
MIND BODY MEDICINE AND CANCER

What is Mind Body Medicine? How does it apply to cancer? Is there any real science behind it? More importantly, how does it apply to YOU, to those you love and care about? How can you, or someone you love, use the principles and practices of Mind Body Medicine (MBM) to live better and live happier with less depression, less anxiety and less stress?

These are the sorts of questions those who work in this area of medicine run into every day—and these are the sorts of questions we hope to answer for you in this eBook.

First, some definitions:

WHAT IS MIND BODY MEDICINE?

In the US, the National Center for Complementary and Alternative Medicine ([NCCAM](#)), a part of the National Institute of Health (NIH) has defined Mind Body Medicine as a number of different techniques designed to enhance the mind's ability to affect symptoms. Some of the techniques in MBM include support groups, cognitive-behavioral therapy, meditation, prayer, positive visualization, movement re-education, creative therapies, aromatherapy, yoga and others. MBM is a holistic and humanistic approach, centering on the patient and the patient's feelings, emotions, needs and comfort.

Mind Body Medicine is defined by [Swinburne University](#), in Australia, as focusing" particular therapeutic attention upon the role of the mind-body relationship in illness and health. The

essential therapeutic aim is to promote bodily health and healing via the modality of mind - and through the mind-body relationship.”ⁱ

The [Australasian Integrative Medicine Association](#) defines Mind Body Medicine (Interventions) as including “patient support groups, meditation, prayer, spiritual healing, and therapies that use creative outlets such as art, music, or dance.”ⁱⁱ

In Mind Body Medicine, practitioners and patients believe in the ability of the mind to overcome or improve physical, mental and emotional limitations. The patient takes a central role in Mind Body Medicine—ultimately, the patient is in charge of their physical, mental and emotional self and can work to improve their outlook or choose not to. This does NOT imply that if a cancer patient has, for example, a new metastatic tumor, that they have somehow “failed”. The success of MBM lies in less quantifiable measurements. If a cancer patient feels less depression, less anxiety, is able to enjoy their lives, is able to laugh and visit with friends and family—the treatment is considered successful because the mental and emotional difficulties **HAVE** been overcome!

IS THERE ANY SCIENTIFIC EVIDENCE FOR MIND BODY MEDICINE?

The short answer to this question is yes—there is increasing scientific support for the effects of the mind on improving the physical, mental and spiritual well-being and health of individuals who practice certain techniques. The opposite is also true—there is much evidence suggesting that stress and “negative” attitudes can actually put someone at greater risk for cancer and other chronic diseases.

A BRIEF HISTORY OF MBM

In 1975, Aderⁱⁱⁱ coined the term “[psychoneuroimmunology](#)”, or PNI to describe a newly discovered communication system between the brain, the mind and the immune system. When it was first described, many in the mainstream medical community found it difficult to accept. To many outside the mainstream medical community, it seemed pretty obvious—doctors and patients alike knew quite well that when someone was depressed or grieving over the loss of a loved one, they tended to get sick more often and took longer to recover. When someone was under a lot of stress at home or at work, they were at greater risk for heart disease. In the world of science, however, it is important to understand that these ideas needed proof. The concept of PNI finally gave scientists a theory to test.

Soon, studies on [PNI](#) began to be seen in the scientific journals around the world. These studies were able to definitely prove that, for example, if you are dealing with a spouse who has Alzheimer’s Disease, any injuries you suffered took longer to heal.^{iv} If there was conflict in your marriage or your relationship, your immune system was suppressed^v. If you were a medical student taking exams, your immune system was also suppressed.^{vi} People in grief and under various other forms of stress were also found to have decreased immunity and increased stress

hormones such as cortisol.^{vii} Cancer patients who did not have a community or group to support them were shown to have decreased Natural Killer (NK) cell immunity.^{viii}

Other researchers showed significant reduction in pain in over 4000 arthritis patients who were involved in mind-body support groups.^{ix} Patients who had had a heart attack and went to facilitated mind-body groups had over 50% less of a chance of a second heart attack than those who didn't attend a mind-body group.^x

When mind body approaches are examined over the last 25 years, an even clearer picture emerges. A number of studies have shown major benefits, particularly for [cancer](#) patients. Some of the benefits studied included a longer life, a better quality of life and a better and happier outlook on life.^{xi, xii, xiii, xiv}

The “placebo” effect has provided another line of evidence for the positive effects of MBM. The placebo effect can be defined as a beneficial effect in a patient after an “inert” treatment. The placebo effect is thought to come from the patient's expectations concerning the treatment—and not the treatment itself. It has always been considered to be almost a nuisance, not really “real” —or an effect that “got in the way” of interpreting the data. Well, it turns out that not only is it “real” but it can be localized to a real part of the brain and controlled by normal receptors in the brain—the same types of receptors that respond to, for example, pain medications.^{xv} In all those studies over the years where the placebo effect was used to explain improvements in outcome after a specific therapy, some portion of the patients improved because they believed they could improve. This is not just some “fluffernutter”, hand-waving pie-in-the-sky thinking—this is a real effect and happens repeatedly in every clinical trial of a particular drug or therapeutic approach—there is always some proportion of individuals who improve just because

they believed they could. The body has an incredible potential for self-repair and the mind is a powerful tool in that repair process.

