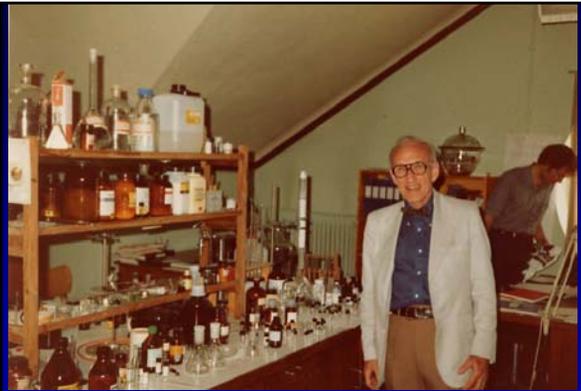
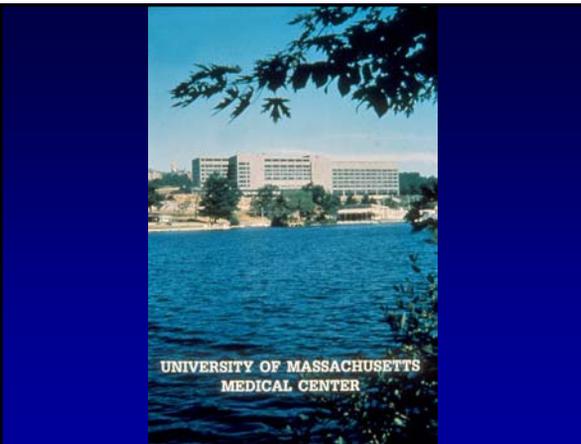


Clinical Applications of
Mindfulness-Based Stress Reduction
(MBSR) in Medicine and Psychiatry:
Origins, Interventions, and
Outcomes

Jon Kabat-Zinn, Ph.D.
Symposium on Mindfulness Meditation and Health
NIH May 27, 2004



Elvin A. Kabat
1914-2000



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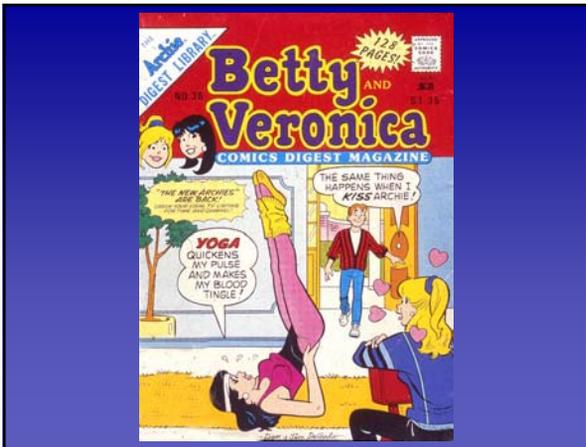
- What is mindfulness?
- What is mindfulness-based stress reduction (MBSR)?
 - Origins
 - Structure
 - Clinical applications
 - Outcomes
- Some implications for medicine, psychiatry, and health

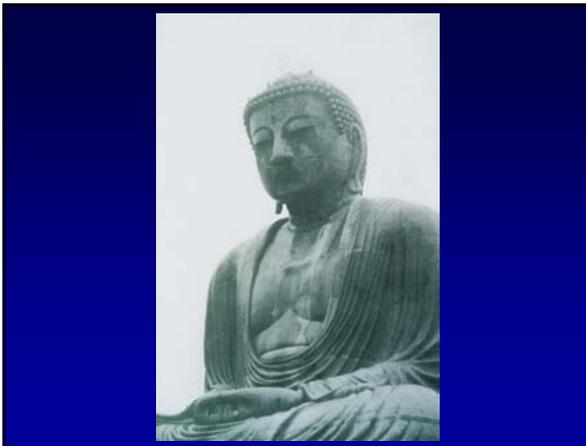
What is
mindfulness?

moment to moment
non-judgmental awareness

cultivated by paying
attention







awake

unconscious
•
on autopilot

Implication:
You may never be
where you actually are

“I went to the woods because I wished to live deliberately, to front only the essential facts of life, and see if I could not learn what it had to teach, and not, when I came to die, discover that I had not lived.”

