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# The Brain-Body Connection (Science and the Spirit)

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Vicki Griffin

Barbara was meticulous—almost compulsive—about her health habits. She exercised and ate her greens and beans. But since the age of 43 she had been helplessly watching her bone density scores steadily decline until now, at age 50, she was suffering from severe osteoporosis.

“How can this be?” She wailed to a physician-friend. “It just isn’t fair. I’ve done everything I know to do—diet, weight-lifting, vitamin D. I have followed all the lifestyle advice, and nothing has worked!”

Osteoporosis is an endocrine disorder that can develop for various reasons and is not always preventable. But in Barbara’s case, one piece of lifestyle advice may have made a difference, but she had overlooked it. It’s found in the Bible: “A glad heart makes a healthy body, but a crushed spirit makes the bones dry” (Prov. 17:22).<sup>1</sup>

Barbara had failed to detect the subtle but habitual worry, anxiety,

## THE BRAIN- BODY CONNECTION

and negativism that characterized much of her outlook on life. It didn’t show so much on her face, but her bones were now telling the story.

Science is also beginning to recognize the importance this often-overlooked link. Ellen White wrote: “True science and Inspiration are in perfect harmony.”<sup>2</sup> Since God is the Author of both, combining their lessons provides powerful encouragement and instructions for building a better brain, better habits, and a better life.

Barbara had overlooked—or at least underestimated—the powerful effect of her state of mind on her physical health. The counsel of Ellen White affirms this mind-body relationship: “That which brings sickness of body and mind to nearly all, is dissatisfied feelings and discontented repinings.”<sup>3</sup>

One of the scientific terms for “discontented repinings” is “ruminating,” or mentally rehearsing negatives over and over again, deepening

the brain's pathways dedicated to that memory while overshadowing more positive, balanced memories.

Roger Pitman, professor of psychiatry at Harvard University, describes it this way: "In the aftermath of a traumatic event, you tend to think more about it, and the more you think about it, the more likely you are to release further stress hormones, and the more likely they are to act to make the memory of that event even stronger."<sup>4</sup>

Ellen White summarized the brain-body link this way: "The relation that exists between the mind and the body is very intimate. When one is affected, the other sympathizes. The condition of the mind affects the health to a far greater degree than many realize. Many of the diseases from which men suffer are the result of mental depression. Grief, anxiety, discontent, remorse, guilt, distrust, all tend to break down the life forces and to invite decay and death. . . . Courage, hope, faith, sympathy, love, promote health and prolong life. A contented mind, a cheerful spirit, is health to the body and strength to the soul."<sup>5</sup>

Always balanced, she also affirmed that the treatment of our body has a powerful effect on mental state: "If our physical habits are not right, our

mental and moral powers cannot be strong; for great sympathy exists between the physical and the moral."<sup>6</sup>

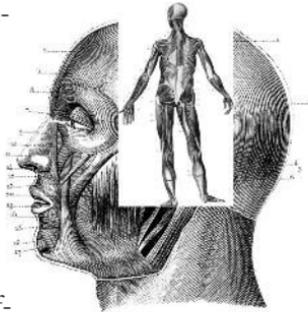
What Ellen White penned so plainly long ago is now the talk of the town in scientific circles. Researchers are now learning that the brain and body have a profound effect on each other and that the condition of one to a large extent affects the health and function of the other.

Noted neuropsychiatrist John Ratey from Harvard University states it this way:

"Exciting research has recently challenged several long-standing assumptions about emotion. For years psychologists have maintained that emotions are purely mental activities, some of which,

such as fear, elicit a physical response by the body. But while a few unique emotions, such as altruism, are dominated by mental processes, the rest are equally due to the body.

"What the public, at the hands of some scientists, clinicians, and popular movements in psychology, has missed for so long is the fact that emotion wells up from the brain and the body acting together. The role of the body has been discounted. . . . The other leading historical idea is that emotions are all localized in one system in the brain, commonly re-



ferred to as the limbic system. However, we are learning that emotions are the result of multiple brain and body systems that are distributed over the whole person. We cannot separate emotion from cognition or cognition from the body.

“It has always been our need as humans to divide and conquer, to separate out two kingdoms as heaven and hell, but separating the body and the brain is rapidly coming to be seen as ridiculous.”<sup>7</sup>

Writers of Scripture support this connection. The psalmist talks of his grief and guilt as so all-consuming that it resulted in fever (Ps. 32:4, NASB) and inflammation (38:7, TLB). Conversely, joy is linked to increased strength of mind, body, and spirit (Neh. 8:10).

