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## 12. MINDFULNESS MEDITATION

### What It Is, What It Isn't, And Its Role In Health Care And Medicine

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Mindfulness-based (M-based) stress reduction is a compelling generic approach to self-care, participatory medicine, patient education, and effective coping with stress, pain and illness. It provides a virtually universal framework for catalyzing inner and outer learning about one's own mind and body and relationship to the world and one's place in it, which in turn promotes on-going growth, healthy living, and healing over the lifespan. As such, it has the potential to function as a vehicle for teaching large numbers of people how to stay healthy and optimize their emotional and physical health, how to stay out of hospitals as much as possible, how to live better and cope more effectively with chronic medical problems for which there are presently no cures, and how to use the health care system effectively and economically. It also has the virtue of being an approach that continues to deepen with practice over the lifespan. One can benefit from it at an introductory level during initial exposure to the intervention yet find it equally valuable if not more so at various points in one's life. Many of our patients return to repeat the course either immediately or in future years and to take booster or "graduate" programs to deepen their relationship and understanding of mindfulness practice.

Mindfulness-based stress reduction has potential as well for school-aged children to learn early in life to recognize stress and its symptoms, adopt effective ways of dealing with it, develop emotional "fluency" and competence in social relationships, and develop lifestyles, attitudes and behaviors to promote health and psychological growth over the lifespan.

#### 1. WHAT IS MINDFULNESS? HOW IS IT DIFFERENT FROM CONCENTRATION AND RELAXATION?

Mindfulness meditation is a consciousness discipline (1) revolving around a particular way of paying attention in one's life. It can be most simply described as the intentional cultivation of nonjudgmental moment-to-moment awareness.

Mindfulness has been termed "the heart of Buddhist meditation" (2). It is elaborated most thoroughly in the Buddhist canon in the *Anapana Sati Sutra* (Sutra on mindfulness of breathing)(3), and the *Mahasi Satipatana Sutra* (Great Sutra on Mindfulness)(2, 4). Mindfulness meditation includes two forms of practice, termed *formal* and *informal* (5, 6, 7). Formal meditation practice refers to making a particular time on a regular basis to devote solely to the cultivation of mindfulness. This is most commonly pursued by stilling the body in one of a number of meditative postures or by conscious walking. Informal mindfulness practice refers to conscious efforts to bring moment-to-moment awareness into all aspects of one's daily life.

The cultivation of mindfulness requires a significant degree of concentration but is not limited to the cultivation of concentration. Concentration here refers to the capacity of the mind to attend to a single object of observation and sustain that attention over an extended period of time. In different schools of Buddhism, concentration meditative practices (termed *samadhi* or *shamatha* practices) are sometimes introduced and practiced for extended periods of time to lay a strong foundation for the later cultivation of mindfulness (termed *vipassana* practices) while in other schools, concentration and mindfulness are cultivated together. The latter has been the approach taken within the context of M-based stress reduction (5), in part because the flexibility of attention characteristic of mindfulness lends itself to the immediate needs of people living highly complex lives within a secular rather than a carefully controlled monastic society, and in part because the training program can be made more interesting and more accessible to large numbers of people within the mainstream of society if the "wisdom dimension" characteristic of mindfulness (the capacity to discern differences non-judgmentally and to see relationships between objects of observation in a rapidly changing field of activity; and more traditionally, the cultivation of insight into the nature of suffering, into the impermanence of all phenomena, and into the question of what it means to be a "self" and a "self-inrelationship") is included from the very beginning of their exposure to meditation training.

It is important to point out that mindfulness meditation training differs significantly both operationally and in its deep objectives from relaxation training (8), the goal of which is invariably to achieve a state of low autonomic arousal, with little or no emphasis on the systematic cultivation of inquiry or insight. Relaxation is often taught as a technique, to be used as necessary to combat stress or anxiety. Mindfulness should not be thought of as a technique but rather as a way of being. It is practiced for its own sake, and cultivated *daily* regardless of circumstances, in the spirit of the consciousness disciplines, as a "path" or a "Way" and not as a bandaid or technique. While relaxation is a frequent by-product of mindfulness meditation, it is not a necessary or even



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desirable proximal endpoint of mindfulness practice.