Henry David Thoreau *Walden*

“All that is important is this one moment in movement. Make the moment vital and worth living. Do not let it slip away unnoticed and unused.”

Martha Graham

The faculty of voluntarily bringing back a wandering attention over and over again, is the very root of judgment, character, and will. No one is *compos sui* if he have it not. An education which should improve this faculty would be *the education par excellence*. But it is easier to define this ideal than to give practical instructions for bringing it about.

William James, *Principles of Psychology*, 1890

Sigmund Freud:

“Evenly suspended attention”

Recommendations to physicians practicing psychoanalysis

Mark Epstein: *Thoughts Without a Thinker*, 1995

MBSR

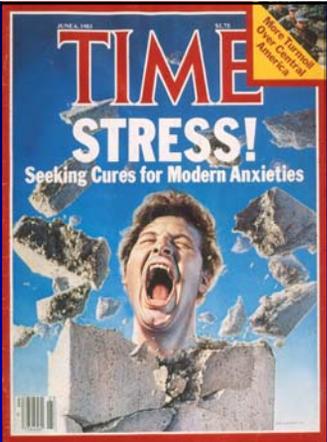
mindfulness-based stress reduction

Department of Medicine UMass Medical School

**Origins of
MBSR**

- To catch people falling through “the cracks” in the system
- Offer them something they might do for themselves
- A referral service physicians to send patients who were not responding to treatment
- Based on intensive training in meditation and yoga
- Notion of a Way (of Being); a Way (of seeing)
 - as in “tao” or “dharma”

- Not a standard cognitive/behavioral paradigm or method
- Would medical patient even be interested?
- Would physicians be interested in referring their patients?
- What would we call it – in 1979?



MBSR

- ♦ An outpatient program in the form of an 8-week course
- ♦ Patients attend class 1x/week
- ♦ 25-40 people per class - all diagnoses together
- ♦ 2.5-3 hrs/class - days or evenings
- ♦ 5-8 classes per cycle running concurrently
- ♦ 4 cycles per year: Fall, Winter, Spring, Summer
- ♦ referrals from all hospital depts, and greater community

MBSR

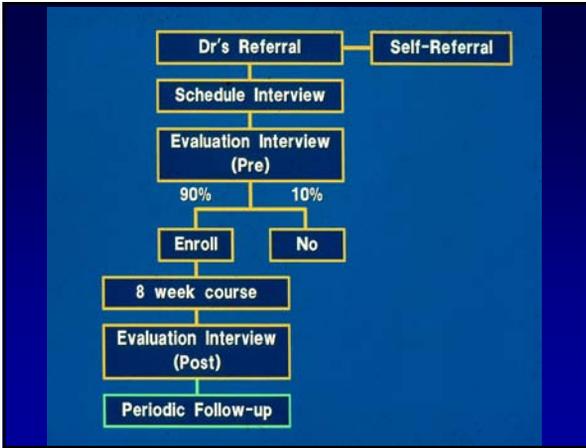
- ♦ Homework: ≥ 45 minutes/day meditation/yoga practice ≥ 6 days/week
- ♦ Daily awareness exercises in workbook
- ♦ All day silent meditation retreat / week 6
- ♦ Individual interviews before (pre) and after (post)

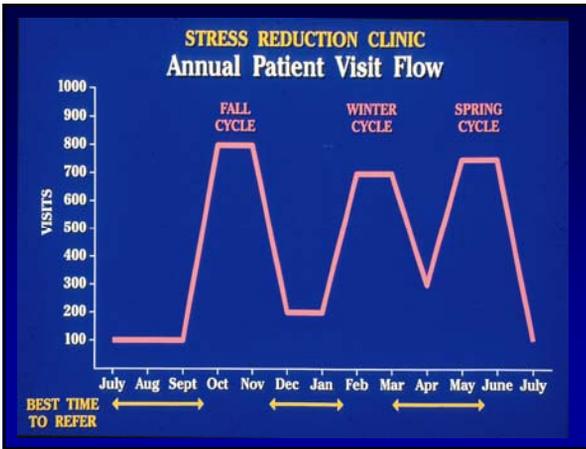
Medical/Psychiatric Model:

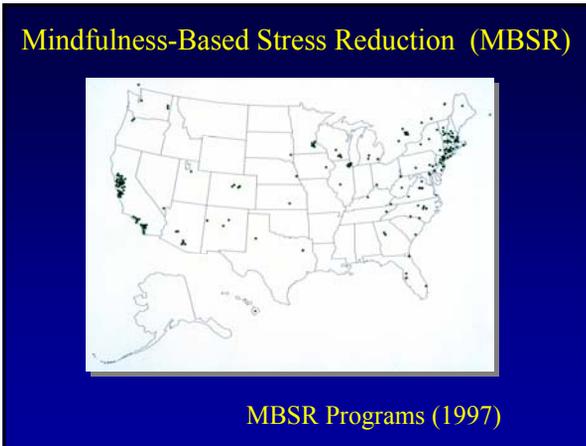
- A specific treatment for a specific disease

MBSR Model:

- A generic training, mixed groups with different diagnoses
- But, individual attention and tailoring to specific needs, circumstances, and problems







MBSR Program

•
A complement to medical treatment,
not a substitute for it.

•
Fully integrated into medical
clinics and subspecialty referrals

Daily Discipline

(mindfulness needs to be systematically cultivated)

Commitment to practice

45 minutes per day
6 days per week

3 formal techniques:

- the body scan
 - sitting meditation
 - mindful hatha yoga
- plus
- walking meditation



The Body Scan



Body Scan – Astronaut position



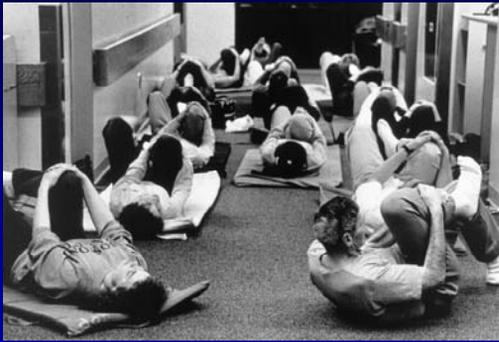
Sitting Meditation



Sitting Meditation – Spanish speaking class – inner city



Mindful Yoga



Mindful Yoga – day-long intensive

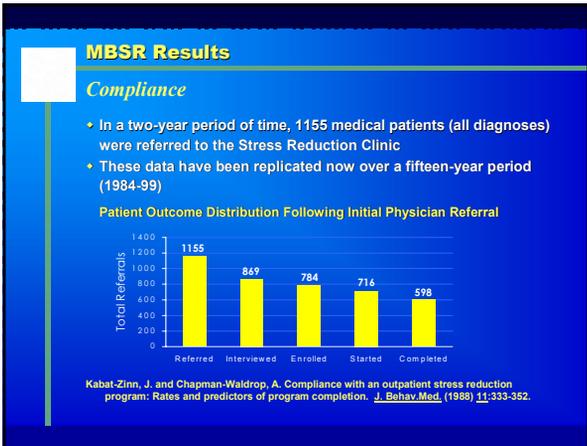


Informal Practice

- Mindfulness in everyday life : Body / Mind / Breath / World
- Living your life as if it really mattered
- Going to sleep at night / waking up in the morning
- Getting out of bed / brushing your teeth / taking a shower
- Relationships / children /parents / friends
- Responsibilities / tasks / shopping / car pooling
- Stress and stress reactivity

Outcomes

- Applications we will not have time to cover:
- Inner City Clinic 1993-2000
 - Prison Project 1993-1996
 - Schools 1990 - present
 - Athletes 1984 US Olympic Rowing Team
Chicago Bulls
Los Angeles Lakers



Symptom reduction:

physical symptoms – MSCL
psychological symptoms -- SCL-90-R

decrease across all diagnoses

Psychological Hardiness (Kobasa)

Sense of Coherence (Antonovsky)

increase across all diagnoses

MBSR Results

Symptom Reduction

- In a study sample of 458 consecutively referred patients for whom complete pre and post-intervention data on the measure were obtained, there was a 34.5% reduction in the number of medical symptoms reported in the previous month on the Medical Symptom Checklist (MSCL)
- A similar degree of symptom reduction is observed on this measure each time a cycle of the program is conducted
- This symptom reduction is highly significant both statistically and clinically.



