack the 40- year-old nut, replace the 40-year-old nutcracker! Annals of Behavioral Medicine 35 (2): 136-149.
- 170. de Morree, H.M., and S.M. Marcora. 2010. The face of effort: Frowning muscle activity reflects effort during a physical task. Biological Psychology 85 (3): 377-382.
- 171.de Morree, H.M., and S.M. Marcora. 2012. Frowning muscle activity and perception of effort during constant-workload cycling. European Journal of Applied Physiology 112(5), 1967-1972.
- 172. Morgan WP. 1985. Affective beneficence of vigorous physical activity. Medicine and Science in Sports and Exercise. 17(1), 94-100.
- 173. Smith, J.C., and P.J. O'Connor. 2003. Physical activity does not disturb the measurement of startle and corrugator responses during affective picture viewing. Biological Psychology 63 (3): 293-310.
- 174. Bixby, W.R., and M.R. Lochbaum. 2006. Affect responses to acute bouts of aerobic exercise in fit and unfit participants: An examination of opponentprocess theory. Journal of Sport Behavior 29 (2): 111.
- 175. Van Landuyt, L.M., P. Ekkekakis, E.E. Hall, and S.J. Petruzzello 2000. Throwing the mountains into the lakes: On the perils of nomothetic conceptions of the exerciseaffect relationship. Journal of Sport and Exercise Psychology, 22 (2): 208-234.
- 176. Shields, M.R., C.L. Larson, A.M. Swartz, and J.C. Smith. 2011. Visual threat detection during moderate- and high-intensity exercise. Emotion 11 (3): 572.
- 177.Barnes, R.T., S.A. Coombes, N.B. Armstrong, T.J. Higgins, and C.M. Janelle. 2010. Evaluating attentional and affective changes following an acute exercise bout using a modified dot-probe protocol. Journal of Sports Sciences 28 (10): 1065-1076.

- 178. Tian, Q., and J.C. Smith. 2011. Attentional bias to emotional stimuli is altered during moderate- but not high-intensity exercise. Emotion. 11(6): 1415-1424. doi: 10.1037/a0023568.
- 179. Dietrich, A., and M. Audiffren. 2011. The reticular-activating hypofrontality (RAH) model of acute exercise. Neuroscience and Biobehavioral Reviews 35 (6): 1305-1325.
- 180. Koltyn, K.F. 1997. The thermogenic hypothesis. In Physical activity and mental health, edited by W.P. Morgan. Washington, DC: Taylor & Francis.
- 181. Koltyn, K.F., H.I. Robins, C.L. Schmitt, J.D. Cohen, and W.P. Morgan. 1992. Changes in mood state following whole-body hyperthermia. International Journal of Hyperthermia 8 (3): 305-307.
- 182. Koltyn, K.F., and W.P. Morgan. 1997. Influence of wet suit wear on anxiety responses to underwater exercise. Undersea & Hyperbaric Medicine 24 (1): 23-28.
- 183. Youngstedt, S.D., R.K. Dishman, K.J. Cureton, and L.J. Peacock. 1993. Does body temperature mediate anxiolytic effects of acute exercise? Journal of Applied Physiology 74 (Feb): 825-831.
- 184. Nybo, L., and N.H. Secher. 2004. Cerebral perturbations provoked by prolonged exercise. Progress in Neurobiology 72 (4): 223-261.
- 185. Secher, N.H., T. Seifert, and J.J. Van Lieshout. 2008. Cerebral blood flow and metabolism during exercise: Implications for fatigue. Journal of Applied Physiology 104 (1): 306-314.
- 186. Colcombe, S.J., A.F. Kramer, K.I. Erickson, et al. 2004. Cardiovascular fitness, cortical plasticity, and aging. Proceedings of the National Academy of Science 101 (9): 3316-3321.
- 187. Williamson, J.W., R. McColl, and D. Mathews. 2003. Evidence for central command activation of the human insular cortex during exercise. Journal of Applied Physiology 94 (5): 1726-1734.
- 188. Dietrich, A. 2003. Functional neuroanatomy of altered states of consciousness: The transient hypofrontality hypothesis. Consciousness and Cognition 12 (2): 231-256.
- 189. Dietrich, A. 2006. Transient hypofrontality as a mechanism for the psychological effects of exercise. Psychiatry Research 145 (1): 79-83.
- 190. Rooks, C.R., N.J. Thom, K.K. McCully, and R.K. Dishman. 2010. Effects of incremental exercise on cerebral oxygenation measured by near-infrared spectroscopy: A systematic review. Progress in Neurobiology 92 (2): 134-150.
- 191. Hatfield, B.D., A.H. Goldfarb, G.A. Sforzo, and M.G. Flynn. 1987. Serum beta-endorphin and affective responses to graded exercise in young and elderly men. Journals of Gerontology. 42 (4): 429 31.
- 192. Boecker, H., A. Othman, S. Mueckter, L. Scheef, M. Pensel, M. Daamen, J. Jankowski, H.H. Schild, T.R. Tölle, and M. Schreckenberger. 2010. Advocating Neuroimaging Studies of Transmitter Release in Human Physical Exercise Challenges Studies. Open Access Journal of Sports Medicine 1: 167-175.
- 193. Goldfarb, A.H., and A.Z. Jamurtas. 1997. Beta-endorphin response to exercise. An update. Sports Medicine 24: 8-16.
- 194. Cook, D.B., and K.F. Koltyn. 2000. Pain and exercise. International Journal of Sport Psychology 31 (2): 256-277.
- 195. Boecker, H., T. Sprenger, M.E. Spilker, et al. 2008. The runner's high: Opioidergic mechanisms in the human brain. Cerebral Cortex 18 (11): 2523-2531.
- 196. Sparling, P.B., A. Giuffrida, D. Piomelli, L. Rosskopf, and A. Dietrich. 2003. Exercise activates the endocannabinoid system. Neuroreport 14 (17): 2209-2211.
- 197. Szabo, A., E. Billett, and J. Turner. 2001. Phenylethylamine, a possible link to the antidepressant effects of exercise? British Journal of Sports Medicine 35 (5): 342-343.
- 198. White, L.J., and V. Castellano. 2008a. Exercise and brain health: Implications for multiple sclerosis: Part 1-neuronal growth factors. Sports Medicine 38 (2): 91-100.
- 199. Morgan, W. P. and P. J. O'Connor. 1988. Exercise and Mental Health. In Exercise adherence: Its impact on public health, edited by R.K. Dishman. Champaign, IL: Human Kinetics.
- 200. Dishman, R.K., and P.V. Holmes. 2012. Exercise and opioids: Animal models. In Functional neuroimaging in exercise and sport sciences, edited by H. Boecker, C.H. Hillman, L. Scheef, and H. Strüder. New York: Springer.
- 201. Koob, G.F., and M. Le Moal. 1997. Drug abuse: Hedonic homeostatic dysregulation. Science 278 (5335): 52-58.
- 202. Smith, K.S., and K.C. Berridge. 2007. Opioid limbic circuit for reward: Interaction between hedonic hotspots of nucleus accumbens and ventral pallidum. Journal of Neuroscience 27 (7): 1594-1605.
- 203. Dishman, R.K., and P.J. O'Connor. 2009. Lessons in exercise neurobiology: The case of endorphins. Mental Health and Physical Activity 2 (1): 4-9.
- 204. Goode, K.T., and D.L. Roth. 1993. Factor analysis of cognitions during running: Association with mood change. Journal of Sport & Exercise Psychology 15 (4): 375-389.
- 205. Morgan, W., D. Brown, J. Raglin, P. O'connor, and K. Ellickson. 1987. Psychological monitoring of overtraining and staleness. British Journal of Sports Medicine. 21 (3): 107-114.
- 206. Dishman, R.K. 1992. Physiological and psychological effects of overtraining. edited by K. Brownell, J. Rodin, and J. Wilmore. Eating, body weight, and performance in athletes: Disorders of modern society. Philadelphia: Lea & Febiger.
- 207. Morgan, W.P. 1979b. Negative addiction in runners. Physician and Sportsmedicine 7: 57-70.
- 208. Mondin, G.W., W.P. Morgan, P.N. Piering, and A.J. Stegner. 1996. Psychological consequences of exercise deprivation in habitual exercisers. Medicine & Science in Sports & Exercise 28 (9): 1199-1203.
- 209. Cockerill, I.M., and M.E. Riddington. 1996. Exercise dependence and associated disorders: A review. Counseling Psychology Quarterly 9 (2): 119-129.
- 210. Raglin, J.S., and L. Moger. 1999. Adverse consequences of physical activity: When more is too much. In Lifestyle medicine, edited by J.M. Rippe. Malden, MA: Blackwell Science.
- 211. Raglin, J.S., and G.S. Wilson. 2000. Overtraining in athletes. In Emotions in sport, edited by Y.L. Hanin. Champaign, IL: Human Kinetics.

- Kessler, R.C., W.T. Chiu, O. Demler, K.R. Merikangas, and E.E. Walters. 2005b. Prevalence, severity, and comorbidity of 12-month DSM-IV disorders in the National Comorbidity Survey Replication. Archives of General Psychiatry 62 (6): 617-627.
- Breslau, J., S. Aguilar-Gaxiola, K.S. Kendler, M. Su, D. Williams, and R.C. Kessler. 2006. Specifying race-ethnic differences in risk for psychiatric disorder in a USA national sample. Psychological Medicine 36 (1): 57-68.
- Van Ameringen, M., C. Allgulander, B. Bandelow, et al. 2003. WCA recommendations for the long-term treatment of social phobia. CNS spectrums 8 (8 Suppl. 1): 40-52.
- 4. Pollack, M.H., C. Allgulander, B. Bandelow, et al. 2003. WCA recommendations for the long-term treatment of panic disorder. CNS Spectrums 8 (8 Suppl. 1): 17-30.
- Allgulander, C., B. Bandelow, E. Hollander, et al. 2003. WCA recommendations for the long-term treatment of generalized anxiety disorder. CNS Spectrums 8 (8 Suppl. 1): 53-61.
- Weissman, M.M., J.S. Markowitz, R. Ouellette, S. Greenwald, and J.P. Kahn. 1990. Panic disorder and cardiovascular/cerebrovascular problems: Results from a community survey. American Journal of Psychiatry 147: 1504–1508.
- 7. Greenberg, P.E., T. Sisitsky, R.C. Kessler, et al. 1999. The economic burden of anxiety disorders in the 1990s. Journal of Clinical Psychiatry 60 (Jul): 427-435.
- 8. Dupont, R.L., D.P. Rice, L.S. Miller, S.S. Shiraki, C.R. Rowland, and H.J. Harwood. 1996. Economic cost of anxiety disorders. Anxiety 2: 167-172.
- 9. Rice, D.P., and L.S. Miller. 1998. Health implications and cost implications of anxiety and other mental disorders in the United States. British Journal of Psychiatry 34 (Suppl.): 4-9.

- 10. Newbold, R.F. 1990. Patterns of anxiety in Sallust, Suetonius and Procopius. The Ancient History Bulletin 4 (2): 44-50.
- 11. Weisberg, R.B. 2009. Overview of generalized anxiety disorder: Epidemiology, presentation, and course. Journal of Clinical Psychiatry 70 (Suppl. 2): 4-9.
- 12. Spielberger, C.D., R.L. Gorsuch, R. Lushene, P.R. Vagg, and G.A. Jacobs. 1983. Manual for the State-Trait Anxiety Inventory. Palo Alto, CA: Consulting Psychologists Press.
- 13. Morgan, W.P. 1979a. Anxiety reduction following acute physical activity. Psychiatric Annals 9 (3): 36-45.
- 14. Pitts, F.J., and J.J. McClure. 1967. Lactate metabolism in anxiety neurosis. New England Journal of Medicine 277 (Dec 21): 1329-1336.
- 15. Grosz, H.J., and B.B. Farmer. 1972. Pitts' and McClure's lactate-anxiety study revisited. British Journal of Psychiatry 120: 415-418.
- Maddock, R.J., C.S. Carter, and D.W. Gietzen. 1991. Elevated serum lactate associated with panic attacks induced by hyperventilation. Psychiatry Research 38 (Sept): 301-311.
- O'Connor, P.J., J.C. Smith, and W.P. Morgan. 2000. Physical activity does not provoke panic attacks in patients with panic disorder: A review of the evidence. Anxiety, Stress & Coping 13: 333-353.
- 18. Martinsen, E.W., J.S. Raglin, A. Hoffart, and S. Friis. 1998. Tolerance to intensive exercise and high levels of lactate in panic disorder. Journal of Anxiety Disorders 12 (4): 333-342.
- Garvin, A.W., K.F. Koltyn, and W.P. Morgan. 1997. Influence of acute physical activity and relaxation on state anxiety and blood lactate in untrained college males. International Journal of Sports Medicine 18 (Aug): 470-476.
- 20. Ströhle, A., C. Feller, M. Onken, F. Godemann, A. Heinz, and F. Dimeo. 2005. The acute antipanic activity of aerobic exercise. American Journal of Psychiatry 162 (12): 2376-2378.
- Ströhle, A., B. Graetz, M. Scheel, et al. 2009. The acute antipanic and anxiolytic activity of aerobic exercise in patients with panic disorder and healthy control subjects. Journal of Psychiatric Research 43 (12): 1013- 1017.
- Broocks, A., B. Bandelow, G. Pekrun, et al. 1998. Comparison of aerobic exercise, clomipramine, and placebo in the treatment of panic disorder [see comments]. American Journal of Psychiatry 155 (May): 603-609.
- 23. Wedekind, D., A. Broocks, N. Weiss, K. Engel, K. Neubert, and B. Bandelow. 2010. A randomized, controlled trial of aerobic exercise in combination with paroxetine in the treatment of panic disorder. World Journal of Biological Psychiatry 11 (7): 904-913.
- 24. Smits, J.A., A.C. Berry, D. Rosenfield, M.B. Powers, E. Behar, and M.W. Otto. 2008. Reducing anxiety sensitivity with exercise. Depression and Anxiety 25 (8): 689-699.
- Smits, J.A., A.C. Berry, C.D. Tart, and M.B. Powers. 2008. The efficacy of cognitive-behavioral interventions for reducing anxiety sensitivity: A meta-analytic review. Behaviour Research and Therapy 46 (9): 1047-1054.
- Morgan, W.P., P.B. Raven, B.L. Drinkwater, and S.M. Horvath. 1973. Perceptual and metabolic responsivity to standard bicycle ergometry following various hypnotic suggestions. International Journal of Clinical & Experimental Hypnosis (2): 86-101.
- 27. Morgan, W.P. 1979a. Anxiety reduction following acute physical activity. Psychiatric Annals 9 (3): 36-45.
- 28. Bahrke, M. and W.P. Morgan. 1978. Anxiety reduction following exercise and meditation. Cognitive Therapy & Research 2 (4): 323-333.
- 29. Breus, M.J. and P.J. O'Connor. 1998. Exercise-induced anxiolysis: A test of the "time out" hypothesis in high anxious females. Medicine & Science in Sports & Exercise 30 (7): 1107-1112.
- 30. Stephens, T. 1988. Physical activity and mental health in the United States and Canada: Evidence from four population surveys. Preventive Medicine 17: 35-47.
- 31. Goodwin, R.D. 2003. Association between physical activity and mental disorders among adults in the United States. Preventive Medicine 36 (6): 698-703.
- Strine, T.W., A.H. Mo19kdad, L.S. Balluz, et al. 2008. Depression and anxiety in the United States: Findings from the 2006 Behavioral Risk Factor Surveillance System. Psychiatric Services 59 (12): 1383-1390.
- 33. Thorsen, L., W. Nystad, H. Stigum, et al. 2005. The association between selfreported physical activity and prevalence of depression and anxiety disorder in long-term survivors of testicular cancer and men in a general population sample. Supportive Care in Cancer 13 (8): 637-646.
- De Moor, M.H., A.L. Beem, J.H. Stubbe, D.I. Boomsma, and E.J. De Geus. 2006. Regular exercise, anxiety, depression and personality: A populationbased study. Preventive Medicine 42 (4): 273-279.
- De Moor, M.H., D.I. Boomsma, J.H. Stubbe, G. Willemsen, and E.J. de Geus. 2008. Testing causality in the association between regular exercise and symptoms of anxiety and depression. Archives of General Psychiatry 65 (8): 897-905.
- Beard, J.R., K. Heathcote, R. Brooks, A. Earnest, and B. Kelly. 2007. Predictors of mental disorders and their outcome in a community based cohort. Social Psychiatry and Psychiatric Epidemiology 42 (8): 623-630.
- Sanchez-Villegas, A., I. Ara, F. Guillen-Grima, M. Bes-Rastrollo, J.J. Varo- Cenarruzabeitia, and M.A. Martinez-Gonzalez. 2008. Physical activity, sedentary index, and mental disorders in the SUN cohort study. Medicine & Science in Sports & Exercise 40 (5): 827-834.
- Jonsdottir, I.H., L. Rodjer, E. Hadzibajramovic, M. Borjesson, and G. Ahlborg, Jr. 2010. A prospective study of leisure-time physical activity and mental health in Swedish health care workers and social insurance officers. Preventive Medicine 51 (5): 373-377.
- Landers, D.M., and S.J. Petruzzello. 1994. Physical activity, fitness, and anxiety. In Physical activity, fitness, and health: International proceedings and consensus statement, edited by C. Bouchard, R. Shephard, and J.C. Stevens. Champaign, II: Human Kinetics.
- Petruzzello, S. J., D.M. Landers, B.D. Hatfield, K.A. Kubitz, and W. Salazar. 1991. A meta-analysis on the anxiety-reducing effects of acute and chronic exercise. Outcomes and mechanisms. Sports Medicine 11 (Mar):143-182.
- 41. McDonald, D.G., and J.A. Hodgdon. 1991. The psychological effects of aerobic fitness training: Research and theory. New York: Springer-Verlag.
- Broocks, A., B. Bandelow, G. Pekrun, et al. 1998. Comparison of aerobic exercise, clomipramine, and placebo in the treatment of panic disorder [see comments]. American Journal of Psychiatry 155 (May): 603-609.
- Dishman, R.K., R.P. Farquhar, and K.J. Cureton. 1994. Responses to preferred intensities of exertion in men differing in activity levels. Medicine & Science in Sports & Exercise 26 (Jun): 783-790.
- 44. Raglin, J.S., and M. Wilson. 1996. State anxiety following 20 minutes of bicycle ergometer exercise at selected intensities. International Journal of Sports Medicine 17 (Aug): 467-471.
- Koltyn, K.F., N.A. Lynch, and D.W. Hill. 1998. Psychological responses to brief exhaustive cycling exercise in the morning and evening. International Journal of Sport Psychology 29: 145-156.
- 46. O'Connor, P.J., S.J. Petruzzello, K.A. Kubitz, and T.L. Robinson. 1995. Anxiety responses to maximal exercise testing. British Journal of Sports Medicine 29: 97-102.
- 47. Hsiao, E.T., and R.E. Thayer. 1998. Exercising for mood regulation: The importance of experience. Personality & Individual Differences 24 (6): 829-836.
- Steinhardt, M., and R.K. Dishman. 1989. Reliability and validity of expected outcomes and barriers for habitual physical activity. Journal of Occupational Medicine 31 (6): 536-546.
- 49. Morgan, W.P. 1997. Methodological considerations. In Physical activity and mental health, edited by W. P. Morgan. From The series in psychology and behavioral medicine. Washington, DC: Taylor & Francis.
- Youngstedt, S.D., R.K. Dishman, K.J. Cureton, and L.J. Peacock. 1993. Does body temperature mediate anxiolytic effects of acute exercise? Journal of Applied Physiology 74 (Feb): 825-831.

- Berger, B.G. and R.W. Motl. 2000. Exercise and mood: A selective review and synthesis of research employing the profile of mood states. Journal of Applied Sport Psychology 12: 69-92.
- 52. Tieman, J.G., L.J. Peacock, K.J. Cureton, and R.K. Dishman. 2002. The influence of exercise intensity and physical activity history on state anxiety after exercise. International Journal of Sport Psychology 33 (2): 155-166.
- 53. Raglin, J. S., P.E. Turner, and F. Eksten. 1993. State anxiety and blood pressure following 30 min of leg ergometry or weight training. Medicine & Science in Sports & Exercise 25 (9): 1044-1048.
- 54. Focht, B.C., and K.F. Koltyn. 1999. Influences of resistance exercise of different intensities on state anxiety and blood pressure. Medicine & Science in Sports & Exercise 31 (3): 456-463.
- 55. O'Connor, P.J., L.E. Aenchbacher, and R.K. Dishman. 1993. Physical activity and depression in the elderly. Journal of Aging and Physical Activity 1: 34-58.
- 56. Bartholomew, J.B., and D.E. Linder. 1998. State anxiety following resistance exercise: The role of gender and exercise intensity. Journal of Behavioral Medicine 21 (2): 205-219.
- 57. Long, B.C., and R. van Stavel. 1995. Effects of exercise training on anxiety: A meta-analysis. Journal of Applied Sport Psychology 7: 167-189.
- Herring, M.P., P.J. O'Connor, and R.K. Dishman. 2010. The effect of exercise training on anxiety symptoms among patients: A systematic review. Archives of Internal Medicine 170 (4): 321-331.
- Martinsen, E.W., A. Hoffart, and O. Solberg. 1989. Comparing aerobic with nonaerobic forms of exercise in the treatment of clinical depression: A randomized trial. Comprehensive Psychiatry 30 (Jul-Aug): 324-331.
- 60. Martinsen, E.W., L. Sandvik, and O.B. Kolbjornsrud. 1989. Aerobic exercise in the treatment of nonpsychotic mental disorders: An exploratory study. Nordisk Psykiatrisk Tidsskrift 43 (6): 521-529.
- Sexton, H., A. Maere, and N.H. Dahl. 1989. Exercise intensity and reduction in neurotic symptoms: A controlled follow-up study. Acta Psychiatrica Scandinavica 80 (3): 231-235.
- 62. Herring, M.P., M.L. Jacob, C. Suveg, R.K. Dishman, and P.J. O'Connor. 2012. Feasibility of exercise training for the short-term treatment of generalized anxiety disorder: A randomized controlled trial. Psychotherapy and Psychosomatics 81 (1): 21-28.
- Merom, D., P. Phongsavan, R. Wagner, et al. 2008. Promoting walking as an adjunct intervention to group cognitive behavioral therapy for anxiety disorders: A pilot group randomized trial. Journal of Anxiety Disorders 22 (6): 959-968.
- 64. Broocks, A., T.F. Meyer, B. Bandelow, et al. 1997. Exercise avoidance and impaired endurance capacity in patients with panic disorder. Neuropsychobiology 36: 182-187.
- O'Connor, P.J., J.C. Smith, and W.P. Morgan. 2000. Physical activity does not provoke panic attacks in patients with panic disorder: A review of the evidence. Anxiety, Stress & Coping 13: 333-353.
- Herring, M.P., M.L. Jacob, C. Suveg, R.K. Dishman, and P.J. O'Connor. 2012. Feasibility of exercise training for the short-term treatment of generalized anxiety disorder: A randomized controlled trial. Psychotherapy and Psychosomatics 81 (1): 21-28.
- 67. Youngstedt, S.D., P.J. O'Connor, J.B. Crabbe, and R.K. Dishman. 1998. Acute exercise reduces caffeine-induced anxiogenesis. Medicine & Science in Sports & Exercise 30 (5): 740-745.
- 68. Spielberger, C.D., R.L. Gorsuch, R. Lushene, P.R. Vagg, and G.A. Jacobs. 1983. Manual for the State-Trait Anxiety Inventory. Palo Alto, CA: Consulting Psychologists Press.
- 69. McNair, D.M., M. Lorr, and L.F. Droppleman. 1981. Manual for the Profile of Mood States. San Diego, CA: Educational and Industrial Testing Service.
- Ekkekakis, P., and S.J. Petruzzello. 1999. Acute aerobic exercise and affect: Current status, problems and prospects regarding dose-response. Sports Medicine 28 (Nov): 337-374.
- deVries, H.A., R.A. Wiswell, R. Bulbulian, and T. Moritani. 1981. Tranquilizer effect of exercise. Acute effects of moderate aerobic exercise on spinal reflex activation level. American Journal of Physical Medicine 60 (Apr): 57-66.
- Smith, J.C., P.J. O'Connor, J.B. Crabbe, and R.K. Dishman. 2002. Emotional responsiveness after low- and moderate-intensity exercise and seated rest. Medicine & Science in Sports & Exercise 34 (7): 1158-1167.
- Crabbe, J.B., and R.K. Dishman. 2001. Exercise and brain electrocortical activity: A quantitative synthesis. Medicine and Science in Sports and Exercise. 32 (suppl. 5): S43, S38.
- 74. Kubitz, K.A., and A.A. Mott. 1996. EEG power spectral densities during and after cycle ergometer exercise. Research Quarterly for Exercise & Sport 67: 91-96.
- 75. Petruzzello, S. J., D.M. Landers, B.D. Hatfield, K.A. Kubitz, and W. Salazar. 1991. A meta-analysis on the anxiety-reducing effects of acute and chronic exercise. Outcomes and mechanisms. Sports Medicine 11 (Mar):143-182.
- Lang, P.J., M.M. Bradley, and B.N. Cuthbert. 1998. Emotion, motivation, and anxiety: Brain mechanisms and psychophysiology. Biological Psychiatry 44 (Dec 15): 1248-1263.
- 77. Davidson, R.J. 1992. Anterior cerebral asymmetry and the nature of emotion. Brain and Cognition 20: 125-151.
- Petruzzello, S.J., E.E. Hall, and P. Ekkekakis. 2001. Regional brain activation as a biological marker of affective responsivity to acute exercise: Influence of fitness. Psychophysiology 38 (1): 99-106.
- 79. Petruzzello, S.J., and D.M. Landers. 1994. State anxiety reduction and exercise: Does hemispheric activation reflect such changes? Medicine & Science in Sports & Exercise 26 (8): 1028-1035.
- Petruzzello, S.J., and A.K. Tate. 1997. Brain activation, affect, and aerobic exercise: An examination of both state-independent and state-dependent relationships. Psychophysiology 34 (5): 527-533.
- Crabbe, J.B., J.C. Smith, and R.K. Dishman. 2007. Emotional & electroencephalographic responses during affective picture viewing after exercise. Physiology & Behavior 90 (2-3): 394-404
- 82. Crabbe, J.B., and R.K. Dishman. 2004. Brain electrocortical activity during and after exercise: A quantitative synthesis. Psychophysiology 41 (4): 563- 574.
- deVries, H.A., C.P. Simard, R.A. Wiswell, E. Heckathorne, and V. Carabetta. 1982. Fusimotor system involvement in the tranquilizer effect of exercise. American Journal of Physical Medicine 61 (Jun): 111-122.
- Bulbulian, R., and B.L. Darabos. 1986. Motor neuron excitability: The Hoffmann reflex following exercise of low and high intensity. Medicine & Science in Sports & Exercise 18 (Dec): 697-702.
- Motl, R.W., and R.K. Dishman. 2004. Effects of acute exercise on the soleus H-reflex and self-reported anxiety after caffeine ingestion. Physiology & Behavior 80 (4): 577-585.
- Motl, R.W., P.J. O'Connor, and R.K. Dishman. 2004. Effects of cycling exercise on the soleus H-reflex and state anxiety among men with low or high trait anxiety. Psychophysiology 41 (1): 96-105.
- 87. Thayer, R.E. 1987. Energy, tiredness, and tension effects as a function of a sugar snack vs. moderate exercise. Journal of Personality & Social Psychology 52: 119-125.
- Morgan, W.P. 1973a. Influences of acute physical activity on state anxiety. In Proceedings, Annual Meeting of the College Physical Education Association for Men, edited by C.E. Mueller. Minneapolis: University of Minnesota.
- 89. McAuley, E., S.L. Mihalko, and S.M. Bane. 1997. Exercise and self-esteem in middle-aged adults: Multidimensional relationships and physical fitness and self-

efficacy influences. Journal of Behavioral Medicine 20 (1): 67-83.

