

Mindfulness-Based Treatment for Depression

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Disclosure

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- **I have no actual or potential conflict of interest in relation to this program/presentation.**

Learning objectives

- 1. The origins and rationale behind Mindfulness-Based Interventions (MBI's) for depression**
- 2. The core therapeutic elements of Mindfulness-Based Cognitive Therapy (MBCT) for Depression and the role of meditation practice for the patient and the therapist**
- 3. The research evidence for the effectiveness of MBI's including MBCT for the treatment of depression and prevention of relapse**

Additional objectives

- **Experiential exercises with formal mindfulness practices and elements and practices of MBCT**
- **Facilitation in mindfulness-based interventions**
- **Medication, trauma and comorbid substance abuse**
- **Findings from neuroscience research on how mindfulness-based interventions work**

Agenda

9 – 12

- Mindfulness-based interventions (MBI's) in psychotherapy
- Experiential exercises
- Research on effectiveness of MBI's
- MBCT rationale and research, outline, initial sessions
- MBCT exercises

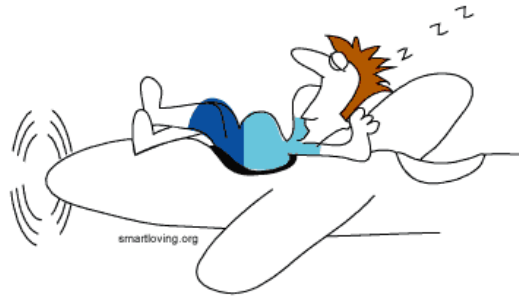
Noon – Lunch in silence: opportunity to practice

1 – 4

- The heart of MBCT, experiential exercises
- Comorbidities and other treatment considerations
- Neural mechanisms
- Q & A

Habits of mind and behavior

Auto-pilot



Multi-tasking



Past ← ? → Future

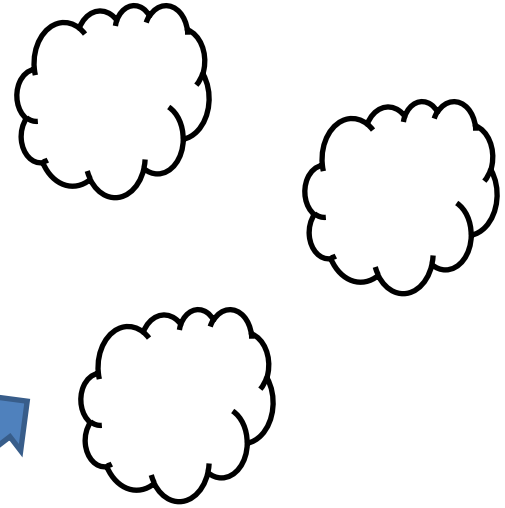
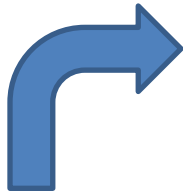
A definition of mindfulness

**The awareness that emerges
from paying attention
on purpose
and non-judgmentally
to things as they are**

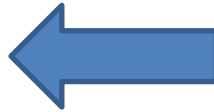
Williams, Teasdale, Segal and Kabat-Zinn 2007







Awareness
of
Mind-wandering



Mindfulness = Focused Attention + Open Monitoring

Focused attention – directing and sustaining attention on a chosen object, noticing when mind wanders – disengaging and redirecting to object of attention

Open monitoring – non-directed, non-reactive moment to moment awareness of all aspects of experience



Mindfulness in psychotherapy

Therapeutic qualities cultivated by mindfulness practice include: attention and presence, compassion for self and for others, empathy, and emotion regulation skills

Shapiro, S. L., & Carlson, L. E. (2009). *The art and science of mindfulness: Integrating mindfulness into psychology and the helping professions*. APA books

Germer, Siegel and Fulton

- **Practicing therapist – relates mindfully regardless of therapeutic intervention**
- **Mindfulness-informed therapy – insights from mindfulness practice inform treatment**
- **Mindfulness-based therapy – teaches mindfulness practice to patients**

Germer, C., Siegel, R., & Fulton, P. (Eds.) (2013). *Mindfulness and psychotherapy*, Second Edition. New York: Guilford Press