Kabat-Zinn, J. Mindfulness Meditation: What it is, what it isn't, and its role in health care and medicine. In Hanaki, Y. and Suzuki, M (eds) *Comparative and Psychological Study on Meditation*. Eburon, Delft, Netherlands, 1996, pp. 161-170.

MBSR Results

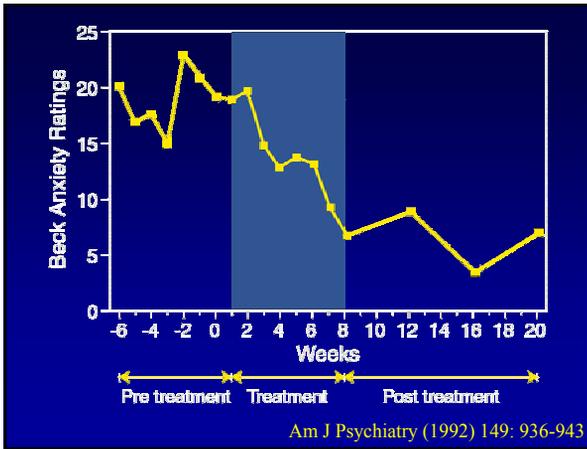
Symptom Reduction on the MSCL in Chronic Pain Patients

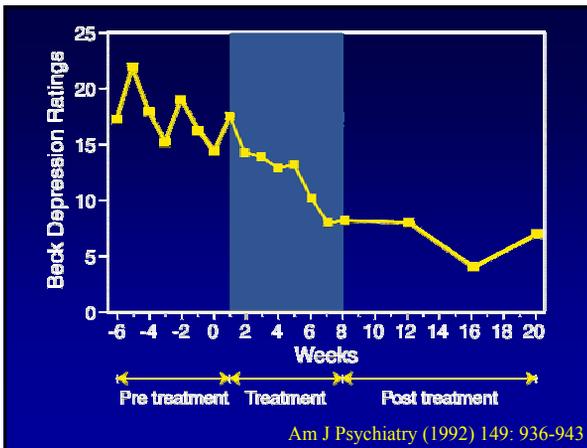


Kabat-Zinn, J., Lipworth, L. and Burney, R. The clinical use of mindfulness meditation for the self-regulation of chronic pain. *J. Behav. Med.* (1985) 8:163-190.

Anxiety and Panic Disorder among Medical Patients

Kabat-Zinn, J., Massion, A.O., Kristeller, J., Peterson, L.G., Fletcher, K., Pbert, L., Linderking, W., and Santorelli, S.F. Effectiveness of a meditation-based stress reduction program in the treatment of anxiety disorders. *Am. J Psychiatry* (1992) 149:936-943.





MBSR Results

Anxiety and Panic Disorder Study: 3-Year Follow-up

Repeated measures ANOVA showed maintenance of reduction of anxiety (Beck Anxiety Inventory) at three years post-intervention

Pre	20.50
Post	8.63
3-month FU	8.00
3-year FU	11.81

F=9.06, df=2,16, p<.0005

Miller JJ, Fletcher K, and Kabat-Zinn J. Three-year follow-up and clinical implications of a mindfulness meditation-based stress reduction intervention in the treatment of anxiety disorders. *Gen. Hosp. Psychiatry* (1995) 17: 192-200.

