



## **HEALING CHRONIC FATIGUE SYNDROME WITH PSYCHO NEUROBICS EXERCISES**

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### **ABSTRACT**

Seventy subjects determined to have persistent exhaustion disorder were randomized to a benchmark group (N 33) or a treatment gathering (N: 37). All proceeded with regular clinical consideration. Therapy subjects were allotted to a multi week, 2-hours-out of each week bunch program showing care contemplation and clinical qigong rehearses. The result variable was year wellbeing progress at one year development, as characterized by the SF36 year Health Transition score. The information yielded an order tree with a 90% by and large precision rate in class if Ying subjects as "improvers" or non-improvers" (impact strength 80.5, analyze savvy  $p < .05$ ), in view of SF36 Role Functioning Physical score at development and recurrence of psyche/body self-recuperating practice. Subjects in the most noteworthy quartile of Role Functioning-Physical improved paying little mind to rehearse. For the leftover 75%, those rehearsing at least three days out of every week at development were 2.7 occasions bound to report positive year Health Transition than those rehearsing less.

**KEYWORDS:** Chronic fatigue syndrome, meditation, mind/body medicine, behavioral medicine, health transition

### **INTRODUCTION**

Ongoing Fatigue Syndrome (CFS) is a complex constant ailment described by unexplained and weakening weariness with negligible effort, immunologic and neurologic anomalies and a wide scope of different indications. 1,2 The expression "weariness" in the name is misdirecting as it is just one of numerous side effects related with the condition. Significantly additionally incapacitating for some victims are intellectual unsettling influences in memory and fixation. Inclusion of the focal sensory system was shown in an investigation of 259 patients which found that 780/0 had injuries in their mind tissue as uncovered by attractive reverberation imaging, contrasted with 21 % for controls. 1 Most patients report an intense beginning as an influenza like sickness that doesn't resolve with rest. The course of ailment shifts broadly among patients, however typically includes a recurrent example of backslides and abatements. A few backslides are set off by specific stressors, while others may happen for no obvious reason.3,4 Etiology stays a secret. Hypotheses have included industrious viral contamination, yeast or parasites, natural pre-eclampsia, essential muscle issue, postinfectious persistent resistant brokenness, neuroendocrine confusion, essential rest issue, and neuropsychiatric problem. No single hypothesis has picked up agreement endorsement. There is no distributed information demonstrating that CFS is transmittable through either easygoing or close contact, and in their audit of exploration Hickie et al. infer that "it is impossible that any single irresistible specialist will be distinguished as the 'reason for' CFS," 4(p.317) There are presently no characterizing tests or natural markers for CFS, making it a finding of exclusion.4(pp.314-318) The current CDC case definition incorporates the models depicted in Table 1. These models supplant a prior, more selective version,5 and are expected to be applied simply

after a careful clinical history, actual assessment, mental status assessment, and lab tests have precluded other, possibly treatable illnesses.<sup>6</sup> Treatments are palliative for explicit side effects. While a few preliminaries of antiviral and immunoregulatory drugs have been embraced, no examinations have shown adequacy in reshaped very much planned preliminaries; consequently, there is no conclusive treatment for CFS.<sup>7</sup>

### **CDC Criteria for a Case Definition of CFS**

1. Clinically evaluated, unexplained persistent or relapsing chronic fatigue that is of new or definite onset (i.e., not lifelong), is not the result of ongoing exertion, is not substantially alleviated by rest, and results in substantial reduction in previous levels of occupational, educational, social, or personal activities; AND

2 The concurrent occurrence of four or more of the following symptoms: substantial impairment in short-term memory or concentration; sore throat; tender lymph nodes; muscle pain; multijoint pain without swelling or redness; headaches of a new type, pattern, or severity; unrefreshing sleep; and postexertional malaise lasting more than 24 hours. These symptoms must have persisted or recurred during 6 or more consecutive months of illness and must not have predated the fatigue.

