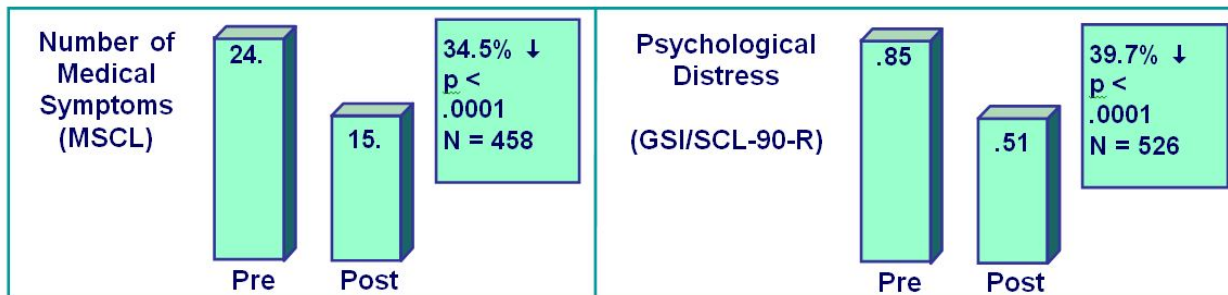


## Mindfulness-Based Stress Reduction Research Summary

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Published research has repeatedly shown that meditation and relaxation training can be powerful adjuncts to the conventional medical treatment of many disorders. The Stress Reduction Program incorporates the critical elements of all these relaxation and meditation programs and takes the healing process an important step further. A central feature of the program is the teaching of a gentle yet effective method that encourages the patient to develop a profound level of inquiry into the application of mindfulness (moment-to-moment, non-judgmental awareness) and mindfulness-based coping strategies in everyday life. Patients in the program are taught to become aware of, and develop, their own resources to support their health, thus becoming more stress hardy, a quality that is associated with better health across the life span.

The Stress Reduction Program has been on the cutting edge of mind/body and integrative medicine for twenty two years and represents participatory and integrative medicine at its best. Over 18,000 patients with all manner of diagnoses have successfully completed the eight-week course and 1,400 physicians have referred patients to this program. Published evaluations of the medical outcomes resulting from patient participation have shown a 35% reduction in the number of medical symptoms and a 40% reduction in psychological symptoms (stable over four years) (Kabat-Zinn 1982, 1985, 1986, 1992, 1998, Miller et al 1995, etc.).



Patients coming to the program are not separated by their referral diagnosis, so these outcome data apply across all the diagnostic categories that have been referred.

### Stress and Patient Presentation

The American Academy of Family Physicians has estimated that up to two-thirds of all office visits to family doctors are for stress-related symptoms. Recent research has indicated that up to 60% of all HMO visits are made by people with no diagnosable disorder - the “worried well” (Sobel 1995) - and that many of these presenting symptoms are related to the patient’s psychosocial functioning - such things as depression, anxiety, social isolation, overwork etc. (Kroenke & Mangelsdorff 1989). At least one third of chest pain cardiology patients with normal or near normal coronary arteries have been found to be suffering from panic disorder (Kushner 1989).

Mindfulness training has been shown effective in addressing the malaise that often underlies these presentations (Kabat-Zinn 1982, 1985, 1986, 1992, Miller 1995, etc.), and further evidence of this can be seen in studies showing reduced need for clinical services following meditation training (Kabat-Zinn, 1987b, Hellman 1990, Caudill 1991a, 1991b, Tate 1994, Orme-Johnson 1994).

Since its inception in 1979, more than 18,000 people have completed the eight-week Mindfulness-Based Stress Reduction Program (MBSR) and learned how to use their innate resources and abilities to respond more effectively to stress, pain, and illness. The central focus of the SR Program is intensive training in mindfulness meditation and its integration into the challenges/adventures of everyday life.

### Coronary Artery Disease

The addition of meditation training to standard cardiac rehabilitation regimens has been shown to reduce mortality (41% decrease during the first two years following, and 46% reduction in recurrence rates) morbidity, psychological distress, and some biological risk factors (plasma lipids, weight, blood pressure, blood glucose) (Linden 1996, Zammara 1996). Meditation practice alone has been shown to reduce exercise-induced myocardial ischemia in patients with coronary artery disease (Zamarrá 1996, Ornish 1983).

### Hypertension

Meditation training has been shown to reduce blood pressure in amounts comparable to the changes that are produced by medication and other lifestyle modifications such as weight loss, sodium restriction, and increased aerobic exercise (Schneider 1995, Linden & Chambers 1994, Alexander 1994).

### Cancer

A randomized trial with cancer outpatients showed Mindfulness-Based Stress Reduction (MBSR) was effective in significantly decreasing mood disturbance (65%), including depression, anxiety, anger and confusion, and also in decreasing the symptoms of stress such as cardiopulmonary and gastrointestinal symptoms (Specá 2000). These changes were sustained at six month follow up (Carlson 2001). Survival rates of both melanoma and metastatic breast cancer patients have been significantly improved by relaxation and meditation training (Fawzy 1993, Speigal 1989) and psychological distress was lessened in women with early breast cancer (Bridge 1988).

### Chronic Pain

Mindfulness meditation has been shown to reduce both the experience of pain and its inhibition of patients' everyday activities. Further, mood disturbance and psychological symptomatology (including anxiety and depression) are also reduced. Pain-related drug utilization was decreased and activity levels and self esteem increased. This was in marked contrast to a traditional pain clinic comparison group, which showed no change on these dimensions (Kabat-Zinn 1982, 85). These gains were nearly all maintained at four-year follow-up (Kabat-Zinn 1987).

### Fibromyalgia

Mindfulness training resulted in clinically significant improvements in physical condition and both psychological and social spheres (Kaplan 1993, Goldenberg 1994, Weissbecker

### Diabetes - Type I

Meditation training significantly lowered glucose levels in patients with poorly controlled type I diabetes (McGrady 1991).

### Irritable Bowel Syndrome

Meditation training has been shown to be effective in improving this condition (Blanchard 1992).

### Anxiety

Mindfulness training has been shown to clinically reduce symptoms of anxiety, psychological distress and secondary depression (Kabat-Zinn 1992). These changes were maintained at 3-year follow-up (Miller 1995).

### Asthma/Respiratory Disorders

Relaxation training has been shown to improve the psychological well-being, functional status and frequency of attacks of asthma patients as well as adherence to treatment (Devine 1996). It has also been shown to have a beneficial effect on dyspnea and psychological well-being among adults with obstructive pulmonary disease (Devine & Pearcy, in press).

### Psoriasis

Recently published research has shown that mindfulness meditation increases skin clearing rates four-fold when used in conjunction with phototherapy and photochemotherapy (Kabat-Zinn 1998).

### Headache

Meditation has been shown to decrease headache activity (Anastasio 1987).

### Depression

The skills derived from mindfulness training and cognitive therapy have been shown effective in significantly reducing the recurrence of major depressive episodes in patients who have been treated for depression (Teasdale 2000).

### Multiple Sclerosis

Training in mindfulness of movement resulted in MS patients reporting improvement over a broad range of symptoms, including balance (Mills 2000).

### Health-Related Quality of Life

MBSR has been shown to significantly improve health-related quality of life. (functional status, well-being, reduced physical symptoms, psychological distress) (Reibel 2001).