

Introduction

Beyond the Mind-Body Connection

The most divine art is that of healing; it must occupy itself with the soul as well as the body.

Pythagoras, fifth century BCE

In 1978, Steven, a strapping 40-year-old, appeared at my office for a physical examination. He looked and felt vibrant, but came at his wife's urging. Steve had a very low hematocrit - an indication of serious disease. An endoscopic exam revealed extensive gastric carcinoma. A subsequent operation confirmed that Steve was studded with cancer throughout his abdomen and into the surrounding lymph nodes. Then, as now, there was no definitive treatment, especially for such an advanced cancer.

In the recovery room, beset with fear, Steve asked, "Lenny, how long do I have to live?" His eyes were wide and his pupils were dilated; he was frantically pumping adrenaline. Steve was hanging on my every word. I did the old vaudeville routine, "How long do you want?" "Ten years," he said. "You got it," I replied. And he did get it. Steve again got sick in the winter of 1987 and died within 6 months. Steve not only went into remission for years, but he was healthy and vital until months before he died.

This incident with Steve profoundly altered my perspective on practicing medicine and my beliefs about the nature of the healing process, particularly regarding the power of the mind to heal. Consequently, for over 20 years now, I have engaged in the study of psychoneuroimmunology (PNI) or, as I prefer to call it, *integral physiology*. Integral physiology has to do with the synthesis of conventional physiology and how our individual psyches (i.e., mind, emotions, and spirituality) interact with the world around us to induce positive or detrimental changes in our bodies. In a broader sense, the concept applies to the health of society as a whole.

In the past two decades, biomedical research has changed our understanding of body systems. It is now known that there is a complex network of feedback, mediation, and modulation among the central and autonomic nervous systems, the endocrine system, the immune system, and the stress system. These systems, which were previously considered pristinely independent, in fact, interact on myriad levels. PNI is concerned with the various interactions among these body systems and provides the underpinnings of a

scientific explanation for what is commonly referred to as the mind-body connection.

In 1964, George Freeman Solomon wrote “Emotions, Immunity, and Disease: A Speculative Theoretical Integration.” In this paper, Solomon first used the term *psychoimmunology* and introduced the concept of a medical link between our emotions and immune systems (Solomon and Moos, 1964). In 1975, Robert Ader expanded on Solomon's work and coined the term *psychoneuroimmunology*. During that same year, Ader and his colleagues published the startling results of their research on the conditioned immune response in a rat population (Ader and Cohen, 1975). The rats in the experimental group were injected with cyclophosphamide (an immunosuppressive agent) while simultaneously being given drinking water flavored with saccharin. The rats were later given only the saccharin-flavored water, but no cyclophosphamide. To the researchers’ surprise (not to mention the rest of the medical community), the rats continued to evidence immune suppression. This was the first documented example of Pavlovian conditioning of the immune response.

In Ader’s groundbreaking research, he used a pharmaceutical agent to induce the conditioned immune response. Subsequent studies have expanded on the theory to include investigations of conditioning stimuli that are neither physical nor chemical, but are instead cognitive (e.g., perceptions, thoughts, or emotional states). What has been learned is that these cognitive stimuli can just as easily mediate changes in the immune system. Two examples:

- Lymphocyte activity in men is diminished immediately following the death of a spouse from breast cancer (Schleifer et al., 1983).
- A study of 75 medical students showed a significant reduction in natural killer-cell activity during final examinations as compared with the previous month (Kiecolt-Glaser et al., 1984).

Twenty years later, *Lancet* published a study by Ader and Cohen (1975) that concludes with the following statement: “The association between stressful life experiences and changes in immune function do not establish a causal link between stress, immune function, and disease. This chain of events has not been definitely established.” In this book, we will illustrate that the integration among body systems and that causal link can now be established. The first few chapters of this book will cover this information in some detail.

What are the practical implications of the understanding that a mind-body system exists? It is a summons to bring holism to the practice of medicine; to do away with the unbalanced cold logic of clinical dispassion; and to bring to medical treatment the balance of nurturing, caring, and empathy as well as to instill hope, when appropriate. Over 100 years ago, the dean of the John Hopkins University School of Medicine, Sir William Osler, said that the care of the patient with tuberculosis has more to do with what is in the head than what is in the chest. Somehow, in all our enthusiasm for scientific precision and methodology, we have lost sight of that important message. And, in doing so, we have lost sight of the art and heart of medicine, of the healing process, and of the mystery of life itself.