### **HEALTH TRANSITION IN CFS**

Symptoms may last for years, and reports vary as to prognosis. Wilson et al. followed 103 patients for 2.4-4.2 years after treatment and found that 63% reported improvement.<sup>8</sup> Bonner et al. reported 66% of 46 patients recovered in four years.<sup>9</sup> In a retrospective study of 234 clinic patients, Hinds and McCluskey found 34.70/0 improving but an overall recovery rate of less than 200/0 over 6 years.<sup>10</sup> Other studies have suggested improvement in only 310/0.<sup>11</sup> The National Institute of Allergy and Infectious Diseases has summarized the prognosis as follows: most patients partially recover, some fully recover, and others recover and relapse.<sup>12</sup> Hence, there is currently very little basis on which to offer a prognosis to the individual sufferer. Despite the mysteries surrounding CFS, a substantial proportion of patients do improve with time and many report themselves recovered. Based on clinical observation, a three-phase model of the course of CFS (onset, chronic phase, recovery phase) is proposed in Figure 1) reflecting its impact on functioning.

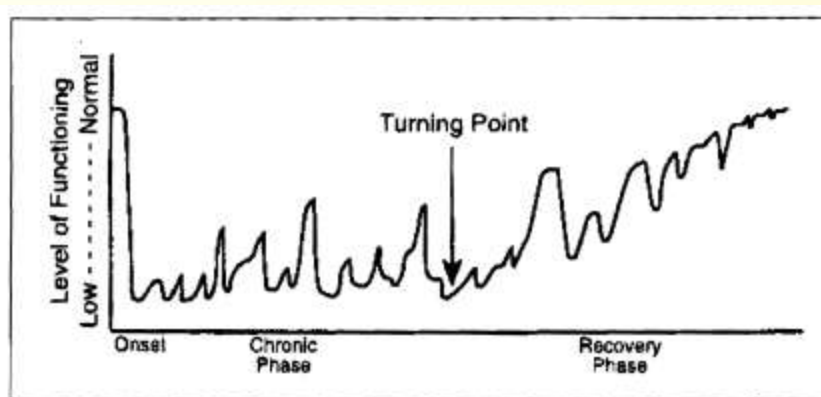


Figure 1. An example of the course of CRS from onset to recovery\_

In daily living in each phase.<sup>13</sup> The figure has no time scale as this varies widely across patients.

The notion of a "turning point" in the course of illness is central to the present paper because it signals the initiation of a process of positive health transition; i.e.) shifting out of a recurrent pattern of chronic functional impairment, and beginning a gradual ascent toward recovery of normal functioning. The recovery process is still punctuated by relapses and remissions, but the relapses become briefer and less severe, and the intervening periods of remission gradually lengthen. We emphasize that positive health

transition is a dynamic process that builds momentum over time. Former patients have retrospectively attributed their turning points to various factors including medical treatments, alternative therapies, behavioral or lifestyle changes, moving, relationship transitions (beginnings and endings), self-healing practices, and spiritual or psychological breakthroughs.

### **SELF-HEALING AND CFS**

CFS is clearly multi-systemic and does not fit neatly into any conventional illness categories. It appears to be multi-causal and is best understood in terms of the biopsychosocial perspective—the result of complex interactions among host resistance, genetic vulnerabilities, environmental pathogens, stress and coping, nutrition and other lifestyle variables.<sup>14,15</sup> Given the often intractable chronicity of this illness, the two major challenges of treatment are (1) symptom management, and (2) helping patients initiate a process of positive health transition that is sustained over the long term. Behavioral medicine, which is grounded in the biopsychosocial perspective, has been found to successfully address both of these challenges in other serious illnesses. Clinically significant impact has been found in metastatic breast cancer,<sup>16</sup> malignant melanoma,<sup>17</sup> AIDS,<sup>18</sup> hypertension,<sup>19</sup> heart disease,<sup>20</sup> and many other diseases. Though Paul Cheney, MD, has observed that lifestyle change is "easily the most important and often the least emphasized" part of treatment in CFS,<sup>21</sup> there has been little research in behaviorally-based interventions with this syndrome. Two studies of group intervention with CFS patients using Cognitive Behavior Therapy (CBT), which focuses on changing behavior patterns and cognitive assumptions, have been conducted, with ambiguous results. A British study of 32 patients who combined CBT with antidepressant drug therapy reported improvement in 69%, which was sustained at 3 month follow-up.<sup>22</sup> However, in this study there was no control group and no way of distinguishing the effects of the medication from the CBT. A controlled trial in Australia compared CBT with routine clinic attendance, and found no significant difference in outcomes of the two groups.<sup>23</sup> For patients with fibromyalgia—which many researchers consider to be a variant of or related to CFS—a group program combining stress reduction therapy and CBT found significant improvement over a control group, which was maintained 3 to 6 months later.<sup>24</sup> The purpose of the present study was to examine the extent to which regular use of mind/body self-healing practices, as well as other behavioral and functional variables, may predict positive health transition over a 12-month period in CFS. We designed a controlled study in which intervention subjects were taught a regime of mind/body self-healing practices for home use.

