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"Principles of Integrative Health: A Path to Health Care Reform"

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Mind Body Stress Management in Health Care Reform

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Stress is pervasive and widespread. The prevention and treatment of the harmful effects of stress on health and wellbeing to all ages is vital and an important feature of the integrative components of healthcare reform.

Over 60% of visits to healthcare providers in the United States are related to stress and its manifestations<sup>1</sup>. It has a profound adverse influence on physical and mental health, on performance and efficiency in the workplace, and on education of our young people.

There are currently no effective pharmaceutical treatments or procedural and surgical approaches that can counteract these harmful effects. This testimony will provide the evidence for the necessity of Health Care Reform to include scientifically proven and patient acceptable approaches to alleviate the deleterious affects of stress.

### **Stress and the Fight or Flight Response**

Nearly 100 years ago, Walter B. Cannon described the “fight or flight” response to stress, identifying a consistent set of physiologic changes that occur when animals, including humans, are exposed to stress<sup>2,3</sup>. The characterization of this response was revised and expanded on 40 years later by the physiologist Hans Selye, who termed this response the “general adaptation response” to stress<sup>4</sup>. Several decades later, Sterling and McEwin proposed that “allostasis” is necessary to adapt to stress<sup>5</sup>.

Any situation that requires behavioral adjustment is stressful, and the fight or flight response is evoked. Situations that are stressful include worries about; health and well-being; family; financial considerations; and terror situations. We characteristically do not run or fight, yet secrete into our blood streams epinephrine and norepinephrine. This response is not utilized to run or to fight and causes or exacerbates a number of conditions that include coronary artery disease, headaches, insomnia, incontinence, chronic low back pain, disease and treatment related symptoms of cancer, and improving postsurgical outcomes, hypertension and arthritis<sup>6</sup>.

### **The Relaxation Response**

Over 40 years ago an opposite mind body state, also consisting of coordinated and reproducible physiological changes, was characterized by Herbert Benson<sup>7-9</sup>. Defined as the “relaxation response”<sup>9</sup>, this state is identified by decreases in oxygen consumption<sup>8,10-12</sup>, respiratory rate, and blood pressure<sup>7</sup>. There is reduced responsivity to norepinephrine<sup>13-15</sup> and on fMRI activation of specific brain areas<sup>14</sup> as well as increased cortical thickness<sup>15</sup>.

To the extent that any disorder is caused or exacerbated by stress, the relaxation response has proven to be a successful intervention. Its elicitation has

been successful in disorders that include: headache<sup>16-18</sup>, decreased alcohol intake<sup>19</sup>, decreased blood pressure in hypertensive patients<sup>20-27</sup>, premature ventricular contractions<sup>28</sup>, anxiety<sup>29, 30</sup>, cardiac surgery<sup>31</sup>, femoral arteriography<sup>32</sup>, premenstrual symptoms<sup>33</sup>, infertility<sup>34-36</sup>, and insomnia<sup>37, 38</sup>.

### **Mind Body Effects and Integrative Health**

Since the time of René Descartes over two hundred years ago, the mind has been considered separate from the body in Western civilization. “It’s all in your head” became pejorative representing diseases that do not have bodily manifestations.

The relaxation response with its above noted physiologic, biochemical, and neurological changes is a mind body effect. It is normally elicited through the repetition of a word, sound, prayer, or phrase and everyday thoughts are disregarded when they come to mind<sup>9</sup>. Hence the mind affects the body.

A recent 2008 publication<sup>39</sup> describes how gene expression is induced by the relaxation response. It provides conclusive evidence supporting the mind body connection. It also reports the first evidence that the relaxation response elicits specific gene expression changes in both short-term and long-term practitioners. Techniques used to evoke the relaxation response included several types of meditation, yoga, Tai Chi, repetitive prayer, guided imagery, and Qi Gong. Specifically, there are anti-oxidation effects as well as anti-inflammatory changes. Hence, the mind *is not separate* from the body. This recognition is an essential feature of integrative health.

### **The Mind Body-Resiliency Programs of the Benson-Henry Institute at Massachusetts General Hospital**

The clinical programs developed at the Benson-Henry Institute are directed at the integration of the relaxation response with cognitive restructuring, with positive psychology, with a patient’s existing beliefs and expectations (remembered wellness)<sup>40</sup>, and with exercise regimens and appropriate dietary changes.