Models of formalized clinical interventions

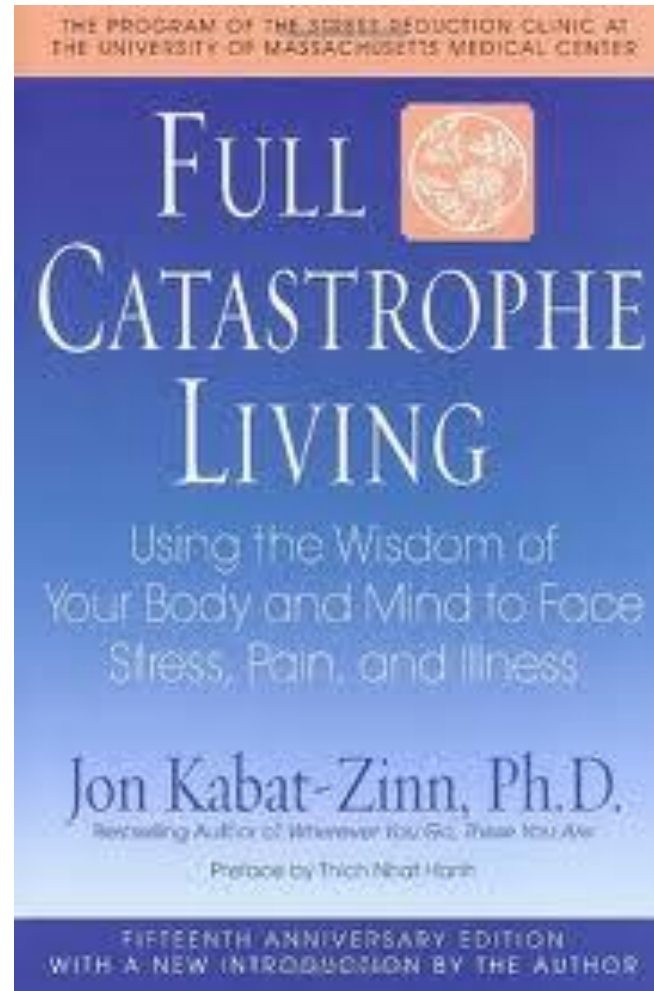
Dialectical Behavior Therapy (DBT) and Acceptance and Commitment Therapy (ACT):

- **CBT-based with training in mindfulness skills**
- **Mindfulness one component among several**
- **Guided exercises vs. formal meditation**

Practice is at the core of MBSR, MBCT, MBRP:

- **Teaching formal meditation practices**
- **Daily practice 30-45 min.**
- **Teachers have extensive personal practice & formal training in retreat setting**

Mindfulness-Based Stress Reduction



Mindfulness-Based Stress Reduction



Core intentions of MBSR

- **Opening to New Possibilities**
- **Realizing and experiencing Embodiment**
- **Cultivating a non-judging and accepting attitude as observer of all experience**
- **Moving towards all observed experience with acceptance**
- **Allowing attitudes of kindness and compassion to support and inform the observing awareness**

Common elements of MBSR-based interventions

Switch out of:

- Automatic pilot
- Avoidance
- Thinking about
- Judging and fixing
- Reactivity
- Unhealthy habits

To:

- Awareness; Intentional mode
- Curiosity and acceptance
- Directly experiencing
- Non-doing and being
- Skillful responding
- Taking care of ourselves and staying well

Common elements of MBSR-based interventions

Class structure:

- **Guided practice**
- **Inquiry**
- **Worksheets, handouts, homework**

Teaching style:

- **Embodied mindful presence – awareness, acceptance, compassion – reflects personal practice**
- **Experiential teaching emphasizes investigating experience directly**
- **Inquiry focuses on present-moment experience vs. story-telling and interpretation**