- 90. Olfson, M., and S.C. Marcus. 2009. National patterns in antidepressant medication treatment. Archives of General Psychiatry 66 (8): 848-856.
- 91. Ballenger, J.C. 2001. Overview of different pharmacotherapies for attaining remission in generalized anxiety disorder. Journal of Clinical Psychiatry 62 (Suppl. 19): 11-19.
- 92. Chouinard, G. 2004. Issues in the clinical use of benzodiazepines: Potency, withdrawal, and rebound. Journal of Clinical Psychiatry 65 (Suppl. 5): 7-12.
- Van Ameringen, M., C. Allgulander, B. Bandelow, et al. 2003. WCA recommendations for the long-term treatment of social phobia. CNS spectrums 8 (8 Suppl. 1): 40-52.
- 94. Pollack, M.H., C. Allgulander, B. Bandelow, et al. 2003. WCA recommendations for the long-term treatment of panic disorder. CNS Spectrums 8 (8 Suppl. 1): 17-30.
- 95. Allgulander, C., B. Bandelow, E. Hollander, et al. 2003. WCA recommendations for the long-term treatment of generalized anxiety disorder. CNS Spectrums 8 (8 Suppl. 1): 53-61.
- 96. Orwin, A. 1974. Treatment of a situational phobia: A case for running. British Journal of Psychiatry 125: 96-98.
- Uhlenhuth, E.H., M.B. Balter, G.D. Mellinger, I.H. Cisin, and J. Clinthorne. 1983. Symptom checklist syndromes in the general population: Correlations with psychotherapeutic drug use. Archives of General Psychiatry 40: 1167-1173.
- 98. Bahrke, M. and W.P. Morgan. 1978. Anxiety reduction following exercise and meditation. Cognitive Therapy & Research 2 (4): 323-333.
- 99. Goddard, A.W., and D.S. Charney. 1997. Toward an integrated neurobiology of panic disorder. Journal of Clinical Psychiatry 58 (Suppl. 2): 4-11.
- 100. Reiman, E.M. 1997. The application of positron emission tomography to the study of normal and pathologic emotions. Journal of Clinical Psychiatry 58 (Suppl. 16): 4-12.
- 101. Goddard, A.W., and D.S. Charney. 1998. SSRIs in the treatment of panic disorder. Depression and Anxiety 8 (Suppl. 1): 114-120.
- 102. Charney, D.S., S.W. Woods, W.K. Goodman, and G.R. Heninger. 1987. Serotonin function in anxiety. II. Effects of the serotonin agonist MCPP in panic disorder patients and healthy subjects. Psychopharmacology 92: 14- 24.
- 103. Fox, J.H., S.E. Hammack, and W.A. Falls. 2008. Exercise is associated with reduction in the anxiogenic effect of mCPP on acoustic startle. Behavioral Neuroscience 122 (4): 943-948.
- 104. Salam, J.N., J.H. Fox, E.M. Detroy, M.H. Guignon, D.F. Wohl, and W.A. Falls. 2009. Voluntary exercise in C57 mice is anxiolytic across several measures of anxiety. Behavioural Brain Research 197 (1): 31-40.
- 105. Heisler, L.K., L. Zhou, P. Bajwa, J. Hsu, and L.H. Tecott. 2007. Serotonin 5- HT(2C) receptors regulate anxiety-like behavior. Genes, Brain, and Behavior 6 (5): 491-496.
- 106. Dishman, R.K. 1998. Physical activity and mental health. In Encyclopedia of mental health, edited by H.S. Friedman. Vol. 3. San Diego: Academic Press.
- 107. Chaouloff, F. 1997. Effects of acute physical exercise on central serotonergic systems. Medicine & Science in Sports & Exercise 29 (Jan): 58-62.
- 108. Greenwood, B.N., T.E. Foley, H.E.W. Day, et al. 2005. Wheel running alters serotonin (5-HT) transporter, 5-HT1A, 5-HT1B, and alpha1b-adrenergic receptor mRNA in the rat raphe nuclei. Biological Psychiatry 57 (5): 559- 568.
- 109. Greenwood, B.N., P.V. Strong, L. Brooks, and M. Fleshner. 2008. Anxietylike behaviors produced by acute fluoxetine administration in male Fischer 344 rats are prevented by prior exercise. Psychopharmacology 199 (2): 209-222.
- 110. Greenwood, B.N., and M. Fleshner. 2011. Exercise, stress resistance, and central serotonergic systems. Exercise and Sport Sciences Reviews 39 (3): 140-149.
- 111. O'Connor, P.J., J.S. Raglin, and E.W. Martinsen. 2000. Physical activity, anxiety and anxiety disorders. International Journal of Sport Psychology 31 (2): 136-155.
- 112. McNally, R.J., E.B. Foa, and C.D. Donnell. 1989. Memory bias for anxiety information in patients with panie disorder. Cognition & Emotion 3 (1): 27-44.
- 113. Mogenson, G.J. 1987. Limbic-motor integration. Progress in Psychobiology and Physiological Psychology 12: 117-170.
- 114. Dishman, R.K., K.J. Renner, S.D. Youngstedt, et al. 1997. Activity wheel running reduces escape latency and alters brain monoamine levels after footshock. Brain Research Bulletin 42: 399-406.
- 115. Gorman, J.M., and L.K. Gorman. 1987. Drug treatment of social phobia. Journal of Affective Disorders 13 (Sep-Oct): 183-192.
- 116. Tancer, M.E., M.B. Stein, and T.W. Uhde. 1993. Growth hormone response to intravenous clonidine in social phobia: Comparison to patients with panic disorder and healthy volunteers. Biological Psychiatry 34 (Nov 1): 591-595.
- 117. Charney, D.S., S.W. Woods, J.H. Krystal, L.M. Nagy, and G.R. Heninger. 1992. Noradrenergic neuronal dysregulation in panic disorder: The effects of intravenous yohimbine and clonidine in panic disorder patients. Acta Psychiatrica Scandinavica 86 (Oct): 273-282.
- 118. Dishman, R.K., S. Hong, J. Soares, et al. 2000. Activity-wheel running blunts suppression of splenic natural killer cell cytotoxicity after sympathectomy and footshock. Physiology & Behavior 71 (3-4): 297-304.
- 119. Soares, J., P.V. Holmes, K.J. Renner, G.L. Edwards, B.N. Bunnell, and R.K. Dishman. 1999. Brain noradrenergic responses to footshock after chronic activity-wheel running. Behavioral Neuroscience 113 (Jun): 558-566.
- 120. Menard, J., and D. Treit. 1999. Effects of centrally administered anxiolytic compounds in animal models of anxiety. Neuroscience and Biobehavioral Reviews 23 (Mar): 591-613.
- 121. Sarter, M., and J.P. Bruno. 1999. Abnormal regulation of corticopetal cholinergic neurons and impaired information processing in neuropsychiatric disorders. Trends in Neurosciences 22 (Feb): 67-74.
- 122. Dishman, R.K., A.L. Dunn, S.D. Youngstedt, et al. 1996. Increased open field locomotion and decreased striatal GABAa binding after activity wheel running. Physiology and Behavior 60 (3): 699-705.
- 123. Zhao, G., X. Zhang, X. Xu, M. Ochoa, and T.H. Hintze. 1997. Short-term exercise training enhances reflex cholinergic nitric oxide-dependent coronary vasodilation in conscious dogs. Circulation Research 80 (Jun): 868-876.
- 124. O'Connor, P.J., J.S. Raglin, and E.W. Martinsen. 2000. Physical activity, anxiety and anxiety disorders. International Journal of Sport Psychology 31 (2): 136-155.

- Lopez, A.D., C.D. Mathers, M. Ezzati, D.T. Jamison, and C.J. Murray. 2006. Global and regional burden of disease and risk factors, 2001: Systematic analysis of population health data. Lancet 367 (9524): 1747-1757.
- 2. Mathers, C.D., and D. Loncar. 2006. Projections of global mortality and burden of disease from 2002 to 2030. PloS Medicine 3 (11): e442.
- 3. Ernst, E., J.I. Rand, and C. Stevinson. 1998. Complementary therapies for depression: an overview. Archives Of General Psychiatry 55 (Nov): 1026-1032.
- Schappert, S.M. 1998. Ambulatory care visits to physician offices, hospital outpatient departments, and emergency departments: United States, 1996. Vital and Health Statistics. 13 (134). Wahsington, DC: National Center for Health Statistics, Centers for Disease Control and Prevention.
- 5. Lehtinen, V., and M. Joukamaa. 1994. Epidemiology of depression: Prevalence, risk factors and treatment situation. Acta Psychiatrica Scandinavica (Suppl.) 377: 7-10.
- Kessler, R.C., K.A. McGonagle, S. Zhao, et al. 1994. Lifetime and 12-month prevalence of DSM-III-R psychiatric disorders in the United States: Results from the National Comorbidity Survey. Archives of General Psychiatry 51: 8-19.
- Kessler, R.C., W.T. Chiu, O. Demler, K.R. Merikangas, and E.E. Walters. 2005b. Prevalence, severity, and comorbidity of 12-month DSM-IV disorders in the National Comorbidity Survey Replication. Archives of General Psychiatry 62 (6): 617-627.
- 8. Kessler, R.C., P. Berglund, O. Demler, R. Jin, K.R. Merikangas, and E.E. Walters. 2005a. Lifetime prevalence and age-of-onset distributions of DSM-IV disorders in

the National Comorbidity Survey Replication. Archives of General Psychiatry 62 (6): 593-602.

- Kessler, R.C., P. Berglund, O. Demler, et al. 2003. The epidemiology of major depressive disorder: Results from the National Comorbidity Survey Replication (NCS-R). Journal of the American Medical Association 289 (23): 3095-3105.
- Rushton, J.L., M. Forcier, and R.M. Schectman. 2002. Epidemiology of depressive symptoms in the National Longitudinal Study of Adolescent Health. Journal of the American Academy of Child and Adolescent Psychiatry 41 (2): 199-205.
- Breslau, J., S. Aguilar-Gaxiola, K.S. Kendler, M. Su, D. Williams, and R.C. Kessler. 2006. Specifying race-ethnic differences in risk for psychiatric disorder in a USA national sample. Psychological Medicine 36 (1): 57-68.
- 12. Nock, M.K., I. Hwang, N.A. Sampson, and R.C. Kessler. 2010. Mental disorders, comorbidity and suicidal behavior: Results from the National Comorbidity Survey Replication. Molecular Psychiatry 15 (8): 868-876.
- Nock, M.K., I. Hwang, N. Sampson, et al. 2009. Cross-national analysis of the associations among mental disorders and suicidal behavior: Findings from the WHO World Mental Health Surveys. PloS medicine 6 (8): e1000123.
- 14. Greenberg, P.E., L.E. Stiglin, S.N. Finkelstein, and E.R. Berndt. 1993. Depression: A neglected major illness. The Journal of Clinical Psychiatry. 54 (11): 419-24.
- Regier, D.A., R.M. Hirschfeld, F.K. Goodwin, J.D. Burke, Jr., J.B. Lazar, and L.L. Judd. 1988. The NIMH Depression Awareness, Recognition, and Treatment Program: Structure, aims, and scientific basis. American Journal of Psychiatry. 145 (11): 1351-7.
- Borges, G., M.K. Nock, J.M. Haro Abad, et al. 2010. Twelve-month prevalence of and risk factors for suicide attempts in the World Health Organization World Mental Health Surveys. Journal of Clinical Psychiatry 71 (12): 1617-1628.
- 17. Centers for Disease Control and Prevention (CDC). 2010a. Web-based Injury Statistics Query and Reporting System (WISQARS) [Online]. National Center for Injury Prevention and Control, CDC (producer).
- 18. www.cdc.gov/injury/wisqars/index.html.
- 19. Petronis, K.R., J.F. Samuels, E.K. Moscicki, and J.C. Anthony. 1990. An epidemiologic investigation of potential risk factors for suicide attempts.
- Centers for Disease Control and Prevention (CDC). 2012. Youth Risk Behavior Surveillance—United States, 2011. Surveillance Summaries, June 8. Morbidity and Mortality Weekly Report 61 (No. SS-4).
- Greenberg, P.E., R.C. Kessler, H.G. Birnbaum, et al. 2003. The economic burden of depression in the United States: How did it change between 1990 and 2000? The Journal of Clinical Psychiatry. 64 (12): 1465-75.
- 22. Sobocki P., B. Jönsson, J. Angst, and C. Rehnberg. 2006. Cost of depression in Europe. Journal of Mental Health Policy and Economics. 9(2): 87-98.
- Gold, P.W., and G.P. Chrousos. 1999. The endocrinology of melancholic and atypical depression: Relation to neurocircuitry and somatic consequences. Proceedings
 of the Association of American Physicians 111 (1): 22-34.
- 24. Jonas, B.S., P. Franks, and D.D. Ingram. 1997. Are symptoms of anxiety and depression risk factors for hypertension? Longitudinal evidence from the National Health and Nutrition Examination Survey I Epidemiologic
- 25. Stunkard, A.J., M.S. Faith, and K.C. Allison. 2003. Depression and obesity. Biological Psychiatry 54 (3): 330-337.
- 26. Herva, A., J. Laitinen, J. Miettunen, et al. 2005. Obesity and depression:
- 27. Results from the longitudinal Northern Finland 1966 Birth Cohort Study. International Journal of Obesity 30 (3): 520-527.
- Luppino, F.S., L.M. de Wit, P.F. Bouvy, et al. 2010. Overweight, obesity, and depression: A systematic review and meta-analysis of longitudinal studies. Archives of General Psychiatry 67 (3): 220.
- 29. American Psychiatric Association. 2000. Practice guidelines for the treatment of patients with major depressive disorders (revision). American Journal of Psychiatry 157 (4 Suppl.): 1-45.
- 30. World Health Organization. 1992. International classification of diseases. 10th ed. Geneva: World Health Organization.
- Rush, A.J., M.H. Trivedi, S.R. Wisniewski, et al. 2006. Bupropion-SR, sertraline, or venlafaxine-XR after failure of SSRIs for depression. New England Journal of Medicine 354 (12): 1231-1242.
- 32. Trivedi, M.H., M. Fava, S.R. Wisniewski, et al. 2006a. Medication augmentation after the failure of SSRIs for depression. New England Journal of Medicine 354 (12): 1243-1252.
- Gaynes, B.N., D. Warden, M.H. Trivedi, S.R. Wisniewski, M. Fava, and A.J. Rush. 2009. What did STAR*D teach us? Results from a large-scale, practical, clinical trial for patients with depression. Psychiatric Services 60 (11): 1439-1445.
- 34. Freeman, M.P., M. Fava, J. Lake, M.H. Trivedi, K.L. Wisner, and D. Mischoulon. 2010. Complementary and alternative medicine in major depressive disorder: The American Psychiatric Association Task Force report. Journal of Clinical Psychiatry 71 (6): 669-681.
- Trivedi, M.H., T.L. Greer, B.D. Grannemann, H.O. Chambliss, and A.N. Jordan. 2006b. Exercise as an augmentation strategy for treatment of major depression. Journal of Psychiatric Practice 12 (4): 205-213.
- 36. Franz, S.I., and G.V. Hamilton. 1905. The effects of exercise upon the retardation in conditions of depression. American Journal of Insanity 62: 239-256.
- 37. Morgan, W.P. 1970. Physical working capacity in depressed and nondepressed psychiatric females: A preliminary study. American Corrective Therapy Journal 24 (Jan-Feb): 14-16.
- Greisft, J.H., M.H. Klein, R.R. Eischens, J. Faris, A.S. Gurman, and W.P. Morgan. 1979. Running as treatment for depression. Comprehensive Psychiatry 20 (Jan-Feb): 41-54.
- 39. Stephens, T. 1988. Physical activity and mental health in the United States and Canada: Evidence from four population surveys. Preventive Medicine 17: 35-47.
- Farmer, M.E., B.Z. Locke, E.K. Moscicki, A.L. Dannenberg, D.B. Larson, and L.S. Radloff 1988. Physical activity and depressive symptoms: The NHANES I epidemiologic follow-up study. American Journal of Epidemiology 128: 1340-1351.
- Weyerer, S. 1992. Physical inactivity and depression in the community: Evidence from the Upper Bavarian Field Study. International Journal of Sports Medicine 136: 492-496.
- 42. Camacho, T.C., R.E. Roberts, N.B. Lazarus, G.A. Kaplan, and R.D. Cohen. 1991. Physical activity and depression: Evidence from the Alameda County Study. American Journal of Epidemiology 134: 220-231.
- Paffenbarger, R.S., I.M. Lee, and R. Leung. 1994. Physical activity and personal characteristics associated with depression and suicide in American college men. Acta Psychiatrica Scandinavia (Suppl. 377): 16-22.
- 44. Morgan, W.P. and S.E. Goldston. 1987. Exercise and mental health. Washington, DC: Hemisphere.
- 45. Bouchard, C., R. Shephard, and T. Stephens. 1994. Physical activity, fitness, and health: International proceedings and consensus statement. Champaign, IL: Human Kinetics.
- 46. O'Connor, P.J., L.E. Aenchbacher, and R.K. Dishman. 1993. Physical activity and depression in the elderly. Journal of Aging and Physical Activity 1: 34-58.
- Physical Activity Guidelines Advisory Committee. 2008. Physical Activity Guidelines Advisory Committee Report, pp. 1-58. Washington, DC: U.S. Department of Health and Human Services.
- 48. Goodwin, R.D. 2003. Association between physical activity and mental disorders among adults in the United States. Preventive Medicine 36 (6): 698-703.
- 49. Knox, S., A. Barnes, C. Kiefe, et al. 2006. History of depression, race, and cardiovascular risk in CARDIA. International Journal of Behavioral Medicine 13 (1): 44-50.
- 50. Morrato, E.H., J.O. Hill, H.R. Wyatt, V. Ghushchyan, and P.W. Sullivan. 2007. Physical activity in U.S. adults with diabetes and at risk for developing diabetes, 2003.

Diabetes Care 30 (2): 203-209.

- Strine, T.W., A.H. Mokdad, L.S. Balluz, et al. 2008. Depression and anxiety in the United States: Findings from the 2006 Behavioral Risk Factor Surveillance System. Psychiatric Services 59 (12): 1383-1390.
- 52. De Moor, M.H., A.L. Beem, J.H. Stubbe, D.I. Boomsma, and E.J. De Geus. 2006. Regular exercise, anxiety, depression and personality: A populationbased study. Preventive Medicine 42 (4): 273-279.
- De Moor, M.H., D.I. Boomsma, J.H. Stubbe, G. Willemsen, and E.J. de Geus. 2008. Testing causality in the association between regular exercise and symptoms of anxiety and depression. Archives of General Psychiatry 65 (8): 897-905.
- 54. Strawbridge, W.J., S. Deleger, R.E. Roberts, and G.A. Kaplan. 2002. Physical activity reduces the risk of subsequent depression for older adults. American Journal of Epidemiology 156 (4): 328-334.
- 55. Brown, W.J., J.H. Ford, N.W. Burton, A.L. Marshall, and A.J. Dobson. 2005. Prospective study of physical activity and depressive symptoms in middleaged women. American Journal of Preventive Medicine 29 (4): 265-272.
- 56. Ball, K., N.W. Burton, and W.J. Brown. 2009. A prospective study of overweight, physical activity, and depressive symptoms in young women. Obesity 17 (1): 66-71.
- 57. Wise, L.A., L.L. Adams-Campbell, J.R. Palmer, and L. Rosenberg. 2006. Leisure time physical activity in relation to depressive symptoms in the Black Women's Health Study. Annals of Behavioral Medicine. 32 (1): 68-76. doi: 10.1207/s15324796abm3201 8.
- 58. Mikkelsen, S.S., J.S. Tolstrup, E.M. Flachs, E.L. Mortensen, P. Schnohr, and T. Flensborg-Madsen. 2010. A cohort study of leisure time physical activity and depression. Preventive Medicine 51 (6): 471-475.
- Smith, T.L., K.H. Masaki, K. Fong, et al. 2010. Effect of walking distance on 8-year incident depressive symptoms in elderly men with and without chronic disease: The Honolulu-Asia Aging Study. Journal of the American Geriatrics Society 58 (8): 1447-1452.
- 60. Ku, P.W., K.R. Fox, and L.J. Chen. 2009. Physical activity and depressive symptoms in Taiwanese older adults: A seven-year follow-up study. Preventive Medicine 48 (3): 250-255.
- 61. Patten, S.B., J.V. Williams, D.H. Lavorato, and M. Eliasziw. 2009. A longitudinal community study of major depression and physical activity. General Hospital Psychiatry 31 (6): 571-575.
- 62. Harris, A.H., R. Cronkite, and R. Moos. 2006. Physical activity, exercise coping, and depression in a 10-year cohort study of depressed patients. Journal of Affective Disorders 93 (1-3): 79-85.
- Jerstad, S.J., K.N. Boutelle, K.K. Ness, and E. Stice. 2010. Prospective reciprocal relations between physical activity and depression in female adolescents. Journal of Consulting and Clinical Psychology 78 (2): 268272.
- Jackson, A.S., X. Sui, J.R. Hebert, T.S. Church, and S.N. Blair. 2009. Role of lifestyle and aging on the longitudinal change in cardiorespiratory fitness. Archive of Internal Medicine. 169 (19): 1781-7. doi: 10.1001/archinternmed.2009.312.
- 65. Dishman, R.K., and P.V. Holmes. 2012. Exercise and opioids: Animal models. In Functional neuroimaging in exercise and sport sciences, edited by H. Boecker, C.H. Hillman, L. Scheef, and H. Strüder. New York: Springer.
- Craft, L.L., and D.M. Landers. 1998. The effect of exercise on clinical depression and depression resulting from mental illness: A meta-analysis. Journal of Sport and Exercise Psychology 20: 339-357.
- 67. Martinsen, E.W. 1990. Physical fitness, anxiety and depression. British Journal of Hospital Medicine 43 (3): 194, 196, 199.
- 68. Martinsen, E.W. 1993. Therapeutic implications of exercise for clinically anxious and depressed patients. International Journal of Sport Psychology. 24 (2): 185-199.
- 69. Morgan, W.P. 1994b. Physical activity, fitness, and depression. In Physical activity, fitness, and health: International proceedings and consensus statement, edited by C. Bouchard, R.J. Shephard, and T. Stephens. Champaign, IL: Human Kinetics.
- 70. North, T.C., P. McCullagh, and Z. Vu Tran. 1990. Effect of exercise on depression. Exercise and Sport Sciences Reviews 18: 379-415.
- Bartholomew, J.B., D. Morrison, and J.T. Ciccolo. 2005. Effects of acute exercise on mood and well-being in patients with major depressive disorder. Medicine & Science in Sports & Exercise 37 (12): 2032-2037.
- 72. Rethorst, C.D., B.M. Wipfli, and D.M. Landers. 2009. The antidepressive effects of exercise: A meta-analysis of randomized trials. Sports Medicine 39 (6): 491-511.
- Lawlor, D.A., and S.W. Hopker. 2001. The effectiveness of exercise as an intervention in the management of depression: systematic review and meta-regression analysis of randomised controlled trials. British Medical Journal. 322 (7289): 763-767.
- Herring, M.P., T.W. Puetz, J. O'Connor P, and R.K. Dishman. 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): 101-11. doi: 10.1001/archinternmed.2011.696.
- 75. Cuijpers, P., A. van Straten, P. van Oppen, and G. Andersson. 2008a. Are psychological and pharmacologic interventions equally effective in the treatment of adult depressive disorders? A meta-analysis of comparative studies. Journal of Clinical Psychiatry 69 (11): 1675-1685; quiz 18391841.
- 76. Cuijpers, P., A. Van Straten, L. Warmerdam, and N. Smits. 2008b. Characteristics of effective psychological treatments of depression: A metaregression analysis. Psychotherapy Research 18 (2): 225-236.
- Krogh, J., M. Nordentoft, J.A. Sterne, and D.A. Lawlor. 2011. The effect of exercise in clinically depressed adults: Systematic review and metaanalysis of randomized controlled trials. Journal of Clinical Psychiatry 72 (4): 529-538.
- 78. Dunn, A.L., M.H. Trivedi, J.B. Kampert, C.G. Clark, and H.O. Chambliss. 2005. Exercise treatment for depression: Efficacy and dose response. American Journal of Preventive Medicine 28 (1): 1-8.
- Singh, N.A., T.M. Stavrinos, Y. Scarbek, G. Galambos, C. Liber, and M.A. Fiatarone Singh. 2005. A randomized controlled trial of high versus low intensity weight training versus general practitioner care for clinical depression in older adults. Journals of Gerontology. Series A, Biological Sciences and Medical Sciences 60 (6): 768-776.
- Mead, G.E., W. Morley, P. Campbell, C.A. Greig, M. McMurdo, and D.A. Lawlor. 2009. Exercise for depression. Cochrane Database of Systematic Reviews (3): CD004366.
- Martinsen, E.W., A. Medhus, and L. Sandvik. 1985. Effects of aerobic exercise on depression: A controlled study. British Medical Journal (Clinical Research Ed.) 291 (July 13): 109.
- Martinsen, E.W., A. Hoffart, and O. Solberg. 1989. Comparing aerobic with nonaerobic forms of exercise in the treatment of clinical depression: A randomized trial. Comprehensive Psychiatry 30 (Jul-Aug): 324-331.
- Doyne, E.J., D.J. Ossip-Klein, E.D. Bowman, K.M. Osborn, I.B. McDougall-Wilson, and R.A. Neimeyer. 1987. Running versus weight lifting in the treatment of depression. Journal of Consulting and Clinical Psychology 555: 748-754.
- 84. Singh, N.A., K.M. Clements, and M.A. Fiatarone. 1997. A randomized controlled trial of the effect of exercise on sleep. Sleep 20 (2): 95-101.
- 85. Fremont, J., and L.W. Craighead. 1987. Aerobic exercise and cognitive therapy in the treatment of dysphoric moods. Cognitive Therapy and Research 112: 241-251.
- Blumenthal, J.A., M.A. Babyak, K.A. Moore, et al. 1999. Effects of exercise training on older patients with major depression. Archives of Internal Medicine 159 (Oct 25): 2349-2356.
- Babyak, M., J.A. Blumenthal, S. Herman, et al. 2000. Exercise treatment for major depression: Maintenance of therapeutic benefit at 10 months. Psychosomatic Medicine 62 (5): 633-638.
- 88. Kugler, J., H. Seelbach, and G.M. Kruskemper. 1994. Effects of rehabilitation exercise programmes on anxiety and depression in coronary patients: A meta-analysis.

British Journal of Clinical Psychology 33 (Pt 3) (Sept): 401-410.

- Segar, M.L., V.L. Katch, R.S. Roth, et al. 1998. The effect of aerobic exercise on self-esteem and depressive and anxiety symptoms among breast cancer survivors [see comments]. Oncology Nursing Forum 25 (JanFeb): 107-113.
- 90. Stephens, T. 1988. Physical activity and mental health in the United States and Canada: Evidence from four population surveys. Preventive Medicine 17: 35-47.
- 91. Paffenbarger, R.S., I.M. Lee, and R. Leung. 1994. Physical activity and personal characteristics associated with depression and suicide in American college men. Acta Psychiatrica Scandinavia (Suppl. 377): 16-22.
- King, A.C., C.B. Taylor, and W.L. Haskell. 1993. Effects of differing intensities and formats of 12 months of exercise training on psychological outcomes in older adults. Health Psychology 124: 292-300.
- Krogh, J., B. Saltin, C. Gluud, and M. Nordentoft. 2009. The DEMO trial: A randomized, parallel-group, observer-blinded clinical trial of strength versus aerobic versus relaxation training for patients with mild to moderate depression. Journal of Clinical Psychiatry 70 (6): 790-800.
- 94. Olfson, M., and S.C. Marcus. 2009. National patterns in antidepressant medication treatment. Archives of General Psychiatry 66 (8): 848-856.
- 95. Ernst, E., J.I. Rand, and C. Stevinson. 1998. Complementary therapies for depression: an overview. Archives Of General Psychiatry 55 (Nov): 1026-1032.
- 96. O'Neal, H.A., A.L. Dunn, and E.W. Martinsen. 2000. Depression and exercise. International Journal of Sport Psychology 31 (2): 110-135.
- 97. McNeil, J.K., E.M. LeBlanc, and M. Joyner. 1991. The effect of exercise on depressive symptoms in the moderately depressed elderly. Psychology & Aging 6 (3): 487-488.
- 98. Williams, J.W., Jr., C.D. Mulrow, E. Chiquette, P.H. Noel, C. Aguilar, and J. Cornell. 2000. A systematic review of newer pharmacotherapies for depression in adults: evidence report summary. Annals of Internal Medicine. 132 (9): 743-56.
- 99. Maas, J.W. 1979. Biochemistry of the affective disorders. Hospital Practice 14 (May): 113-120.
- 100. O'Neal, H.A., A.L. Dunn, and E.W. Martinsen. 2000. Depression and exercise. International Journal of Sport Psychology 31 (2): 110-135.
- 101. Chrousos, G.P., and P.W. Gold. 1998. A healthy body in a healthy mind—and vice versa—the damaging power of "uncontrollable" stress [editorial; comment]. Journal of Clinical Endocrinology and Metabolism 83 (June):1842-1845.
- 102. Willner, P. 1995. Animal models of depression: Validity and applications. In Depression and mania: From neurobiology to treatment, edited by G. Gessa, W. Fratta, L. Pani, and G. Serra. New York: Raven Press.
- 103. Gold, P.W., and G.P. Chrousos. 1999. The endocrinology of melancholic and atypical depression: Relation to neurocircuitry and somatic consequences. Proceedings of the Association of American Physicians 111 (1): 22-34.
- 104. Dishman, R.K., K.J. Renner, J.E. White-Welkley, K.A. Burke, and B.N.Bunnell. 2000. Treadmill exercise training augments brain norepinephrine response to familiar and novel stress. Brain Research Bulletin. 52 (5): 337-42.
- 105. Dunn, A. L. and R. K. Dishman. 1991. Exercise and the neurobiology of depression. Exercise and Sport Sciences Reviews 19: 41-98.
- 106. Dunn, A.L., T.G. Reigle, S.D. Youngstedt, R.B. Armstrong, and R.K.Dishman. 1996. Brain norepinephrine and metabolites after treadmill training and wheel running in rats. Medicine and Science in Sports and Exercise. 28 (2): 204-209.
- 107. Yoo, H.S., B.N. Bunnell, J.B. Crabbe, L.R. Kalish, and R.K. Dishman. 2000. Failure of neonatal clomipramine treatment to alter forced swim immobility: Chronic treadmill or activity-wheel running and imipramine. Physiology & Behavior 70 (3-4): 407-411.
- 108. Yoo, H., H.A. O'Neal, S. Hong, R.L. Tackett, and R.K. Dishman. 1999. Brain β-adrenergic responses to footshock after wheel running. Medicine & Science in Sports & Exercise 31 (5) (Suppl.): S109, 647.
- 109. Dishman, R.K. 1997. Brain monoamines, exercise, and behavioral stress: Animal models. Medicine & Science in Sports & Exercise 29 (Jan): 63-74.
- 110. Greenwood, B.N., T.E. Foley, H.E. Day, et al. 2003. Freewheel running prevents learned helplessness/behavioral depression: Role of dorsal raphe serotonergic neurons. Journal of Neuroscience 23 (7): 2889-2898.
- 111. Dishman, R.K., H.R. Berthoud, F.W. Booth, et al. 2006. Neurobiology of exercise. Obesity 14 (3): 345-356.
- 112. Knab, A.M., and J.T. Lightfoot. 2010. Does the difference between physically active and couch potato lie in the dopamine system? International Journal of Biological Sciences 6 (2): 133-150.
- 113. Greenwood, B.N., T.E. Foley, H.E. Day, et al. 2003. Freewheel running prevents learned helplessness/behavioral depression: Role of dorsal raphe serotonergic neurons. Journal of Neuroscience 23 (7): 2889-2898.
- 114. Rethorst, C.D., D.M. Landers, C.T. Nagoshi, and J.T. Ross. 2011. The association of 5-HTTLPR genotype and depressive symptoms is moderated by physical activity. Journal of Psychiatric Research 45 (2): 185-189.
- 115. Rethorst, C.D., D.M. Landers, C.T. Nagoshi, and J.T. Ross. 2010. Efficacy of exercise in reducing depressive symptoms across 5-HTTLPR genotypes. Medicine & Science in Sports & Exercise 42 (11): 2141-2147.
- 116. Pagliari, R., and L. Peyrin. 1995. Norepinephrine release in the rat frontal cortex under treadmill exercise: A study with microdialysis. Journal of Applied Physiology 78 (Jun): 2121-2130.
- 117. Richter, E.A., and J.R. Sutton. 1994. Hormonal adaptations to physical activity. In Physical activity, fitness and health: International proceedings and consensus statement, edited by C. Bouchard, R. Shephard, and T. Stephens. Champaign, IL: Human Kinetics.
- 118. White-Welkley, J.E., B.N. Bunnell, E.H. Mougey, J.L. Meyerhoff, and R.K. Dishman. 1995. Treadmill training and estradiol moderate hypothalamicpituitary-adrenal cortical responses to acute running and immobilization. Physiology and Behavior 57: 533-540.
- 119. White-Welkley, J.E., G.L. Warren, B.N. Bunnell, E.H. Mougey, J.L. Meyerhoff, and R.K. Dishman. 1996. Treadmill exercise training and estradiol increase plasma ACTH and prolactin after novel footshock. Journal of Applied Physiology 80 (Mar): 931-939.
- 120. Hunsberger, J.G., S.S. Newton, A.H. Bennett, et al. 2007. Antidepressant actions of the exercise-regulated gene VGF. Nature Medicine 13 (12): 1476-1482.
- 121. Russo-Neustadt, A. 2003. Brain-derived neurotrophic factor, behavior, and new directions for the treatment of mental disorders. Seminars in Clinical Neuropsychiatry 8 (2): 109-118.
- 122. Adlard, P.A., and C.W. Cotman. 2004. Voluntary exercise protects against stress-induced decreases in brain-derived neurotrophic factor protein expression. Neuroscience 124 (4): 985-992.
- 123. Van Hoomissen, J.D., H.O. Chambliss, P.V. Holmes, and R.K. Dishman. 2003. Effects of chronic exercise and imipramine on mRNA for BDNF after olfactory bulbectomy in rat. Brain Research 974 (1-2): 228-235.
- 124. Morgan, W.P. 1968. Selected physiological and psychomotor correlates of depression in psychiatric patients. Research Quarterly 39 (Dec): 1037-1043.
- 125. Morgan, W.P. 1969. A pilot investigation of physical working capacity in depressed and nondepressed psychiatric males. Research Quarterly 40 (Dec): 859-861.
- 126. Martinsen, E.W., J. Strand, G. Paulsson, and J. Kaggestad. 1989. Physical fitness level in patients with anxiety and depressive disorders. International Journal of Sports Medicine 10 (Feb): 58-61.