The goal of mindfulness practice, if there can be said to be a goal at all (since the practice emphasizes non-duality and therefore non-striving) is simply to experience what is present from moment to moment. Thus, emotional reactivity, and the full range of emotional states available to human beings are as much a valid domain of meditative experience as experiences of calm or relaxation.

The cultivation of mindfulness is an arduous challenge, in which one learns to face and work with the full range of human emotions and mind states. Frequently, relaxation in the way it is usually formulated, would be an entirely inappropriate response to human situations and problems. If it is offered as the "solution" or the heart of a meditative approach to stress reduction, it will introduce inevitable conflict because of its emphasis on a desirable endstate to be achieved. If one fails to experience or "achieve" relaxation, then one has failed, and the practitioner has either to conclude that she herself is somehow inadequate, or that the technique is lacking. In either case, there has been a thwarting of one's goals and expectations which can lead to a sense of inadequacy and an arrested trajectory of development.

In contrast, it is impossible to "fail" at mindfulness if one is willing to bring whatever it is that one is experiencing into the field of awareness. One does not have to do anything at all, or achieve a particular state in mindfulness practice. We sometimes tell our patients, in the spirit of the paradoxical nature of the non-dualistic approach, that "we will teach you how to be so relaxed that it is OK to be tense."

## 2. WHAT IS MINDFULNESS-BASED STRESS REDUCTION?

M-based stress reduction is a well-defined and systematic patient-centered educational approach which uses relatively intensive training in mindfulness meditation as the core of a program to teach people how to take better care of themselves and live healthier and more adaptive lives. The prototype program as developed in the Stress Reduction Clinic at the University of Massachusetts Medical Center has been described in detail (5). This model has been successfully utilized with appropriate modifications in a number of other medical centers, as well as in non-medical settings such as schools, prisons, athletic training programs, professional programs, the workplace. We emphasize that there are many different ways to structure and deliver mindfulness-based stress reduction programs. The optimal form and its delivery will depend critically on local factors and on the level of experience and understanding of the people undertaking the teaching. Rather than "clone" or "franchise" one cookiecutter approach, mindfulness ultimately requires the effective use of the present

moment as the core indicator of the appropriateness of particular choices. However, there are key principles and aspects of m-based stress reduction which are universally important to consider and to embody within any context of teaching. These include:

- a making the experience a challenge rather than a chore and thus turning the observing of one's own life mindfully into an adventure in living rather than one more thing one "has" to do for oneself to be healthy.
- b An emphasis on the importance of individual effort and motivation and regular disciplined practice of the meditation in its various forms, whether one "feels" like practicing on a particular day or not.
- c The immediate lifestyle change that is required to undertake formal mindfulness practice, since it requires a significant time commitment (in our clinic 45 minutes a day, six days per week minimally).
- d the importance of making each moment count by consciously bringing it into awareness during practice, thus stepping out of clock time into the present moment.
- e an educational rather than a therapeutic orientation, which makes use of relatively large "classes" of participants in a time-limited course structure to provide a *community of learning and practice*, and a "critical mass" to help in cultivating ongoing motivation, support, and feelings of acceptance and belonging. The social factors of emotional support and caring and not feeling isolated or alone in one's efforts to cope and adapt and grow are in all likelihood extremely important factors in healing (9) as well as for providing an optimal learning environment for ongoing growth and development in addition to the factors of individual effort and initiative and coping/problem solving (10).
- f a medically heterogeneous environment, in which people with a broad range of medical conditions participate in classes together without segregation by diagnosis or conditions and specialization of the intervention. This approach has the virtue of focusing on what people have in common rather than what is special about their particular disease (what is "right" with them rather than what is "wrong" with them), which is left to the attention of other dimensions of the health care team and to specialized support groups for specific classes of patients, where that is appropriate. It is in part from this orientation, which differs considerably from the traditional medical or psychiatric models, which orient interventions as specifically as possible to particular diagnostic categories, that the generic and universal qualities of M-based stress reduction stem. Of course, stress, pain, and illness are common experiences within the medical context, but beyond that, and even more fundamentally, the participants share being alive, having a body, breathing, thinking, feeling, perceiving, and incessant flow of mental states,



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including anxiety and worry, frustration, irritation and anger, depression, sorrow, helplessness, despair, joy and satisfaction, and the capacity to cultivate moment-to-moment awareness by directing attention in particular systematic ways. They also share, in our view, the capacity to access their own inner resources for learning, growing, and healing (as distinguished from curing) within this context of mindfulness practice.