Common elements of MBSR-based interventions

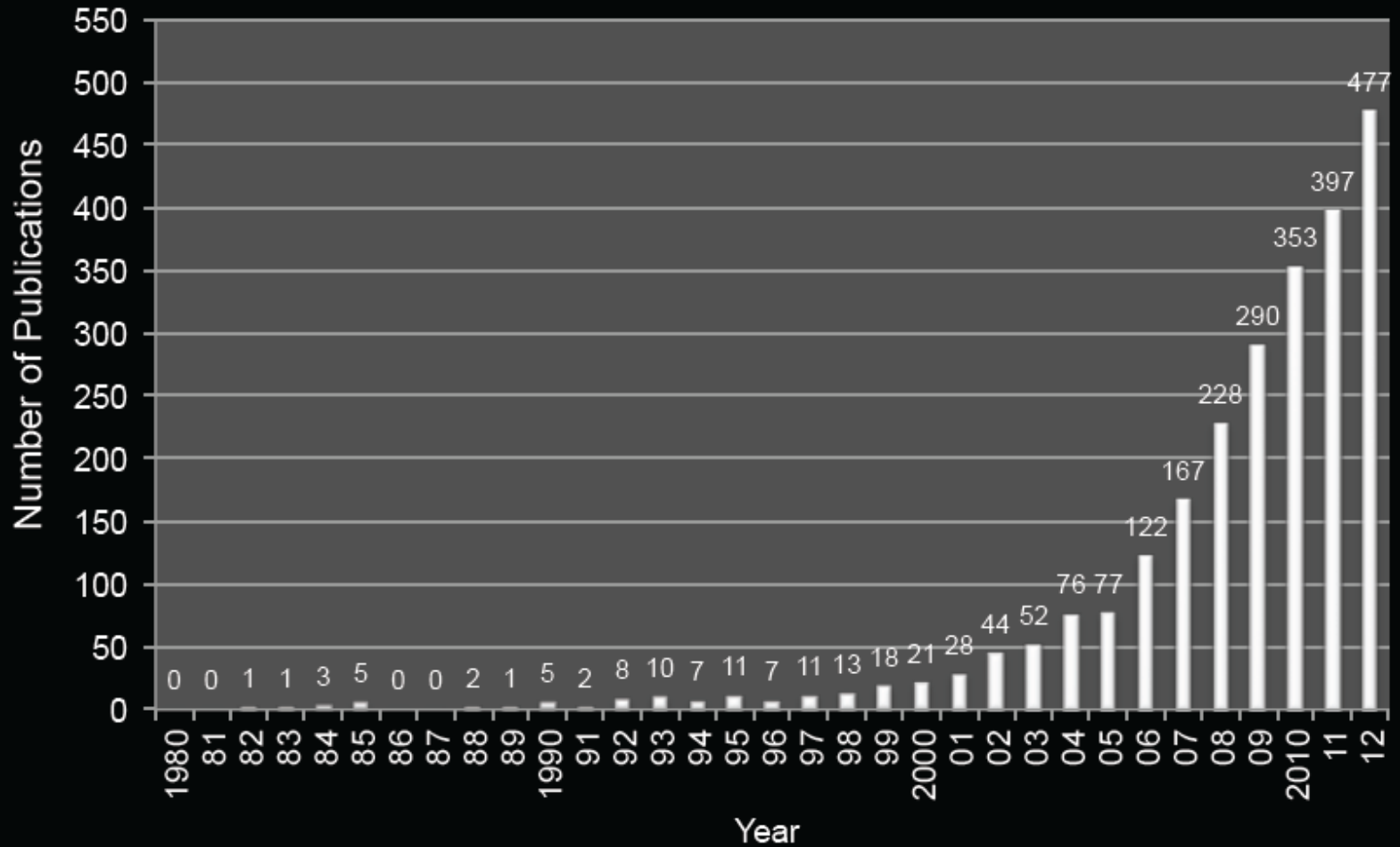
Formal practices:

- **Body scan**
- **Mindful movement/yoga**
- **Walking meditation**
- **Mindfulness of breath/body/sounds/thoughts**

Informal practices:

- **Mindfulness of daily activities**
- **Moment to moment awareness**

Mindfulness publications by year, 1980 - 2012



Source: DS Black (2013). Mindfulness Research Guide. www.mindfulexperience.org



Fad or breakthrough?

Evidence for MBSR-based interventions

Meta-analysis 2013

209 studies; 12,145 subjects pooled

Pre/post comparisons and randomized controlled trials with both wait list comparisons and active intervention controls

- Effect-size estimates were highest for anxiety, depression and stress**
- Mindfulness-based treatment did not differ from active interventions studies – CBT, behavioral therapies, medication**



Effective Health Care Program

Comparative Effectiveness Review
Number 124

Meditation Programs for Psychological Stress and Well-Being

Original Investigation

Meditation Programs for Psychological Stress and Well-being A Systematic Review and Meta-analysis

Madhav Goyal, MD, MPH; Sonal Singh, MD, MPH; Erica M. S. Sibinga, MD, MHS; Neda F. Gould, PhD;
Anastasia Rowland-Seymour, MD; Ritu Sharma, BSc; Zackary Berger, MD, PhD; Dana Sleicher, MS, MPH;
David D. Maron, MHS; Hasan M. Shihab, MBChB, MPH; Padmini D. Ranasinghe, MD, MPH; Shauna Linn, BA;
Shonali Saha, MD; Eric B. Bass, MD, MPH; Jennifer A. Haythornthwaite, PhD