- 1. Sorabji, R. 2004. Aristotle on memory. 2nd ed. Chicago: University of Chicago Press.
- 2. Hergenhahn, B.R. 1992. An introduction to the history of psychology. 2nd ed. Belmont, CA: Wadsworth.
- 3. Wilson, G.F., J.A. Caldwell, and C.A. Russell. 2007. Performance and psychophysiological measures of fatigue effects on aviation related tasks of varying difficulty.

International Journal of Aviation Psychology 17 (2): 219-247.

- Wasserman, J.D., and D.S. Tulsky. 2005. A history of intelligence assessment. In Contemporary intellectual assessment: Theories, tests, and issues, edited by D.P. Flanagan and P.L. Harrison. New York: Guilford Press.
- Detterman, D.K. 1986. Human intelligence is a complex system of separate processes. In What is intelligence? Contemporary viewpoints on its nature and definition, edited by R.J. Sternberg and D.K. Detterman. Norwood, NJ: Ablex.
- Nettelbeck, T., and C. Wilson. 1997. Speed of information processing and cognition. In Ellis' handbook of mental deficiency, psychological theory and research, edited by W.E. MacLean, Jr. Mahwah, NJ: Erlbaum.
- 7. Sternberg, S. 1969. Memory-scanning: Mental processes revealed by reaction time experiments. American Scientist 57: 421-457.
- 8. Baddeley, A.D. 1986. Working memory. New York: Oxford.
- Miyake, A., N.P. Friedman, M.J. Emerson, A.H. Witzki, A. Howerter, and T.D. Wager. 2000. The unity and diversity of executive functions and their contributions to complex "frontal lobe" tasks: A latent variable analysis. Cognitive Psychology 41: 49-100.
- Naglieri, J.A., and D. Johnson. 2000. Effectiveness of a cognitive strategy intervention to improve math calculation based on the PASS theory. Journal of Learning Disabilities 33: 591-597.
- 11. Posner, M.I., and S. Dahaene. 1994. Attentional networks. Trends in Neurosciences 17: 75-79.
- 12. Borkowski, J.H., M. Carr, and M. Pressely. 1987. "Spontaneous" strategy use: Perspectives from metacognitive theory. Intelligence 11: 61-75.
- 13. Flavell, J.H. 1979. Metacognition and cognitive monitoring: A new area of cognitive-developmental inquiry. American Psychologist 34: 906-911.
- 14. Eysenck, H.J. 1990. Biological dimensions of personality. In Handbook of personality: Theory and research, edited by L.A. Pervin. New York: Guilford Press.
- 15. Lezak, M.D., D.B. Howieson, and D.W. Loring. 2004. Neuropsychological assessment. 4th ed. New York: Oxford University Press.
- 16. O'Reilly, R.A. 2010. The what and how of prefrontal cortical organization. Trends in Neuroscience 33: 355-361.
- 17. Posner, M.I., and M.E. Raichle. 1997. Images of mind. New York: Scientific American Library.
- 18. Dishman, R.K., H.R. Berthoud, F.W. Booth, et al. 2006. Neurobiology of exercise. Obesity 14 (3): 345-356.
- 19. Meeusen, R., and K. De Meirleir. 1995. Exercise and brain neurotransmission. Sports Medicine 20 (3): 160-188.
- Etnier, J.L., W. Salazar, D.M. Landers, S.J. Petruzzello, M. Han, and P. Nowell. 1997. The influence of physical fitness and exercise upon cognitive functioning: A meta-analysis. Journal of Sport and Exercise Psychology 19: 249-277.
- 21. Tomporowski, P.D., and N.R. Ellis. 1986. The effects of exercise on cognitive processes: A review. Psychological Bulletin 99: 338-346.
- 22. McMorris, T., and J. Graydon. 2000. The effect of incremental exercise on cognitive performance. International Journal of Sport Psychology 31: 66-81.
- 23. Brisswalter, J.B., M. Collardeau, and R Arcelin. 2002. Effects of acute physical exercise on cognitive performance. Sports Medicine 32: 555-566.
- 24. Tomporowski, P.D. 2003. Effects of acute bouts of exercise on cognition. Acta Psychologica 112: 297-324.
- 25. Lambourne, K., and P.D. Tomporowski. 2010. The effect of acute exercise on cognitive task performance: A meta-regression analysis. Brain Research Reviews 1341: 12-24.
- McMorris, T., J. Sproule, A. Turner, and B.J. Hale. 2011. Acute, intermediate intensity exercise, and speed and accuracy in working memory tasks: A meta-analytical comparison of effects. Physiology & Behavior 102 (3-4):421-428.
- 27. Folkins, C.H., and W.E. Sime. 1981. Physical fitness training and mental health. American Psychologist. 36 (4): 373-389.
- 28. Chodzko-Zajko, W.J., and K.A. Moore. 1994. Physical fitness and cognitive functioning in aging. In Exercise and sport science reviews, edited by J.O. Holloszy. Baltimore, PA: Williams & Wilkins.
- 29. Etnier, J.L., P.M. Nowell, D.M. Landers, and B.A. Sibley. 2006. A metaregression to examine the relationship between aerobic fitness and cognitive performance. Brain Research Reviews 52: 119-130.
- 30. Colcombe, S.J., and A. F Kramer. 2003. Fitness effects on the cognitive function of older adults: A meta-analytic study. Psychological Science 14:125-130.
- Angevaren, M., G. Aufdemkampe, H.J.J. Verhaar, A. Aleman, and L. Vanhees. 2008. Physical activity and enhanced fitness to improve cognitive function in older people without known cognitive impairment. Cochrane Database of Systematic Reviews. Issue 3. Art. No.: CD005381. doi: 10.1002/14651858.CD005381.pub3.
- Hockey, G.R.J. 1997. Compensatory control in the regulation of human performance under stress and high workload: A cognitive-energetical framework. Biological Psychology 45: 73-93.
- 33. Kahneman, D. 1973. Attention and effort. Englewood Cliffs, NJ: Prentice Hall.
- 34. Sanders, A.F. 1998. Elements of human performance: Reaction processes and attention in human skill. Mahwah, NJ: Lawrence Erlbaum.
- 35. Pfaff, D.W. 2006. Brain arousal and information theory: Neural and genetic mechanisms. Cambridge, MA: Harvard University Press.
- 36. Brisswalter, J.B., M. Collardeau, and R Arcelin. 2002. Effects of acute physical exercise on cognitive performance. Sports Medicine 32: 555-566.
- 37. Tomporowski, P.D. 2003. Effects of acute bouts of exercise on cognition. Acta Psychologica 112: 297-324.
- 38. Luck, S.J. 2005. An introduction to the event-related potential technique.Boston: MIT Press.
- Grego, F., J.-M. Vallier, M. Collardeau, et al. 2004. Effects of long duration exercise on cognitive function, blood glucose, and counterregulatory hormones in male cyclists. Neuroscience Letters 362: 76-80.
- 40. Pontifex, M.B., and C.H. Hillman. 2007. Neuroelectric and behavioral indices of interference control during acute cycling. Clinical Neurophysiology 118: 570-580.
- 41. Yagi, Y., K.L. Coburn, K.N. Estes, and J.E. Arruda. 1999. Effects of aerobic exercise and gender on visual and auditory P300, reaction time, and accuracy. Journal of Applied Physiology and Occupational Physiology 80:402-408.
- 42. Kamijo, K. 2009. Effects of acute exercise on event-related brain potentials. In Enhancing cognitive functioning and brain plasticity, edited by W.J.Chodzko-Kajko, A.F. Kramer, and L.W. Poon. Champaign, IL: Human Kinetics.
- 43. Hillman, C.H., K.I. Erickson, and A. F Kramer. 2008. Be smart, exercise your heart: Exercise effects on brain and cognition. Nature Reviews Neuroscience 9 (1): 58-65.
- 44. Hillman, C.H., M.B. Pontifex, L.B. Raine, D. Castelli, E.E. Hall, and A.F.Kramer. 2009. The effect of acute treadmill walking on cognitive control and academic achievement in preadolescent children. Neuroscience 159:1044-1054.
- Hillman, C.H., E.M. Snook, and G. Jerome, J. 2003. Acute cardiovascular exercise and executive control function. International Journal of Psychophysiology 48: 307-314.
- 46. California Department of Education. 2005. A study of the relationship between physical fitness and academic achievement in California using 2004 test results. Sacramento: California Department of Education.
- 47. Carlson, S.A., J.E. Fulton, S.M. Lee, et al. 2008. Physical education and academic achievement in elementary school: Data from the Early Childhood Longitudinal study. American Journal of Public Health 98 (4):721-727.
- 48. Chomitz, V.R., M.M. Slinning, R.J. McGowan, S.E. Mitchell, G.F. Dawson, and K.A. Hacker. 2009. Is there a relationship between physical fitness and academic achievement? Positive results from public school children in the Northeastern United States. Journal of School Health 79 (1): 30-37.
- 49. Roberts, C.K., B. Freed, and W.J. McCarthy. 2010. Low aerobic fitness and obesity are associated with lower standardized test scores in children. Journal of Pediatrics 156: 711-718.
- 50. Prakash, R.S., M.W. Voss, K.I. Erickson, J.M. Lewis, L. Chaddock, and E.Malkowski. 2011. Cardiorespiratory fitness and attentional control in the aging brain.

Frontiers in Human Neuroscience 4: 1-12.

- Colcombe, S.J., K.I. Erickson, P. Scalf, et al. 2006. Aerobic exercise training increases brain volume in aging humans. Journal of Gerontology: Medical Sciences 61A (11): 1166-1170.
- 52. Colcombe, S.J., A.F. Kramer, K.I. Erickson, et al. 2004. Cardiovascular fitness, cortical plasticity, and aging. Proceedings of the National Academy of Science 101 (9): 3316-3321.
- 53. Pereira, A.C., D.E. Huddleston, A.M. Brickman, et al. 2007. An in vivo correlate of exercise-induced neurogenesis in adult dentate gyrus. Proceedings of the National Academy of Science 104 (13): 5638-5643.
- Hillman, C.H., S.M. Buck, J.R. Themanson, M.B. Pontifex, and D. Castelli.2009. Aerobic fitness and cognitive development: Event-related brain potential and task performance indices of executive control in preadolescent children. Developmental Psychology 45 (1): 114-129.
- Chaddock, L., M.B. Pontifex, C.H. Hillman, and A.F. Kramer. 2011. A review of the relation of aerobic fitness and physical activity to brain structure and function in children. Journal of the International Neuropsychological Society 7 (6): 975-85. doi:10.1017/S1355617711000567.
- 56. O'Connor, P.J., M.P. Herring, and A. Caravalho. 2010. Mental health benefits of strength training in adults. American Journal of Lifestyle Medicine 45 (5): 377-396.
- 57. Dustman, R.E., R. Emmerson, and D. Shearer. 1994. Physical activity, age, and cognitive-neuropsychological function. Journal of Aging and Physical Activity 2: 143-181.
- 58. Hertzog, C., A.F. Kramer, R.S. Wilson, and U. Lindenberger. 2009. Enrichment effects on adult cognitive development. Psychological Science in the Public Interest 9 (1): 1-65.
- 59. Erickson, K.I., and A.F. Kramer. 2009. Aerobic exercise effects on cognitive and neural plasticity in older adults. British Journal of Sports Medicine 43 (1): 22-24.
- 60. West, R.L. 1996. An application of prefrontal cortex function theory to cognitive aging. Psychological Bulletin 120: 272-292.
- 61. Heyn, P., B.C. Abreu, and K.J. Ottenbacher. 2004. The effects of exercise training on elderly persons with cognitive impairment and dementia: A meta-analysis. Archives of Physical Medicine and Rehabilitation 85: 1694-1704.
- 62. Eggermont, L., D. Swaab, P. Luiten, and E. Scherder. 2006. Exercise, cognition and Alzheimer's disease: More is not necessarily better. Neuroscience and Biobehavioral Reviews 30: 562-575.
- 63. Kramer, A.F., S. Hahn, E. McAuley, N.J. Cohen, M.T. Banich, and C Harrison, R. 2002. Exercise, aging, and cognition: Healthy body, healthy mind? In Human factors interventions for the health care of older adults, edited by W.A. Rogers and A.D. Fisk. Mahwah, NJ: Erlbaum.
- 64. Van Praag, H. 2009. Exercise and the brain: Something to chew on. Trends in Neurosciences 32 (5): 283-290.
- 65. Thelen, E. 2004. The central role of action in typical and atypical development: A dynamical systems perspective. In Movement and action in learning and development: Clinical implications for pervasive developmental disorders, edited by I.J. Stockman. New York: Elsevier.
- 66. Tomporowski, P.D., C.L. Davis, P.H. Miller, and J.A. Naglieri. 2008. Exercise and children's intelligence, cognition, and academic achievement. Educational Psychology Review 20 (2): 111-131.
- 67. Sibley, B.A., and J.L. Etnier. 2003. The relationship between physical activity and cognition in children: A meta-analysis. Pediatric Exercise Science 15: 243-256.
- Davis, C.L., P.D. Tomporowski, J.E. McDowell, et al. 2011. Exercise improves executive function and achievement and alters brain activation in overweight children: A randomized, controlled trial. Health Psychology 30(1): 91-98.
- 69. Ismail, A.H. 1967. The effects of a well-organized physical education programme on intellectual performance. Research in Physical Education 1: 31-38.2008
- 70. Donnelly, J.E., and K. Lambourne. 2011. Classroom-based physical activity, cognition, and academic achievement. Preventive Medicine 52: S36-S42.
- 71. Morabia, A., and M.C. Costanza. 2011. Physical activity or academic achievement? Both! Preventive Medicine 52: S1-S2.
- 72. Stroth, S., K. Hille, M. Spitzer, and R. Reinhardt. 2009. Aerobic endurance exercise benefits memory and affect in young adults. Neuropsychological Rehabilitation 19 (2): 223-243.
- 73. Masley, S., R. Roetzheim, and T. Gualtieri. 2009. Aerobic exercise enhances cognitive flexibility. Journal of Clinical Psychology in Medical Settings 16 (2): 186-193.
- 74. Spirduso, W.W., L.W. Poon, and W.J. Chodzko-Kajko. 2007. Exercise and its mediating effects on cognition. Edited by L.W. Poon, W.W. Spirduso, and W.J. Chodzko-Kajko. Vol. 2, Aging, exercise, and cognition series. Champaign, IL: Human Kinetics.
- Tomporowski, P.D., K. Lambourne, and M.S. Okumura. 2011. Physical activity interventions and children's mental function: An introduction and overview. Preventive Medicine 52, S3-S9.
- Noack, H., M. Lovden, F. Schmiedek, and U. Lindenberger. 2009. Cognitive plasticity in adulthood and old age: Gauging the generality of cognitive intervention effects. Restorative Neurology and Neuroscience 27: 435-453.
- 77. Baltes, P.B., U. Staudinger, and U. Lindenberger. 1999. Lifespan psychology: Theory and application to intellectual functioning. In Annual Review of Psychology, edited by J.T. Spence, J.M. Darley and D.J. Foss. Palo Alto, CA: Annual Reviews.
- 78. Kahneman, D. 1973. Attention and effort. Englewood Cliffs, NJ: Prentice Hall.
- 79. Spirduso, W.W. 1980. Physical fitness, aging, and psychomotor speed: A review. Journal of Gerontology 35: 850-865.
- Stones, M.J., and A. Kozma. 1988. Physical activity, age, and cognitive/motor performance. In Cognitive development in adulthood: Progress in cognitive development research, edited by M.L. Howe and C.J. Branerd. New York: Springer-Verlag.
- Churchill, J.D., R. Galvez, S. Colcombe, R.A. Swain, A.F. Kramer, and W.T. Greenough. 2002. Exercise, experience and the aging brain. Neurobiology of Aging 23 (5): 941-955.
- 82. Dishman, R.K., H.R. Berthoud, F.W. Booth, et al. 2006. Neurobiology of exercise. Obesity 14 (3): 345-356
- Anderson, B.J., D.P. McCloskey, D.A. Tata, and H.E. Gorby. 2003. Physiological psychology: Biological and behavioral outcomes of exercise. In Handbook of research methods in experimental psychology, edited by S.F. Davis. Malden, MA: Blackwell Publishing.
- Vaynman, S., and F. Gomez-Pinilla. 2006. Revenge of the "Sit": How lifestyle impacts neuronal and cognitive health through molecular systems that interface energy metabolism with neuronal plasticity. Journal of Neuroscience Research 84: 699-715.
- 85. Diamond, A. 1991. Guidelines for the study of brain-behavior relationships during development. In Frontal lobe function and dysfunction, edited by H.M.E.H. S. Levin, and A.L. Benton. New York: Oxford University Press.
- 86. Lim, J., and D.F. Dinges. 2010. A meta-analysis of the impact of short-term sleep deprivation on cognitive variables. Psychological Bulletin 136 (3): 375-389.
- Englund, C.E., D.H. Ryman, P. Naitoh, and J.A. Hodgdon. 1985. Cognitive performance during successive sustained physical work episodes. Behavior Research Methods, Instruments, & Computers 17: 75-85.
- Vitiello, M.V. 2008. Exercise, sleep, and cognition. In Exercise and its mediating effects on cognition, edited by W.W. Spirduso, L.W. Poon, and W.J. Chodzko-Zajko. Champaign, IL: Human Kinetics.
- 89. Deslandes, A., H. Moraes, C. Ferreira, et al. 2009. Exercise and mental health: Many reasons to move. Neuropsychobiology 59: 191-198.
- Khatri, P., J.A. Blumenthal, M.A. Babyak, et al. 2001. Effects of exercise training on cognitive functioning among depressed older men and women. Journal of Aging and Physical Activity 9: 43-57.
- Hamer, M., and Y. Chida. 2009. Physical activity and risk of neurodegenerative disease: A systematic review of prospective evidence. Psychological Medicine 39: 3-11.
- 92. Heyn, P., B.C. Abreu, and K.J. Ottenbacher. 2004. The effects of exercise training on elderly persons with cognitive impairment and dementia: A meta-analysis.

Archives of Physical Medicine and Rehabilitation 85: 1694-1704.

- Briones, T.L. 2006. Environment, physical activity, and neurogenesis: Implications for prevention and treatment of Alzheimer's Disease. Current Alzheimer Research 3: 49-54.
- 94. Polidori, M.C., G. Nelles, and L. Pientka. 2010. Prevention of dementia: Focus on lifestyle. International Journal of Alzheimer's Disease. 2010: Article ID 393579, 9 pages. doi: 10.4061/2010/393579.
- Lautenschlager, N.T., K.L. Cox, L. Flicker, et al. 2008. Effect of physical activity on cognitive function in older adults at risk for Alzheimer Disease. Journal of the American Medical Association 300 (9): 1027-1037.
- van Uffelen, J.G.Z., M.J.M. Chinapaw, W. van Mechelen, and M. Hopman-Rock. 2011. Walking or vitamin B for cognition in older adults with mild cognitive impairment? A randomized controlled trial. British Journal of Sports Medicine 42: 344-351.
- 97. Baker, L.D., L.L. Frank, K. Foster-Schubert, et al. 2010. Effects of aerobic exercise on mild cognitive impairment. Archives of Neurology 67 (1): 71-79.
- Smith, J.C., K.A. Nielson, J.L. Woodard, et al. 2010. Interactive effects of physical activity and APOE-e4 on Bold semantic memory activation in healthy elders. NeuroImage. 54: 635-644. doi: 10.1016/j.neuroimage.2010.07.070.
- 99. Bol, Y., A.A. Druits, R.M. Hupperts, J.W. Valaeyen, and F.R. Verhey. 2009. The psychology of fatigue in patients with multiple sclerosis: A review. Journal of Psychosomatic Research 66 (1): 3-11.
- 100. Oken, B.S., S. Kishiyama, D. Zajdel, D. Bourdette, D. Carlsen, and M. Haas. 2004. Randomized controlled trial of yoga and exercise in multiple sclerosis. Neurology 62 (11): 2058-2064.
- 101. Velikonja, O., K. Curic, A. Ozura, and S.S. Jazbec. 2010. Influence of sports climbing and yoga on spasticity, cognitive function, mood and fatigue in patients with multiple sclerosis. Clinical Neurology and Neurosurgery 112 (7): 597-601.
- 102. Tanaka, K., A.C. de Quadros, R.F. Santos, F. Stella, L.T. Gobbi, and S. Gobbi. 2009. Benefits of physical exercise on executive functions in older people with Parkinson's disease. Brain and Cognition 69: 435-441.
- 103. Lewis, S.J. G., A. Dove, T.W. Robbins, R.A. Barker, and A.M. Owen. 2003. Cognitive impairments in early Parkinson's disease are accompanied by reductions in activity in frontostriatal neural circuitry. Journal of Neuroscience 23 (15): 6351-6356.
- 104. Owen, A.M. 2004. Cognitive dysfunction in Parkinson's disease: The role of frontostriatal circuitry. Neuroscientist 10 (6): 525-537.
- 105. Elias, M.F., and A.L. Goodell. 2010. Diet and exercise: Blood pressure and cognition. Hypertension 55 (6): 1296-1298.
- 106. Gunstad, J., J.T. Kearney, M.B. Spitznagel, et al. 2009. Blood pressure and cognitive function in older adults with cardiovascular disease. International Journal of Neuroscience 119: 2228-2242.
- 107. Smith, P.J., J.A. Blumenthal, M.A. Babyak, et al. 2010. Effects of the dietary approaches to stop hypertension diet, exercise, and caloric restriction on neurocognition in overweight adults with high blood pressure. Hypertension 55 (6): 1331-1338.
- 108. Pierce, T.W., D.J. Madden, W.C. Siegel, and J.A. Blumenthal. 1993. Effects of aerobic exercise on cognitive and psychosocial functioning in patients with mild hypertension. Health Psychology 12: 286-291.
- 109. Molteni, R., R.J. Barnard, Z. Ying, K. Roberts, and F. Gomez-Pinilla. 2002. A high-fat, refined sugar diet reduces hippocampal brain-derived neurotrophic factor, neuronal plasticity, and learning. Neuroscience 112 (4): 803-814.
- 110. Rochester, C.L. 2003. Exercise training in chronic obstructive pulmonary disease. Journal of Rehabilitation Research and Development 40 (5): 59-80.
- 111. Emery, C.F. 2008. Exercise, chronic obstructive pulmonary disease and cognition. In Exercise and its mediating effects on cognition, edited by W.W. Spirduso, L.W. Poon, and W.J. Chodzko-Kajko. Champaign, IL: Human Kinetics.
- 112. Emery, C.F., R.L. Schein, E.R. Hauck, and N.R. MacIntyre. 1998. Psychological and cognitive outcomes of a randomized trial of exercise among patients with chronic obstructive pulmonary disease. Health Psychology 17 (3): 232-240.
- 113. Etnier, J.L., R. Johnston, D. Dagenbach, R.J. Pollard, W.J. Rejeski, and M. Berry. 1999. The relationships among pulmonary function, aerobic fitness, and cognitive functioning in older COPD patients. Chest 116: 953-960.
- 114. Emery, C.F., R.L. Shermer, E.R. Hauck, E.T. Hsiao, and N.R. MacIntyre. 2003. Cognitive and psychological outcomes of exercise in a 1-year follow-up study of patients with chronic obstructive pulmonary disease. Health Psychology 22 (6): 598-604.
- 115. Emery, C.F. 1994. Effects of age on physiological and psychological functioning among COPD patients in an exercise program. Journal of Aging and Health 6: 3-16.
- 116. Etnier, J.L., and M. Berry. 2001. Fluid intelligence in an older COPD sample after short- or long-term exercise. Medicine & Science in Sport and Exercise 33: 1620-1628.
- 117. Emery, C.F., V.J. Honn, D.J. Frid, K.R. Lebowitz, and P.T. Diaz. 2001. Acute effects of exercise on cognition in patients with chronic obstructive pulmonary disease. American Journal of Respiratory and Critical Care Medicine 164: 1624-1627.
- 118. Herrmann, L.L., G.M. Goodwin, and K.P. Ebmeier. p. The cognitive neuropsychology of depression in the elderly. Psychological Medicine 37: 1693-1702.
- 119. Hoffman, B.M., J.A. Blumenthal, M.A. Babyak, et al. 2008. Exercise fails to improve neurocognition in depressed middle-aged and older adults. Medicine & Science in Sports & Exercise 40 (7): 1344-1352.
- 120. Casey, B.J., A. Galvan, and T.A. Hare. 2005. Changes in cerebral functional organization during cognitive development. Current Opinion in Neurobiology 15 (2): 239-244.
- 121. Best, J.R., P.H. Miller, and L.L. Jones. 2009. Executive function after age 5: Changes and correlates. Developmental Review 29: 180-200.
- 122. Diamond. A. 2006. Bootstrapping conceptual deduction using physical connection: Rethinking frontal cortex. Trends in Cognitive Sciences 10 (5): 212-218.
- 123. Diamond, A., and K. Lee. 2011. Interventions shown to aid executive function development in children 4 to 12 years old. Science 333 (6045): 959-964.
- 124. Best, J.R. 2010. Effects of physical activity on children's executive function: Contributions of experimental research on aerobic exercise. Developmental Review 30 (4): 331-351.
- 125. Salthouse, T.A. 1988. The role of processing resources in cognitive aging. In Cognitive development in adulthood: Progress in cognitive development research, edited by M.L. Howe and C.J. Brainerd. New York: Springer-Verlag.
- 126. Baltes, P.B., U. Staudinger, and U. Lindenberger. 1999. Lifespan psychology: Theory and application to intellectual functioning. In Annual Review of Psychology, edited by J.T. Spence, J.M. Darley and D.J. Foss. Palo Alto, CA: Annual Reviews.
- 127. Erickson, K.I., S.J. Colcombe, S. Elavsky, et al. 2007. Interactive effects of fitness and hormone treatment on brain health in postmenopausal women. Neurobiology of Aging 28 (2): 179-185.
- 128. Lindwall, M., M. Rennemark, and T. Berggren. 2008. Movement in mind: The relationship of exercise with cognitive status for older adults in the Swedish National Study on Aging and Care (SNAC). Aging & Mental Health 12 (2): 212-220.
- 129. Tomporowski, P.D., J.A. Naglieri, and K. Lambourne. 2010. Exercise psychology and children's intelligence. In Oxford Handbook of Exercise Psychology, edited by E.O. Acevedo. New York: Oxford University Press.
- 130. Zagrodnik, J.A., and M. Horvat. 2009. Chronic exercise and developmental disabilities. In Exercise and cognitive function, edited by T. McMorris, P.D. Tomporowski, and M. Audiffren. Chichester, UK: Wiley.
- 131. Tomporowski, P.D. 1997. The effects of physical and mental training on the mental abilities of older adults. Journal of Aging and Physical Activity 5: 9-27.
- 132. Schaefer, S., O. Huxhold, and U. Lindenberger. 2006. Healthy mind in healthy body? A review of sensorimotor-cognitive interdependencies in old age. European

Review of Aging and Physical Activity 3: 45-54.

