



part 9—*The Knowledge*  
*Touching Up Our Picture of Health*

by *Risë Rafferty*

After spending a year in England at Newbold College, I developed a high regard for London taxi drivers. Though I rarely could afford their services, I was always amazed how you could tell them to take you anywhere in the city, and they knew exactly where it was and how to get there. The only big city I had ever navigated was Los Angeles, and most of its streets are at right angles. Not London.

London taxi drivers must learn what's called "the knowledge," that is, all the streets in London and more. They have to know not only every name of every street, but also how to get from Street A to Street B most efficiently. Beginners have a huge memory task ahead of them.

An experiment was conducted using London's taxi drivers, with significant results. The test was very simple: brain scans were done on the drivers' brains and compared with scans of non-taxi drivers of similar age and gender. Part of the brain, an area related to the memory called the *hippocampus*, was found to be significantly larger in the taxi drivers than in the control group. Very interesting!

As part of our NEWSTART approach, let's look at the significance of mental exercise to nerve health.

Focused thinking and appropriate actions, i.e., mental exercise, cause new neural development in humans. In other words, new growth actually takes place in the brain. It has been found that new brain connections and networks form in elderly brains as they remain active in pursuing new learning experiences.<sup>1</sup> The saying "use it or lose it" applies even to mental function. "In the course of a lifetime, more than 18 million brain cells and their connections die every year because of disuse and abuse."<sup>2</sup>

When it comes to abusing our brains through alcohol and drugs, the enemy's

agenda—to impair communication with heaven—is seen in its most malignant form. According to Robert Iacono, MD, the effects of certain street drugs are phenomenal. One night's use of a drug called *ecstasy* can wipe out half of the serotonin-producing cells in your brain.<sup>3</sup> Alcohol remains a potent central nervous system depressant. In spite of some health professionals' acclamations of the health benefits of wine, alcohol remains a destroyer of men. In the brain, alcohol crosses easily into and out of the nerve cells, somehow altering neuronal transmission. "Even at the lowest measurable level, alcohol affects perception, information processing, learning, judgment, reaction time, sound processing, and peripheral vision. Most seriously, it reduces an individual's awareness of being impaired."<sup>4</sup>

With the use of CAT scans, researchers in Boston have found "shrinkage of the brain even in light-to-moderate drinkers."<sup>5</sup> Sad, but very true, is the fact that this brain shrinkage begins in the frontal lobes, the spiritual seat of the soul, where moral values and the power of the will are said to reside.

Blood flow within the gray matter of the brain decreases as we age and even healthy brains lose cells. Alcohol accelerates degeneration. "Alcohol appears to accelerate aging processes that interfere with the capacity to reason and solve the problems of everyday living. Chronic alcohol consumption . . . can cause dementia and also produce severe brain

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damage.”<sup>6</sup> “The alcoholic brain often shows signs of atrophy.”<sup>7</sup>

If you have abused your brain cells, it is not too late to turn around. Begin today to use your brain in healthy ways. “Its cells will sprout and multiply new connections for increased productivity and abounding health. Let your brain cells remain unused or abused and relevant brain cells and their connections die. Psychological health implies growth, not mere survival.”<sup>8</sup>

It was commonly thought that when brain cells died, sorry, there was no hope of restoring them. However, in 1988 a team of American and Swedish scientists demonstrated for the first time that new brain cells do generate in adult humans. Up until that time, most believed that those referred to as “brain dead” (as a result of disuse or abuse), would remain that way.

Also contrary to popular belief was the discovery that the mental decline most people experience as they age is not due to the steady death of nerve cells. Instead, it usually results from the thinning out of the number and complexity of dendrites (branches that directly receive information from other nerve cells.) “Dendrites receive information across connections called *synapses*. If connections aren’t regularly switched on, the dendrites can atrophy. This reduces the brain’s ability to put new information into memory as well as to retrieve old information. Generating new dendrites was long thought to be possible only in the brains of children, but recent research has shown that old neurons can grow dendrites to compensate for losses. “The aging brain continues to have a remarkable ability to grow, adapt, and change patterns of connections!”<sup>9</sup>

Disuse and abuse (from destructive foreign substances) are not the only contributors to loss. Poor nutrition, infectious diseases, inappropriate environments, head injuries, and inherited disorders are other factors as well. Yet the bottom line is *don’t sell yourself short!* Whatever the difficulty, whatever the handicap or situation, wrestle with it and push your brain to think and solve and understand. You see, if the mind is occupied with commonplace matters only, “it will become dwarfed and enfeebled. If never required to grapple with difficult

problems, it will after a time almost lose the power of growth.”<sup>10</sup>

The life-changing power of Holy Spirit-led Bible study shines brilliantly here. In learning the Knowledge found in the Word of God, “the highest faculties of the human mind are called into intense activity. No one can engage in such study without developing mental power.”<sup>11</sup>

Not only do the mechanics of grasping Bible truths strengthen the mind, but encountering the Knowledge Himself will electrify and charge your brain as nothing else can. Christ is the mightiest Healing Power. In meeting the Omnipotent One, our minds become renewed. Do not be discouraged if you have abused or disused your mental powers. God’s restorative power goes to work immediately when the abuse is removed. None have fallen so low as to be out of His reach. Will it take a struggle or an intense battle to surrender brain-destructive habits? Absolutely. But we are not left alone in the fight. The promise is sure: “I will restore health to you, and I will heal you of your wounds, declares the Lord.”<sup>12</sup>

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1 *Healing the Broken Brain*, Elden M. Chalmers, PhD, p. 59.

2 *Ibid.*, p. 58.

3 Lecture tape by Robert Iacono, M.D., in Redlands, CA.

4 *Nutrition and Wellness*, Winston Craig, PhD, p. 282.

5 *Ibid.*, p. 283.

6 *Ibid.*

7 “Alcohol, the Legal Drug,” *National Geographic*, Feb. 1992, p. 15.

8 *Healing the Broken Brain*, p. 60.

9 *Neurobics*; Dr. Lawrence Katz, Manning Rubin, and David Suter; p. 3-4.

10 *Patriarchs and Prophets*, Ellen G. White, p. 596.

11 *Education*, Ellen G. White, p. 124.

12 Jeremiah 30:17, NAS.