### 3. OUTCOMES OF SR&RP

The SR&RP has been shown to be effective in a number of descriptive longitudinal studies in the reduction of pain and pain-related symptoms and behaviors in people with a wide range of chronic pain conditions participating in the SR&RP (11, 12, 13) and in the reduction of medical and psychological symptoms in participants who have a wide range of non-pain related chronic medical conditions and diseases (14, 15). Longterm follow-up has shown the results to be maintained for periods of up to four years following the 8-week intervention (13, 14).

Figure 1 shows short-term outcome data on the Medical Symptom Checklist (11) for 458 consecutive patients who completed the SR&RP in 1988 and 1989. This cohort of patients referred to the clinic by their physicians with a typically broad range of medical diagnoses including chronic low back pain (8.9%), headache (10.3%), neck pain (3.1%), chest pain (4.8%), other pain (3.7%), hypertension (7.0%), heart disease (5.4%), irritable bowel disease (8.9%), and a large subcohort (26.9) presenting with "functional somatic complaints"

### NUMBER OF MEDICAL SYMPTOMS (MSCL)

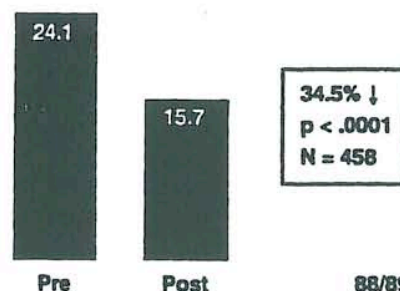


Figure 1: Pre-and post-intervention mean scores on the Medical Symptom Checklist (MSCL) of 458 consecutive completers of the SR&RP with a wide range of primary diagnoses (see text).

## PSYCHOLOGICAL DISTRESS (GSI/SCL-90-R)

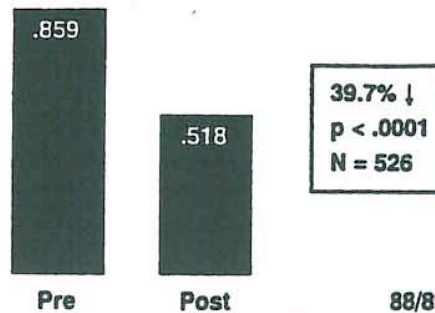


Figure 2: Pre-and post-intervention mean scores of the General Severity Index of the SCL-90-R of 526 consecutive completers of the SR&RP (see text).

associated with anxiety. As shown in Figure 1, there is a mean reduction of 34.5 percent ( $p < 0.0001$ ) between the pre and post intervention measures of the number of medical symptoms reported for the preceding month. This finding reproduces and confirms similar results reported in previous studies (11, 12, 13, 14, 15).

Figure 2 shows pre- and post intervention data for the General Severity Index of the SCL-90-R (16, 11) for the same period of time and a somewhat larger patient population which included the 458 individuals from Figure 1. The 40 percent reduction ( $p < 0.0001$ ) in psychological distress (the GSI includes dimensions of *somatization*, *interpersonal sensitivity*, *anxiety*, *depression*, *hostility*, among others) in this population also reflects results from previous studies with similar populations.

Other studies (17) on the same patients showed concurrent small (in the order of 5 to 8 percent) but highly statistically and clinically significant mean increases over the course of the intervention in the personality measures known as Stress Hardiness (18) and Sense of Coherence (19), with three-year maintenance of or increase in the improved condition. These results indicate that not only did symptoms improve substantially in the majority of people undergoing M-based stress reduction in this study, but that in addition, a deeper change occurred at the level of how one perceives oneself and oneself in relationship to others and to the environment. Stress hardiness and sense of coherence are thought to be relatively stable personality characteristics in adults. The finding that they change in a positive direction over a relatively brief intervention and then maintain over a three year period suggests an important effect of the intervention beyond symptom reduction. These findings confirm



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clinical observations and anecdotal reports from many participants suggesting a profound impact of M-based stress reduction on perception, proprioception, stress awareness, stress reactivity, coping, and comfort with a broader range of emotions and thought content than is ordinarily admitted to full awareness. We interpret the stress hardness and sense of coherence results as showing that people change in terms of their sense of self and self-in-relationship in a salutogenic direction, including a greater sense of control, increased commitment to the activities and experiences of daily living, seeing life events as challenges rather than as obstacles (the subdimensions of stress hardness), and believing that the world is comprehensible, manageable, and meaningful (the subdimensions of sense of coherence).