- 133. Tomporowski, P.D., B.A. McCullick, and M. Horvat. 2010. Role of contextual interference and mental engagement on learning: Perspectives on cognitive psychology. New York: Nova Science.
- 134. Kempermann, G. 2008. The neurogenic reserve hypothesis: What is adult hippocampal neurogenesis good for? Trends in Neuroscience 31 (4): 163-169.
- 135. Carroll, J.B. 1993. Human cognitive abilities. Cambridge: Cambridge University Press.

- 1. Muscio, B. 1921. Is a fatigue test possible? British Journal of Psychology 12:31-46.
- Dawson, D., Y.I. Noy, M. Harma, T. Akerstedt, and G. Belenky. 2011. Modelling fatigue and the use of fatigue models in work settings. Accident: Analysis and Prevention 43 (2): 549-564.
- 3. DeLuca, J. 2005. Fatigue as a window to the brain. Cambridge, MA: The MIT Press.
- 4. Stahl, S.M. 2002. The psychopharmacology of energy and fatigue. Journal of Clinical Psychiatry 63 (1): 7-8.
- Van der Linden, D. 2011. The urge to stop: The cognitive and biological nature of acute mental fatigue. In Cognitive fatigue, edited by P.L. Ackerman. Washington, DC: American Psychological Association.
- 6. Watanabe, Y., B. Evengard, B.H. Natelson, L.A. Jason, and H. Kuratsune. 2010. Fatigue science for human health. Japan: Springer.
- Lieberman, H.R., C.M. Falco, and S.S. Slade. 2002. Carbohydrate administration during a day of sustained aerobic activity improves vigilance, as assessed by a novel ambulatory monitoring device, and mood. American Journal of Clinical Nutrition 76 (1): 120-127.
- Skapinakis, P., G. Lewis, and V. Mavreas. 2003. Cross-cultural differences in the epidemiology of unexplained fatigue syndromes in primary care. British Journal of Psychiatry 182: 205-209.
- 9. Puetz, T.W. 2006. Physical activity and feelings of energy and fatigue: Epidemiological evidence. Sports Medicine 36 (9): 767-780.
- Martin, P., A. Bishop, L. Poon, and M.A. Johnson. 2006. Influence of personality and health behaviors on fatigue in late and very late life. Journals of Gerontology. Series B, Psychological Sciences and Social Sciences 61 (3): P161-P166.
- 11. Eyler, A.A., R.C. Brownson, S.J. Bacak, and R.A. Housemann. 2003. The epidemiology of walking for physical activity in the United States. Medicine & Science in Sports & Exercise 35 (9): 1529-1536.
- 12. Strijk, J.E., K.I. Proper, L. Klaver, A.J. van der Beek, and W. van Mechelen. 2010. Associations between O2max and vitality in older workers: A cross-sectional study. BMC Public Health 10: 684.
- Viner, R.M., C. Clark, S.J. Taylor, et al. 2008. Longitudinal risk factors for persistent fatigue in adolescents. Archives of Pediatrics & Adolescent Medicine 162 (5): 469-475.
- Brownson, R.C., E.A. Baker, R.A. Housemann, L.K. Brennan, and S.J. Bacak. 2001. Environmental and policy determinants of physical activity in the United States. American Journal of Public Health 91 (12): 1995- 2003.
- Motl, R.W., D. Dlugonski, T.R. Wojcicki, E. McAuley, and D.C. Mohr. 2011. Internet intervention for increasing physical activity in persons with multiple sclerosis. Multiple Sclerosis 17 (1): 116-128.
- 16. Abu-Omar, K., A. Rutten, and V. Lehtinen. 2004. Mental health and physical activity in the European Union. Sozial- und Praventivmedizin 49 (5): 301309.
- 17. Poudevigne, M.S., and P.J. O'Connor. 2005. Physical activity and mood during pregnancy. Medicine & Science in Sports & Exercise 37 (8): 13741380.
- Young, D.R., W.L. Haskell, C.B. Taylor, and S.P. Fortmann. 1996. Effect of community health education on physical activity knowledge, attitudes, and behavior. The Stanford Five-City Project. American Journal of Epidemiology 144 (3): 264-274.
- 19. Herring, M.P., and P.J. O'Connor. 2009. The effect of acute resistance exercise on feelings of energy and fatigue. Journal of Sports Sciences 27 (7): 701-709.
- 20. Hansen, C.J., L.C. Stevens, and J.R. Coast. 2001. Exercise duration and mood state: How much is enough to feel better? Health Psychology 20 (4): 267-275.
- Hoffman, M.D., and D.R. Hoffman. 2008. Exercisers achieve greater acute exercise-induced mood enhancement than nonexercisers. Archives of Physical Medicine and Rehabilitation 89 (2): 358-363.
- 22. Bartholomew, J.B., D. Morrison, and J.T. Ciccolo. 2005. Effects of acute exercise on mood and well-being in patients with major depressive disorder. Medicine & Science in Sports & Exercise 37 (12): 2032-2037.
- 23. Lambourne, K., and P.D. Tomporowski. 2010. The effect of acute exercise on cognitive task performance: A meta-regression analysis. Brain Research Reviews 1341: 12-24.
- 24. Puetz, T.W., P.J. O'Connor, and R.K. Dishman. 2006. Effects of chronic exercise on feelings of energy and fatigue: A quantitative synthesis. Psychological Bulletin 132 (6): 866-876.
- Martin, C.K., T.S. Church, A.M. Thompson, C.P. Earnest, and S.N. Blair. 2009. Exercise dose and quality of life: A randomized controlled trial. Archives of Internal Medicine 169 (3): 269-278.
- 26. O'Connor, P.J., M.P. Herring, and A. Caravalho. 2010. Mental health benefits of strength training in adults. American Journal of Lifestyle Medicine 45 (5): 377-396.
- 27. Puetz, T.W., and M.P. Herring. 2012. Differential effects of exercise on cancer-related fatigue during and following treatment. American Journal of Preventive Medicine 43(2): e1-e10.
- 28. Puetz, T.W., S.S. Flowers, and P.J. O'Connor. 2008. A randomized controlled trial of the effect of aerobic exercise training on feelings of energy and fatigue in sedentary young adults with persistent fatigue. Psychotherapy and Psychosomatics 77 (3): 167-174.
- 29. Milne, H.M., K.E. Wallman, S. Gordon, and K.S. Courneya. 2008. Effects of a combined aerobic and resistance exercise program in breast cancer survivors: A randomized controlled trial. Breast Cancer Research and Treatment 108 (2): 279-288.
- White, P.D., K.A. Goldsmith, A.L. Johnson, et al. 2011. Comparison of adaptive pacing therapy, cognitive behaviour therapy, graded exercise therapy, and specialist medical care for chronic fatigue syndrome (PACE): A randomised trial. Lancet 377 (9768): 823-836.
- Cook, D.B., P.R. Nagelkirk, A. Poluri, J. Mores, and B.H. Natelson. 2006. The influence of aerobic fitness and fibromyalgia on cardiorespiratory and perceptual responses to exercise in patients with chronic fatigue syndrome. Arthritis and Rheumatism 54 (10): 3351-3362.
- Donta, S.T., D.J. Clauw, C.C. Engel, et al. and for the VA Cooperative Study #470 Study Group. 2003. Cognitive behavioral therapy and aerobic exercise for Gulf War veterans' illnesses. Journal of the American Medical Association 289 (11): 1396-1404.
- Grego, F., J.-M. Vallier, M. Collardeau, et al. 2004. Effects of long duration exercise on cognitive function, blood glucose, and counterregulatory hormones in male cyclists. Neuroscience Letters 362: 76-80.
- Petruzzello, S.J., E.E. Hall, and P. Ekkekakis. 2001. Regional brain activation as a biological marker of affective responsivity to acute exercise: Influence of fitness. Psychophysiology 38 (1): 99-106.
- Woo, M., S. Kim, J. Kim, S.J. Petruzzello, and B.D. Hatfield. 2009. Examining the exercise-affect dose-response relationship: Does duration influence frontal EEG asymmetry? International Journal of Psychophysiology 72 (2): 166-172.
- Dishman, R.K., N.J. Thom, T.W. Puetz, P.J. O'Connor, and B.A. Clementz. 2010. Effects of cycling exercise on vigor, fatigue, and electroencephalographic Activity among young adults who report persistent fatigue. Psychophysiology 47 (6): 1066-1074.
- 37. Cook, D.B., P.J. O'Connor, G. Lange, and J. Steffener. 2007. Functional neuroimaging correlates of mental fatigue induced by cognition among chronic fatigue

syndrome patients and controls. NeuroImage 36 (1): 108-122.

- 38. Genova, H.M., G.R. Wylie, and J. DeLuca. 2011. Neuroimaging of fatigue. In Brain imaging in behavioral medicine and clinical neuroscience, edited by R.A. Cohen and L.H. Sweet. New York: Springer.
- 39. Rooks, C.R., N.J. Thom, K.K. McCully, and R.K. Dishman. 2010. Effects of incremental exercise on cerebral oxygenation measured by near-infrared spectroscopy: A systematic review. Progress in Neurobiology 92 (2): 134-150.
- 40. Stahl, S.M. 2002. The psychopharmacology of energy and fatigue. Journal of Clinical Psychiatry 63 (1): 7-8.
- 41. Salamone, J.D., M. Correa, A. Farrar, and S.M. Mingote. 2007. Effort-related functions of nucleus accumbens dopamine and associated forebrain circuits. Psychopharmacology 191 (3): 461-482.

- 1. National Institutes of Health. 2010. NIH State-of-the-Science Conference: Manifestations and management of chronic insomnia in adults. June 13-15, 2005 [cited June 9, 2010]. http://consensus.nih.gov/previous.htm.
- 2. Rosekind, M.R., and K.B. Gregory. 2010. Insomnia risks and costs: Health, safety, and quality of life. American Journal of Managed Care 16 (8): 617-626.
- 3. Chilcott, L.A., and C.M. Shapiro. 1996. The socioeconomic impact of insomnia. An overview. PharmacoEconomics 10 (Suppl. 1): 1-14.
- 4. Ozminkowski, R.J., S. Wang, and J.K. Walsh. 2007. The direct and indirect costs of untreated insomnia in adults in the United States. Sleep 30 (3): 263-273.
- Kripke, D.F., M.R. Klauber, D.L. Wingard, R.L. Fell, J.D. Assmus, and L. Garfinkel. 1998. Mortality hazard associated with prescription hypnotics. Biological Psychiatry. 43 (9): 687-93.
- 6. Guardiola-Lemaitre, B. 1997. Toxicology of melatonin. Journal of Biological Rhythms 12: 697-706.
- 7. Monti, J.M. 2010. Serotonin 5-HT(2A) receptor antagonists in the treatment of insomnia: Present status and future prospects. Drugs of Today 46 (3): 183-193.
- Siegel, J.M. 2000. Brainstem mechanisms generating REM sleep. In Principles and practice of sleep medicine, edited by M.K. Kryger, T. Roth and W.O. Dement. New York: Saunders
- 9. Physical Activity Guidelines Advisory Committee. 2008. Physical Activity Guidelines Advisory Committee Report, pp. 1-58. Washington, DC: U.S. Department of Health and Human Services.
- Youngstedt, S.D., P.J. O'Connor, J.B. Crabbe, and R.K. Dishman. 1998. Acute exercise reduces caffeine-induced anxiogenesis. Medicine & Science in Sports & Exercise 30 (5): 740-745.
- Landolt, H.P., V. Meier, H.J. Burgess, L. Finelli, F. Cattelin, and A.A. Borbely. 1998. SR 46349B, a selective 5-HT2 receptor antagonist, enhances delta activity and reduces sigma activity in nonREM sleep in humans. Sleep 21S: 85.
- 12. Youngstedt, S.D., D.F. Kripke, and J.A. Elliott. 1999. Is sleep disturbed by vigorous late-night exercise? Medicine and Science in Sports and Exercise 31 (6): 864-869.
- Passos, G.S., D. Poyares, M.G. Santana, S.A. Garbuio, S. Tufik, and M.T. Mello. 2010. Effect of acute physical exercise on patients with chronic primary insomnia. Journal of Clinical Sleep Medicine 6 (3): 270-275.
- 14. Youngstedt, S.D., and C.E. Kline. 2006. Epidemiology of exercise and sleep. Sleep and Biological Rhythms 4 (3): 215-221.
- Urponen, H., I. Vuori, J. Hasan, and M. Partinen. 1988. Self evaluations of factors promoting and disturbing sleep: An epidemiological survey in Finland. Social Science Medicine 26(4): 443-450.
- 16. Sherrill, D.L., K. Kotchou, and S.F. Quan. 1998. Association of physical activity and human sleep disorders. Archives of Internal Medicine 158: 1894-1898.
- 17. O'Connor, P.J., and S.D. Youngstedt. 1995. Influence of exercise on human sleep. In Exercise and sport sciences review, edited by J.O. Holloszy. Baltimore: Williams and Wilkins.
- 18. Driver, H.S., and S.R. Taylor. 2000. Exercise and sleep. Sleep Medicine Reviews 4: 387-402.
- 19. Peppard, P.E., and T. Young. 2004. Exercise and sleep-disordered breathing: An association independent of body habitus. Sleep 27 (3): 480-484.
- 20. Quan, S.F., G.T. O'Connor, J.S. Quan, et al. 2007. Association of physical activity with sleep-disordered breathing. Sleep & Breathing [Schlaf & Atmung] 11 (3): 149-157.
- 21. Bazargan, M. 1996. Self-reported sleep disturbance among African-American elderly: The effects of depression, health status, exercise, and social support. International Journal of Aging & Human Development 42 (2): 143-160.
- 22. Morgan, K. 2003. Daytime activity and risk factors for late-life insomnia. Journal of Sleep Research 12 (3): 231-238.
- Dishman, R.K., X. Sui, T.S. Church, S.D. Youngstedt, and S.N. Blair. 2013. Decline in cardiorespiratory fitness and increased incidence of sleep complaints. Athens, GA: University of Georgia.
- 24. Backeland, F. 1970. Exercise deprivation: Sleep and psychological reactions. Archives of General Psychiatry 22: 365-369.
- Alessi, C.A., J.L. Martin, A.P. Webber, E. Cynthia Kim, J.O. Harker, and K.R. Josephson. 2005. Randomized, controlled trial of a nonpharmacological intervention to improve abnormal sleep/wake patterns in nursing home residents. Journal of the American Geriatrics Society 53 (5): 803-810.
- Martin, J.L., M.R. Marler, J.O. Harker, K.R. Josephson, and C.A. Alessi. 2007. A multicomponent nonpharmacological intervention improves activity rhythms among nursing home residents with disrupted sleep/wake patterns. Journals of Gerontology. Series A, Biological Sciences and Medical Sciences 62 (1): 67-72.
- Ouslander, J.G., B.R. Connell, D.L. Bliwise, Y. Endeshaw, P. Griffiths, and J.F. Schnelle. 2006. A nonpharmacological intervention to improve sleep in nursing home patients: Results of a controlled clinical trial. Journal of the American Geriatrics Society 54 (1): 38-47.
- 28. Singh, N.A., K.M. Clements, and M.A. Fiatarone. 1997. A randomized controlled trial of the effect of exercise on sleep. Sleep 20 (2): 95-101.
- 29. King, A.C., R.F. Oman, G.S. Brassington, D.L. Bliwise, and W.L. Haskell. 1997. Moderate-intensity exercise and self-rated quality of sleep in older adults: A randomized controlled trial. Journal of the American Medical Association 277 (1): 32-37.
- King, A.C., L.A. Pruitt, S. Woo, et al. 2008. Effects of moderate-intensity exercise on polysomnographic and subjective sleep quality in older adults with mild to moderate sleep complaints. Journals of Gerontology: Series A: Biological Sciences & Medical Sciences 63 (9): 997-1004.
- Buman, M.P., E.B. Hekler, D.L. Bliwise, and A.C. King. 2011a. Exercise effects on night-to-night fluctuations in self-rated sleep among older adults with sleep complaints. Journal of Sleep Research 20 (1 Pt 1): 28-37.
- 32. King, A.C., K. Baumann, P. O'Sullivan, S. Wilcox, and C. Castro. 2002. Effects of moderate-intensity exercise on physiological, behavioral, and emotional responses to family caregiving: A randomized controlled trial. Journals of Gerontology. Series A, Biological Sciences and Medical Sciences 57 (1): M26-M36.
- 33. De Jong, J., K.A. Lemmink, A.C. King, M. Huisman, and M. Stevens. 2006. Twelve-month effects of the Groningen active living model (GALM) on physical activity, health and fitness outcomes in sedentary and underactive older adults aged 55-65. Patient Education and Counseling 66 (2): 167-176.
- 34. Elavsky, S., and E. McAuley. 2007. Lack of perceived sleep improvement after 4-month structured exercise programs. Menopause 14 (3 Pt 1): 535- 540.
- 35. Gary, R., and S.Y. Lee. 2007. Physical function and quality of life in older women with diastolic heart failure: Effects of a progressive walking program on sleep patterns. Progress in Cardiovascular Nursing 22 (2): 72-80.
- 36. Yurtkuran, M., A. Alp, and K. Dilek. 2007. A modified yoga-based exercise program in hemodialysis patients: A randomized controlled study. Complementary Therapies in Medicine 15 (3): 164-171.
- 37. Guilleminault, C., A. Clerk, J. Black, M. Labanowski, R. Pelayo, and D. Claman. 1995. Nondrug treatment trials in psychophysiologic insomnia. Annals of Internal Medicine 155: 838-844.

- Reid, K.J., K.G. Baron, B. Lu, E. Naylor, L. Wolfe, and P.C. Zee. 2010. Aerobic exercise improves self-reported sleep and quality of life in older adults with insomnia. Sleep Medicine 11 (9): 934-940.
- 39. Tworoger, S.S., Y. Yasui, M.V. Vitiello, et al. 2003. Effects of a yearlong moderate-intensity exercise and a stretching intervention on sleep quality in postmenopausal women. Sleep 26 (7): 830-836.
- 40. Youngstedt, S.D., P.J. O'Connor, and R.K. Dishman. 1997. The effects of acute exercise on sleep: A quantitative synthesis. Sleep 20 (3): 203-214.
- 41. Youngstedt, S.D., and C.E. Kline. 2006. Epidemiology of exercise and sleep. Sleep and Biological Rhythms 4 (3): 215-221.
- 42. McGinty, D., and R. Szymusiak. 1990. Keeping cool: A hypothesis about the mechanisms and functions of slow wave sleep. Trends in Neurosciences 13: 480-487.
- 43. Horne, J.A., and L.H.E. Staff. 1983. Exercise and sleep: Body heating effects. Sleep 6: 36-46.
- Horne, J.A., and V.J. Moore. 1985. Sleep EEG effects of exercise with and without additional body cooling. Electroencephalography and Clinical Neurophysiology 60: 33-38.
- O'Connor, P.J., M.J. Breus, and S.D. Youngstedt. 1998. Exercise-induced increase in core temperature does not disrupt a behavioral measure of sleep. Physiology and Behavior 64: 213-217.
- 46. Youngstedt, S.D. 2000. The exercise-sleep mystery. International Journal of Sport Psychology 31 (2): 241-255.
- Myllymäki, T., H. Kyröläinen, K. Savolainen, et al. 2011. Effects of vigorous late-night exercise on sleep quality and cardiac autonomic activity. Journal of Sleep Research 20 (1 Pt 2): 146-153.
- 48. Vuori, I., Urponen, H., Hasan, J., & Partinen, M. 1988. Epidemiology of exercise effects on sleep. Acta physiologica Scandinavica. Supplementum, 574, 3-7.
- 49. Knight, J.A., S. Thompson, J.M. Raboud, and B.R. Hoffman. 2005. Light and exercise and melatonin production in women. American Journal of Epidemiology 162 (11): 1114-1122.
- Van Reeth, O., J. Sturis, M.M. Byrne, et al. 1994. Nocturnal exercise phase delays circadian rhythms of melatonin and thyrotropin secretion in normal men. American Journal of Physiology 266 (6 Pt 1): E964-E974.
- Barger, L.K., K.P. Wright, Jr., R.J. Hughes, and C.A. Czeisler. 2004. Daily exercise facilitates phase delays of circadian melatonin rhythm in very dim light. American Journal of Physiology 286 (6): R1077-R1084.
- Benington, J.H., S.K. Kodali, and H.C. Heller. 1995. Stimulation of A1 adenosine receptors mimics the electroencephalographic effects of sleep deprivation. Brain Research 692 (1-2): 79-85.
- 53. Youngstedt, S.D. 2005. Effects of exercise on sleep. Clinics in Sports Medicine 24 (2): 355-365, xi.
- Espiritu, R.C., D.F. Kripke, S. Ancoli-Israel, et al. 1994. Low illumination by San Diego adults: Association with atypical depressive symptoms. Biological Psychiatry 35: 403-407.
- 55. Cole, R.J., D.F. Kripke, J. Wisbey, et al. 1995. Seasonal variation in human illumination exposure at two different latitudes. Journal of Biological Rhythms 10 (4): 324-334.
- 56. Golden, R.N., B.N. Gaynes, R.D. Ekstrom, et al. 2005. The efficacy of light therapy in the treatment of mood disorders: A review and meta-analysis of the evidence. American Journal of Psychiatry 162 (4): 656-662.
- 57. Singh, N.A., K.M. Clements, and M.A. Fiatarone. 1997. A randomized controlled trial of the effect of exercise on sleep. Sleep 20 (2): 95-101.
- 58. Buxton, O.M., C.W. Lee, M. L'Hermite-Baleriaux, F.W. Turek, and E. Van Cauter. 2003. Exercise elicits phase shifts and acute alterations of melatonin that vary with circadian phase. American Journal of Physiology 284 (3): R714-R724.
- 59. Porkka-Heiskanen, T., R.E. Strecker, M. Thakkar, A.A. Bjorkum, R.W. Greene, and R.W. McCarley. 1997. Adenosine: A mediator of the sleepinducing effects of prolonged wakefulness. Science 276: 1265-1268.
- 60. Youngstedt, S.D., D.F. Kripke, and J.A. Elliott. 1999. Is sleep disturbed by vigorous late-night exercise? Medicine and Science in Sports and Exercise 31 (6): 864-869.
- 61. Breus, M.J., P.J. O'Connor, and S.T. Ragan. 2000. Muscle pain induced by novel eccentric exercise does not disturb the sleep of normal young men. Journal of Pain 1 (1): 67-76.

- 1. Dallenbach, K.M. 1939. Pain: History and present status. American Journal of Psychology 52 (3): 331-347.
- IASP Task Force on Taxonomy. 1994. Part III: Pain terms—A current list with definitions and notes on usage. In Classification of chronic pain, edited by B. Merskey and N. Bogduk. Seattle: IASP Press.
- 3. Mittenberg, W., C. Patton, E.M. Canyock, and D.C. Condit. 2002. Base rates of malingering and symptom exaggeration. Journal of Clinical and Experimental Neuropsychology 24 (8): 1094-1102.
- 4. Cox, J.J., F. Reimann, A.K. Nicholas, et al. 2006. An SCN9A channelopathy causes congenital inability to experience pain. Nature 444 (7121): 894-898.
- Kaski, J.C. 2004. Pathophysiology and management of patients with chest pain and normal coronary arteriograms (cardiac syndrome X). Circulation 109 (5): 568-572.
 Jensen, M.C., M.N. Brant-Zawadzki, N. Obuchowski, M.T. Modic, D. Malkasian, and J.S. Ross. 1994. Magnetic resonance imaging of the lumbar spine in people without back pain. New England Journal of Medicine 331 (2): 69-73.
- Abeles, A.M., M.H. Pillinger, B.M. Solitar, and M. Abeles. 2007. Narrative review: The pathophysiology of fibromyalgia. Annals of Internal Medicine 146 (10): 726-734.
- 8. Turk, D.C., and R. Melzack. 2001. The measurement of pain and the assessment of people experiencing pain. In Handbook of pain assessment, edited by D.C. Turk and R. Melzack. New York: Guilford Press.
- 9. Johannes, C.B., T. Kim Le, X. Zhou, J.A. Johnston, and R.H. Dworkin. 2010. The prevalence of chronic pain in United States adults: Results of an Internet-based survey. Journal of Pain 11 (11): 1230-1239.
- Manchikanti, L., V. Singh, S. Datta, S.P. Cohen, and J.A. Hirsch. 2009. Comprehensive review of epidemiology, scope and impact of spinal pain. Pain Physician 12: E35-E70.
- 11. Volinn, E. 1997. The epidemiology of low back pain in the rest of the world: A review of surveys in low- and middle-income countries. Spine 22 (15): 1747-1754.
- 12. Institute of Medicine. 2011. Relieving pain in America: A blueprint for transforming prevention, care, education and research. Washington, DC: The National Academies Press.
- 13. Stewart, W.F., J.A. Ricci, E. Chee, D. Morganstein, and R. Lipton. 2003. Lost productive time and cost due to common pain conditions in the U.S. workforce. Journal of the American Medical Association 290 (18): 2443- 2454.
- 14. Gatchel, R.J., and A. Okifuji. 2006. Evidence-based scientific data documenting the treatment and cost-effectiveness of comprehensive pain programs for chronic nonmalignant pain. Journal of Pain 7 (11): 779-793.
- Von Korff, M., P. Crane, M. Lane, et al. 2005. Chronic spinal pain and physical-mental comorbidity in the United States: Results from the national comorbidity survey replication. Pain 113 (3): 331-339.
- 16. Jensen, M.P., M.J. Chodroff, and R.H. Dworkin. 2007. The impact of neuropathic pain on health-related quality of life. Neurology 68 (15): 1178-1182.
- 17. Dick, B.D., and S. Rashiq. 2007. Disruption of attention and working memory traces in individuals with chronic pain. Anesthesia & Analgesia 104 (5): 1223-1229.
- 18. Smith, M.T., and J.A. Haythornthwaite. 2004. How do sleep disturbance and chronic pain inter-relate? Insights from the longitudinal and cognitivebehavioral clinical

trials literature. Sleep Medicine Reviews 8 (2): 119-132.