## **METHODS**

### **SUBJECT RECRUITMENT**

A call for subjects was sent by mail to physicians in the San Francisco Bay area recognized as having expertise in diagnosing and treating CFS, who announced the study through postings in their waiting rooms and their individual contacts with patients. It was also publicized by mail to other clinicians, support groups and leaders in the local CFS network. The study was presented as an opportunity for patients to contribute to knowledge about the course of CFS for the benefit of others. Those interested in participating contacted researchers (WC or HR) for a screening interview by phone. Those who met the following criteria were invited to participate:

1. A current diagnosis of CFS by a physician according to the CDC criteria;
2. An interval of at least 12 months since the diagnosis;
3. No other major medical conditions, such as cancer, AIDS, MS, etc.;
4. An estimated global functioning level of 75% or less;

5. No current or recent participation in behavioral or mind/body medicine treatment programs, individually or group;
6. No current regular use of behavioral or mind/body self-healing practices;
7. Willingness to be randomly assigned to either the control group (continue usual care) or the experimental group (usual care plus intervention program);
8. Willingness to comply with a regime of self-help practices if assigned to the intervention group.

Criteria 1-3 were independently confirmed by the subject's physician, and the other items were resolved during the interview. Subjects accepted into the study signed a standard consent form acknowledging that participation is no substitute for appropriate medical care, that they would be randomly assigned to a control or intervention group, that it is unknown whether any benefits would accrue from participating in the intervention group, that they would be free to withdraw at any time, and that their data would be kept confidential. 70 subjects were accepted into the study and were randomized to a control group (N = 33) or a training group (N = 37) by use of a table of random numbers.

### **DATA COLLECTION**

A self-report instrument package was administered by mail, and each subject was paid a total of \$50 over the 12 months for returning the completed questionnaire packets. The present paper is based on data from the following instruments at baseline (pre-intervention), ten weeks (immediately post-intervention), and twelve months.

### **INSTRUMENTS**

SF36. The Medical Outcomes Short-Form General Health Survey (SF-36) is a 36-item instrument that measures functional status in eight domains: Physical Functioning (extent to which health limits physical activities), Role Functioning-Physical (extent to which physical health interferes with work or other daily activity), Bodily Pain (intensity and effect on activity), General Health (evaluation of current health, outlook and resistance to illness), Vitality (energy versus tiredness), Social Functioning (extent to which health interferes with normal social activity), Role Functioning-Emotional (extent to which emotional problems interfere with normal activity), and Mental Health (depression, anxiety, behavioral-emotional control, affect). It also contains a summary measure of Health Transition, comparing overall current health status with one year ago.<sup>25,26</sup> The specific outcome variable used for this study was the 12-month Health Transition summary measure at one-year follow-up. This is a single Likert-scaled item as follows: "Compared to one year ago, how would you rate your health in general now?" Possible responses are "much better now than one year ago," "somewhat better now than one year ago," "about the same as one year ago," "somewhat worse now than one year ago," or "much worse now than one year ago." The validity of this self-reported change measure was established by Ware et al. in studies of analysis of variance with one-year measured change scores in the eight SF36 functional subscales. MANOVA F for the health transition measure was  $F = 12.91$ ,  $P < .00001$ , and of the eight subscales, its strongest concurrent validity was with change in the General Health subscale over the same time interval ( $F = 55.3$ ).<sup>27</sup>