In a recent review of the literature, it was acknowledged that the mind—and the state of the mind – is critically important to how the body responds, how it heals and how the body is able to rid itself of an infection, a tumor or any condition.^{xvi} To many people, again, this really didn't come as a great surprise—there are stories everywhere of the more depressed you are, the sicker you get or the more “negative” you are the more likely to get cancer or a heart attack. We have long known that certain personality “types” are more likely to have heart attacks. Many talked about a business man with a “Type A personality” who was headed for a heart attack. What is different now is that there is much more data to support what many of us already suspected. Another recent review connected not only the psychological, the nervous and the immune systems, but added information about stress—what stress does to a person's body, mind and spirit and what stress can cause—heart conditions, depression, nervous conditions, glandular imbalances, cancer and more.^{xvii, xviii, xix} We all have stress—and, within limits, we can all cope with stress. There does come a point for many where the stress begins to affect both our mental and our physical health.

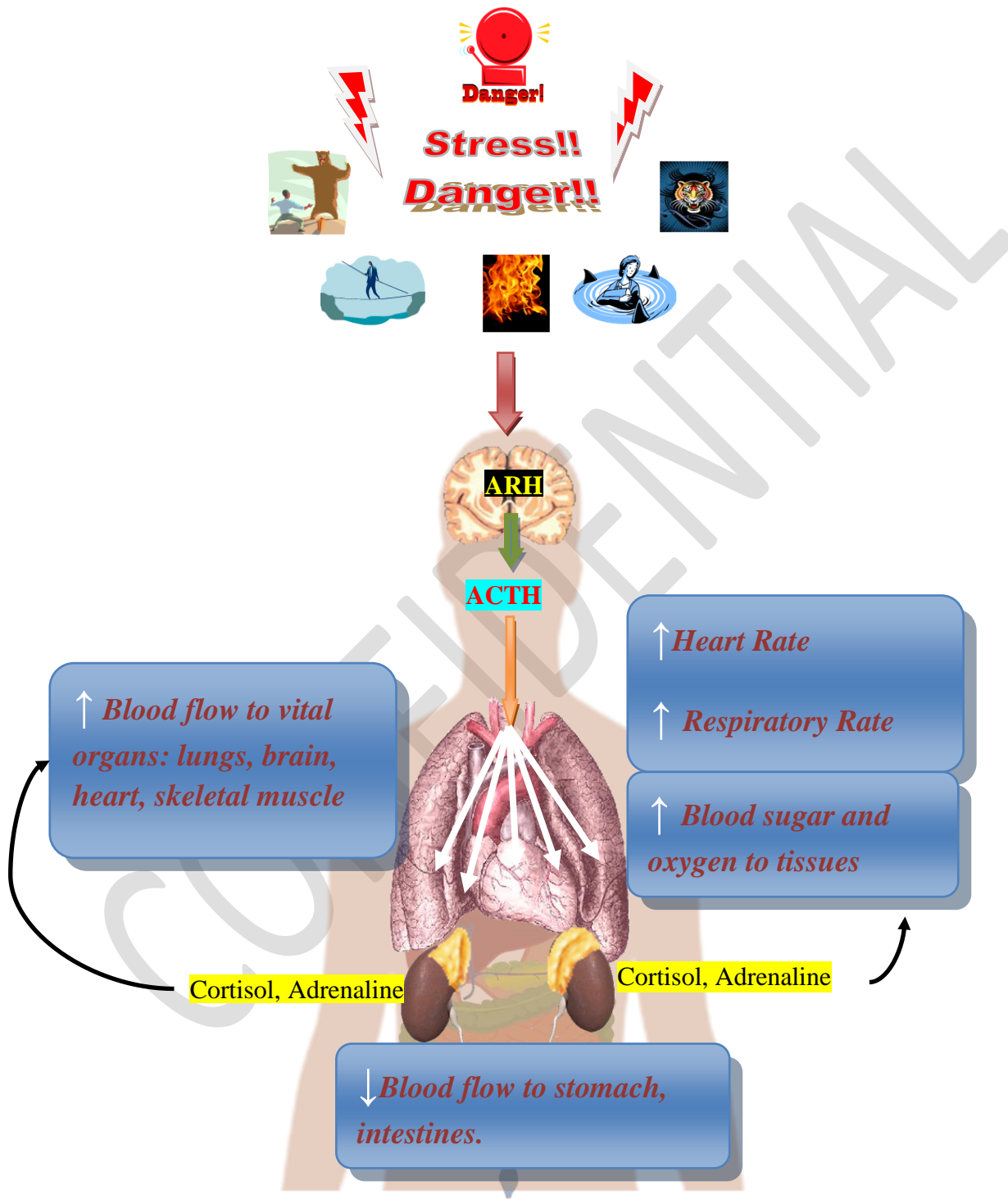


FIGURE 1: THE STRESS RESPONSE: Danger signals the release of cortisol and other hormones. Cortisol increases blood flow to organs vital to “Fight or Flight” such as the brain, skeletal muscles, heart and lungs and decreases blood flow to the GI, giving you that feeling of dread in the “pit” of your stomach.