- 19. Jamison, R.N. 2010. Unraveling the secrets to chronic pain and disability: More than meets the eye. Journal of Pain 11 (5): 405-407.
- 20. Flor, H., D.C. Turk, and B.O. Scholz. 1987. Impact of chronic pain on the spouse: Marital, emotional and physical consequences. Journal of Psychosomatic Research 31 (1): 63-71.
- Breivik, H., B. Collett, V. Ventafridda, R. Cohen, and D. Gallacher. 2006. Survey of chronic pain in Europe: Prevalence, impact on daily life, and treatment. European Journal of Pain 10 (4): 287-333.
- 22. Osborn, J., and S.W.G. Derbyshire. 2010. Pain sensation evoked by observing injury in others. Pain 148 (2): 268-274.
- 23. Derbyshire, S.W.G., M.G. Whalley, and D.A. Oakley. 2009. Fibromyalgia pain and its modulation by hypnotic and non-hypnotic suggestion: An fMRI analysis. European Journal of Pain 13 (5): 542-550.
- 24. Derbyshire, S.W.G., M.G. Whalley, V.A. Stenger, and D.A. Oakley. 2004. Cerebral activation during hypnotically induced and imagined pain. NeuroImage 23 (1): 392-401.
- Cook, D.B., P.J. O'Connor, S.A. Eubanks, J.C. Smith, and M. Lee. 1997. Naturally occurring muscle pain during exercise: Assessment and experimental evidence. Medicine & Science in Sports & Exercise 29 (8): 999-1012.
- 26. Mense, S. 2009. Algesic agents exciting muscle nociceptors. Experimental Brain Research 196 (1): 89-100.
- 27. Birdsong, W.T., L. Fierro, F.G. Williams, et al. 2010. Sensing muscle ischemia: Coincident detection of acid and ATP via interplay of two ion channels. Neuron 68 (4): 739-749.
- Paterson, D.J., J.S. Friedland, D.A. Bascom, et al. 1990. Changes in arterial K+ and ventilation during exercise in normal subjects and subjects with McArdle's syndrome. Journal of Physiology 429: 339-348.
- 29. Dishman, R.K., and P.J. O'Connor. 2009. Lessons in exercise neurobiology: The case of endorphins. Mental Health and Physical Activity 2 (1): 4-9.
- Sparling, P.B. 2003. College physical education: An unrecognized agent of change in combating inactivity-related diseases. Perspectives in Biology and Medicine 46 (4): 579-587.
- 31. Price, D.D. 2000. Psychological and Neural Mechanisms of the Affective Dimension of Pain. Science 288 (5472): 1769-1772.
- 32. Coghill, R.C., C.N. Sang, J.M. Maisog, and M.J. Iadarola. 1999. Pain intensity processing within the human brain: A bilateral, distributed mechanism. Journal of Neurophysiology 82 (4): 1934-1943.
- Bantick, S.J., R.G. Wise, A. Ploghaus, S. Clare, S.M. Smith, and I. Tracey. 2002. Imaging how attention modulates pain in humans using functional MRI. Brain 125 (2): 310-319.
- 34. Kong, J., N.S. White, K.K. Kwong, et al. 2006. Using fMRI to dissociate sensory encoding from cognitive evaluation of heat pain intensity. Human Brain Mapping 27 (9): 715-721.
- 35. Khanna, S., and J.G. Sinclair. 1989. Noxious stimuli produce prolonged changes in the CA1 region of the rat hippocampus. Pain 39 (3): 337-343.
- Johnson, M., and M. Martinson. 2007. Efficacy of electrical nerve stimulation for chronic musculoskeletal pain: A meta-analysis of randomized controlled trials. Pain 130 (1): 157-165.
- 37. Beecher, H.K. 1956. Relationship of significance of wound to pain experienced. Journal of the American Medical Association 161 (17): 1609-1613.
- Rechel, J.A., Yard, E.E., Comstock, R.D. 2008. An epidemiological comparison of high school sports injuries sustained in practice and competition. Journal of Athletic Training 43 (2): 197-204.
- Hootman, J.M., Dick, R., and Agel, J. 2007. Epidemiology of collegiate injuries for 15 sports: Summary and recommendations for injury prevention initiatives. Journal
 of Athletic Training 42 (2): 311-319.
- 40. Finch, C., and E. Cassell. 2006. The public health impact of injury during sport and active recreation. Journal of Science and Medicine in Sport 9 (6): 490-497.
- O'Connor, P.J., and D.B. Cook. 2001. Moderate-intensity muscle pain can be produced and sustained during cycle ergometry. Medicine & Science in Sports & Exercise 33 (6): 1046-1051.
- 42. Cook, D.B., P.J. O'Connor, S.E. Oliver, and Y. Lee. 1998. Sex differences in naturally occurring leg muscle pain and exertion during maximal cycle ergometry. International Journal of Neuroscience 95 (3-4): 183-202.
- Motl, R.W., R.C. Gliottoni, and J.A. Scott. 2007. Self-efficacy correlates with leg muscle pain during maximal and submaximal cycling exercise. Journal of Pain 8 (7): 583-587.
- 44. Cook, D.B., E.M. Jackson, P.J. O'Connor, and R.K. Dishman. 2004. Muscle pain during exercise in normotensive African American women: Effect of parental hypertension history. Journal of Pain 5 (2): 111-118.
- Ciubotariu, A., L. Arendt-Nielsen, and T. Graven-Nielsen. 2007. Localized muscle pain causes prolonged recovery after fatiguing isometric contractions. Experimental Brain Research 181 (1): 147-158.
- Cook, D.B., P.J. O'Connor, and C.A. Ray. 2000. Muscle pain perception and sympathetic nerve activity to exercise during opioid modulation. American Journal of Physiology. 279 (5): R1565-R1573.
- Mauger, A.R., A.M. Jones, and C.A. Williams. 2010. Influence of acetaminophen on performance during time trial cycling. Journal of Applied Physiology 108 (1): 98-104.
- Black, C.D., and P.J. O'Connor. 2008. Acute effects of dietary ginger on quadriceps muscle pain during moderate-intensity cycling exercise. International Journal of Sport Nutrition & Exercise Metabolism 18 (6): 653-664.
- Ganio, M.S., L.E. Armstrong, E.C. Johnson, et al. 2010. Effect of quercetin supplementation on maximal oxygen uptake in men and women. Journal of Sports Sciences 28 (2): 201-208.
- 50. . O'Brien, P.M., and P.J. O'Connor. 2000. Effect of bright light on cycling performance. Medicine & Science in Sports & Exercise 32 (2): 439.
- O'Connor, P.J., R.W. Motl, S.P. Broglio, and M.R. Ely. 2004. Dosedependent effect of caffeine on reducing leg muscle pain during cycling exercise is unrelated to systolic blood pressure. Pain 109 (3): 291-298.
- 52. Motl, R.W., P.J. O'Connor, and R.K. Dishman. 2003. Effect of caffeine on perceptions of leg muscle pain during moderate intensity cycling exercise. Journal of Pain 4 (6): 316-321.
- Piters, K.M., A. Colombo, H.G. Olson, and S.M. Butman. 1985. Effect of coffee on exercise-induced angina pectoris due to coronary artery disease in habitual coffee drinkers. American Journal of Cardiology 55 (4): 277-280.
- Motl, R.W., P.J. O'Connor, L. Tubandt, T. Puetz, and M.R. Ely. 2006. Effect of caffeine on leg muscle pain during cycling exercise among females. Medicine & Science in Sports & Exercise 38 (3): 598-604. doi: 10.1249/01.mss.0000193558.70995.03.
- Shaper, A.G., D.G. Cook, M. Walker, and P.W. Macfarlane. 1984. Prevalence of ischaemic heart disease in middle aged British men. British Heart Journal 51 (6): 595-605.
- 56. Hemingway, H., C. Langenberg, J Damant, et al. 2008. Prevalence of angina in women versus men. Circulation 117 (12): 1526-1536.
- Beltrame, K.F., A.J. Weekes, C. Morgan, R. Tavella, and J.A. Spertus. 2009. The prevalence of weekly angina among patients with chronic stable angina in primary care practices: The Coronary Artery Disease in General Practice (CADENCE) Study. Archives of Internal Medicine 169 (16): 1491-1499.
- 58. Lloyd-Jones, D., R. Adams, M. Carnethon, et al. 2009. Heart disease and stroke statistics-2009 Update. Circulation 119 (3): e21-e181.

- Detry, J.-M.R., A. Robert, R.J. Luwaert, et al. 1985. Diagnostic value of computerized exercise testing in men without previous myocardial infarction. A multivariate, compartmental and probabilistic approach. European Heart Journal 6 (3): 227-238.
- 60. Gibbons, R.J., K. Chatterjee, J. Daley et al. 1999. ACC/AHA/ACP-ASIM guidelines for the management of patients with chronic stable angina: A report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines (Committee on Management of Patients With Chronic Stable Angina). Journal of the American College of Cardiology 33 (7): 2092-2197.
- 61. Gardner, A.W., P.S. Montgomery, R.M. Ritti-dias, and U. Thadani. 2011. Exercise performance, physical activity, and health-related quality of life in participants with stable angina. Angiology 62 (6): 461-466.
- 62. Clausen, J.P., and J. Trap-Jensen. 1976. Heart rate and arterial blood pressure during exercise in patients with angina pectoris. Effects of training and of nitroglycerin. Circulation 53 (3): 436-442.
- 63. Hambrecht, R., C. Walther, S. Möbius-Winkler, et al. 2004. Percutaneous coronary angioplasty compared with exercise training in patients with stable coronary artery disease. Circulation 109 (11): 1371-1378.
- 64. Williams, M.A., P.A. Ades, L.F. Hamm, et al. 2006. Clinical evidence for a health benefit from cardiac rehabilitation: An update. American Heart Journal 152 (5): 835-841.
- 65. Kemppainen, P., A. Pertovaara, T. Huopaniemi, G. Johansson, and S.-L. Karonen. 1985. Modification of dental pain and cutaneous thermal sensitivity by physical exercise in man. Brain Research 360 (1-2): 33-40.
- 66. Koltyn, K.F. 2002. Exercise-induced hypoalgesia and intensity of exercise. Sports Medicine 32 (8): 477-487.
- 67. Umeda, M., L.W. Newcomb, L.D. Ellingson, and K.F. Koltyn. 2010. Examination of the dose-response relationship between pain perception and blood pressure elevations induced by isometric exercise in men and women. Biological Psychology 85 (1): 90-96.
- 68. Kosek, E., J. Ekholm, and P. Hansson. 1996. Modulation of pressure pain thresholds during and following isometric contraction in patients with fibromyalgia and in healthy controls. Pain 64 (3): 415-423.
- 69. Cook, D.B., A.J. Stegner, and L.D. Ellingson. 2010. Exercise alters pain sensitivity in Gulf War veterans with chronic musculoskeletal pain. Journal of Pain 11 (8): 764-772.
- 70. Smith, L.L. 1991. Acute inflammation: The underlying mechanism in delayed onset muscle soreness? Medicine & Science in Sports & Exercise 23 (5): 542-551.
- Sayers, S.P., P.M. Clarkson, P.A. Rouzier, and G. Kamen. 1999. Adverse events associated with eccentric exercise protocols: Six case studies. Medicine & Science in Sports & Exercise 31 (12): 1697.
- Black, C.D., M.P. Herring, D.J. Hurley, and P.J. O'Connor. 2010. Ginger (Zingiber officinale) reduces muscle pain caused by eccentric exercise. Journal of Pain 11 (9): 894-903.
- Kujala, U.M., S. Orava, J. Parkkari, J. Kaprio, and S. Sarna. 2003. Sports career-related musculoskeletal injuries: Long-term health effects on former athletes. Sports Medicine 33 (12): 869-875.
- Martin, C.K., T.S. Church, A.M. Thompson, C.P. Earnest, and S.N. Blair. 2009. Exercise dose and quality of life: A randomized controlled trial. Archives of Internal Medicine 169 (3): 269-278.
- Kardel, K.R., B. Johansen, N. Voldner, P. Ole Iversen, and T. Henriksen. 2009. Association between aerobic fitness in late pregnancy and duration of labor in nulliparous women. Acta Obstetricia et Gynecologica Scandinavica 88 (8): 948-952.
- 76. Sun, Y.-C., Y.-C. Hung, Y. Chang, and S.-C. Kuo. 2010. Effects of a prenatal yoga programme on the discomforts of pregnancy and maternal childbirth self-efficacy in Taiwan. Midwifery 26 (6): e31-e36.
- 77. Penttinen, J., and R. Erkkola. 1997. Pregnancy in endurance athletes. Scandinavian Journal of Medicine & Science in Sports 7 (4): 226-228.
- Varrassi, G., C. Bazzano, and W.T. Edwards. 1989. Effects of physical activity on maternal plasma beta-endorphin levels and perception of labor pain. American Journal of Obstetrics and Gynecology 160 (3): 707-712.
- 79. Lawrence, R.C., D.T. Felson, C.G. Helmick, et al. 2008. Estimates of the prevalence of arthritis and other rheumatic conditions in the United States: Part II. Arthritis & Rheumatism 58 (1): 26-35.
- Mancuso, C.A., M. Rincon, W. Sayles, and S.A. Paget. 2007. Comparison of energy expenditure from lifestyle physical activities between patients with rheumatoid arthritis and healthy controls. Arthritis Care & Research 57 (4): 672-678.
- 81. Wessel, J. 2004. The effectiveness of hand exercises for persons with rheumatoid arthritis: A systematic review. Journal of Hand Therapy 17 (2): 174-180.
- Stenström, C.H., and M.A. Minor. 2003. Evidence for the benefit of aerobic and strengthening exercise in rheumatoid arthritis. Arthritis Care & Research 49 (3): 428-434.
- 83. Guy, P. 2008. The role of physical activity in rheumatoid arthritis. Physiology & Behavior 94 (2): 270-275.
- Ottawa Panel Members, Ottawa Methods Group, L. Brosseau, G.A. Wells, et al. 2004. Ottawa Panel evidence-based clinical practice guidelines for therapeutic exercises in the management of rheumatoid arthritis in adults. Physical Therapy 84 (10): 934-972.
- Felson, D.T., J. Niu, M. Clancy, B. Sack, P. Aliabadi, and Y. Zhang. 2007. Effect of recreational physical activities on the development of knee osteoarthritis in older adults of different weights: The Framingham Study. Arthritis Care & Research 57 (1): 6-12.
- Fransen, M., S. McConnell, and M. Bell. 2002. Therapeutic exercise for people with osteoarthritis of the hip or knee. A systematic review. Journal of Rheumatology 29 (8): 1737-1745.
- Van Baar, M.E., W.J.J. Assendelft, J. Dekker, R.A.B. Oostendorp, and J.W.J. Bijlsma. 1999. Effectiveness of exercise therapy in patients with osteoarthritis of the hip or knee: A systematic review of randomized clinical trials. Arthritis & Rheumatism 42 (7): 1361-1369.
- Fransen, M., S. McConnell, G. Hernandez-Molina, and S. Reichenbach. 2010. Does land-based exercise reduce pain and disability associated with hip osteoarthritis? A meta-analysis of randomized controlled trials. Osteoarthritis and Cartilage 18 (5): 613-620.
- Fransen, M., S. McConnell, G. Hernandez-Molina, and S. Reichenbach. 2010. Does land-based exercise reduce pain and disability associated with hip osteoarthritis? A meta-analysis of randomized controlled trials. Osteoarthritis and Cartilage 18 (5): 613-620.
- Messier, S.P., R.F. Loeser, G.D. Miller, et al. 2004. Exercise and dietary weight loss in overweight and obese older adults with knee osteoarthritis: The arthritis, diet, and activity promotion trial. Arthritis & Rheumatism 50 (5): 1501-1510.
- 91. Freburger, J.K., G.M. Holmes, R.P. Agans, et al. 2009. The rising prevalence of chronic low back pain. Archives of Internal Medicine 169 (3): 251-258.
- Centers for Disease Control and Prevention (CDC). 2001b. Prevalence of disabilities and associated health conditions among adults—United States, 1999. Journal of the American Medical Association 285 (12): 1571.
- Hayden, J.A., M.W. van Tulder, and G. Tomlinson. 2005. Systematic review: Strategies for using exercise therapy to improve outcomes in chronic low back pain. Annals of Internal Medicine 142 (9): 776-785.
- 94. Liddle, S.D., G.D. Baxter, and J.H. Gracey. 2004. Exercise and chronic low back pain: What works? Pain 107 (1-2): 176-190.
- 95. Macedo, L.G, C.G Maher, J. Latimer, and J.H McAuley. 2009. Motor control exercise for persistent, nonspecific low back pain: A systematic review. Physical Therapy 89 (1): 9-25.
- Sherman, K.J., D.C. Cherkin, R.D. Wellman, et al. 2011. A randomized trial comparing yoga, stretching, and a self-care book for chronic low back pain. Archives of Internal Medicine. 171(22): 2019-2026.

- 97. Waller, B., J. Lambeck, and D. Daly. 2009. Therapeutic aquatic exercise in the treatment of low back pain: A systematic review. Clinical Rehabilitation 23 (1): 3-14.
- Chou, R., and L. Hoyt Huffman. 2007. Nonpharmacologic therapies for acute and chronic low back pain: A review of the evidence for an American Pain Society/ American College of Physicians clinical practice guideline. Annals of Internal Medicine 147 (7): 492-504.
- Kujala, U.M., S. Taimela, and T.Viljanen. 1999. Leisure physical activity and various pain symptoms among adolescents. British Journal of Sports Medicine 33 (5): 325-328.
- 100. Busch, V., and C. Gaul. 2008. Exercise in migraine therapy: Is there any evidence for efficacy? A critical review. Headache: The Journal of Head and Face Pain 48 (6): 890-899.
- 101. Dittrich, S.M., V. Günther, G. Franz, M. Burtscher, B. Holzner, and M. Kopp. 2008. Aerobic exercise with relaxation: Influence on pain and psychological well-being in female migraine patients. Clinical Journal of Sport Medicine 18 (4): 363-365. doi: 10.1097/JSM.0b013e31817efac9.
- 102. John, P.J., N. Sharma, C.M. Sharma, and A. Kankane. 2007. Effectiveness of yoga therapy in the treatment of migraine without aura: A randomized controlled trial. Headache: Journal of Head and Face Pain 47 (5): 654- 661.
- 103. Narin, S., L. Osün, D. Pinar, V. Erbas, V. Oztürk, and F. Idiman. 2003. The effects of exercise and exercise-related changes in blood nitric oxide level on migraine headache. Clinical Rehabilitation 17 (6): 624-630.
- 104. Varkey, E, Å. Cider, J. Carlsson, and M. Linde. 2011. Exercise as migraine prophylaxis: A randomized study using relaxation and topiramate as controls. Cephalalgia 31 (14): 1428-1438.
- 105. Diehm, C., A. Schuster, J.R. Allenberg, et al. 2004. High prevalence of peripheral arterial disease and co-morbidity in 6880 primary care patients: Cross-sectional study. Atherosclerosis 172 (1): 95-105.
- 106. McGrae McDermott, M., S. Mehta, and P. Greenland. 1999. Exertional leg symptoms other than intermittent claudication are common in peripheral arterial disease. Archives of Internal Medicine 159 (4): 387-392.
- 107. Hankey, G.J., P.E. Norman, and J.W. Eikelboom. 2006. Medical treatment of peripheral arterial disease. Journal of the American Medical Association 295 (5): 547-553.
- 108. Watson L., B. Ellis, and G.C. Leng. 2008. Exercise for intermittent claudication. Cochrane Database System Review 8 (4): CD000990.
- 109. Leng, G.C., B. Fowler, and E. Ernst. 2000. Exercise for intermittent claudication. Cochrane Database of Systematic Reviews (2): CD000990.
- 110. Galea, M.N., and S.R. Bray. 2007. Determinants of walking exercise among individuals with intermittent claudication: Does pain play a role? Journal of Cardiopulmonary Rehabilitation and Prevention 27 (2):107-113. doi: 10.1097/01.HCR.0000265045.36725.97.
- 111. Milani, R.V., and C.J. Lavie. 2007. The role of exercise training in peripheral arterial disease. Vascular Medicine 12 (4): 351-358.
- 112. Woolf, C.J., and R.J. Mannion. 1999. Neuropathic pain: Aetiology, symptoms, mechanisms, and management. The Lancet 353 (9168): 1959-1964.
- 113. Jensen, M.P., M.J. Chodroff, and R.H. Dworkin. 2007. The impact of neuropathic pain on health-related quality of life. Neurology 68 (15): 1178-1182.
- 114. Schmader, K.E. 2002. Epidemiology and impact on quality of life of postherpetic neuralgia and painful diabetic neuropathy. Clinical Journal of Pain 18 (6): 350-354.
- 115. Narayan, K.M.V, J.P. Boyle, L.S. Geiss, J.B. Saaddine, and T.J. Thompson. 2006. Impact of recent increase in incidence on future diabetes burden. Diabetes Care 29 (9): 2114-2116.
- 116. Dworkin, R.H., M. Backonja, M.C. Rowbotham, et al. 2003. Advances in neuropathic pain: Diagnosis, mechanisms, and treatment recommendations. Archives of Neurology 60 (11): 1524-1534.
- 117. Balducci, S., G. Iacobellis, L. Parisi, et al. 2006. Exercise training can modify the natural history of diabetic peripheral neuropathy. Journal of Diabetes and Its Complications 20 (4): 216-223.Ball, K., N.W. Burton, and W.J. Brown. 2009. A prospective study of overweight, physical activity, and depressive symptoms in young women. Obesity 17 (1): 66-71.
- 118. Hung, J.-W., C.-W. Liou, P.-W. Wang, et al. 2009. Effect of 12-week tai chi chuan exercise on peripheral nerve modulation in patients with type 2 diabetes mellitus. Journal of Rehabilitation Medicine 41 (11): 924-929.
- 119. Kuphal, K.E., E.E. Fibuch, and B.K. Taylor. 2007. Extended swimming exercise reduces inflammatory and peripheral neuropathic pain in rodents. Journal of Pain 8 (12): 989-997.
- 120. Shankarappa, S.A., E.S. Piedras-Rentería, and E.B. Stubbs. 2011. Forcedexercise delays neuropathic pain in experimental diabetes: Effects on voltage-activated calcium channels. Journal of Neurochemistry 118 (2): 224-236.
- 121. Stagg, N.J., H.P. Mata, M.M. Ibrahim, et al. 2011. Regular exercise reverses sensory hypersensitivity in a rat neuropathic pain model: Role of endogenous opioids. Anesthesiology 114 (4): 940-948. doi: 10.1097/ALN.0b013e318210f880.
- 122. Motl, R.W., E.M. Snook, and R.T. Schapiro. 2008. Symptoms and physical activity behavior in individuals with multiple sclerosis. Research in Nursing & Health 31 (5): 466-475.
- 123. Motl, R.W., and E. McAuley. 2009b. Symptom cluster as a predictor of physical activity in multiple sclerosis: Preliminary evidence. Journal of Pain and Symptom Management 38 (2): 270-280.
- 124. Motl, R.W., and E. McAuley. 2009a. Pathways between physical activity and quality of life in adults with multiple sclerosis. Health Psychology 28 (6): 682-689.
- 125. Motl, R.W., and J.L. Gosney. 2008. Effect of exercise training on quality of life in multiple sclerosis: A meta-analysis. Multiple Sclerosis 14 (1): 129-135.
- 126. Stuifbergen, A.K., H. Becker, S. Blozis, G. Timmerman, and V. Kullberg. 2003. A randomized clinical trial of a wellness intervention for women with multiple sclerosis. Archives of Physical Medicine and Rehabilitation 84 (4): 467-476.
- 127. Romberg, A., A. Virtanen, and J. Ruutiainen. 2005. Long-term exercise improves functional impairment but not quality of life in multiple sclerosis. Journal of Neurology 252 (7): 839-845.
- 128. Wolfe, F., K. Ross, J. Anderson, I.J. Russell, and L. Hebert. 1995. The prevalence and characteristics of fibromyalgia in the general population. Arthritis & Rheumatism 38 (1): 19-28.
- 129. Weir, P.T., G.A. Harlan, F.L. Nkoy, et al. 2006. The incidence of fibromyalgia and its associated comorbidities: A population-based retrospective cohort study based on international classification of diseases, 9th revision codes. Journal of Clinical Rheumatology 12 (3): 124-128. doi: 10.1097/01.rhu.0000221817.46231.18.
- 130. Jones, J., D.N. Rutledge, K. Dupree Jones, L. Matallana, and D.S. Rooks. 2008. Self-assessed physical function levels of women with fibromyalgia: A national survey. Women's Health Issues 18 (5): 406-412.
- 131. Kelley, G.A., K.S. Kelley, J.M. Hootman, and D.L. Jones. 2011. Effects of community-deliverable exercise on pain and physical function in adults with arthritis and other rheumatic diseases: A meta-analysis. Arthritis Care & Research 63 (1): 79-93.
- 132. Hauser, W. 2010. Efficacy of different types of aerobic exercise in fibromyalgia syndrome: A systematic review and meta-analysis of randomised controlled trials. Arthritis Research & Therapy 12:R79. doi: 10.1186/ar3002.
- 133.Ramel, J., R. Bannuru, M. Griffith, and C. Wang. 2009. Exercise for fibromyalgia pain: A meta-analysis of randomized controlled trials. Current Rheumatology Reviews 5 (4): 188-193.
- 134. Häuser, W., K. Thieme, and D.C. Turk. 2010. Guidelines on the management of fibromyalgia syndrome: A systematic review. European Journal of Pain 14 (1): 5-10.
- 135. Bennett, R., J. Jones, D. Turk, I.J. Russell, and L. Matallana. 2007. An internet survey of 2,596 people with fibromyalgia. BMC Musculoskeletal Disorders 8 (1): 27.
- 136. Artham, S.M., C.J. Lavie, and R.V. Milani. 2008. Cardiac rehabilitation programs markedly improve high-risk profiles in coronary patients with high psychological distress. Southern Medical Journal 101 (3): 262-267. doi: 10.1097/SMJ.0b013e318164dfa8.
- 137. Rushton, A., C. Wright, P. Goodwin, M. Calvert, and N. Freemantle. 2011. Physiotherapy rehabilitation post first lumbar discectomy: A systematic review and meta-

analysis of randomized controlled trials. Spine 36 (14): E961-E972. doi: 10.1097/BRS.0b013e3181f0e8f8.

- 138. Frost, H., S.E. Lamb, and S. Robertson. 2002. A randomized controlled trial of exercise to improve mobility and function after elective knee arthroplasty. Feasibility, results and methodological difficulties. Clinical Rehabilitation 16 (2): 200-209.
- 139. Beaupre, L.A, D. Lier, D.M Davies, and D.B.C Johnston. 2004. The effect of a preoperative exercise and education program on functional recovery, health related quality of life, and health service utilization following primary total knee arthroplasty. Journal of Rheumatology 31 (6): 1166-1173.
- 140. Unlu, E., E. Eksioglu, E. Aydog, S. Tolga Aydoð, and G. Atay. 2007. The effect of exercise on hip muscle strength, gait speed and cadence in patients with total hip arthroplasty: A randomized controlled study. Clinical Rehabilitation 21 (8): 706-711.
- 141. Goudas, L.C., R. Bloch, M. Gialeli-Goudas, J. Lau, and D.B. Carr. 2005. The epidemiology of cancer pain. Cancer Investigation 23 (2): 182-190.
- 142. Maddocks, M., S. Mockett, and A. Wilcock. 2009. Is exercise an acceptable and practical therapy for people with or cured of cancer? A systematic review. Cancer Treatment Reviews 35 (4): v383-390.
- 143. Kendall, A.R., M. Mahue-Giangreco, C.L. Carpenter, P.A. Ganz, and L. Bernstein. 2005. Influence of exercise activity on quality of life in longterm breast cancer survivors. Quality of Life Research 14 (2): 361-371.
- 144. Segal, R., W. Evans, D. Johnson, et al. 2001. Structured exercise improves physical functioning in women with stages I and II breast cancer: Results of a randomized controlled trial. Journal of Clinical Oncology 19 (3): 657- 665.
- 145. Schmitz, K.H., J. Holtzman, K.S. Courneya, L.C. Mâsse, S. Duval, and R. Kane. 2005. Controlled physical activity trials in cancer survivors: A systematic review and meta-analysis. Cancer Epidemiology Biomarkers & Prevention 14 (7): 1588-1595.
- 146. McNeely, M.L., M.B. Parliament, H. Seikaly, et al. 2008. Effect of exercise on upper extremity pain and dysfunction in head and neck cancer survivors. Cancer 113 (1): 214-222.
- 147. Donta, S.T., D.J. Clauw, C.C. Engel, et al. and for the VA Cooperative Study #470 Study Group. 2003. Cognitive behavioral therapy and aerobic exercise for Gulf War veterans' illnesses. Journal of the American Medical Association 289 (11): 1396-1404.
- 148. Posadzki, P., E. Ernst, R. Terry, and M. Soo Lee. 2011. Is yoga effective for pain? A systematic review of randomized clinical trials. Complementary Therapies in Medicine 19 (5): 281-287.

- 1. Wylie, R.C. 1989. Measures of self-concept. Lincoln: University of Nebraska Press.
- 2. Baumeister, R.F. 1993. Self-esteem: The puzzle of low self-regard. New York: Plenum Press.
- Trzesniewski, K.H., M.B. Donnellan, T.E. Moffitt, R.W. Robins, R. Poulton, and A. Caspi. 2006. Low self-esteem during adolescence predicts poor health, criminal behavior, and limited economic prospects during adulthood. Developmental Psychology 42 (2): 381-390.
- 4. Rector, N.A., and D. Roger. 1997. The stress buffering effects of self-esteem. Personality & Individual Differences 23 (5): 799-808.
- Harter, S. 1996. Historical roots of contemporary issues involving selfconcept. In Handbook of self-concept: Developmental, social, and clinical considerations, edited by B.A. Bracken, 1-37. New York: Wiley
- 6. Fox, K.R. 2000. Self-esteem, self-perceptions and exercise. International Journal of Sport Psychology 31 (2): 228-240.
- Marsh, H.W. 1997. The measurement of physical self-concept: A construct validation approach. In The physical self: From motivation to well-being. edited by K.R. Fox. Champaign, IL: Human Kinetics.
- 8. Shavelson, R.J., J.J. Hubner, and G.C. Stanton. 1976. Self-concept: Validation of construct interpretations. Review of Educational Research 46 (3): 407-441.
- 9. Kendzierski, D. 1994. Schema theory: An information processing focus. in Advances in Exercise Adherence. edited by R.K. Dishman, Champaign, IL: Human Kinetics.
- 10. Rathbone, J.L., F.L. Bacon, and C.H. Keene 1932 Foundations of Health. Boston: Houghton Mifflin.
- Blascovich, J., and J. Tomaka. 1991. Measures of self-esteem. In Measures of personality and social psychological attitudes, edited by J.P. Robinson, P.R. Shaver, and L.S. Wrightsman. San Diego, CA: Academic Press.
- 12. Fox, K.R., and C.B. Corbin.1989. The Physical Self-Perception Profile: Development and preliminary validation. Journal of Sport & Exercise Psychology 11 (4): 408-430.
- 13. Sonstroem, R.J. 1998. Physical self-concept: Assessment and external validity. Exercise and Sport Sciences Reviews 26: 133-164.
- 14. Sonstroem, R.J., and W.P. Morgan. 1989. Exercise and self-esteem: Rationale and model. Medicine & Science in Sports & Exercise 21 (3): 329-337.
- 15. Biddle, S.J.H. 1997. Cognitive theories of motivation and the physical self. In The physical self: From motivation to well-being, edited by K.R. Fox. Champaign, IL: Human Kinetics.
- 16. Sonstroem, R.J., L.L. Harlow, and L. Josephs. 1994. Exercise and selfesteem: Validity of model expansion and exercise associations. Journal of Sport & Exercise Psychology 16 (1): 29-42.
- McAuley, E., S. Elavsky, R.W., J.F. Konopack, L. Hu, and D.X. Marquez. 2005. Physical activity, self-efficacy, and self-esteem: Longitudinal relationships in older adults. Journals of Gerontology. Series B, Psychological Sciences and Social Sciences 60 (5): P268-P275.
- McAuley, E., S.L. Mihalko, and S.M. Bane. 1997. Exercise and self-esteem in middle-aged adults: Multidimensional relationships and physical fitness and selfefficacy influences. Journal of Behavioral Medicine 20 (1): 67-83.
- 19. Elavsky, S. 2010. Longitudinal examination of the exercise and self-esteem model in middle-aged women. Journal of Sport & Exercise Psychology 32: 862-880.
- Moore, J.B., N.G. Mitchell, W.S. Bibeau, and J.B. Bartholomew. 2011. Effects of a 12-week resistance exercise program on physical selfperceptions in college students. Research Quarterly for Exercise and Sport 82, 291-301
- 21. Fox, K.R. 1990. The Physical Self Perception Profile manual. DeKalb, IL: Office for Health Promotion, Northern Illinois University.
- 22. Fox, K.R. 1997. The physical self and processes in self-esteem development. In The physical self: From motivation to well-being, edited by K.R. Fox. Champaign, IL: Human Kinetics.
- 23. Hirsch, B. and D.T. Lykken. 1993. Age and the self-perception of ability: A twin study analysis. Psychology & Aging 8 (1): 72-80.
- Orth, U., K.H. Trzesniewski, and R.W. Robins. 2010. Self-esteem development from young adulthood to old age: A cohort-sequential longitudinal study. Journal of Personality and Social Psychology 98 (4): 645-658.
- 25. Sparks, A.C. 1997. Reflections on the socially constructed physical self. In The physical self: From motivation to well-being, edited by K.R. Fox. Champaign, IL: Human Kinetics.
- 26. Marsh, H.W. 1999. Cognitive discrepancy models: Actual, ideal, potential, and future self-perspectives of body image. Social Cognition 17 (1): 46-75.
- Deci, E.L., and R.M. Ryan. (1991). A motivational approach to self: Integration in personality. In R. Dienstbier (Ed.), Nebraska symposium on motivation: Perspectives on motivation, 38 (pp. 237-288). Lincoln, NE: University Of Nebraska Press.
- Deci, E.L., and R.M. Ryan. 1980. The empirical exploration of intrinsic motivational processes. In L. Berkowitz (Ed.), Advances in experimental social psychology (pp. 39-80). New York: Academic Press.
- 29. Davis, C. 1997. Body image, exercise, and eating disorders. In The physical self: From motivation to well-being, edited by K.R. Fox. Champaign, IL: Human Kinetics.
- 30. Perrin, E.M., J. Boone-Heinonen, A.E. Field, T. Coyne-Beasley, and P. Gordon-Larsen. 2010. Perception of overweight and self-esteem during adolescence.

