

Rollin McCraty, Ph.D.

Dr. Rollin McCraty, Ph.D., is the director of research at HeartMath Institute Research Center. McCraty, a professor at Florida Atlantic University, is a psychophysiological whose interests include the physiology of emotion. One of his primary areas of focus is the mechanisms by which emotions influence cognitive processes, behavior, health and the global interconnectivity between people and Earth's energetic systems.

Findings from this research have been incorporated by HeartMath in the development of simple, user-friendly mental and emotional self-regulation tools and techniques. People of all ages and cultures can use these tools and techniques *in the moment* to relieve stress and break through to greater levels of personal balance, stability, creativity, intuitive insight and fulfillment.

McCraty has served as principal investigator in numerous research studies examining the effects of emotions on heart-brain interactions and on autonomic, cardiovascular, hormonal and immune-system function. The members of his research team regularly participate in collaborative studies with scientific, medical and educational institutions in the United States and around the world. They have worked in joint partnership with research groups at Stanford University, Claremont Graduate University, Dalhousie University in Halifax, Nova Scotia, Prince Sultan Cardiac Center in Saudi Arabia and the University of Lithuania among many others.

He is a member of the American Autonomic Society, Pavlovian Society, National Association for Psychological Science, Association for Applied Psychophysiology and Biofeedback and Society for Scientific Exploration.

McCraty has written extensively and been widely published in his areas of scientific interest. He has been interviewed for many feature articles in publications that include *Prevention*, *Natural Health*, *Men's Fitness* and *American Health* magazines. He has appeared in television segments for CNN Headline News, ABC World News Tonight, ABC's Good Morning America, NBC's Today Show, PBS's Body & Soul and the Discovery Channel. In addition, he has been featured many documentary films, including *I Am*, *The Truth*, *The Joy of Sox*, *The Power of the Heart*, *Solar Revolution*, and *The Living Matrix* among others.

Bibliography

McCraty, R., Moor, S., Goelitz, J. & Lance, S. Transforming Stress for Teens: The HeartMath Solution for Staying Cool Under Pressure (New Harbinger 2016).

McCraty, R. Science of The Heart Vol.2. Vol. 2 (HeartMath Institute 2016).

Abdulgader, A.A., et al., Human heart rhythm sensitivity to earth local magnetic field fluctuations. *Journal of Vibroengineering* 2015. 17(6): p. 2743-3391.

R. McCraty and F. Shaffer, Heart Rate Variability: New Perspectives on Physiological Mechanisms, Assessment of Self-Regulatory Capacity, and Health Risk. *Global Advances in Health and Medicine*, 4 (1) 2015. Pp 46-61

R. McCraty, and M. Zayas, Cardiac coherence, self-regulation, autonomic stability, and psychosocial well-being. *Frontiers in Psychology* 5 (2014) 1-13.

F. Shaffer, R. McCraty, and C. Zerr, A healthy heart is not a metronome: an integrative review of the heart's anatomy and heart rate variability. *Frontiers in Psychology* 5:1040 (2014).

R. McCraty, Heart-brain neurodynamics: The making of emotions, *The Neuropsychotherapist*, 2014, pp. 68-89.

R. McCraty, The energetic heart: Bio-magnetic Communication Within and Between People. in: P.J. Rosch, and M.S. Markov, (Eds.), *Bioelectromagnetic Medicine*, 2nd edition, Marcel Dekker, New York, 2014, pp. In press

R. McCraty, and A. Deyhle, The Global Coherence Initiative: Investigating the Dynamic Relationship Between People and Earth's Energetic Systems in: P.J. Rosch, and M.S. Markov, (Eds.), *Bioelectromagnetic Medicine*, 2nd edition, Marcel Dekker, New York, 2014, pp. In press

R. McCraty, and M. Atkinson, Biophysiology: Heart–Brain Interactions and Psychophysiological Coherence. in: S.I.J. SACHTER, (Ed.), *Psychology's New Design Science: Theory and Research*, Common Ground Publishing LLC, Champaign, Illinois, 2014, pp. 141-207.