AHRQ review – Goyal, et al. 2014

- **RCTs of meditation**
- **Only trials with active control groups**
- **Excluded Yoga, Tai Chi, ACT, DBT**
- **18,753 citations**
- **1,651 full-text articles**
- **47 trials; 3,515 subjects pooled**

AHRQ review – Goyal, et al. 2014

- **Only mindfulness meditation effective**
- **Moderate evidence for anxiety, depression and pain**
- **No evidence better than active treatment (medication, CBT and other behavioral therapies)**

Outcome	8 weeks	Range	3-6 mos	Range
Anxiety	0.38	[0.12-0.64]	0.22	[0.02-0.43]
Depression	0.30	[0.00-0.59]	0.23	[0.05-0.42]
Pain	0.33	[0.03- 0.62]		



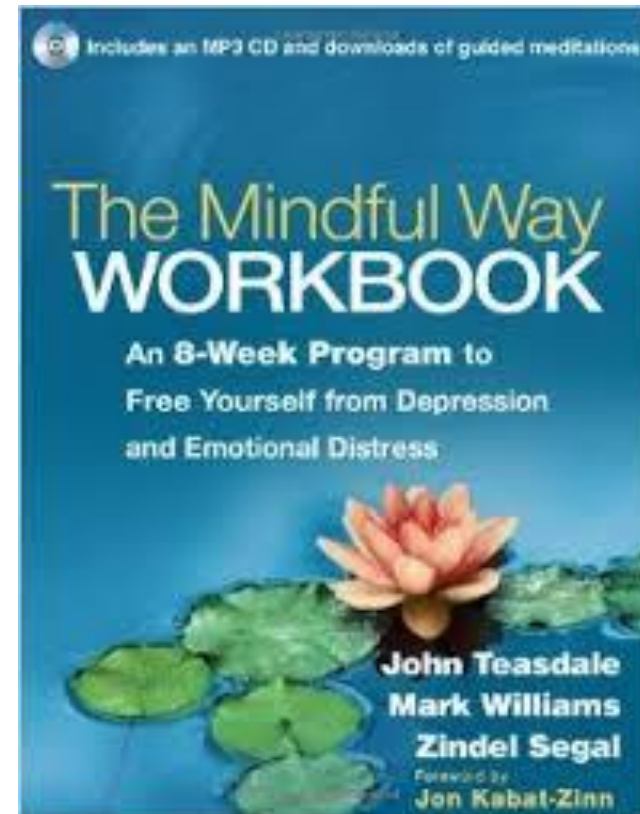
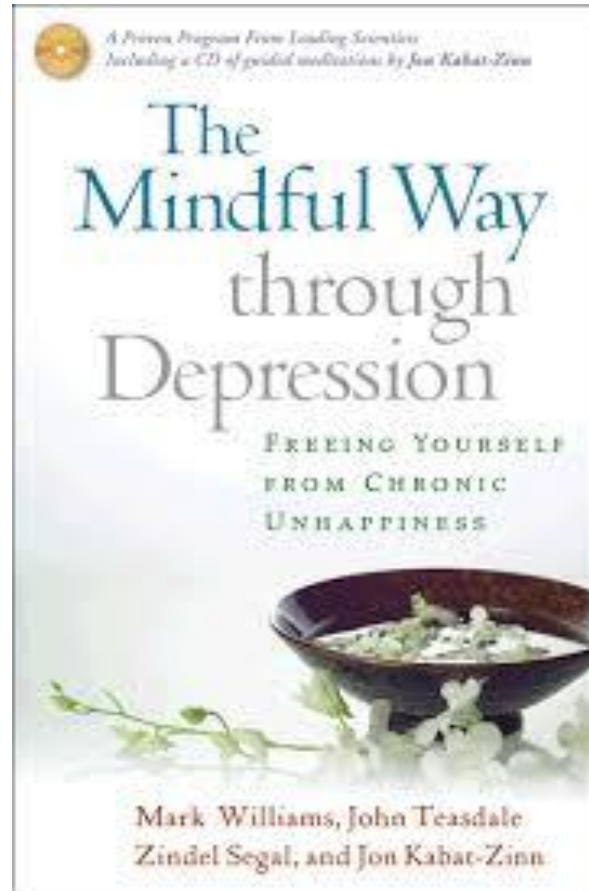
Mindfulness-based cognitive therapy for depression