International Journal of Eating Disorders 43 (5): 447-454.

- 31. Marsh, H.W., J. Hey, L.A. Roche, and C. Perry. 1997. Structure of physical self-concept: Elite athletes and physical education students. Journal of Educational Psychology 89 (2): 369-380.
- 32. Fox, K.R. 1998. Advances in the measurement of the physical self. In Advances in sport and exercise psychology measurement, edited by J.L. Duda. Morgantown, WV: Fitness Information Technology
- 33. Thompson, J. 2004. The (mis)measurement of body image: Ten strategies to improve assessment for applied and research purposes. Body Image 1 (1): 7-14.
- 34. Secord, P.F., and S.M. Jourard. 1953. The appraisal of body-cathexis: Bodycathexis and the self. Journal of Consulting Psychology 17: 343-347.
- 35. Franzoi, S.L., and S.A. Shields. 1984. The Body Esteem Scale: Multidimensional structure and sex differences in a college population. Journal of Personality Assessment 48 (2): 173-178.
- 36. Rowe, D.A., J. Benson, and T.A. Baumgartner. 1999. Development of the Body Self-Image Questionnaire. Measurement in Physical Education and Exercise Science 3 (4): 223-248.
- 37. Cash, T.F. 2000. Multidimensional Body-Self Relations Questionnaire: MBSRQ user's manual. Norfolk, VA: Old Dominion University.
- Hormes, J.M., L.A. Lytle, C.R. Gross, R.L. Ahmed, A.B. Troxel, and K.H. Schmitz. 2008. The body image and relationships scale: Development and validation of a measure of body image in female breast cancer survivors. Journal of Clinical Oncology 26 (8): 1269.
- 39. Harter, S. 1982. The Perceived Competence Scale for Children. Child Development 53 (1): 87-97.
- 40. Fitts, W.H. 1965. Tennessee Self-Concept Scale: Manual. Los Angeles: Western Psychological Services.
- 41. Roid, G.H., and W.H. Fitts. 1994. Tennessee self-concept scale [revised manual]. Los Angeles: Western Psychological Services.
- 42. Marsh, H.W., I.D. Smith, and J. Barnes. 1983. Multitrait-multimethod analyses of the Self-Description Questionnaire: Student-teacher agreement on multidimensional ratings of student self-concept. American Educational Research Journal 20 (3): 333-357.
- 43. Marsh, H.W., J. Parker, and J. Barnes. 1985. Multidimensional adolescent self-concepts: Their relationship to age, sex, and academic measures. American Educational Research Journal 22 (3): 422-444.
- 44. Marsh, H.W., and R. O'Neill. 1984. Self Description Questionnaire III: The construct validity of multidimensional self-concept ratings by late adolescents. Journal of Educational Measurement 21 (2): 153-174. Marsh, H.W., J. Parker, and J. Barnes. 1985. Multidimensional adolescent.
- 45. Harter, S. 1985. Competence as a dimension of self-evaluation: Toward a comprehensive model of self-worth. In The development of the self, edited by R.H. Leahy. New York: Academic Press.
- 46. Harter, S.. Cognitive-developmental processes in the integration of concepts about emotions and the self. Social Cognition 4 (2): 119-151.
- 47. Lindwall, M., H. Asci, and M.S. Hagger. 2011. Factorial validity and measurement invariance of the Revised Physical Self-Perception Profile (PSPP-R) in three countries. Psychology, Health & Medicine 16 (1): 115-128.
- 48. Marsh, H.W. 1990. The structure of academic self-concept: The Marsh/Shavelson model. Journal of Educational Psychology 82 (4): 623-636.
- 49. Marsh, H.W. 1993. Physical fitness self-concept: Relations of physical fitness to field and technical indicators for boys and girls aged 9-25. Journal of Sport & Exercise Psychology 15 (2): 184-206.
- Marsh, H.W., G.E. Richards, S. Johnson, and L. Roche. 1994. Physical SelfDescription Questionnaire: Psychometric properties and a multitraitmultimethod analysis of relations to existing instruments. Journal of Sport & Exercise Psychology 16 (3): 270-305.
- Marsh, H.W. 1998. Age and gender effects in physical self-concepts for adolescent elite athletes and nonathletes: A multicohort-multioccasion design. Journal of Sport & Exercise Psychology 20 (3): 237-259.
- Dishman, R.K., D.P. Hales, M.J. Almeida, K.A. Pfeiffer, M. Dowda, and R.R. Pate. 2006. Factorial validity and invariance of the Physical SelfDescription Questionnaire among black and white adolescent girls. Ethnicity & Disease 16 (2): 551-558.
- 53. Marsh, H.W., A.J. Martin, and S. Jackson. 2010. Introducing a short version of the physical self description questionnaire: New strategies, short-form evaluative criteria, and applications of factor analyses. Journal of Sport & Exercise Psychology 32 (4): 438-482.
- 54. Rosenberg, M. 1965. Society and the adolescent self-image. Princeton, NJ: University Press.
- 55. Coopersmith, S. 1967. The antecedents of self-esteem. San Francisco: Freeman.
- 56. Janis, I.L., and P.B. Field. 1959. Sex differences and factors related to personality. In Personality and persuasibility. edited by C.I. Hovland and I.L. Janis. New Haven, CT: Yale University Press
- 57. Fleming, J.S., and W.A. Watts. 1980. The dimensionality of self-esteem: Some results of a college sample. Journal of Personality & Social Psychology 39 (5): 921-929.
- 58. Fleming, J.S., and B.E. Courtney. 1984. The dimensionality of self-esteem:II. Hierarchical facet model for revised measurement scales. Journal of Personality & Social Psychology 46 (2): 404-421.
- 59. Sonstroem, R.J. 1978. Physical estimation and attraction scales: Rationale and research. Medicine and Science in Sports 10 (Summer): 97-102.
- 60. McAuley, E. Physical activity and psychosocial outcomes. In Physical activity, fitness, and health: International proceedings and consensus statement, edited by Bouchard, C. and R.J. Shephard. Champaign, IL: Human Kinetics
- Gruber, J.J. 1986. Physical activity and self-esteem development in children: A meta-analysis. In Effects of physical activity on children. edited by G.A Stull and E.M. Eckert. The Academy Papers 19: 330-348.
- 62. Anshel, M.H., D. Muller, and V.L. Owens. 1986. Effect of a sports camp experience on the multidimensional self-concepts of boys. Perceptual & Motor Skills 63 (2, Pt 1): 363-366.
- 63. Strong, W.B., R.M. Malina, C.J. Blimkie, et al. 2005. Evidence based physical activity for school-age youth. Journal of Pediatrics 146 (6): 732-737. doi: 10.1016/j. jpeds.2005.01.055.
- 64. Ekeland, E., F. Heian, K.B. Hagen, J. Abbott, and L. Nordheim. 2004. Exercise to improve self-esteem in children and young people. Cochrane Database of Systematic Reviews. 1: CD003683.
- 65. Lirgg, C.D. 1991. Gender differences in self-confidence in physical activity: A meta-analysis of recent studies. Journal of Sport & Exercise Psychology 13 (3): 294-310.
- 66. Spence, J.C., K.R. McGannon, and P. Poon. 2005. The effect of exercise on global self-esteem: A quantitative review. Journal of Sport & Exercise Psychology 27 (3): 311-334.
- 67. Desharnais, R., J. Jobin, C. Cote, L. Levesque, and G. Godin. 1993. Aerobic exercise and the placebo effect: A controlled study. Psychosomatic Medicine 55: 149-154.
- 68. Campbell, A., and H.A. Hausenblas. 2009. Effects of exercise interventions on body image: A meta-analysis. Journal of Health Psychology 14 (6): 780-793.
- Boyd, K.R., and D.W. Hrycaiko. 1997. The effect of a physical activity intervention package on the self-esteem of pre-adolescent and adolescent females. Adolescence 32 (Fall): 693-708.
- 70. Alpert, B., T.M. Field, S. Goldstein, and S. Perry. 1990. Aerobics enhances cardiovascular fitness and agility in preschoolers. Health Psychology 9 (1): 48-56.
- 71. Faigenbaum, A., L.D. Zaichkowsky, W.L. Wescott, et al. 1997. Psychological effects of strength training on children. Journal of Sport Behavior 20 (2): 164-175.
- Walters, S.T., and J.E. Martin. 2000. Does aerobic exercise really enhance self-esteem in children? A prospective evaluation in 3rd-5th graders. Journal of sport behavior 23 (1): 53-62.
- Goldfield, G.S., R. Mallory, T. Parker, et al. 2007. Effects of modifying physical activity and sedentary behavior on psychosocial adjustment in overweight/obese children. Journal of Pediatric Psychology 32 (7): 783-793.

- 74. Calhoun, L.G. 1999. Gender and ethnic differences in the relationship between body esteem and self-esteem. Journal of Psychology 133 (4): 357-368.
- Bartlewski, P.P., J L. Van Raalte, and B.W. Brewer. 1996. Effects of aerobic exercise on the social physique anxiety and body esteem of female college students. Women in Sport and Physical Activity Journal 5 (2): 49-61.
- McAuley, E., S.M. Bane, D.L. Rudolph, and C.L. Lox. 1995. Physique anxiety and exercise in middle-aged adults. Journals of Gerontology: Series B: Psychological Sciences and Social Sciences 50 (5): 229-235.
- 77. Palmer, L.K. 1995. Effects of a walking program on attributional style, depression, and self-esteem in women. Perceptual & Motor Skills 81 (3, Pt 1): 891-898.
- Brown, R.D., and J.M. Harrison. 1986. The effects of a strength training program on the strength and self-concept of two female age groups. Research Quarterly for Exercise and Sport 57: 315-320.
- 79. Caruso, C.M., and D.L. Gill. 1992. Strengthening physical self-perceptions through exercise. Journal of Sports Medicine and Physical Fitness 32: 416-427.
- Van Vorst, J.G., J. Buckworth, and C. Mattern. 2002. Physical self-concept and strength changes in college weight training classes. Research Quarterly for Exercise and Sport 73 (1): 113-117.
- 81. Stein, P.N., and R.W. Motta. 1992. Effects of aerobic and nonaerobic exercise on depression and self-concept. Perceptual & Motor Skills 74 (1): 79-89.
- Opdenacker, J., C. Delecluse, and F. Boen. 2009. The longitudinal effects of a lifestyle physical activity intervention and a structured exercise intervention on physical self-perceptions and self-esteem in older adults. Journal of Sport & Exercise Psychology 31 (6): 743-760.
- 83. McAuley, E., K.S. Courneya, D.L. Rudolph, and C.L. Lox. 1994. Enhancing exercise adherence in middle-aged males and females. Preventive Medicine. 23: 498-506.
- Mutrie, N. 1997. The therapeutic effects of exercise on the self. In The physical self: From motivation to well-being, edited by K.R. Fox. Champaign, IL: Human Kinetics.
- 85. American College of Sports Medicine. 2009. Guidelines for exercise testing and prescription. 8th ed. Philadelphia: Wolters Kluwer; Lippincott Williams & Wilkins.
- Stewart, A.L., K.M. Mills, P.G. Sepsis, et al. 1997. Evaluation of CHAMPS, a physical activity promotion program for older adults. Annals of Behavioral Medicine 19 (4): 353-361.
- 87. Wilfley, D., and J.T. Kunce. 1986. Differential physical and psychological effects of exercise. Journal of Counseling Psychology. 33 (3): 337.
- Ossip-Klein, D.J., E.J. Doyne, E.D. Bowman, K.M. Osborn, and R.A. Neimeyer. 1989. Effects of running or weight lifting on self-concept in clinically depressed women. Journal of Consulting and Clinical Psychology. 57 (1): 158.
- Bartlo, P., and P.J. Klein. 2011. Physical activity benefits and needs in adults with intellectual disabilities: Systematic review of the literature. American Journal on Intellectual and Developmental Disabilities 116 (3): 220-232.
- Dykens, E.M., and D.J. Cohen. Effects of Special Olympics International on Social Competence in Persons with Mental Retardation. Journal of the American Academy of Child and Adolescent Psychiatry 35, 2 (Feb 1996): 223-229.
- Rimmer, J.H., M.D. Chen, J.A. McCubbin, C. Drum, and J. Peterson. 2010. Exercise intervention research on persons with disabilities: What we know and where we need to go. American Journal of Physical Medicine & Rehabilitation 89 (3): 249-263.
- Schmitz, K.H., K.S. Courneya, C. Matthews, et al. 2010. American College of Sports Medicine roundtable on exercise guidelines for cancer survivors. Medicine & Science in Sports & Exercise 42 (7): 1409-1426.
- Motl, R.W., J.F. Konopack, E. McAuley, S. Elavsky, G.J. Jerome, and D.X. Marquez. 2005. Depressive symptoms among older adults: Long-term reduction after a physical activity intervention. Journal of Behavioral Medicine 28 (4): 385-394.
- Dishman, R.K., D.P. Hales, K.A. Pfeiffer, et al. 2006. Physical self-concept and self-esteem mediate cross-sectional relations of physical activity and sport participation with depression symptoms among adolescent girls. Health Psychology 25 (3): 396-407.
- Cole, D.A., S.E. Maxwell, J.M. Martin, et al. 2001. The development of multiple domains of child and adolescent self-concept: A cohort sequential longitudinal design. Child Development 72 (6): 1723-1746.
- 96. Marsh, H.W., and A.S. Yeung. 1998. Top-down, bottom-up, and horizontalmodels: The direction of causality in multidimensional, hierarchical selfconcept models. Journal of Personality and Social Psychology 75 (2):5509-5527.
- 97. Desharnais, R., J. Jobin, C. Cote, L. Levesque, and G. Godin. 1993. Aerobic exercise and the placebo effect: A controlled study. Psychosomatic Medicine 55: 149-154.
- 98. Davis, C. 2000. Exercise abuse. International Journal of Sport Psychology 31: 278-289. Blumenthal, J.A., S. Rose, and J.L. Chang. 1985. Anorexia nervosa and exercise. Implications from recent findings. Sports Medicine 2 (Jul-Aug): 237-247.
- 99. Dishman, R.K. 1985. Medical Psychology in Exercise and Sport. Medical Clinics of North America 69, 1: 123-43.
- 100. Einerson, J., A. Ward, and P. Hanson. 1988. Exercise responses in females with anorexia nervosa. International Journal of Eating Disorders 7: 253-260.
- 101. Sundgot-Borgen, J. 1994. Risk and trigger factors for the development of eating disorders in female elite athletes. Medicine & Science in Sports & Exercise 26 (Apr): 414-419.
- 102. Sundgot-Borgen, J., and M.K. Torstveit. 2004. Prevalence of eating disorders in elite athletes is higher than in the general population. Clinical Journal of Sport Medicine 14 (1): 25-32.
- 103.O'Connor, P.J., and J.C. Smith. 1999. Physical activity and eating disorders. In Lifestyle medicine, edited by J.M. Rippe. Cambridge, MA: Blackwell Science.
- 104. Phillips, K.A., S. Wilhelm, L.M. Koran, et al. 2010. Body dysmorphic disorder: Some key issues for DSM-V. Depression and Anxiety 27 (6): 573-591.
- 105. Phillips, K.A., R.L. O'Sullivan, and H.J. Pope. 1997. Muscle dysmorphia [letter]. Journal of Clinical Psychiatry 58 (Aug): 361.
- 106. Gruber, A.J., and H.J. Pope. 2000. Psychiatric and medical effects of anabolic-androgenic steroid use in women. Psychotherapy and Psychosomatics 69: 19-26.
- 107. Pope, H.J., A.J. Gruber, P. Choi, R. Olivardia, and K.A. Phillips. 1997. Muscle dysmorphia. An underrecognized form of body dysmorphic disorder. Psychosomatics 38 (Nov-Dec): 548-557.
- 108. Pope, H.J., A.J. Gruber, B. Mangweth, B. Bureau, C. deCol, R. Jounent, and J.I. Hudson. 2000. Body perception among men in three countries American Journal of Psychiatry 157: 1297-1231.
- 109. Olivardia, R., H.J. Pope, and J.I. Hudson. 2000. Muscle dysmorphia in male weightlifters: A case-control study. American Journal of Psychiatry 157 (Aug): 1291-1296.
- 110. McFarland, M.B., and P.L. Kaminski. 2009. Men, muscles, and mood: The relationship between self-concept, dysphoria, and body image disturbances. Eating Behaviors 10 (1): 68-70.
- 111. Phillips, K.A., G. Quinn, and R.L. Stout. 2008. Functional impairment in body dysmorphic disorder: A prospective, follow-up study. Journal of Psychiatric Research 42 (9): 701-707.
- 112. Morgan, W.P. 1979b. Negative addiction in runners. Physician and Sportsmedicine 7: 57-70.
- 113. Sacks, M.H., and M.L. Sachs. 1981. Psychology of running. Champaign, IL:Human Kinetics.
- 114. Heaney, J.L., A.T. Ginty, D. Carroll, and A.C. Phillips. 2011. Preliminary evidence that exercise dependence is associated with blunted cardiac and cortisol reactions to acute psychological stress. International Journal of Psychophysiology 79 (2): 323-329.
- 115. Zmijewski, C.F., and M.O. Howard. 2003. Exercise dependence and attitudes toward eating among young adults. Eating Behaviors 4 (2): 181-196.

PART 3

- 1. Conn, V.S., A.R. Hafdahl, and D.R. Mehr. 2011. Interventions to increase physical activity among healthy adults: A meta-analysis of outcomes. American Journal of Public Health 101 (4): 751-758.
- 2. Dishman, R.K., and J. Buckworth 1996b. Increasing physical activity: A quantitative synthesis. Medicine & Science in Sports & Exercise 28 (6): 706-719.
- 3. Leonard, F.E. 1919. Pioneers of modern physical training. New York: Association Press.
- Rhodes, R.E., and L.A. Pfaeffli. 2010. Mediators of physical activity behaviour change among adult non-clinical populations: A review update. International Journal
 of Behavioral Nutrition and Physical Activity 7: 37.

- 1. Dishman, R.K., J.F. Sallis, and D.R. Orenstein, 1985, The determinants of physical activity and exercise. Public Health Reports 100 (2): 161.
- Trost, S.G., N. Owen, A.E. Bauman, J.F. Sallis, and W. Brown. 2002. Correlates of adults' participation in physical activity: Review and update. Medicine & Science in Sports & Exercise 34 (12): 1996-2001.
- 3. Dishman, R.K., and J. Buckworth 1996b. Increasing physical activity: A quantitative synthesis. Medicine & Science in Sports & Exercise 28 (6): 706-719.
- Perri, M.G., S.D. Anton, P.E. Durning, et al. 2002. Adherence to exercise prescriptions: Effects of prescribing moderate versus higher levels of intensity and frequency. Health Psychology 21 (5): 452-458.
- 5. Kohl, H.W., and W. Hobbs. 1998. Development of physical activity behavior among children and adolescents. Pediatrics 101 (Suppl. 5): 549-554.
- Troiano, R.P., D. Berrigan, K.W. Dodd, L.C. Masse, T. Tilert, and M. McDowell. 2008. Physical activity in the United States measured by accelerometer. Medicine & Science in Sports & Exercise 40 (1): 181-188.
- 7. Caspersen, C.J., M.A. Pereira, and K.M. Curran. 2000. Changes in Physical Activity Patterns in the United States, by Sex and Cross-Sectional Age. Medicine and Science in Sports and Exercise 32, 9: 1601-1609.
- Chung, S., M.E. Domino, S.C. Stearns, and B.M. Popkin. 2009. Retirement and physical activity: Analyses by occupation and wealth. American Journal of Preventive Medicine 36 (5): 422-428.
- 9. Stone, E.J., T.L. McKenzie, G.J. Welk, and M. Booth. 1998. Effects of physical activity interventions in youth: Review and synthesis. American Journal of Preventive Medicine 15 (4): 298-315.
- Whitt-Glover, M.C., W.C. Taylor, M.F. Floyd, M.M. Yore, A.K. Yancey, and C.E. Matthews. 2009. Disparities in physical activity and sedentary behaviors among U.S. children and adolescents: Prevalence, correlates, and intervention implications. Journal of Public Health Policy 30 (Suppl. 1): S309-S334.
- 11. Lowry, R., S.M. Lee, J.E. Fulton, and L. Kann. 2009. Healthy People 2010 objectives for physical activity, physical education, and television viewing among adolescents: National trends from the Youth Risk Behavior Surveillance System, 1999-2007. Journal of Physical Activity & Health 6 (Suppl. 1): S36-S45.
- 12. Sallis, J.F., J.J. Prochaska, and W.C. Taylor. 2000. A review of correlates of physical activity of children and adolescents. Medicine & Science in Sports & Exercise 32: 963-975.
- 13. Sallis, J.F., and N. Owen. 1999. Physical activity and behavioral medicine. Thousand Oaks, CA: Sage.
- 14. U.S. Department of Health and Human Services (USDHHS). 2010. Healthy people 2020. Washington, DC: U.S. Government Printing Office.
- Van Der Horst, K., M.J.C.A. Paw, J.W.R. Twisk, and W. Van Mechelen. 2007. A brief review on correlates of physical activity and sedentariness in youth. Medicine & Science in Sports & Exercise 39 (8): 1241-1250. doi: 10.1249/mss.0b013e318059bf35.
- 16. Kohl, H.W., and W. Hobbs. 1998. Development of physical activity behavior among children and adolescents. Pediatrics 101 (Suppl. 5): 549-554.
- 17. Sallis, J.F., B.G. Simons-Morton, E.J. Stone, et al. 1992. Determinants of
- 18. physical activity and interventions in youth. Medicine & Science in Sports
- 19. & Exercise 24 (6): S248-S257
- lowry, R., S.M. Lee, J.E. Fulton, and L. Kann. 2009. Healthy People objectives for physical activity, physical education, and television viewing among adolescents: National trends from the Youth Risk Behavior Surveillance System, 1999-2007. Journal of Physical Activity & Health 6 (Suppl. 1): S36-S45.
- Crespo, C.J., E. Smit, R.E. Andersen, O. Carter-Pokras, and B.E. Ainsworth. 2000. Race/ethnicity, social class and their relation to physical inactivity during leisure time: Results from the third National Health and Nutrition Examination Survey, 1988-1994. American Journal of Preventive Medicine 18 (1): 46-53.
- Whitt-Glover, M.C., W.C. Taylor, M.F. Floyd, M.M. Yore, A.K. Yancey, and C.E. Matthews. 2009. Disparities in physical activity and sedentary behaviors among U.S. children and adolescents: Prevalence, correlates, and intervention implications. Journal of Public Health Policy 30 (Suppl. 1): S309-S334.
- 23. U.S. Department of Health and Human Services (USDHHS). 1996. Physical activity and health: A report of the surgeon general. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion.
- 24. Anderson, L.B. 1996. Tracking of risk factors for coronary heart disease from adolescence to young adulthood with special emphasis on physical activity and fitness: A longitudinal study.
- 25. Kaplan, G.A., W.J. Strawbridge, R.D. Cohen, and L.R. Hungerford. 1996. Natural history of leisure-time physical activity and its correlates: Associations with mortality from all causes and cardiovascular disease over 28 years. American Journal of Epidemiology 144 (8): 793-797.
- Schmitz, K., S.A. French, and R.W. Jeffery. 1997. Correlates of changes in leisure time physical activity over 2 years: The Healthy Worker Project. Preventive Medicine 26: 570-579.
- 27. Franklin, B.A. 1988. Program factors that influence exercise adherence: Practical adherence skills for the clinical staff. In Exercise adherence, edited by R.K. Dishman. Champaign, IL: Human Kinetics.
- 28. Rowland, T.W. 1998. The biological basis of physical activity. Medicine & Science in Sports & Exercise 30 (3): 392-399.
- 29. Stubbe, J.H., D.I. Boomsma, J.M. Vink, et al. 2006. Genetic influences on exercise participation in 37,051 twin pairs from seven countries. PLoS ONE 1: e22.
- 30. Lightfoot, J.T. 2011. Current understanding of the genetic basis for physical activity. Journal of Nutrition 141 (3): 526.
- Wilmore, J.H., A.S. Leon, D.C. Rao, J.S. Skinner, J. Gagnon, and C. Bouchard. 1997. Genetics, response to exercise, and risk factors: the HERITAGE Family Study. World Review of Nutrition & Dietetics 81: 72-83.
- 32. Bandura, A. 1997. Self-efficacy: The exercise of control. New York: W.H. Freeman and Company.
- 33. Ashford, S., J. Edmunds, and D.P. French. 2010. What is the best way to change self-efficacy to promote lifestyle and recreational physical activity? A systematic review with meta-analysis. British Journal of Health Psychology 15 (2): 265-288.
- 34. Blanchard, C., M. Fortier, S. Sweet, et al. 2007. Explaining physical activity levels from a self-efficacy perspective: The physical activity counseling trial. Annals of Behavioral Medicine 34 (3): 323-328.
- 35. McAuley, E., and B. Blissmer. 2000. Self-efficacy determinants and consequences of physical activity. Exercise and Sport Sciences Reviews 28: 85-88.
- Sallis, J.F., W.L. Haskell, S.P. Fortmann, K.M. Vranizan, C.B. Taylor, and D.S. Solomon. 1986. Predictions of adoption and maintenance of physical activity in a community sample. Preventive Medicine 15: 331-341.
- Lox, C.L., E. McAuley, and R.S. Tucker. 1995. Exercise as an intervention for enhancing subjective well-being in an HIV-1 population. Journal of Sport & Exercise Psychology; Journal of Sport & Exercise Psychology. 17 (4): 345-362.
- 38. McAuley, E., C.L. Lox, and S.C. Duncan. 1993. Long-term maintenance of exercise, self-efficacy, and physiological change in older adults. Journal of Gerontology

48 (4): 218-224.