R. McCraty, and M. Zayas, Intuitive Intelligence, Self-regulation, and Lifting Consciousness. *Glob Adv Health Med* 3 (2014) 56-65.

R. McCraty, Electrophysiology of Intuition: Pre-stimulus Responses in Group and Individual Participants Using a Roulette Paradigm. *Global Advances in Health and Medicine* 3 (2014) 16-27.

R. McCraty, and M. Atkinson, Resilience Training Program Reduces Physiological and Psychological Stress in Police Officers. *Global Advances in Health and Medicine* 1 (2012) 44-66.

A. Zohar, R. Cloninger, and R. McCraty, Personality and Heart Rate Variability: Exploring Pathways from Personality to Cardiac Coherence and Health. *Open Journal of Social Sciences* 1 (2013) 32-39.

R. McCraty, A. Deyhle, and D. Childre, The Global Coherence Initiative: creating a coherent planetray standing wave. *Global Advances in Health and Medicine* 1 (2012) 62-75.

S. Kim, V. Zemon, M.M. Cavallo, J.F. Rath, R. McCraty, and F.W. Foley, The control of heart rate variability using biofeedback in individuals with chronic brain injury and its effects on executive functioning. [Abstract]. *Archives of Physical Medicine and Rehabilitation* 93 (2012).

F. Halberg, G. Cornelissen, R. McCraty, and A. A.Al-Abdulgader, Time Structures (Chronomes) of the Blood Circulation, Populations' Health, Human Affairs and Space Weather. *World Heart Journal* 3 (2011) 1-40.

R.T. Bradley, M. Gillin, R. McCraty, and M. Atkinson, Nonlocal Intuition in Entrepreneurs and Non-entrepreneurs: Results of Two Experiments Using Electrophysiological Measures. *International Journal of Entrepreneurship and Small Business* 12 (2011) 343-372.

McCraty, R, Childre, D, Coherence: Bridging Personal, Social and Global Health. *Alternative Therapies in Health and Medicine*, 2010. 16(4). P.10-24

R. McCraty, G. Cornelissen, M. Atkinson, and F. Halberg, Gender differences in various endpoints of the conventional range of heart rate variability (HRV), 1st International Workshop of The TsimTsoom Institute, Krakow, Poland, 2010.

R.T. Bradley, R. McCraty, M. Atkinson, D. Tomasino, A. Daugherty, and L. Arguelles, Emotion self-regulation, psychophysiological coherence, and test anxiety: results from an experiment using electrophysiological measures. *Appl Psychophysiol Biofeedback* 35 (2010) 261-83.

D.A. Murphy, G.W. Thompson, J.L. Ardell, R. McCraty, R.S. Stevenson, V.E. Sangalang, R. Cardinal, M. Wilkinson, S. Craig, F.M. Smith, J.G. Kingma, and J.A. Armour, The heart reinnervates after transplantation. *Ann Thorac Surg* 69 (2000) 1769-81.

McCraty, R., et al., New Hope for Correctional Officers: An Innovative Program for Reducing Stress and Health Risks. *Appl Psych and Biofeedback* 2009. 34(4): p. 251-272.

McCraty, R., Atkinson, M., Tomasino, D., & Bradley, R. T, The coherent heart: Heart-brain interactions, psychophysiological coherence, and the emergence of system-wide order. *Integral Review*, 2009. 5(2): p. 10-115.

R. McCraty, and B. Rees, Biofeedback. in: S.J.E. Lopez, (Ed.), *The encyclopedia of positive psychology.*, Blackwell Publishing, London, 2009.

R.R. McCraty, R., Heart-Brain Connection. in: S.J.E. Lopez, (Ed.), *The encyclopedia of positive psychology*, Blackwell Publishing, London, 2009, pp. 998471-473

F. Halberg, G. Cornelissen, P. Grambsch, R. McCraty, I. Beaty, J. Siegelova, P. Homolka, H. D, F. J, T. F, K. T, M. Revilla, and O. Schwartzkopff, Personalized chronobiologic cybercare; other chronomics' progress by transdisciplinary cycles' congruences: season's appreciations 2009. *J Appl Biomed* 9 (2011) 1-34.