Includes audio downloads
of guided meditations

SECOND EDITION

Mindfulness-Based Cognitive Therapy for Depression

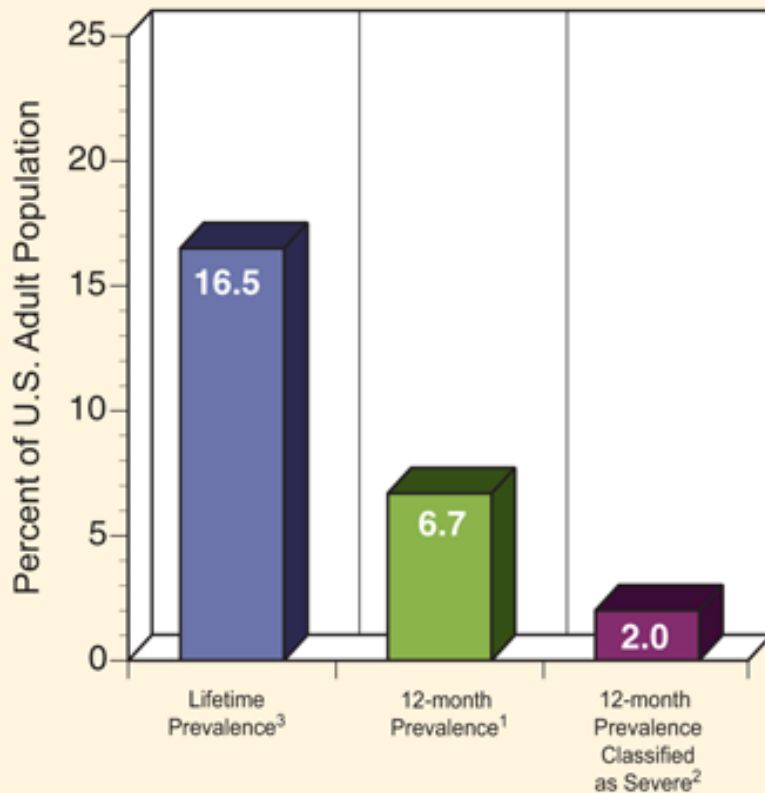
Zindel V. Segal
J. Mark G. Williams
John D. Teasdale