The Multidimensional Health Locus of Control Scale measures the degree to which subjects attribute their health status to factors outside their control as opposed to factors within their control. It yields three distinct subscale scores: Internal, Powerful Others, and Chance.<sup>28</sup> Symptom Index Survey is an exploratory, non-standardized, 97-item Likert-scaled survey of symptom areas relevant to CFS. Symptom categories include allergy, cognitive, digestive, ears, emotions, energy/activity, eyes, head, heart, immune, joints/muscles, lungs, metabolism/endocrine, mouth/throat, neurologic, nose/sinus,

pelvic/urinary, skin, and weight/diet.<sup>29</sup> For experimental purposes we used the raw total score to represent an approximation of cumulative symptom severity. In addition the self-report instrument package contained a series of questions addressing help-seeking behavior including (1) number of current medications prescribed by a physician, (2) past and current use of mind/body self-healing practices (meditation, imagery, prayer, breathing exercises, biofeedback, yoga, qigong, tai chi, relaxation exercises, autogenic training, self-hypnosis, other), (3) number of office visits to physicians in the past three months, and (4) number of office visits to non-physician health care providers in the past three months.

### **INTERVENTION PROGRAM**

Treatment subjects participated in a 9-week, 2-hours-per-week group behavioral medicine program, with a choice of morning or afternoon sections. Each meeting included the following components:

**Mindfulness meditation.** Subjects were led through about 30 minutes of instruction and guided practice of mindfulness meditation. This is a traditional Buddhist practice involving sitting still with eyes closed and focusing one's attention on the breath. Mindfulness meditation is the basis of stress reduction programs developed in recent years by Kabat-Zinn and others, which have shown promise in pain control and health promotion.<sup>30,31</sup>

**Medical qigong.** Subjects were led through about 30 minutes of instruction and guided practice of a set of medical qigong exercises (sitting or standing). This is a traditional Chinese system of self-healing exercises that involve breathing, self-massage, movement, imagery, and circulation of vital energy.<sup>32,33</sup> The methods used in this program were developed by Master Sun Da-jin, former director of the Hang Zou Qigong Medical Science Research Institute, Hang Zou, China, and currently the master at the Genesee Valley Daoist Hermitage, Moscow, Idaho.

**Group discussion.** Participants were encouraged to share their experience of the past week, including compliance with home practice recommendations. There was discussion of lifestyle issues associated with CFS; however, rather than being a conventional support group or therapy group, the emphasis was on integrating the prescribed self-healing practices into daily life and reinforcing regular practice. In addition to the group sessions the subjects were asked to practice their choice of one or both of the techniques for at least 30 minutes per day at home. To support home practice a "buddy system" was used in which each subject had a partner who they would phone on alternate days of the week to offer encouragement and reinforcement. Also, subjects used daily log sheets to record the length of time practiced, which methods were used, and observations about the experience. Log sheets for the week were collected at each meeting and used as feedback by the researchers.

### **DATA ANALYSIS**

The outcome measure was self-rated (non) improvement, assessed using the SF36 Health Transition score. Specifically, improvement was defined as a response to this item of either "much better" or "somewhat better" (Likert scores of 1 and 2, respectively) now versus one year ago. Non-improvement was defined by responses of "about the same," "somewhat worse," or "much worse" (Likert scores of 3, 4, and 5 respectively) now versus one year ago. This dichotomous outcome measure was predicted using classification tree analysis (cTA), a nonparametric nonlinear discriminate analysis that explicitly maximizes classification accuracy. All reported effects met the Bonferroni criterion for statistical significance (experiment wise  $p < .05$ ).

### **CONCLUSION**

The method of recruiting subjects for this study has the inherent biases of any study relying on volunteer participation. In this case, the self-selection criteria explicitly addressed ability to travel to a weekly program, and willingness to follow through with a self-help

regime if assigned to the treatment program. Potential subjects who were either physically too ill to attend or otherwise not motivated to volunteer were not represented. However, the baseline levels of functioning and debilitation as presented in Table II suggest that this was a significantly debilitated sample-particularly in terms of the degree to which their role functioning was limited by physical illness. In terms of prior self-help orientation, through our screening criteria we rejected subjects already involved in regular use of such practices, yet we did need subjects who were open to such an approach. We found that the sample tended to favor an internal health locus of control over Chance or Powerful Others, but we know of no norms for this patient population regarding this variable. Another salient characteristic of the sample was educational level, in that two thirds of the subjects had at least an undergraduate degree. It is unknown whether-or in what direction-this could influence the results, though more highly educated medical patients are generally assumed to be more receptive to self-help regimes.

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