Other studies of M-based stress reduction have shown it to be effective in the short and long term treatment of anxiety and panic disorder (20, 21) in patients with chronic medical conditions. High levels of adherence with the intervention (15) suggest it is enthusiastically received by people who are referred to the clinic and that mainstream Americans with a wide range of chronic medical conditions are willing to undertake a disciplined and relatively rigorous and intensive course of training in mindfulness meditation and its applications in everyday living, and sustain the effort and resultant benefits far beyond the period of the intervention.

#### 4. ADVANTAGES OF M-BASED STRESS REDUCTION

The M-based stress reduction approach is generic and thus can appeal to and be of significant relevance and benefit for a wide range of people. It can be offered to heterogeneous groups and thus is readily adapted to various settings such as the workplace, schools, prisons, hospitals, corporations, athletic venues, community groups. Since its orientation is towards what people have in common and is based on the systematic cultivation of attention, a universal capacity of human beings) it can serve as an introduction to the basic practice of mindfulness in a generic and heterogeneous context, yet people with a wide range of different medical conditions, life situations, stressors, and histories can all find it of relevance. Specialized offering for particular groups of patients is not necessary, such as for people with chronic pain conditions, or breast cancer, or heart disease or AIDS. In fact, our patients report that they gain a great deal from participating in classes with people who have different problems than their own, and find this situation reassuring and perspectiveenhancing. Graduates of M-based stress reduction training can then seek more specialized interventions or advanced training as appropriate, having received a universally applicable foundation in moment-to-moment awareness, which we believe to be at the

most fundamental level of learning, growing, and personal/transpersonal transformation. The large-class format also means that such programs can be highly cost effective, as one instructor can typically teach a class with from 20 to 35 participants. Over time, a small but committed group of instructors can see and train significant numbers of people and begin to have an influence at the level of community public health. Over the past 15 years, the SR&RP at the University of Massachusetts Medical Center has had close to 7,000 people complete the program.

The availability of an M-based stress reduction program in a medical center or hospital can have a number of important consequences for the health care system:

- a Physicians have a place to send their patients when the course of traditional treatment is less than effective, or when patients "fall through" the cracks of the health care system. Such a program can serve as a safety net and opportunity to try an alternative, patient-centered, educational, mind/body alternative approach;
- b it is important from the point of health care costs for medical centers and hospitals to take responsibility for teaching people the fundamentals of physical, psychological and spiritual health, for mobilizing their own inner resources for growth and healing, and for coping more effectively with stress and pain in non-pharmacological ways, and ultimately, for staying out of the hospital and learning how to appropriately use medical care and assert themselves effectively in communicating with their doctors and the health care system (22).

## 5. CAUTIONARY NOTES

It is important to point out to prospective participants that it is a non-trivial commitment to oneself and to the program to undertake this eight-week training (23). We tell our patients that it may be stressful in the short term to take the SR&RP, as it requires an immediate and significant lifestyle change, most readily seen in the need to devote a minimum of 45 minutes per day, six days per week to practicing the various forms of meditation and yoga assigned for "homework." Moreover, we feel it is important to point out that things may seem like they are getting worse rather than better at first as one brings a higher degree of attention to unpleasant and potentially anxiety-filled experiences and moments, and that this requires a commitment to face and "be with" one's problems rather than to deny them or emotionally distance oneself from them. These are all aspects of the informed consent process that we engage in with patients referred to the clinic before they are admitted to the program itself.



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Thus, M-based stress reduction is not for everybody at any time in their lives. One has to be ready to undertake such a major commitment, even if it is time-limited. Some degree of selfmotivation is required. However, we appreciate people who come with an open sceptical attitude, and who are willing to explore their own possibilities using this approach for eight weeks and suspending judgement and just doing the practice as best one can, and letting the results speak for themselves at the end, but not before. Following this approach, we have shown that there is a very low (15 percent) drop out rate for such an intensive type of participatory intervention (15).

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