The programs include treatments for many conditions and are entitled, the “Resiliency Programs of the Benson-Henry Institute”. Disease conditions include:

- Autoimmune disorders
- Symptoms of cancer
- Chronic pain
- Gastrointestinal disorders
- Headache
- Heart disease

- Hypertension
- Infertility
- Insomnia
- Menopause
- Stress reduction
- Weight management
- Any stress-related medical condition

The Institute also has wellness programs for mothers that offer solutions for managing the stresses of parenthood. It also offers relaxation response training and yoga for well hospital employees.

For more than 35 years, the approaches of the Benson-Henry have improved the lives of thousands of people whose conditions were caused or made worse by stress. It also has trained many thousands of healthcare professionals in its therapeutic and wellness programs under the aegis of Harvard Medical School's Department of Continuing Education and continues to do so.

### **Mind Body Integrative Health in the Workplace**

As noted in the 2005 *Harvard Business Review* article:<sup>41</sup>

Managers apply pressure to themselves and their teams in the belief that it will make them more productive. After all, stress is an intrinsic part of work and a critical element of achievement; without a certain amount of it, we would never perform at all.

Yet the dangers of burnout are real. Studies cited by the National Institute for Occupational Safety and Health (NIOSH) indicate that some 40% of all workers today feel overworked, pressured, and squeezed to the point of anxiety, depression, and disease. And the problem is getting worse, thanks to intensified competition, rapid market changes, and an unending stream of terrible news about natural disasters, terrorism, and the state of the economy. The cost to employers is appalling: Corporate health insurance premiums in the United States shot up by 11.2% in 2004-quadruple the rate of inflation-according to survey figures from the Henry J. Kaiser Family Foundation. Today, the American Institute of Stress reports, roughly 60% of doctor visits stem from stress-related complaints and illnesses: In total, American businesses lose \$300 billion annually to lowered productivity, absenteeism, health-care, and related costs stemming from stress.

The above *Harvard Business Review* article was published in 2005. The business environment today in 2009 is notably more stressful! Mind body integrative health approaches should be given even more consideration. Their integration could have important disease prevention manifestations.

The Benson-Henry Institute has trained individuals in many different corporations to apply its anti-stress wellness programs to healthy individuals. Its programs are easily replicable and can be disseminated widely.

### **Mind Body Integrative Health in Education**

Stress is pervasive in our educational system resulting in absenteeism, poor academic performance, alcohol and drug abuse, depression, and suicide. The stress management programs of the Benson-Henry Institute Education Initiative were developed to address these needs.

The Education Initiative program of the Benson-Henry Institute has been in existence for several decades. It is a two-phase “train the trainer” model. In phase one, the Educational Initiative provides school staff with mind body skills for their own use. The second phase demonstrates ways to bring these interventions directly to students.

In 1994, its stress management programs were applied to a high school population in Lake Placid, NY. Exposure to this curriculum resulted in significant increases in self-esteem and a tendency toward “greater locus of control scores”<sup>42</sup>.

In 2000, the Institute’s mind body education curriculum was studied in middle school students living in South Central Los Angeles, CA. Teachers were trained in how to teach relaxation response exercises and self-care strategies. Four measures of academic outcomes were analyzed. Students who had more than two exposures to semester-long classes in which teachers had been trained in the curriculum had higher grade point averages, work habits scores and cooperation scores than students who had two or fewer exposures. Students who had more exposures to the curriculum demonstrated an improvement in academic scores over the course of a two-year period<sup>43</sup>.

In 2002, the Institute investigated the results of a six 90-minute group training sessions at Harvard University. A six-week mind body intervention yielded significant reductions in psychological distress, state anxiety, and perceived stress<sup>44</sup>.

A recently completed, unpublished controlled investigation in a suburban Boston high school found that high school students partaking in the Institute’s curriculum had significant improvements in perceived stress, state anxiety, trait anxiety, and stress management behaviors.

The Educational Initiative is easily replicable and has been disseminated throughout the United States.

## Conclusion

As noted above, over 60% of visits to health care professionals are related to stress, and stress also has profound adverse effects in the work-place as well as in schools.

There are no current effective pharmaceutical or procedural and surgical treatments in the current medical system to counter-act the harmful effects of stress. Stress management programs developed at the Benson-Henry Institute have been addressing the needs of patients with stress-related disease. They are well-received, carry few risks, and are easily replicable in most health care settings. They're also easily adaptable to a wellness model as evidenced by the Institute's workplace and educational programs.

Healthcare reform should integrate scientifically proven mind body stress management programs. To do so, it may be necessary to utilize White House and Congressional level approaches rather than simply attempting to modify the extant disease-treatment based system.

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