MBSR Results

Anxiety and Panic Disorder Study: 3-Year Follow-up

Repeated measures ANOVA showed maintenance of reduction of depression (Beck Depression Inventory) three years post-intervention

Pre	15.41
Post	9.00
3-month FU	7.31
3-year FU	7.50

F=13.90, df=2,17, p<.0005

Miller JJ, Fletcher K, and Kabat-Zinn J. Three-year follow-up and clinical implications of a mindfulness meditation-based stress reduction intervention in the treatment of anxiety disorders. *Gen. Hosp. Psychiatry* (1995) 17: 192-200.

Three randomized trials:

- The mind's effect on a healing process – psoriasis
- The effect of MBSR on:
 - emotional processing in the brain
 - immune function in response to influenza vaccine
- Combined MBSR/Dietary Intervention in prostate CA
(in progress)

Can mindfulness training in the form of MBSR be used to modify the central circuitry of emotion?

Alterations in brain and immune function produced by mindfulness meditation. Davidson, Kabat-Zinn, Schumacher, Rosenkranz, et al. Psychosomatic Medicine, (2003) 65:564-570.

Psoriasis

Kabat-Zinn J, Wheeler E, Light T, Skillings A, Scharf M, Cropley TG, Hosmer D, and Bernhard J. Influence of a mindfulness-based stress reduction intervention on rates of skin clearing in patients with moderate to severe psoriasis undergoing phototherapy (UVB) and photochemotherapy (PUVA). Psychosomatic Medicine (1998) 60:625-632.

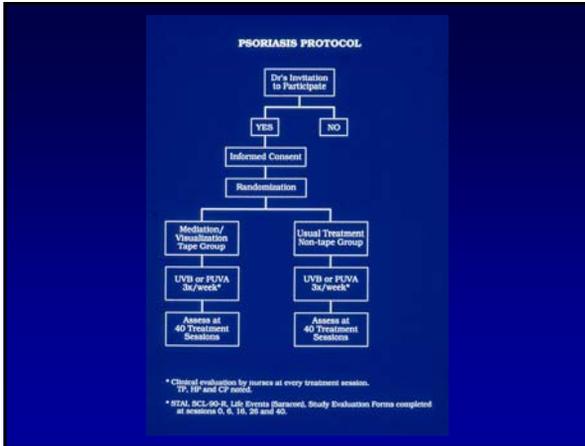
Oct. 31. I have long been a potter, a bachelor, and a leper. Leprosy is not exactly what I have, but what in the Bible is called leprosy was probably this thing, which has a twisty Greek name it pains me to write. The form of the disease is as follows: spots, plaques, and avalanches of excess skin, manufactured by the dermis through some trifling but persistent error in its metabolic instructions, expand and slowly migrate across the body like lichen on a tombstone. I am silvery, scaly. Puddles of flakes form wherever I rest my flesh. Each morning I vacuum my bed. My torture is skin deep: There is no pain, not even itching; we lepers live a long time, and are ironically healthy in other respects. Lusty, though we are loathsome to love. Keen-sighted, though we hate to look upon ourselves. The name of the disease, spiritually speaking, is Humiliation.

Nov. 1. The doctor whistles when I take off my clothes. "Quite a case." ... The floor of his office, I notice, is sprinkled with flakes. There are other lepers. At last, I am not alone. ... As I drag my clothes on, a shower of silver falls to the floor. He calls it, professionally, "scale." I call it, inwardly, filth. John Updike, New Yorker, 1976. (from Toombs)





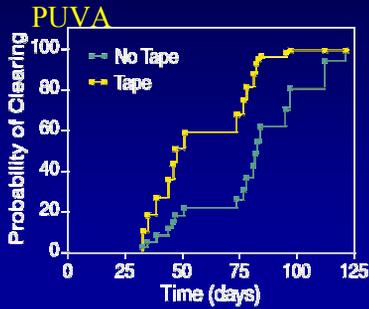








Healing and the Mind in Psoriasis



Healing and the Mind in Psoriasis

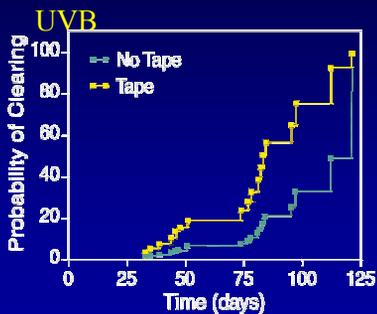


Table 3: Estimated Cox Proportional Hazard Ratios and 95% Confidence Intervals for the Effect of Tape Group and Light in the Treatment of Psoriasis