McCraty, R., Emotions Drive Your Body, in *Peak Vitality: Raising the threshold of abundance in our spiritual, emotional and material lives.*, J. House, Editor. 2008, Elite Books: Santa Rosa, California.

R. McCraty, From Depletion to Renewal: Positive Emotions and Heart Rhythm Coherence Feedback. *Biofeedback* 36 (2008) 30-34.

Bradley, R.T., R. McCraty, M. Atkinson, & M. Gillin. Nonlocal Intuition in Entrepreneurs and Nonentrepreneurs: An Experimental Comparison Using Electrophysiological Measures. in *Regional Frontiers of Entrepreneurship Research*. 2008. Hawthorne, Australia.

R. McCraty, R. Rees. Biofeedback and Positive Emotions, *Encyclopedia of Positive Psychology*, ed. S. J. Lopez (London: Blackwell, 2008).

R. McCraty, R. Rees. The Heart-Brain Connection. Encyclopedia of Positive Psychology, ed. S.J. Lopez (London: Blackwell, 2008).

R. McCraty, R. Rees. The Central Role of the Heart in Generating and Sustaining Positive Emotions, The Handbook of Positive Psychology, 2nd Edition. ed. C. R. Snyder & S. J. Lopez (New York: Oxford University Press, 2008).

R. McCraty, Emotions Drive Your Body. in: J. House, (Ed.), Peak Vitality: Raising the threshold of abundance in our spiritual, emotional and material lives., Elite Books, Santa Rosa, California, 2008.

Bradley, R.T., R. McCraty, and e. al., eds. Reducing Test Anxiety and Improving Test Performance in America's Schools: Results from the TestEdge National Demonstration Study. Vol. Institute of HeartMath, Publication No. 07-09-01. 2007, HeartMath Research Center: Boulder Creek, CA. 335.

R. McCraty, D. Tomasino. Emotional stress, positive emotions, and psychophysiological coherence. In: B.B. Arnetz, R. Ekman, eds. Stress in Health and Disease. Weinheim, Germany: Wiley-VCH, 2006: 342-365.

R. McCraty, M. Atkinson, D. Tomasino, and R.T. Bradley, The coherent heart: Heart-brain interactions, psychophysiological coherence, and the emergence of system-wide order, HeartMath Research Center, Institute of HeartMath, Publication No. 06-022, Boulder Creek, CA, 2006.

R. McCraty. Enhancing emotional, social, and academic learning with heart rhythm coherence feedback. Biofeedback 2005;33(4):130-134.

R. McCraty, R.T. Bradley, D. Tomasino. The resonant heart. Shift: At the Frontiers of Consciousness Dec. 2004-Feb. 2005; No. 5:15-19.

R. McCraty, M. Atkinson, R.T. Bradley. Electrophysiological evidence of intuition: Part 1. The surprising role of the heart. Journal of Alternative and Complementary Medicine 2004;10(1):133-143.

R. McCraty, M. Atkinson, R.T. Bradley. Electrophysiological evidence of intuition: Part 2. A system-wide process? Journal of Alternative and Complementary Medicine 2004;10(2):325-336.

R. McCraty, D. Tomasino. Heart rhythm coherence feedback: A new tool for stress reduction, rehabilitation, and performance enhancement. In: Proceedings of the First Baltic Forum on Neuronal Regulation and Biofeedback, Riga, Latvia, Nov. 2-4, 2004.

R. McCraty. The energetic heart: Bioelectromagnetic communication within and between people. In: Clinical Applications of Bioelectromagnetic Medicine, P.J. Rosch, M.S. Markov, eds. New York: Marcel Dekker, 2004: 541-562.

R. McCraty, D. Childre. The grateful heart: The psychophysiology of appreciation. In: R.A. Emmons, M.E. McCullough, eds. The Psychology of Gratitude. New York: Oxford University Press, 2004: 230-255.

L. Arguelles, R. McCraty, R.A. Rees. The heart in holistic education. *Encounter: Education for Meaning and Social Justice* 2003;16(3):13-21.