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- ⁱ <http://courses.swinburne.edu.au/subjects/Introduction-to-Mind%2FBody-Medicine-HIM205/local>. (Accessed 6/2010)
- ⁱⁱ http://www.aima.net.au/resources/what_is_integrative_medicine.html (Accessed 6/2010)
- ⁱⁱⁱ Ader, R & Cohen, N. (1975) Behaviorally conditioned immunosuppression. *Psychosomatic Medicine*; 37(4), 333-40.
- ^{iv} Christian LM, Graham JE, Padgett DA, Glaser R, Kiecolt-Glaser JK. (2006) Stress and wound healing. *Neuroimmunomodulation*.;13(5-6):337-46.
- ^v Kiecolt-Glaser JK, Loving TJ, Stowell JR, Malarkey WB, Lemeshow S, Dickinson SL, Glaser, R., (2005) Hostile marital interactions, proinflammatory cytokine production, and wound healing. *Arch Gen Psychiatry*. Dec;62(12):1377-84.
- ^{vi} Kiecolt-Glaser JK, Garner W, Speicher C, Penn GM, Holliday J, Glaser R. (1984) [Psychosocial modifiers of immunocompetence in medical students](#). *Psychosom Med. Jan-Feb*;46(1):7-14.
- ^{vii} Bartrop, RW, Luckhurst, E. Lazarus L. Kiloh, LG & Penny, R. (1977) Depressed lymphocyte function after bereavement. *Lancet*, (8016). 834-836.
- ^{viii} Lutgendorf SK, Sood AK, Anderson B, McGinn S, Maiseri H, Dao M, Sorosky JI, De Geest K, Ritchie J, Lubaroff DM. (2005) [Social support, psychological distress, and natural killer cell activity in ovarian cancer](#). *J Clin Oncol*. Oct 1;23(28):7105-13.
- ^{ix} Lorig KR, Ritter PL, Stewart AL, Sobel DS, Brown BW, Bandura A, *et al.* (2001) Chronic Disease Self-Management Program: 2-Year Health Status and Health Care Utilization Outcomes. *Medical Care*, 39(11), 1217-1223.
- ^x Frishman, WH, Beravol, P, Carosella, C., (2009) Alternative and Complementary Medicine for Preventing and Treating Cardiovascular Disease, *Disease-a-Month* - Volume 55, Issue 3.
- ^{xi} [Andersen BL](#), [Yang HC](#), [Farrar WB](#), [Golden-Kreutz DM](#), [Emery CF](#), [Thornton LM](#), [Young DC](#), [Carson WE](#) 3rd (2008). Psychologic intervention improves survival for breast cancer patients: a randomized clinical trial. *Cancer*, Dec 15, 113 (12),3450-8.
- ^{xii} Anderson K.O., Cohen M.Z., Mendoza T.R., *et al.*: (2006) Brief cognitive-behavioral audiotape interventions for cancer-related pain. *Cancer* 107. (1): 207-214.
- ^{xiii} Spiegel D, Butler LD, Giese-Davis J, Koopman C, Miller E, DiMiceli S, *et al.* (2007) Effects of supportive-expressive group therapy on survival of patients with metastatic breast cancer: a randomized prospective trial. *Cancer*, 110(5):1130-8.
- ^{xiv} Spiegel D, Moore R. (1997) Imagery and hypnosis in the treatment of cancer patients. *Oncology*;11(8):1179-89.
- ^{xv} Diederich NJ. (2008) The placebo treatments in neurosciences: New insights from clinical and neuroimaging studies, *Neurology* 71(9): 677-84.
- ^{xvi} Friedman, HS, (2008) The Multiple Linkages of Personality and Disease, *Brain, Behavior, and Immunity*, 22(5):668-675.
- ^{xvii} Irwin, MR, (2008) Human psychoneuroimmunology: 20 Years of Discovery, *Brain, Behavior, and Immunity*, 22, (2): 129-139.
- ^{xviii} Goncharova, LB, Tarakanov, AO, (2007) Molecular Networks of Brain and Immunity, *Brain Research Reviews*, 55, (1):155-166.
- ^{xix} Malarkey, WB, Mills, PJ, (2007) Endocrinology: The active partner in PNI Research, *Brain, Behavior, and Immunity*, 21(2):161-168.