- 39. Godin, G. 1994. Social-cognitive models. In Advances in exercise adherence, edited by R.K. Dishman. 2nd ed. Champaign, IL: Human Kinetics.
- 40. Daly, J., A.P. Sindone, D.R. Thompson, K. Hancock, E. Chang, and P. Davidson. 2002. Barriers to participation in and adherence to cardiac rehabilitation programs: A critical literature review. Progress in Cardiovascular Nursing 17 (1): 8-17.
- 41. Knapp, D.N. 1988. Behavioral management techniques and exercise promotion. In Exercise adherence, edited by R.K. Dishman. Champaign, IL: Human Kinetics.
- 42. Sonstroem, R.J. 1988. Psychological models. In Exercise adherence: its impact on public health, edited by R.K. Dishman. Champaign, IL: Human Kinetics.
- Biddle, S., D. Akande, N. Armstrong, M. Ashcroft, R. Brooke, and M. Goudas. 1996. The self-motivation inventory modified for children: Evidence on psychometric properties and its use in physical exercise. International Journal of Sport Psychology. 27 (3): 237-250.
- Motl, R.W., R.K. Dishman, D.S. Ward, et al. 2002. Examining social cognitive determinants of intention and physical activity among black and white adolescent girls using structural equation modeling. Health Psychology. 21 (5): 459-467.
- 45. André N., and Dishman R.K. 2012. Evidence for the construct validity of self-motivation as a correlate of exercise adherence in French older adults. Journal of Aging and Physical Activity 20 (2): 231-245.
- 46. O'Shea, S.D., N.F. Taylor, and J.D. Paratz. 2007. Factors affecting adherence to progressive resistance exercise for persons with COPD. Journal of Cardiopulmonary Rehabilitation and Prevention 27 (3): 166-174.
- 47. Rodgers, W.M., C.R. Hall, L.R. Duncan, E. Pearson, and M.I. Milne. 2010. Becoming a regular exerciser: Examining change in behavioural regulations among exercise initiates. Psychology of Sport and Exercise 11 (5): 378-386.
- Buckworth, J., R.E. Lee, G. Regan, L.K. Schneider, and C.C. DiClemente. 2007. Decomposing intrinsic and extrinsic motivation for exercise: Application to stages of motivational readiness. Psychology of Sport and Exercise 8 (4): 441-461.
- 49. Dishman, R.K., R.W. Motl, R. Saunders, et al. 2002. Factorial invariance and latent mean structure of questionnaires measuring social-cognitive determinants of physical activity among black and white adolescent girls. Preventive Medicine. 34 (1): 100-108.
- Bopp, M., S. Wilcox, M. Laken, K. Butler, R.E. Carter, L. McClorin, and A. Yancey. 2006. Factors associated with physical activity among AfricanAmerican men and women. American Journal of Preventive Medicine 30 (4): 340-346.
- King, A.C., C. Castro, S. Wilcox, A.A. Eyler, J.F. Sallis, and R.C. Brownson. 2000. Personal and environmental factors associated with physical inactivity among different racial-ethnic groups of U.S. middle-aged and older-aged women. Health Psychology 19 (4): 354-364.
- 52. Courneya, K.S., and L.M. Hellsten. 1998. Personality correlates of exercise behavior, motives, barriers, and preferences: An application of the fivefactor model. Personality and Individual Differences 24 (5): 625-633.
- Morrow, J.R., Jr., J.A. Krzewinski-Malone, A.W. Jackson, T.J. Bungum, and S.J. FitzGerald. 2004. American adults' knowledge of exercise recommendations. Research Quarterly for Exercise and Sport 75 (3): 231-237.
- 54. Tammelin, T. 2003. Adolescent participation in sports and adult physical activity. American Journal of Preventive Medicine 24 (1): 22.
- 55. Huotari, P., H. Nupponen, L. Mikkelsson, L. Laakso, and U. Kujala. 2011. Adolescent physical fitness and activity as predictors of adulthood activity. Journal of Sports Sciences 29 (11): 1135-1141.
- Pate, R.R., G.W. Heath, M. Dowda, and S.G. Trost. 1996. Associations between physical activity and other health behaviors in a representative sample of U.S. adolescents. American Journal of Public Health 86 (11): 1577-1581.
- 57. Steptoe, A., J. Wardle, R. Fuller, et al. 1997. Leisure-time physical exercise: Prevalence, attitudinal correlates, and behavioral correlates among young Europeans from 21 countries. Preventive Medicine 26 (6): 845-854.
- 58. Biddle, S J., T. Gorely, and S.J. Marshall. 2009. Is television viewing a suitable marker of sedentary behavior in young people? Annals of Behavioral Medicine 38 (2): 147-153.
- 59. Santos, M.P., H. Gomes, and J. Mota. 2005. Physical activity and sedentary behaviors in adolescents. Annals of Behavioral Medicine 30 (1): 21-24.
- 60. Owen, N., E. Leslie, J. Salmon, and M.J. Fotheringham. 2000. Environmental determinants of physical activity and sedentary behavior. Exercise and Sport Sciences Reviews 28: 153-158.
- 61. Dietz, W.H. 1996. The role of lifestyle in health: The epidemiology and consequences of inactivity. Proceedings of the Nutrition Society 55: 829-840.
- 62. Owen, N., G.N. Healy, C.E. Matthews, and D.W. Dunstan. 2010. Too much sitting: The population health science of sedentary behavior. Exercise and Sport Sciences Reviews 38 (3): 105-113.
- 63. Epstein, L.H., B.E. Saelens, M.D. Myers, and D. Vito. 1997. Effects of decreasing sedentary behaviors on activity choice in obese children. Health Psychology 16: 107-113.
- 64. Ståhl, T., A. Rutten, D. Nutbeam, et al. 2001. The importance of the social environment for physically active lifestyle: Results from an international study. Social Science and Medicine 52: 1-10.
- 65. Courneya, K.S., and E. McAuley. 1995. Cognitive mediators of the social influence-exercise adherence relationship: A test of the Theory of Planned Behavior. Journal of Behavioral Medicine 18 (5): 499-515.
- 66. McNeill, L.H., M.W. Kreuter, and S.V. Subramanian. 2006. Social environment and physical activity: A review of concepts and evidence. Social Science & Medicine 63 (4): 1011-1022.
- 67. Carron, A.V., H.A. Hausenblas, and D. Mack. 1996. Social influence and exercise: A meta-analysis. Journal of Sport & Exercise Psychology 18: 1-16.
- 68. Estabrooks, P.A. 2000. Sustaining exercise participation through group cohesion. Exercise and Sport Sciences Reviews 28 (Apr): 63-67.
- 69. Pugliese, J., and B. Tinsley. 2007. Parental socialization of child and adolescent physical activity: A meta-analysis. Journal of Family Psychology 21 (3): 331-343.
- 70. O'Connor, T.M., R. Jago, and T. Baranowski. 2009. Engaging parents to increase youth physical activity: A systematic review. American Journal of Preventive Medicine 37 (2): 141-149.
- Duncan, T.E., S.C. Duncan, and E. McAuley. 1993. The role of domain and gender-specific provisions of social relations in adherence to a prescribed exercise regimen. Journal of Sport and Exercise Psychology 15 (2): 220-231.
- Molloy, G.J., D. Dixon, M. Hamer, and F.F. Sniehotta. 2010. Social support and regular physical activity: Does planning mediate this link? British Journal of Health Psychology 15: 859-870.
- Wallace, L.S., J. Buckworth, T.E. Kirby, and W.M. Sherman. 2000. Characteristics of exercise behavior among college students: Application of social cognitive theory to predicting stage of change. Preventive Medicine 31 (5): 494-505.
- 74. Troped, P.J., and R.P. Saunders. 1998. Gender differences in social influence on physical activity at different stages of exercise adoption. American Journal of Health Promotion 13: 112-115.
- 75. Epping, J.N. 2011. Dog ownership and dog walking to promote physical activity and health in patients. Current Sports Medicine Reports 10 (4): 224.
- Duncan, M., and K. Mummery. 2005. Psychosocial and environmental factors associated with physical activity among city dwellers in regional Queensland. Preventive Medicine 40 (4): 363-372.
- 77. Brown, S G., and R.E. Rhodes. 2006. Relationships among dog ownership and leisure-time walking in Western Canadian adults. American Journal of Preventive Medicine 30 (2): 131-136.
- 78. Cleland, V., D. Crawford, L.A. Baur, C. Hume, A. Timperio, and J. Salmon. 2008. A prospective examination of children's time spent outdoors, objectively measured

physical activity and overweight. International Journal of Obesity 32 (11): 1685-1693.

- 79. Buckworth, J. 2001. Exercise adherence in college students: Issues and preliminary results. Quest 53 (3): 335-345.
- Raynor, D.A., K.J. Coleman, and L.H. Epstein. 1998. Effects of proximity on the choice to be physically active or sedentary. Research Quarterly for Exercise and Sport 69: 99-103.
- Ferreira, I., K. van der Horst, W. Wendel-Vos, S. Kremers, F.J. van Lenthe, and J. Brug. 2007. Environmental correlates of physical activity in youth: A review and update. Obesity Reviews 8 (2): 129-154.
- Wendel-Vos, W., M. Droomers, S. Kremers, J. Brug, and F. van Lenthe. 2007. Potential environmental determinants of physical activity in adults: A systematic review. Obesity Reviews 8 (5): 425-440.
- Merom, D., A. Bauman, P. Phongsavan, et al. 2009. Can a motivational intervention overcome an unsupportive environment for walking: Findings from the Step-by-Step study. Annals of Behavioral Medicine 38 (2): 137-146.
- Van Cauwenberg, J., I. De Bourdeaudhuij, F. De Meester, et al. 2011. Relationship between the physical environment and physical activity in older adults: A systematic review. Health and Place 17 (2): 458-469.
- Colabianchi, N., M. Dowda, K.A. Pfeiffer, D.E. Porter, M.J. Almeida, and R.R. Pate. 2007. Towards an understanding of salient neighborhood boundaries: Adolescent reports of an easy walking distance and convenient driving distance. International Journal of Behavioral Nutrition and Physical Activity 4: 66.
- Brownson, R.C., C.M. Hoehner, K. Day, A. Forsyth, and J.F. Sallis. 2009. Measuring the built environment for physical activity: State of the science. American Journal of Preventive Medicine 36 (4): S99-S123; E12.
- Booth, M.L., N. Owen, A. Bauman, O. Clavisi, and E. Leslie. 2000. Social cognitive and perceived environmental influences associated with physical activity in older Australians. Preventive Medicine 31: 15-22.
- 88. Saelens, B.E., and S.L. Handy. 2008. Built environment correlates of walking: A review. Medicine & Science in Sports & Exercise 40 (7 Suppl.): S550-S566.
- Reis, J.P., H.R. Bowels, B.E. Ainsworth, K.D. DuBose, S. Smith, and J.N. Laditka. 2004. Nonoccupational physical activity by degree of urbanization and U.S. geographic region. Medicine & Science in Sports & Exercise 36 (12): 2093-2098.
- 90. Frost, S.S., R.T. Goins, R.H. Hunter, et al. 2010. Effects of the built environment on physical activity of adults living in rural settings. American Journal of Health Promotion 24 (4): 267-283.
- Rhodes, R.E., D.E. Warburton, and H. Murray. 2009. Characteristics of physical activity guidelines and their effect on adherence: A review of randomized trials. Sports Medicine 39 (5): 355-375.
- 92. Barr-Anderson, D.J., M. AuYoung, M.C. Whitt-Glover, B.A. Glenn, and A.K. Yancey. 2011. Integration of short bouts of physical activity into organizational routine: A systematic review of the literature. American Journal of Preventive Medicine 40 (1): 76-93.
- Cox, K.L., V. Burke, L.J. Beilin, and I.B. Puddey. 2010. A comparison of the effects of swimming and walking on body weight, fat distribution, lipids, glucose, and insulin in older women: The Sedentary Women Exercise Adherence Trial 2 (Report). Metabolism 59 (11): 1562-1573.
- 94. King, N., N. Byrne, A. Hunt, and A. Hills. 2010. Comparing exercise prescribed with exercise completed: Effects of gender and mode of exercise. Journal of Sports Sciences 28 (6): 633-640.
- Pollock, M.L., J.F. Carroll, J.E. Graves, et al. 1991. Injuries and adherence to walk/jog and resistance training programs in the elderly. Medicine & Science in Sports & Exercise 23 (10): 1194-1200.
- Anton, S.D., M.G. Perri, J. Riley, et al. 2005. Differential predictors of adherence in exercise programs with moderate versus higher levels of intensity and frequency. Journal of Sport & Exercise Psychology 27 (2): 171-187.
- 97. King, A.C., W.L. Haskell, C.B. Taylor, H.C. Kraemer, and R.F. DeBusk. 1991. Group-vs home-based exercise training in healthy older men and women. Journal of the American Medical Association. 266: 1535-1542.
- 98. Callaghan, P., E. Khalil, and I. Morres. 2009. Pragmatic randomised controlled trial of a preferred intensity exercise programme to improve wellbeing outcomes of women living with depression. University of Nottingham. Nottingham, UK.
- 99. Macera, C.A., K.L. Jackson, G.W. Hagenmaier, J.J. Kronenfeld, H.W. Kohl, and S.N. Blair. 1989. Age, physical activity, physical fitness, body composition, and incidence of orthopedic problems. Research Quarterly for Exercise & Sport 60 (3): 225-233.

- 1. Watson, J.B. 1919. Psychology from the standpoint of a behaviorist. Philadelphia: Lippincott.
- Meichenbaum, D.H., and J. Goodman. 1971. Training impulsive children to talk to themselves: A means of developing self-control. Journal of Abnormal Psychology 77 (2): 115-126.
- 3. Meichenbaum, D., and R. Cameron. 1974. The clinical potential of modifying what clients say to themselves. Psychotherapy: Theory, Research & Practice 11 (2): 103-117.
- Ashford, S., J. Edmunds, and D.P. French. 2010. What is the best way to change self-efficacy to promote lifestyle and recreational physical activity? A systematic review with meta-analysis. British Journal of Health Psychology 15 (2): 265-288.
- Lubans, D.R., C. Foster, and S.J.H. Biddle. 2008. A review of mediators of behavior in interventions to promote physical activity among children and adolescents. Preventive Medicine 47 (5): 463-470.
- Netz, Y., M.J. Wu, B.J. Becker, and G. Tenenbaum. 2005. Physical activity and psychological well-being in advanced age: A meta-analysis of intervention studies. Psychology and Aging 20 (2): 272-284.
- Artinian, N.T., G.F. Fletcher, D. Mozaffarian, et al. on behalf of the American Heart Association Prevention Committee of the Council on Cardiovascular Nursing. 2010. Interventions to promote physical activity and dietary lifestyle changes for cardiovascular risk factor reduction in adults: A scientific statement from the American Heart Association. Circulation 122 (4): 406-441.
- 8. Dzewaltowski, D.A. 1994. Physical activity determinants: A social cognitive approach. Medicine and Science in Sports and Exercise. 26 (11): 1395-1399.
- 9. Ajzen, I. and M. Fishbein. 1974. Factors influencing intentions and the intention -behavior relation. Human Relations 27 (1): 1-15.
- 10. Rhodes, R.E., and C.R. Nigg. 2011. Advancing physical activity theory: A review and future directions. Exercise and Sport Sciences Reviews 39 (3): 113-119.
- 11. Rhodes, R.E., and K.S. Courneya. 2003. Investigating multiple components of attitude, subjective norm, and perceived control: An examination of the theory of planned behaviour in the exercise domain. British Journal of Social Psychology 42 (Pt 1): 129-146.
- 12. Fishbein, M. 2008. A reasoned action approach to health promotion. Medical Decision Making 28 (6): 834-844.
- Hausenblas, H.A., A.V. Carron, and D.E. Mack. 1997. Application of the theories of reasoned action and planned behavior to exercise behavior: A meta-analysis. Journal of Sport & Exercise Psychology. 19 (1): 36-51.
- Kimiecik, J. 1992. Predicting vigorous physical activity of corporate employees: Comparing the theories of reasoned action and planned behavior. Journal of Sport & Exercise Psychology. 14 (2): 192-206
- 15. Deci, E.L., and N.D. Ryan. 2008. Self-determination theory: A macrotheory of human motivation, development and health. Canadian Psychology 49 (3): 182-185.
- Ryan, R.M., and E.L. Deci. 2002. Overview of self-determination theory. In Handbook of self-determination research, edited by E.L. Deci and R.M. Ryan. Rochester, NY: University of Rochester Press.

- 17. Edmunds, J., N. Ntoumanis, and J.L. Duda. 2006. Examining exercise dependence symptomatology from a self-determination perspective. Journal of Health Psychology 11 (6): 887-903.
- Rodgers, W.M., C.R. Hall, L.R. Duncan, E. Pearson, and M.I. Milne. 2010. Becoming a regular exerciser: Examining change in behavioural regulations among exercise initiates. Psychology of Sport and Exercise 11 (5): 378-386.
- 19. Wilson, P.M., D.E. Mack, and K.P. Grattan. 2008. Understanding motivation for exercise: A self-determination theory perspective. Canadian Psychology 49 (3): 250-256.
- 20. Schwarzer, R. 1992. Self-efficacy in the adoption and maintenance of health behaviors: Theoretical approaches and a new model: Washington, DC: Hemisphere.
- 21. Prochaska, J.O. 1979. Systems of psychotherapy: A transtheoretical analysis. Homewood, IL: Dorsey Press.
- 22. Prochaska, J.O., and C.C. DiClemente. 1982. Transtheoretical therapy: Toward a more integrative model of change. Psychotherapy: Theory, Research and Practice 20: 161-173.
- Prochaska, J.O., and C.C. DiClemente. 1983. Stages and processes of selfchange of smoking: Toward an integrative model of change. Journal of Consulting and Clinical Psychology 51 (3): 390-395.
- 24. Dishman, R.K. 1982. Compliance/adherence in health-related exercise. Health Psychology 1 (3): 237-267.
- 25. Sonstroem, R.J. 1988. Psychological models. In Exercise adherence: its impact on public health, edited by R.K. Dishman. Champaign, IL: Human Kinetics.
- 26. Sallis, J.F., and M.F. Hovell. 1990. Determinants of exercise behavior. Exercise and Sport Sciences Reviews 11: 307-330.
- 27. Marcus, B.H., V.C. Selby, R.S. Niaura, and J.S. Rossi. 1992. Self-efficacy and the stages of exercise behavior change. Research Quarterly for Exercise and Sport 63 (1): 60-66.
- 28. Marcus, B.H., and L.R. Simkin. 1993. The stages of exercise behavior. Journal of Sports Medicine and Physical Fitness 33: 83-88.
- 29. Dishman, R.K., R.J. Vandenberg, R.W. Motl, and C.R. Nigg. 2010. Using constructs of the transfheoretical model to predict classes of change in regular physical activity: A multi-ethnic longitudinal cohort study. Annals of Behavioral Medicine 40 (2): 150-163.
- Marcus, B.H., C.A. Eaton, J.S. Rossi, et al. 1994. Self-efficacy, decisionmaking and the stages of change: An integrative model of physical exercise. Journal of Applied Social Psychology 24: 489-508.
- Plotnikoff, R.C., S.B. Hotz, N.J. Birkett, and K.S. Courneya. 2001. Exercise and the transfluence of a population sample. Preventive Medicine 33 (5): 441-452.
- 32. Janis, I.L., and L. Mann. 1977. Decision making: a psychological analysis of conflict, choice, and commitment. New York: The Free Press
- 33. Prochaska, J.O., and W.F. Velicer. 1997. The Transtheoretical Model of behavior change. American Journal of Health Promotion. 12: 38-48.
- 34. Williams, D.M., S. Dunsiger, J.T. Ciccolo, B.A. Lewis, A.E. Albrecht, and B.H. Marcus. 2008. Acute affective response to a moderate-intensity exercise stimulus predicts physical activity participation 6 and 12 months later. Psychology of Sport and Exercise 9 (3): 231-245.
- Dishman, R.K., N.J. Thom, C.R. Rooks, R.W. Motl, C. Horwath, and C.R. Nigg. 2009. Failure of post-action stages of the transtheoretical model to predict change in regular physical activity: A multiethnic cohort study. Annals of Behavioral Medicine 37 (3): 280-293.
- 36. Blissmer, B., and E. McAuley. 2002. Testing the requirements of stages of physical activity among adults: The comparative effectiveness of stagematched, mismatched, standard care, and control interventions. Annals of Behavioral Medicine 24 (3): 181-189.
- 37. Lewin, K. 1935. A dynamic theory of personality. New York: McGraw-Hill.
- Sallis, J.F., N. Owen, and E.B. Fisher. 2008. Ecological models of health behavior. In Health behavior and health education: Theory, research, and practice, edited by K. Glanz, B.K. Rimer, and P. Viswanath. San Francisco: Jossey-Bass.
- Moos, R.H. 1979. Social-ecological perspectives on health. Edited by G.C. Stone, F. Cohen and N.E. Adler. Health psychology: A handbook. San Francisco: Jossey-Bass.
- 40. Bronfenbrenner, U. 1979. The Ecology of Human Development. Cambridge, MA: Harvard University Press.
- Fleury, J., and S.M. Lee. 2006. The social ecological model and physical activity in African American women. American Journal of Community Psychology 37 (1-2): 129-140.
- 42. Marlatt, G.A., and J.R. Gordon. 1985. Relapse prevention: Maintenance strategies in addictive behavior change. New York: Guilford Press.
- Marcus, B.H., and A.L. Stanton. 1993. Evaluation of relapse prevention and reinforcement interventions to promote exercise adherence in sedentary females. Research Quarterly for Exercise and Sport 64: 447-452.
- 44. Stetson, B.A., A.O. Beacham, S.J. Frommelt, et al. 2005. Exercise slips in high-risk situations and activity patterns in long-term exercisers: An application of the relapse prevention model. Annals of Behavioral Medicine 30 (1): 25-35.
- 45. Ronis, D.L., J.F. Yates, and J.P. Kirscht. 1989. Attitudes, decisions, and habits as determinants of repeated behavior. In Attitude Structure and Function. edited by A.R. Pratkanis, S.J. Breckler, and A.G. Greenwald. Hillsdale, NJ: Erlbaum.
- 46. Aarts, H., T. Paulussen, and H. Schaalma. 1997. Physical exercise habit: On the conceptualization and formation of habitual health behaviors. Health Education Research 12: 363-374.
- 47. Verplanken, B., and S. Orbell. 2003. Reflections on past behavior: A self report index of habit strength. Journal of Applied Social Psychology 33 (6): 1313-1330.
- 48. Rhodes, R.E., G.-J. de Bruijn, and D.H. Matheson. 2010. Habit in the physical activity domain: Integration with intention temporal stability and action control. Journal of Sport & Exercise Psychology 32 (1): 84-98.
- 49. De Bruijn, G.-J. 2011. Exercise habit strength, planning and the theory of planned behaviour: An action control approach. Psychology of Sport and Exercise 12 (2): 106-114.
- 50. Nigg, C.R., B. Borrelli, J. Maddock, and R.K. Dishman. 2008. A theory of physical activity maintenance. Applied Psychology 57 (4): 544-560.
- 51. Biddle, S.J.H., and R. Fuchs. 2009. Exercise psychology: A view from Europe. Psychology of Sport and Exercise 10 (4): 410-419.
- 52. Schwarzer, R. 2008. Modeling health behavior change: How to predict and modify the adoption and maintenance of health behaviors. Applied Psychology—an International Review 57 (1): 1-29.
- Baranowski, T., C. Anderson, and C. Carmack. 1998. Mediating variable framework in physical activity interventions: How are we doing? How might we do better? American Journal of Preventive Medicine 15: 266-297.
- 54. Nigg, C.R., and R.J. Paxton. 2008. Conceptual perspectives. In Youth physical activity and inactivity: Challenges and solutions, edited by A.L. Smith and S.J. H. Biddle. Champaign, IL: Human Kinetics.
- 55. Epstein, L.H. 1998. Integrating theoretical approaches to promote physical activity. American Journal of Preventive Medicine 15 (4): 257-265

- Dishman, R.K., N.J. Thom, C.R. Rooks, R.W. Motl, C. Horwath, and C.R. Nigg. 2009. Failure of post-action stages of the transflueroetical model to predict change in regular physical activity: A multiethnic cohort study. Annals of Behavioral Medicine 37 (3): 280-293.
- Schwarzer, R., B. Schüz, J.P. Ziegelmann, S. Lippke, A. Luszczynska, and U. Scholz. 2007. Adoption and maintenance of four health behaviors: Theoryguided longitudinal studies on dental flossing, seat belt use, dietary behavior, and physical activity. Annals of Behavioral Medicine 33 (2): 156-166.
- 3. Schwarzer, R., A. Luszczynska, J.P. Ziegelmann, U. Scholz, and S. Lippke. 2008. Social-cognitive predictors of physical exercise adherence: Three longitudinal

studies in rehabilitation. Health Psychology 27 (1 Suppl.): S54-S63.

- Lippke, S., R. Schwarzer, J.P. Ziegelmann, U. Scholz, and B. Schuz. 2010. Testing stage-specific effects of a stage-matched intervention: A randomized controlled trial targeting physical exercise and its predictors. Health Education & Behavior 37 (4): 533-546.
- Auweele, Y.A., R. Rzewnicki, and V. Van Mele. 1997. Reasons for not exercising and exercise intentions: A study of middle-aged sedentary adults. Journal of Sports Sciences 15: 151-165.
- Baron, R.M., and D.A. Kenny. 1986. The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. Journal of Personality and Social Psychology 51: 1173-1182.
- 7. McAuley, E., K.S. Courneya, D.L. Rudolph, and C.L. Lox. 1994. Enhancing exercise adherence in middle-aged males and females. Preventive Medicine. 23: 498-506
- Markland, D., and L. Hardy. 1993. The exercise motivation inventory: Preliminary development and validity of a measure of individuals' reasons for participation in regular physical exercise. Personality and Individual Differences 15 (3): 289-296.
- Artinian, N.T., G.F. Fletcher, D. Mozaffarian, et al. on behalf of the American Heart Association Prevention Committee of the Council on Cardiovascular Nursing. 2010. Interventions to promote physical activity and dietary lifestyle changes for cardiovascular risk factor reduction in adults: A scientific statement from the American Heart Association. Circulation 122 (4): 406-441.
- 10. Oman, R.F., and A.C. King. 1998. Predicting the adoption and maintenance of exercise participation using self-efficacy and previous exercise participation rates. American Journal of Health Promotion. 12 (3): 154-161.
- Garcia, A.W., and A.C. King. 1991. Predicting long-term adherence to aerobic exercise: A comparison of two models. Journal of Sport and Exercise Psychology 13: 394-410.
- 12. Blanchard, C., M. Fortier, S. Sweet, et al. 2007. Explaining physical activity levels from a self-efficacy perspective: The physical activity counseling trial. Annals of Behavioral Medicine 34 (3): 323-328.
- 13. Frederick, C.M., and R.M. Ryan. 1995. Self-determination in sport: A review using cognitive evaluation theory. International Journal of Sport Psychology 26: 5-23.
- 14. Ferrier, S., C.M. Blanchard, M. Vallis, and N. Giacomantonio. 2011. Behavioural interventions to increase the physical activity of cardiac patients: A review. European Journal of Cardiovascular Prevention and Rehabilitation 18 (1): 15-32.
- 15. Courneya, K.S. 2010. Efficacy, effectiveness, and behavior change trials in exercise research. International Journal of Behavioral Nutrition and Physical Activity 7: 81.
- 16. Müller-Riemenschneider, F., T. Reinhold, M. Nocon, and S.N. Willich. 2008. Long-term effectiveness of interventions promoting physical activity: A systematic review. Preventive Medicine 47 (4): 354-368
- 17. Bolognesi, M., C.R. Nigg, M. Massarini, and S. Lippke. 2006. Reducing obesity indicators through brief physical activity counseling (PACE) in Italian primary care settings. Annals of Behavioral Medicine 31 (2): 179-185.
- Calfas, K.J., B.J. Long, J.F. Sallis, W. Wooten, M. Pratt, and K. Patrick. 1996. A controlled trial of physician counseling to promote the adoption of physical activity. Preventive Medicine 25 (3): 225-233.
- 19. Bull, F.C., K. Jamrozik, and B.A. Blanksby. 1998. Tailoring advice on exercise: Does it make a difference? American Journal of Preventive Medicine 16 (3): 230-239.
- 20. Kirk, A., J. Barnett, G. Leese, and N. Mutrie. 2009. A randomized trial investigating the 12-month changes in physical activity and health outcomes following a physical activity consultation delivered by a person or in written form in type 2 diabetes: Time2Act. Diabetic Medicine 26 (3): 293-301
- Lee, S.M., C.R. Burgeson, J.E. Fulton, and C.G. Spain. 2007. Physical education and physical activity: Results from the School Health Policies and Programs Study 2006. Journal of School Health 77 (8):435-463.
- 22. Kahn, E.B., L.T. Ramsey, R.C. Brownson, et al. 2002. The effectiveness of interventions to increase physical activity: A systematic review. American Journal of Preventive Medicine 22 (May): 73-107.
- Stone, E.J., T.L. McKenzie, G.J. Welk, and M. Booth. 1998. Effects of physical activity interventions in youth: Review and synthesis. American Journal of Preventive Medicine 15 (4): 298-315.
- Luepker, R.V., C.L. Perry, S.M. McKinlay, et al. 1996. Outcomes of a field trial to improve children's dietary patterns and physical activity. The Child and Adolescent Trial for Cardiovascular Health. CATCH collaborative group. Journal of the American Medical Association 275 (Mar 13): 768-776
- Kriemler, S., U. Meyer, E. Martin, E.M. van Sluijs, L.B. Andersen, and B.W. Martin. 2011. Effect of school-based interventions on physical activity and fitness in children and adolescents: A review of reviews and systematic update. British Journal of Sports Medicine 45 (11): 923-930.
- 26. Sallis, J.F., T.L. McKenzie, T.L. Conway, et al. 2003. Environmental interventions for eating and physical activity: A randomized controlled trial in middle schools. American Journal of Preventive Medicine 24 (3): 209-217.
- 27. Webber, L.S., D.J. Catellier, L.A. Lytle, et al. 2008. Promoting physical activity in middle school girls: Trial of activity for adolescent girls. American Journal of Preventive Medicine 34 (3): 173-184.
- Pate, R.R., R. Saunders, R.K. Dishman, C. Addy, M. Dowda, and D.S. Ward. 2007. Long-term effects of a physical activity intervention in high school girls. American Journal of Preventive Medicine 33 (4): 276-280.
- Sparling, P.B. 2003. College physical education: An unrecognized agent of change in combating inactivity-related diseases. Perspectives in Biology and Medicine 46 (4): 579-587.
- 30. Nelson, M.C., M. Story, N.I. Larson, D. Neumark-Sztainer, and L.A. Lytle. 2008. Emerging adulthood and college-aged youth: An overlooked age for weight-related behavior change. Obesity 16 (10): 2205-2211.
- Sparling, P.B., T.K. Snow, and B. Beavers. 1999. Serum cholesterol levels in college students: Opportunities for education and intervention. Journal of American College Health Association 48: 123-127.
- 32. Sacheck, J.M., J.F. Kuder, and C.D. Economos. 2010. Physical fitness, adiposity, and metabolic risk factors in young college students. Medicine & Science in Sports & Exercise 42 (6): 1039-1044.
- Division of Labor Force Statistics. 2011. College enrollment and work activity of 2010 high school graduates [News release]. U.S. Department of Labor Statistics, April 08, 2011 [cited September 1, 2011]. www.bls.gov/news.release/hsgec.nr0.htm.
- 34. Brynteson, P., and T.M.I. Adams. 1993. The effects of conceptually based physical education programs on attitudes and exercise habits of college alumni after 2 to 11 years of follow-up. Research Quarterly for Exercise & Sport 64: 208-212.
- 35. Pearman, S.N., R.F. Valois, R.G. Sargent, R.P. Saunders, J.W. Drane, and C.A. Macera. 1997. The impact of a required college health and physical education course on the health status of alumni. Journal of American College Health 4: 77-85.
- 36. Hensley, L.D. 2000. State of required physical education in colleges and universities. Research Quarterly for Exercise & Sport 71: A71-A72
- 37. Kulinna, P.H., W.W. Warfield, S. Jonaitis, M. Dean, and C. Corbin. 2009. The progression and characteristics of conceptually based fitness/wellness courses at American universities and colleges. Journal of American College Health 58 (2): 127-131
- 38. Dishman, R.K., B. Oldenburg, H. O'Neal, and R. Shephard. 1998. Worksite physical activity interventions. American Journal of Preventive Medicine 15 (4): 344-361.
- 39. Conn, V.S., A.R. Hafdahl, and L.M. Brown. 2009. Meta-analysis of qualityof-life outcomes from physical activity interventions. Nursing Research 58 (3): 175-183.
- Yancey, A.K., W.J. McCarthy, W.C. Taylor, et al. 2004. The Los Angeles Lift Off: A sociocultural environmental change intervention to integrate physical activity into the workplace. Preventive Medicine 38 (6): 848-856.
- 41. Godbey, G.C., L.L. Caldwell, M. Floyd, and L.L. Payne. 2005. Contributions of leisure studies and recreation and park management research to the active living

agenda. American Journal of Preventive Medicine 28 (2 Suppl. 2): 150-158.