R. McCraty, and M. Atkinson, Psychophysiological coherence, HeartMath Research Center, Institute of HeartMath, Publication 03-016, Boulder Creek, CA, 2003.

B. Cryer, R. McCraty, D. Childre. Pull the plug on stress. *Harvard Business Review* 2003;81(7):102-107.

R. McCraty, M. Atkinson, D. Tomasino. Impact of a workplace stress reduction program on blood pressure and emotional health in hypertensive employees. *Journal of Alternative and Complementary Medicine* 2003;9(3):355-369.

R. McCraty, Influence of cardiac afferent input on heart-brain synchronization and cognitive performance. *International Journal of Psychophysiology* 45 (2002) 72-73.

R. McCraty. Heart rhythm coherence – An emerging area of biofeedback. *Biofeedback*. 2002;30(1):23-25.

R. McCraty: The energetic heart: Bioelectromagnetic interactions within and between people. HeartMath Research Center, Institute of HeartMath, Publication No. 02-035. Boulder Creek, CA, 2002.

R. McCraty. The scientific role of the heart in learning and performance. HeartMath Research Center, Institute of HeartMath, Publication No. 02-030. Boulder Creek, CA, 2002.

R. McCraty, D. Childre. The appreciative heart: The psychophysiology of positive emotions and optimal functioning. HeartMath Research Center, Institute of HeartMath, Publication No. 02-026. Boulder Creek, CA, 2002.

R. McCraty. Heart rate variability: A measure of autonomic activity and physiological coherence. *Journal of Optometric Phototherapy*. 2002;(March):1-7.

D. Childre, R. McCraty. Psychophysiological correlates of spiritual experience. *Biofeedback*. 2001;29(4):13-17.

R. McCraty, M. Atkinson, and D. Tomasino, Science of the Heart: Exploring the Role of the Heart in Human Performance, HeartMath Research Center; Institute of HeartMath, Publication No. 01-001, Boulder Creek, CA, 2001.

R. McCraty, M. Atkinson, D. Tomasino, W.P. Stuppy. Analysis of twenty-four hour heart rate variability in patients with panic disorder. *Biological Psychology*. 2001;56:131-150.

D.A. Murphy, G.W. Thompson, J.L. Ardell, R. McCraty, R. Stevenson, V.E. Sangalang, R. Cardinal, M. Wilkinson, S. Craig, F.M. Smith, J.G. Kingma, J.A. Armour. The heart reinnervates after transplantation. *Annals of Thoracic Surgery*. 2000;69(6):1769-1781.

R. McCraty, D. Tomasino, M. Atkinson, P. Aasen, S.J. Thurik. Improving test-taking skills and academic performance in high school students using HeartMath learning enhancement tools. HeartMath Research Center, Institute of HeartMath, Publication No. 00-010. Boulder Creek, CA, 2000.

R. McCraty, M. Atkinson, L. Lipsenthal. Emotional self-regulation program enhances psychological health and quality of life in patients with diabetes. HeartMath Research Center, Institute of HeartMath, Publication No. 00-006. Boulder Creek, CA, 2000.

R. McCraty, M. Atkinson, D. Tomasino, J. Goelitz, H.N. Mayrovitz. The impact of an emotional self-management skills course on psychosocial functioning and autonomic recovery to stress in middle school children. *Integrative Physiological and Behavioral Science*. 1999;34(4):246-268.

B. Barrios-Choplin, R. McCraty, J. Sundram, M. Atkinson. The effect of employee self-management training on personal and organizational quality. HeartMath Research Center, Institute of HeartMath, Publication No. 99-083. Boulder Creek, CA, 1999.

R. McCraty, D. Tomasino, M. Atkinson, J. Sundram. Impact of the HeartMath self-management skills program on physiological and psychological stress in police officers. HeartMath Research Center, Institute of HeartMath, Publication No. 99-075. Boulder Creek, CA, 1999.

R. McCraty, B. Barrios-Choplin, D. Rozman, M. Atkinson, A.D. Watkins. The impact of a new emotional self-management program on stress, emotions, heart rate variability, DHEA and cortisol. *Integrative Physiological and Behavioral Science*. 1998;33(2):151-170.