Outcome	Variables	Estimated Hazard Ratio	95% Confidence Interval	p
First Response	Group	2.16	(0.90, 5.17)	0.083
	Light	5.53	(2.08, 14.69)	0.001
Turning Point	Group	2.02	(0.80, 5.12)	0.139
	Light	6.21	(2.18, 17.64)	0.001
Halfway Point	Group	3.88	(1.34, 11.25)	0.013
	Light	4.71	(1.73, 12.81)	0.002
Clearing Point	Group	3.75	(1.11, 12.65)	0.033
	Light	4.42	(1.37, 14.21)	0.013

Implications

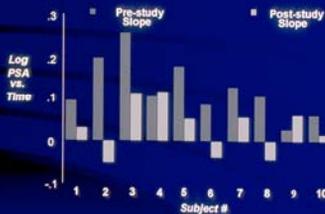
- the mind can positively influence a healing process you can see; speeding it up by a factor of approximately four
- it must be doing this down to the level of gene expression to control cell proliferation in the epidermis
- it could be doing it directly or indirectly – blood flow; inflammatory response
- built-in cost-effectiveness study – participatory medicine
- classical example of integrative medicine
- may reduce the risk of basal cell carcinoma from UV exposure
- not be easily attributed to “social support” factors
- this experimental system can be “mined” to explore the mind/body connection in healing: placebo light; expectations; conditioning, etc.

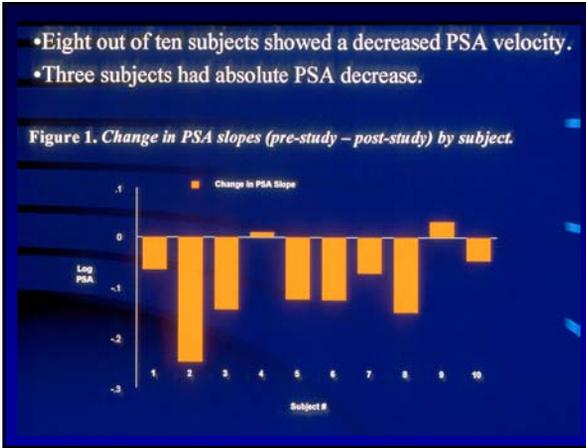
Effect of Diet and Mindfulness-based Stress Reduction on Secondary Prostate Cancer.

Gordon Saxe M.D. Ph.D.
James Hebert M.S.P.H. Sc.D
James Carmody Ph.D.
Jon Kabat-Zinn Ph.D.
Penny Rozenzweig B.Sc.
David Jarzowski B.Sc.
Robert Blute M.D.

J. Urology (2001) 166:2202-2207

Figure 5. PSA slopes, paired (pre-study vs. post-study), by subject.





- Current Studies in the CFM
1. Pre-hypertention Study NCCAM Lori Pbert, PI
 2. Prostate clinical trial Dept. of Defense James Carmody, PI
 3. Cost-effectiveness study Signa Health Care James Carmody
- Consulting
1. CEB Study Mind and Life Margaret Kemeny PI UCSF
 2. MBSR and Cardiac Disease David Sheps, PI UFL
 3. MBSR and Therapeutic Communities Marion Marcus, U Tex
 4. MBSR and AIDS Susan Folkman, PI UCSF

Mind / Body
Medicine

Integrative
Medicine

Participatory
Medicine

Good Medicine

I have no doubt whatever that most people live, whether physically, intellectually, or morally, in a very restricted circle of their potential being. They make use of a very small portion of their possible consciousness, much like a man who, out of his whole bodily organism, should get into a habit of using and moving only his little finger... We all have reservoirs of life to draw upon, of which we do not dream.

William James

www.umassmed.edu/cfm

•
www.mindandlife.org