- 42. Young, D.R., W.L. Haskell, C.B. Taylor, and S.P. Fortmann. 1996. Effect of community health education on physical activity knowledge, attitudes, and behavior. The Stanford Five-City Project. American Journal of Epidemiology 144 (3): 264-274.
- 43. Reger, B., L. Cooper, S. Booth-Butterfield, et al. 2002. Wheeling Walks: A community campaign using paid media to encourage walking among sedentary older adults. Preventive Medicine 35 (3): 285-292.
- Baker, P.R.A., D.P. Francis, J. Soares, A.L. Weightman, and C. Foster. 2011. Community wide interventions for increasing physical activity. Cochrane Database of Systematic Reviews Issue 4. Art. No.: CD008366. doi: 10.1002/14651858.CD008366.pub2.
- 45. Pew Internet and American Life Project. 2011b. Trend data. Pew Research Center 2011 [cited May 13, 2011]. www.pewinternet.org/TrendData/Online-Activites-Total. aspx.
- 46. Barak, A., B. Klein, and J.G. Proudfoot. 2009. Defining internet-supported therapeutic interventions. Annals of Behavioral Medicine: 38 (1): 4-17
- Blumberg, S.J., and J.V. Luke. 2011. Wireless substitution: Early release of estimates from the National Health Interview Survey, January-June 2010. National Center for Health Statistics, December 21, 2010 [cited September 2, 2011]. www.cdc.gov/nchs/nhis.htm.
- 48. Riley, W.T., D.E. Rivera, A.A. Atienza, W. Nilsen, S.M. Allison, and R. Mermelstein. 2011. Health behavior models in the age of mobile interventions: Are our theories up to the task? Translational BehavioralMedicine 1 (1): 53-71
- 49. Dishman, R.K., and J. Buckworth 1996b. Increasing physical activity: A quantitative synthesis. Medicine & Science in Sports & Exercise 28 (6): 706-719.
- 50. Sallis, J.F., and N. Owen. 1999. Physical activity and behavioral medicine. Thousand Oaks, CA: Sage.
- Kahn, E.B., L.T. Ramsey, R.C. Brownson, et al. 2002. The effectiveness of interventions to increase physical activity: A systematic review. American Journal of Preventive Medicine 22 (May): 73-107.
- 52. Conn, V.S., A.R. Hafdahl, and D.R. Mehr. 2011. Interventions to increase physical activity among healthy adults: A meta-analysis of outcomes. American Journal of Public Health 101 (4): 751-758.
- Bélanger-Gravel, A., G. Godin, L.A. Vezina-Im, S. Amireault, and P. Poirier. 2010. The effect of theory-based interventions on physical activity participation among overweight/obese individuals: A systematic review. Obesity Review. 12 (6): 430-9. doi: 10.1111/j.1467-789X.2010.00729.x.
- 54. Rhodes, R.E., and L.A. Pfaeffli. 2010. Mediators of physical activity behaviour change among adult non-clinical populations: A review update. International Journal of Behavioral Nutrition and Physical Activity 7: 37.
- 55. Flora, J.A., E.W. Maibach, and N. Maccoby. 1989. The role of media across four levels of health promotion intervention. Annual Review of Public Health 10: 181-201.
- 56. Berkowitz, J.M., M. Huhman, and M.J. Nolin. 2008. Did augmenting the VERB campaign advertising in select communities have an effect on awareness, attitudes, and physical activity? American Journal of Preventive Medicine 34 (6 Suppl.): S257-S266.
- 57. Huhman, M., L.D. Potter, F.L. Wong, S.W. Banspach, J.C. Duke, and C.D. Heitzler. 2005. Effects of a mass media campaign to increase physical activity among children: Year-1 results of the VERB campaign. Pediatrics 116 (2): e277-284.
- 58. Pate, R.R., M. Pratt, S.N. Blair, et al. 1995. Physical activity and public health: a recommendation from the Centers for Disease Control and Prevention and the American College of Sports Medicine. Journal of the American Medical Association. 273 (5): 402-407.
- Jakicic, J.M., C. Winters, W. Lang, and R.R. Wing. 1999. Effects of intermittent exercise and use of home exercise equipment on adherence, weight loss, and fitness in overweight women. Journal of the American Medical Association 282: 1554-1560.
- 60. Dunn, A.L., B.H. Marcus, J.B. Kampert, M.E. Garcia, H.W. Kohl, and S.N. Blair. 1999. Comparison of lifestyle and structured interventions to increase physical activity and cardiorespiratory fitness: A randomized trial. Journal of the American Medical Association 281 (4): 327-334
- 61. Dunn, A.L., B.H. Marcus, J.B. Kampert, M.E. Garcia, H.W. Kohl, and S.N. Blair. 1997. Reduction in cardiovascular disease risk factors: Six-month results from Project Active. Preventive Medicine 26 (6): 883-892.
- 62. Dunn, A.L. 2009. The effectiveness of lifestyle physical activity interventions to reduce cardiovascular disease. American Journal of Lifestyle Medicine 3 (1): 11S-18S.
- 63. Blamey, A., N. Mutrie, and T. Aitchison. 1995. Health promotion by encouraged use of stairs. British Medical Journal 311: 289-290
- Brownell, K., A.J. Stunkard, and J. Albaum. 1980. Evaluation and modification of exercise patterns in the natural environment. American Journal of Psychiatry 136: 1540-1545.
- 65. Shilts, M.K., M. Horowitz, and M.S. Townsend. 2004. Goal setting as a strategy for dietary and physical activity behavior change: A review of the literature. American Journal of Health Promotion 19 (2): 81-93.
- 66. Shilts, M., Townsend, B., Dishman, RK. 2013. Using goal setting to promote health behavior change: Diet and physical activity. In New developments in goal setting and task performance, edited by E. Locke and G. Latham. London: Taylor & Francis.
- 67. Kyllo, L.B., and D.M. Landers. 1995. Goal setting in sport and exercise: A research synthesis to resolve the controversy. Journal of Sport and Exercise Psychology 17: 117-137.
- 68. Simkin, L.R., and A.M. Gross. 1994. Assessment of coping with high-risk situations for exercise relapse among healthy women. Health Psychology 13 (3): 274-277.
- 69. Stetson, B.A., A.O. Beacham, S.J. Frommelt, et al. 2005. Exercise slips in high-risk situations and activity patterns in long-term exercisers: An application of the relapse prevention model. Annals of Behavioral Medicine 30 (1): 25-35.
- 70. Knapp, D.N. 1988. Behavioral management techniques and exercise promotion. In Exercise adherence, edited by R.K. Dishman. Champaign, IL: Human Kinetics.
- 71. Rollnick, S., W.R. Miller, and C. Butler. 2007. Motivational interviewing in health care: Helping patients change behavior. New York: Guilford Press.
- 72. Lundahl, B.W., C. Kunz, C. Brownell, D. Tollefson, and B.L. Burke. 2010. A meta-analysis of motivational interviewing: Twenty-five years of empirical studies. Research on Social Work Practice 20 (2): 137-160.
- 73. Brodie, D.A., and A. Inoue. 2005. Motivational interviewing to promote physical activity for people with chronic heart failure. Journal of Advanced Nursing 50 (5): 518-527.
- Bennett, J.A., K.S. Lyons, K. Winters-Stone, L.M. Nail, and J. Scherer. 2007. Motivational interviewing to increase physical activity in long-term cancer survivors: A randomized controlled trial. Nursing Research 56 (1): 18-27.
- 75. Van Dorsten, B. 2007. The use of motivational interviewing in weight loss. Current Diabetes Reports 7 (5): 386-390.
- Marcus, B.H., J.T. Ciccolo, and C.N. Sciamanna. 2009. Using electronic/computer interventions to promote physical activity. British Journal of Sports Medicine 43 (2): 102-105.
- 77. Eakin, E.G., S.P. Lawler, C. Vandelanotte, and N. Owen. 2007. Telephone interventions for physical activity and dietary behavior change: A systematic review. American Journal of Preventive Medicine 32 (5): 419- 434.
- 78. Liu, W.T., C.H. Wang, H.C. Lin, et al. 2008. Efficacy of a cell phone-based exercise programme for COPD. European Respiratory Journal 32 (3): 651-659.
- Intille, S.S., C. Kukla, R. Farzanfar, and W. Bakr. 2003. Just-in-time technology to encourage incremental, dietary behavior change. Annual Symposium proceedings/ AMIA Symposium: 874.
- 80. Danaher, B.G., and J.R. Seeley. 2009. Methodological issues in research on web-based behavioral interventions. Annals of Behavioral Medicine 38 (1): 28-39.
- Pew Internet and American Life Project. 2011a. Home broadband adoption, 2000-2010. Pew Internet & American Life Project 2010 [cited May 13, 2011]. www. pewinternet.org/Static-Pages/Trend-Data/Home-BroadbandAdoption.aspx
- 82. Linenger, J.M., C.V. Chesson, II, and D.S. Nice. 1991. Physical fitness gains following simple environmental change. American Journal of Preventive Medicine 7 (5):

298-310.

- 83. Wang, G., C.A. Macera, B. Scudder-Soucie, T. Schmid, M. Pratt, and D. Buchner. 2004. Cost effectiveness of a bicycle/pedestrian trail development in health promotion. Preventive Medicine 38 (2): 237-242.
- Hoehner, C.M., J. Soares, D. Parra Perez, et al. 2008. Physical activity interventions in Latin America: A systematic review. American Journal of Preventive Medicine 34 (3): 224-233.
- Gomez, L.F., J.C. Mateus, and G. Cabrera. 2004. Leisure-time physical activity among women in a neighbourhood in Bogota, Colombia: Prevalence and sociodemographic correlates. Cadernos de Saude Publica/Ministerio da Saude, Fundacao Oswaldo Cruz, Escola Nacional de Saude Publica 20 (4): 1103-1109.
- 86. Ridgers, N.D., G. Stratton, S.J. Fairclough, and J.W. Twisk. 2007. Long-term effects of playground markings and physical structures on children's recess physical activity levels. Preventive Medicine 44 (5): 393-397
- 87. National Center for Health Statistics (NCHS), Centers for Disease Control and Prevention. 2011. Healthy People 2010 final review. Accessed April 17, 2012. www. cdc.gov/nchs/healthy_people/hp2010_final_review.htm.
- 88. Hillsdon, M., C. Foster, and M. Thorogood. 2005. Interventions for promoting physical activity. Cochrane Database of Systematic Reviews [Online] (1): CD003180.
- 89. Masse, L.C., C. Nigg, K. Basen-Engquist, and A.A. Atienza. 2011. Understanding the mechanism of physical activity behavior change
- 90. Abraham, C., and S. Michie. 2008. A taxonomy of behavior change techniques used in interventions. Health psychology 27 (3): 379-387.
- 91. Michie, S., M. Johnston, J. Francis, W. Hardeman, and M. Eccles. 2008. From theory to intervention: Mapping theoretically derived behavioural determinants to behaviour change techniques. Applied Psychology 57 (4): 660-680.
- 92. Ashford, S., J. Edmunds, and D.P. French. 2010. What is the best way to change self-efficacy to promote lifestyle and recreational physical activity? A systematic review with meta-analysis. British Journal of Health Psychology 15 (2): 265-288.
- Williams, S.L., and D.P. French. 2011. What are the most effective intervention techniques for changing physical activity self-efficacy and physical activity behaviour and are they the same? Health Education Research 26 (2): 308-322.
- 94. Silva, M.N., D. Markland, E.V. Carraca, et al. 2011. Exercise autonomous motivation predicts 3-yr weight loss in women. Medicine & Science in Sports & Exercise 43 (4): 728-737.

- 1. American College of Sports Medicine. 2009. Guidelines for exercise testing and prescription. 8th ed. Philadelphia: Wolters Kluwer; Lippincott Williams & Wilkins.
- 2. Bell, C. 1826. On the nervous circle which connects the voluntary muscles with the brain. Philosophical Transactions of the Royal Society of London 116: 163-173.
- 3. Duchenne, G.B. 1867. Physiologie des mouvements démontrée à l'aide de l'expérimentation électrique et de l'observation clinique et applicable à l'étude des paralysies et des déformations [Physiology of movements demonstrated with electrical experimentation and with clinical observation and applied to the study of paralysis and deformations]. Paris: Baillère.
- 4. Clarac, F. 2008. Some historical reflections on the neural control of locomotion. Brain Research Reviews 57 (1): 13-21.
- Southall, J.P. C. 1924. Helmhollz's treatise on physiological optics. Translated from the third German edition, Vol. I: The Optical Society of America. Menasha, WI: Banta.
- 6. Bastian, H.C. 1887-1889. The "muscular sense," its nature and cortical localisation. Brain 10: 1-137.
- 7. Sherrington, C.S. 1906. The integrative action of the nervous system. New Haven: Yale University.
- von Holst, E., and H. Mittelstaedt. 1950. Das reafferenzprinzip: Wechselwirkungen zwischen Zentralnervensystem und Peripherie [The reafference principle: Mutual effects between the central nervous system and the periphery]. Naturwissenschaften 37: 464-476.
- Sperry, R.W. 1950. Neural basis of the spontaneous optokinetic response produced by visual inversion. Journal of Comparative and Physiological Psychology 43 (6): 482-489.
- 10. Crapse, T.B., and M.A. Sommer. 2008. Corollary discharge across the animal kingdom. Nature reviews. Neuroscience 9 (8): 587-600.
- 11. Gandevia, S.C. 1996. Kinesthesia: Roles for afferent signals and motor commands In Handbook of physiology: Sec. 12. Exercise: Regulation and integration of multiple systems, edited by L.B. Rowell and J.T. Shepherd. New York: Oxford University Press.
- 12. McCloskey, D.I. 1978. Kinesthetic sensibility. Physiological reviews 58 (4): 763-820.
- 13. Fullerton, G.S., and J.M. Cattell. 1892. On the perception of small differences. Philadelphia: University of Pennsylvania Press.
- 14. Stevens, J.C., and J.D. Mack. 1959. Scales of apparent force. Journal of Experimental Psychology 58: 405-413.
- 15. Borg, G.A. 1962. Physical performance and perceived exertion. Vol. XI, Studia Psychologica et Paedagogica. Seris altera. Lund, Sweden: Gleerup.
- 16. Stevens, J.C., and E.H. Galanter. 1957. Ratio scales and category scales for a dozen perceptual continua. Journal of Experimental Psychology 54: 377-411.
- 17. Green, D.M., and J.A. Swets. 1974. Signal detection theory and psychophysics. Huntington, NY: Krieger.
- Morgan, W.P., P.B. Raven, B.L. Drinkwater, and S.M. Horvath. 1973. Perceptual and metabolic responsivity to standard bicycle ergometry following various hypnotic suggestions. International Journal of Clinical & Experimental Hypnosis (2): 86-101.
- 19. Skinner, J.S., R. Hutsler, V. Bergsteinova, and E.R. Buskirk. 1973. The validity and reliability of a rating scale of perceived exertion. Medicine and Science in Sports 5 (2): 94-96.
- 20. Dishman, R.K., R.P. Farquhar, and K.J. Cureton. 1994. Responses to preferred intensities of exertion in men differing in activity levels. Medicine & Science in Sports & Exercise 26 (Jun): 783-790.
- 21. Borg, G.A. 1961. Interindividual scaling and perception of muscular force. Kungliga Fysiografiska Sällskapets I Lund Förhandlinger 12 (31): 117-125.
- 22. Borg, G.A. 1998. Borg's perceived exertion and pain scales. Champaign, IL: Human Kinetics.
- 23. Robertson, R.J., F.L. Goss, J.L. Andreacci, et al. 2005. Validation of the Children's OMNI-Resistance Exercise Scale of perceived exertion. Medicine & Science in Sports & Exercise 37 (5): 819-826.
- 24. Robertson, R.J., F.L. Goss, N.F. Boer, et al. 2000. Children's OMNI scale of perceived exertion: Mixed gender and race validation. Medicine & Science in Sports & Exercise 32 (2): 452-458.
- 25. Robertson, R.J., F.L. Goss, D.J. Aaron, et al. 2006. Observation of perceived exertion in children using the OMNI pictorial scale. Medicine & Science in Sports & Exercise 38 (1): 158-166.
- 26. Utter, A.C., R.J. Robertson, D.C. Nieman, and J. Kang. 2002. Children's OMNI Scale of Perceived Exertion: Walking/running evaluation. Medicine & Science in Sports & Exercise 34 (1): 139-144.
- 27. Pandolf, K.B. 1982. Differentiated ratings of perceived exertion during physical exercise. Medicine & Science in Sports & Exercise 14: 397-405.
- 28. Amann, M., and J.A. Dempsey. 2011. Reply to Marcora. Journal of Applied Physiology 110: 1500.
- 29. Marcora, S. 2009a. Last word on viewpoint: Perception of effort during exercise is independent of afferent feedback from skeletal muscles, heart, and lungs. Journal of Applied Physiology 106 (6): 2067.
- 30. Marcora, S. 2009b. Perception of effort during exercise is independent of afferent feedback from skeletal muscles, heart, and lungs. Journal of Applied Physiology 106 (6): 2060-2062.
- 31. Marcora, S.M. 2011. Role of feedback from Group III and IV muscle afferents in perception of effort, muscle pain, and discomfort. Journal of Applied Physiology

110 (5): 1499; author reply 1500.

- Meeusen, R. 2009. Commentaries on Viewpoint: Perception of effort during exercise is independent of afferent feedback from skeletal muscles, heart, and lungs. Journal of Applied Physiology 106 (6): 2063.
- 33. Borg, G.A. 1970. Perceived exertion as an indicator of somatic stress. Scandinavian Journal of Rehabilitative Medicine 23: 92-98.
- 34. Borg, G.A. 1982. Psychophysical bases of perceived exertion. Medicine & Science in Sports & Exercise 14: 377-381.
- Jackson, A., R.K. Dishman, C.S. La, R. Patton, and R. Weinberg. 1981. The heart rate, perceived exertion, and pace of the 1.5 mile run. Medicine & Science in Sports & Exercise 13: 224-228.
- 36. Killian, K.J. 1987. Limitations of exercise by dyspnea. Canadian Journal of Sport Science 12 (Suppl. 1): 53S-60S.
- Yorio, J.M., R.K. Dishman, W.R. Forbus, and K.J. Cureton. 1992. Breathlessness predicts perceived exertion in young women with mild asthma. Medicine & Science in Sports & Exercise 24 (8): 860-867.
- Hill, D.W., K.J. Cureton, S.C. Grisham, and M.A. Collins. 1987. Effect of training on the rating of perceived exertion at the ventilatory threshold. European Journal of Applied Physiology and Occupational Physiology 56: 206-211.
- Noble, B.J., G.A. Borg, I. Jacobs, and P. Kaiser. 1983. A category-ratio perceived exertion scale: Relationship to blood and muscle lactates and heart rate. Medicine & Science in Sports & Exercise 15: 523-528
- 40. Kostka, C.E., and E. Cafarelli. 1982. Effect of pH on sensation and vastus lateralis electromyogram during cycling exercise. Journal of Applied Physiology S2: 1181-1185.
- 41. Robertson, R.J., J.E. Falkel, A.L. Drash, et al. 1986. Effect of blood pH on peripheral and central signals of perceived exertion. Medicine & Science in Sports & Exercise 18 (Feb): 114-122
- 42. Amann, M., G.M. Blain, L.T. Proctor, J.J. Sebranek, D.F. Pegelow, and J.A. Dempsey. 2010. Group III and IV muscle afferents contribute to ventilatory and cardiovascular response to rhythmic exercise in humans. Journal of Applied Physiology 109 (4): 966-976
- Cook, D.B., P.J. O'Connor, and C.A. Ray. 2000. Muscle pain perception and sympathetic nerve activity to exercise during opioid modulation. American Journal of Physiology. 279 (5): R1565-R1573.
- 44. Demello, J.J., K.J. Cureton, R.E. Boineau, and M.M. Singh. 1987. Ratings of perceived exertion at the lactate threshold in trained and untrained men and women. Medicine & Science in Sports & Exercise 19 (Aug): 354-362.
- Boutcher, S.H., R.L. Seip, R.K. Hetzler, E.F. Pierce, D. Snead, and A. Weltman. 1989. The effects of specificity of training on rating of perceived exertion at the lactate threshold. European Journal of Applied Physiology 59: 365-369.
- 46. Robertson, R.J., and B.J. Noble. 1997. Perception of physical exertion: Methods, mediators, and applications. Exercise and Sport Sciences Reviews 25: 407-452.
- Skrinar, G.S., S.P. Ingram, and K.B. Pandolf. 1983. Effect of endurance training on perceived exertion and stress hormones in women. Perceptual & Motor Skills 57 (Dec): 1239-1250.
- Kjaer, M., N.H. Secher, F.W. Bach, S. Sheikh, and H. Galbo. 1989. Hormonal and metabolic responses to exercise in humans: Effect of sensory nervous blockade. American Journal of Physiology 257 (1 Pt 1): E95-E101.
- 49. Cafarelli, E., and B. Bigland-Ritchie. 1979. Sensation of static force in muscles of different length. Experimental Neurology 65: 511-525.
- 50. Gandevia, S.C. 1982. The perception of motor commands on effort during muscular paralysis. Brain 105: 151-159.
- 51. Cafarelli, E., and C.E. Kostka. 1981. Effect of vibration on static force sensation in man. Experimental Neurology 74 (2): 331-340.
- 52. Jones, L.A., and I.W. Hunter. 1985. Effect of muscle tendon vibration on the perception of force. Experimental Neurology 87 (1): 35-45.
- Ogoh, S., W.L. Wasmund, D.M. Keller, et al. 2002. Role of central command in carotid baroreflex resetting in humans during static exercise. Journal of Physiology 543 (1): 349.
- Williamson, J.W., D.B. Friedman, J.H. Mitchell, N.H. Secher, and L. Friberg. 1996. Mechanisms regulating regional cerebral activation during dynamic handgrip in humans. Journal of Applied Physiology 81 (5): 1884-1890.
- 55. Morgan, W.P. 1981. Psychophysiology of self-awareness during vigorous physical activity. Research Quarterly for Exercise and Sport. 52 (3): 385-427.
- Frith, C.D., S.J. Blakemore, and D.M. Wolpert. 2000. Abnormalities in the awareness and control of action. Philosophical Transactions of the Royal Society of London. Series B, Biological Sciences 355 (1404): 1771-1788.
- 57. Winchester, P.K., J.W. Williamson, and J.H. Mitchell. 2000. Cardiovascular responses to static exercise in patients with Brown-Sequard syndrome. Journal of Physiology 527 Pt 1: 193-202.
- 58. Marchetti, C., and S. Della Sala. 1998. Disentangling the alien and anarchic hand. Cognitive Neuropsychiatry 3 (3): 191-207.
- 59. Goldberg, G., N.H. Mayer, and J.U. Toglia. 1981. Medial frontal cortex infarction and the alien hand sign. Archives of Neurology 38 (11): 683-686.
- 60. Ramachandran, V.S., and W. Hirstein. 1998. The perception of phantom limbs. The D.O. Hebb lecture. Brain 121 (Pt 9): 1603-1630.
- 61. Rothwell, J.C., M.M. Traub, B.L. Day, J.A. Obeso, P.K. Thomas, and C.D. Marsden. 1982. Manual motor performance in a deafferented man. Brain: A Journal of Neurology 105 (Pt 3): 515-542.
- 62. Jeannerod, M., F. Michel, and C. Prablanc. 1986. The control of hand movements in case of hemianaesthesia following a parietal lesion. Brain 107: 899-920.
- Sanes, J.N., and R. Shadmehr. 1995. Sense of muscular effort and somesthetic afferent information in humans. Canadian Journal of Physiology and Pharmacology 73 (2): 223-233.
- Christensen, M.S., J. Lundbye-Jensen, S.S. Geertsen, T.H. Petersen, O.B. Paulson, and J.B. Nielsen. 2007. Premotor cortex modulates somatosensory cortex during voluntary movements without proprioceptive feedback. Nature Neuroscience 10 (4): 417-419.
- 65. Butler, J.E., J.L. Taylor, and S.C. Gandevia. 2003. Responses of human motoneurons to corticospinal stimulation during maximal voluntary contractions and ischemia. Journal of Neuroscience 23 (32): 10224-10230
- 66. Gandevia S.C. 2001. Spinal and supraspinal factors in human muscle fatigue. Physiological Reviews. 81(4): 1725-1789.
- Amann, M., L.T. Proctor, J.J. Sebranek, M.W. Eldridge, D.F. Pegelow, and J.A. Dempsey. 2008. Somatosensory feedback from the limbs exerts inhibitory influences on central neural drive during whole body endurance exercise. Journal of Applied Physiology 105 (6): 1714-1724.
- 68. Duchateau, J., and R.M. Enoka. 2002. Neural adaptations with chronic activity patterns in able-bodied humans. American Journal of Physical Medicine & Rehabilitation 81 (11 Suppl.): S17-S27.
- Morgan, W.P. 1973a. Influences of acute physical activity on state anxiety. In Proceedings, Annual Meeting of the College Physical Education Association for Men, edited by C.E. Mueller. Minneapolis: University of Minnesota.
- 70. Cafarelli, E., W.S. Cain, and J.C. Stevens. 1977. Effort of dynamic exercise: Influence of load, duration, and task. Ergonomics 20 (2): 147-158.
- Weiser, P.C., R.A. Kinsman, and D.A. Stamper. 1973. Task-specific symptomatology changes resulting from prolonged submaximal bicycle riding. Medicine & Science in Sports & Exercise 5: 79-85.
- 72. Ekkekakis, P., G. Parfitt, and S.J. Petruzzello. 2011. The pleasure and displeasure people feel when they exercise at different intensities: Decennial update and progress towards a tripartite rationale for exercise intensity prescription. Sports Medicine 41 (8): 641-671.
- Dishman, R.K., R.E. Graham, R.G. Holly, and J.G. Tieman. 1991. Estimates of Type A behavior do not predict perceived exertion during graded exercise. Medicine & Science in Sports & Exercise 23 (11): 1276-1282.

- Dishman, R.K., R.E. Graham, J. Buckworth, and J.E. White-Welkley. 2001. Perceived exertion during incremental cycling is not influenced by the Type A Behavior Pattern. I International Journal of Sports Medicine. 22 (Apr): 209-214.
- Boutcher, S.H., L.A. Fleischer-Curtian, and S.D. Gines. 1988. The effects of self-presentation on perceived exertion. Journal of Sport & Exercise Psychology 10 (3): 270-280.
- 76. Hardy, C.J., E.G. Hall, and P.H. Presholdt. 1986. The mediational role of social influence in the perception of exertion. Journal of Sport and Exercise Psychology 8: 88-104.
- 77. Rejeski, W.J. 1981. Perception of exertion: A social psychophysiological integration. Journal of Sport Psychology 3: 305-320.
- Bar-Or, O. 2001. Exertional perception in children and adolescents with a disease or disability. International Journal of Sport and Exercise Psychology 21 (2): 127-136.
 American College of Sports Medicine. 2000. Guidelines for exercise testing and prescription. 6th ed. Baltimore: Lippincott Williams & Wilkins.
- 80. Ekblom, B., and A.N. Goldbarg. 1971. The influence of physical training and other factors on the subjective rating of perceived exertion. Acta Physiologica Scandinavica 83: 399-406.
- Haskell, W.L., I.M. Lee, R.R. Pate, et al. 2007. Physical activity and public health: Updated recommendation for adults from the American College of Sports Medicine and the American Heart Association. Circulation 116:1081-1093.
- 82. Weir, L.T., and A.S. Jackson. 1992. % O2max and %HRmax reserve are not equal methods of assessing exercise intensity. Medicine & Science in Sports & Exercise 24 (5 Suppl.): 1057.
- 83. Borg, G.A. 1982. Psychophysical bases of perceived exertion. Medicine & Science in Sports & Exercise 14: 377-381.
- Whaley, M.H., P.H. Brubaker, L.A. Kaminsky, and C.R. Miller. 1997. Validity of rating of perceived exercise devertion during graded exercise testing in apparently healthy adults and cardiac patients. Journal of Cardiopulmonary Research 17 (Jul-Aug): 261-267.
- Dishman, R.K., R.W. Patton, J. Smith, R. Weinberg, and A. Jackson. 1987. Using perceived exertion to prescribe and monitor exercise training heart rate. International Journal of Sports Medicine 8 (June): 208-213.
- Dunbar, C.C., R.J. Robertson, R. Baun, et al. 1992. The validity of regulating exercise intensity by ratings of perceived exertion. Medicine & Science in Sports & Exercise 24 (Jan): 94-99.
- Seip, R.L., D. Snead, E.F. Pierce, P. Stein, and A. Weltman. 1991. Perceptual responses and blood lactate concentration: Effect of training state. Medicine & Science in Sports & Exercise 23 (Jan): 80-87.
- 88. Jackson, A.W., and R.K. Dishman. 2000. Perceived sub-maximal force production in young men and women. Medicine & Science in Sports & Exercise 32: 448-451.
- Jackson, A.W., R.K. Dishman, and S.B. Martin. 2002. Perceived leg extension and flexion forces of young adult men and women: Comparison to previous findings. Research Quarterly for Exercise and Sport 73 (2): 225-228.
- Jackson, A.W., A.W. Ludtke, S.B. Martin, L.P. Koziris, and R.K. Dishman. 2006. Perceived submaximal force production in young adults. Research Quarterly for Exercise and Sport 77 (1): 50-57.
- 91. King, A.C., W.L. Haskell, C.B. Taylor, H.C. Kraemer, and R.F. DeBusk. 1991. Group-vs home-based exercise training in healthy older men and women. Journal of the American Medical Association. 266: 1535-1542.
- 92. Bayles, C.M., K.F. Metz, R. Robertson, F.L. Gross, J. Cosgrove, and D. McBurney. 1990. Perceptual regulation of prescribed exercise. Journal of Cardiopulmonary Rehabilitation 10: 25-31.
- 93. Cook, D.B., and K.F. Koltyn. 2000. Pain and exercise. International Journal of Sport Psychology 31 (2): 256-277.
- O'Connor, P.J., and D.B. Cook. 1999. Exercise and pain: The neurobiology, measurement, and laboratory study of pain in relation to exercise in humans. Exercise and Sport Sciences Reviews 27: 119-166.