In this book, we first establish the scientific basis for the mind-body connection and begin to understand why Steve lived only as long as his requested time. We will learn that stories like Steve's are not all that unusual and begin to understand how this can happen. We will document the puissant interactions of the endocrine, immune, nervous, and stress systems that can so profoundly influence our lives. Once this information is clearly established, we will turn our attention to issues beyond the mind-body connection and examine what it is that the dimension of spirituality (i.e., that which informs, but transcends the five senses) can add to healing. We will look at issues such as hope and faith and what they have to do with healing. If we are more emotionally present with our patients, can we influence their healing process or outcome? What does deeply caring or loving have to do with health and healing - not only in patients' lives, but also in the lives of those called to the healing profession?

If Western medicine is to have a truly cohesive physiological system, it must incorporate a unified theory that can account for the existence of energy fields within - as well as outside - of the human body. This book looks at how various forms of energy (e.g., light, sound, electromagnetism, and prayer) translate into chemical and electrical signals that orchestrate our physical health. Some of these forms of energy can be called "subtle energy," that is, types of energy that typically are not detectable by the five senses or current scientific instrumentation. Integral physiology serves as a bridge between Western medical knowledge and the equally valuable, but less well-recognized, Eastern systems of medicine. Eastern medical concepts concern endogenous energy systems, such as Qi or life force that, according to Chinese medicine, flow throughout the body. A clear understanding of these issues will usher in a new form of medicine. I call it integral medicine because it combines important

Western biological knowledge with forms of healing that incorporate the mental and emotional, if not the spiritual, capacities of humans to heal.

Jeff Levin writes the following in the last paragraphs of his book *God, Faith, and Health*:

I believe that a new generalist perspective, which is on the rise, will be based on something akin to a “unified field theory” of the determinants of health and healing. This perspective will not be grounded principally in genetics and molecular biology, as the mainstream medical research establishment presumes. Instead, it will be founded on an integrated, body-mind-spirit perspective - a view of all sentient life as part of a continuous bioenergetic spectrum, or to use a metaphor borrowed from author Ken Wilber, a “spectrum of consciousness.” This will be the next era or historical epoch of Western medicine (Levin, 2001).

In the final chapters of this book, we introduce a paradigm that we called “integral physiology,” curiously, a schematic much akin to Levin's “unified field theory,” which presents an integrated perspective of health care. It takes us on a pilgrimage well beyond the mind-body connection and research in the field of PNI - it brings the subtle-energy dimension into the mix. The bridge that we are constructing between Eastern and Western medical knowledge is like a Rosetta Stone of integral physiology. In Chapter 13, we use the image of the Rosetta Stone of ancient Egypt as an allegory for deciphering the pieces of information that incorporate the physical, mental, emotional, and spiritual aspects of our lives and of our health. Someday, we will have the scientific means to prove the principles inherent to a system of medical treatment that incorporates a fully integral physiology and the technology to employ it to benefit physical, emotional, and spiritual health. And someday, research on human subtle energy will be the next exciting frontier in medicine.

The fragility of life confronts us, often personally and certainly existentially. We have been inspired to give this book a deeper voice, a voice that neither of us thought would be expressed here, but, rather, in the future. We were wrong. It is clearly time to begin to describe the power and importance of the spiritual in overall health and in the healing process. In Chapter 13, we present some initial blueprints for the construction of a “bridge” that will connect science of spirituality, leading medicine toward a fully integrated view of physiology.

While this book addresses many technical issues, it is not intended solely for the physician, but also for the interested health care practitioner. The technical parts are necessary to responsibly convey the contributions that Western medicine has offered to the deciphering of our “Rosetta Stone.” We would encourage the nonphysician reader not to get too bogged down in understanding every technical aspect or physiological explanation. Such readers can later return to the text to work on the more purely scientific understanding. The overriding message will be apparent, even if the medical details are not entirely understood. And to the physician, we encourage you to read it all. Although you might be familiar with, for example, the pineal gland or the neuroendocrinology of the stress response, topics are presented here from a new viewpoint and emerge to convey a candidly innovative perspective of healing.

Please note that throughout this book when the text states “I” or “my,” it is intended to designate author Len Wisneski’s voice and opinions.
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