In a stunning testimony, Ellen White described this amazing relationship in incredible detail: “If your mind is impressed and fixed that a bath will injure you [as a treatment for illness], the mental impression is communicated to all the nerves of the body. The nerves control the circulation of the blood; therefore the blood is, through the impression of the mind, confined to the blood vessels, and the good effects of the bath are lost. All this is because the blood is prevented by the mind and will from flowing readily, and from coming to the surface to stimulate, arouse, and promote the circulation. For instance, you are impressed that if you bathe

you will become chilly. The brain sends this intelligence to the nerves of the body, and the blood vessels, held in obedience to your will, cannot perform their office and cause a reaction after the bath.”<sup>8</sup>

Fascinating scientific investigations have revealed the precise mechanism that Ellen White describes. Specific molecules of communication called neuropeptides are deeply rooted in our biology that are highly responsive to habits of mind and body. These neuropeptides are major players in the brain-body connection to disease and health. The Bible and Ellen White have described this link in simple language for years, and science is just now validating this profound truth.

Noted biophysicist Candace Pert, Ph.D., research professor in the Department of Physiology and Biophysics at Georgetown University Medical Center, has pioneered research that unraveled the mystery of how the chemicals in our bodies form a dynamic information network, linking mind and body systems in health and disease.

Pert’s description of this process is a scientific version of Ellen White’s, but reveals the same process: “Pockets of peptide juices are released from both glands and brain cells, after which they bind with specific receptors that enable them to act at sites far from where the juices originated. This is what

endocrinologists call ‘action at a distance.’

“We made a radical discovery that every neuropeptide receptor we could find in the brain is on the surface of the human monocyte (immune cells). . . . Immune cells also make, store, and secrete the neuropeptides themselves. In other words, the immune cells are making the same chemicals that we conceive of as controlling mood in the brain. So, immune cells not only control the tissue integrity of the body, but they also manufacture information chemicals that can regulate mood or emotion.

“We know that the immune system, like the central nervous system, has *memory and the capacity to learn*. Emotions are at the nexus between matter and mind, going back and forth between the two, and influencing both.

“A major conceptual shift in neuroscience has been wrought by the realization that brain function is modulated by numerous chemicals in addition to classical neurotransmitters. Many of these informational substances are neuropeptides, originally studied in other contexts as hormones, gut peptides, or growth factors. Their number presently exceeds 50, and most, if not all, alter behavior and mood states.

“Neuropeptides and their receptors thus join the brain, glands, and immune system in a network of communication between brain and

body probably representing the biochemical substrate of emotion.”<sup>9</sup>

How true and inspiring, what depth of meaning the words of Ellen White hold when she exhorted: “The power of the will is not valued as it should be. Let the will be kept awake and rightly directed, and it will impart energy to the whole being, and will be a wonderful aid in the maintenance of health. It is a power also in dealing with disease. Exercised in the right direction, it would control the imagination, and be a potent means of resisting and overcoming disease of both mind and body.”<sup>10</sup>

So today, if you feel there is something missing in your wellness journey, remember: A simple change in attitude can have a dramatic impact on your health—spiritually, physically, and emotionally.<sup>11</sup>

## REFERENCES

- <sup>1</sup> *The Bible in Basic English*.
- <sup>2</sup> *Testimonies for the Church*, vol. 4, p. 584.
- <sup>3</sup> *Counsels on Health*, p. 631.
- <sup>4</sup> “Targeting the Brain,” *Time* (Sept. 18, 1998).
- <sup>5</sup> *Counsels on Health*, p. 344.
- <sup>6</sup> *Temperance*, p. 13.
- <sup>7</sup> John Ratey, *User’s Guide to the Brain* (New York: Vintage Books, 2002) p. 223.
- <sup>8</sup> *Testimonies for the Church*, vol. 3, pp. 69, 70.
- <sup>9</sup> Candace Pert, *Molecules of Emotion* (New York: Scribner Press, 1997), p. 179.
- <sup>10</sup> *The Ministry of Healing*, p. 246.
- <sup>11</sup> Visit <http://LifestyleMatters.com> for more information about books and materials.