K. Umetani, D.H. Singer, R. McCraty, M. Atkinson. Twenty-four hour time domain heart rate variability and heart rate: Relationships to age and gender over nine decades. *Journal of the American College of Cardiology*. 1998;31(3):593-601.
(Rein, Atkinson et al. 1995)

R. McCraty, B. Barrios-Choplin, M. Atkinson, D. Tomasino. The effects of different types of music on mood, tension, and mental clarity. *Alternative Therapies in Health and Medicine*. 1998;4(1):75-84.

R. McCraty, M. Atkinson, D. Tomasino, W.A. Tiller. The electricity of touch: Detection and measurement of cardiac energy exchange between people. In: K.H. Pribram, ed. *Brain and Values: Is a Biological Science of Values Possible*. Mahwah, NJ: Lawrence Erlbaum Associates, 1998: 359-379.

B. Barrios-Choplin, R. McCraty, B. Cryer. A new approach to reducing stress and improving physical and emotional wellbeing at work. *Stress Medicine*. 1997;13:193-201.

R. McCraty, A. Watkins. *Autonomic Assessment Report: A Comprehensive Heart Rate Variability Analysis – Interpretation Guide and Instructions*. Boulder Creek: Institute of HeartMath, 1996.

R. McCraty, M. Atkinson, G. Rein, A.D. Watkins. Music enhances the effect of positive emotional states on salivary IgA. *Stress Medicine*. 1996;12(3):167-175.

W.A. Tiller, R. McCraty, M. Atkinson. Cardiac coherence: A new non-invasive measure of autonomic system order. *Alternative Therapies in Health and Medicine*. 1996;2(1):52-65.

R. McCraty, W.A. Tiller, M. Atkinson. Head-heart entrainment: A preliminary report. *Proceedings of the Key West Brain-Mind, Applied Neurophysiology, EEG Biofeedback 4th*

Annual Advanced Colloquium, Key West, FL, 1996.

R. McCraty, M. Atkinson, W.A. Tiller, G. Rein, A.D. Watkins. The effects of emotions on short-term power spectrum analysis of heart rate variability. *American Journal of Cardiology*. 1995;76(14):1089-1093.

G. Rein, R. McCraty, M. Atkinson. The physiological and psychological effects of compassion and anger. *Journal of Advancement in Medicine*. 1995;8(2):87-105.

R. McCraty, M. Atkinson, W.A. Tiller, G. Rein. New electrophysiological correlates associated with intentional heart focus. *Subtle Energies*. 1993;4(3):251-268.

R. McCraty, M. Atkinson, G. Rein. ECG spectra: The measurement of coherent and incoherent frequencies and their relationship to mental and emotional states. *Proceedings of the Third Annual ISSSEEM Conference, Monterey, CA, 1993*.

G. Rein, R. McCraty. Modulation of DNA by coherent heart frequencies. *Proceedings of the Third Annual ISSSEEM Conference, Monterey CA, 1993*.

G. Rein, R. McCraty. Heart Intelligence: The correlation between ECG coherence, DNA and the immune system. *Proceedings of the International Forum on New Science, Fort Collins, CO, 1993*.

G. Rein, R. McCraty. Local and non-local effects of coherent heart frequencies on conformational changes of DNA. *Proceedings of the Joint USPA/IAPR Psychotronics Conference, Milwaukee, WI, 1993*.

R. McCraty, B. Kabaker. Pulse D.C. Ionization for work stations. *Evaluation Engineering* May 1986 Pt. 48 LXVIII: 58-75.

R. McCraty. Methods for controlling ion levels. *Electrical Overstress Exposition Proceedings, Las Vegas, NV, 1985*.

R. McCraty. Pulse D.C. Microcontamination, June 1985.

R. McCraty. Electrostatics. In: W. Tolliver, ed. *Contamination Control in Clean Rooms*. New York: Wiley Publications, 1985.

R. McCraty. Static Control. *Telephone Engineer*, March 1984.

R. McCraty. Room air ionization systems. *Electrical Overstress Exposition Proceedings, Orlando, FL, 1984*.