Depression

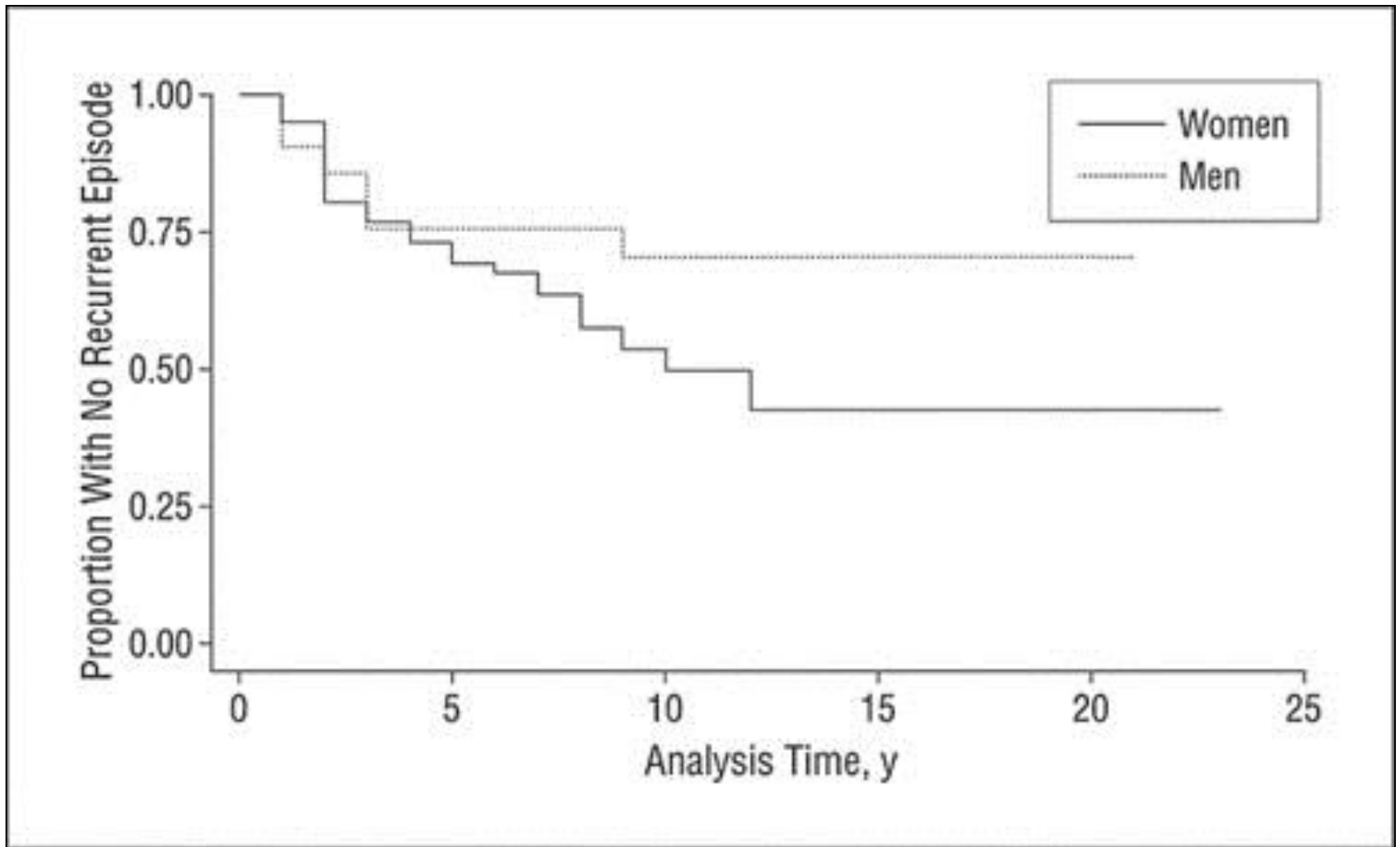
Prevalence

- **12-month Prevalence:** 6.7% of U.S. adult population¹
- **Severe:** 30.4% of these cases (e.g., 2.0% of U.S. adult population) are classified as "severe"²



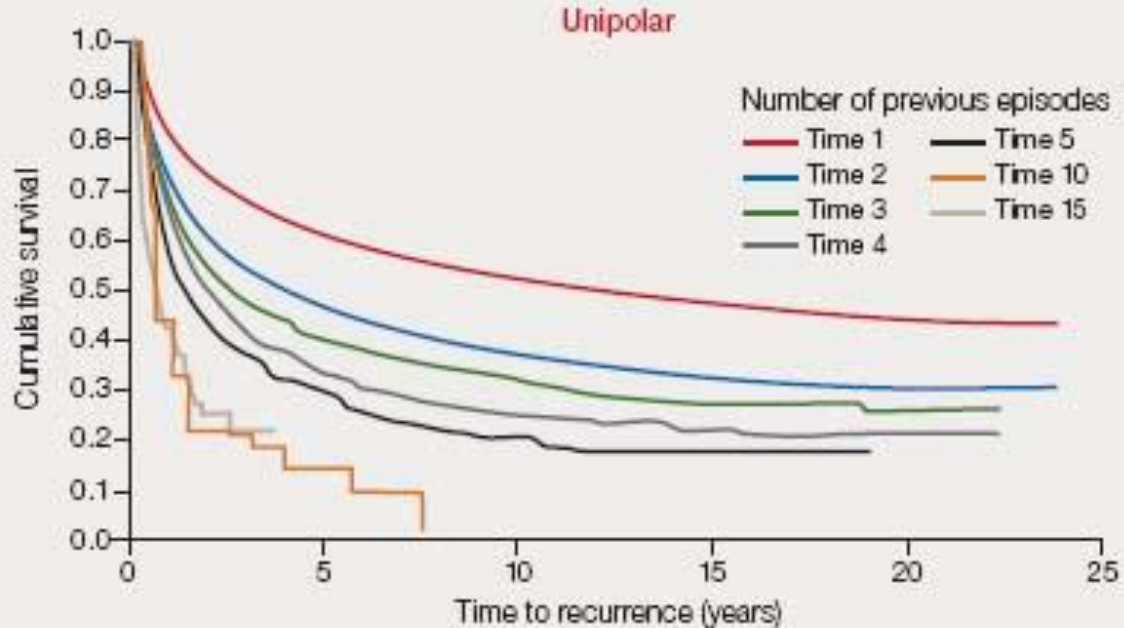
- The leading cause of disability in the U.S. for ages 15-44
- 2nd leading cause of disability worldwide

WHO The Global Burden of Disease, 2008



About 1/2 do not get better or have recurrence after first episode

Treatment outcomes and recurrence



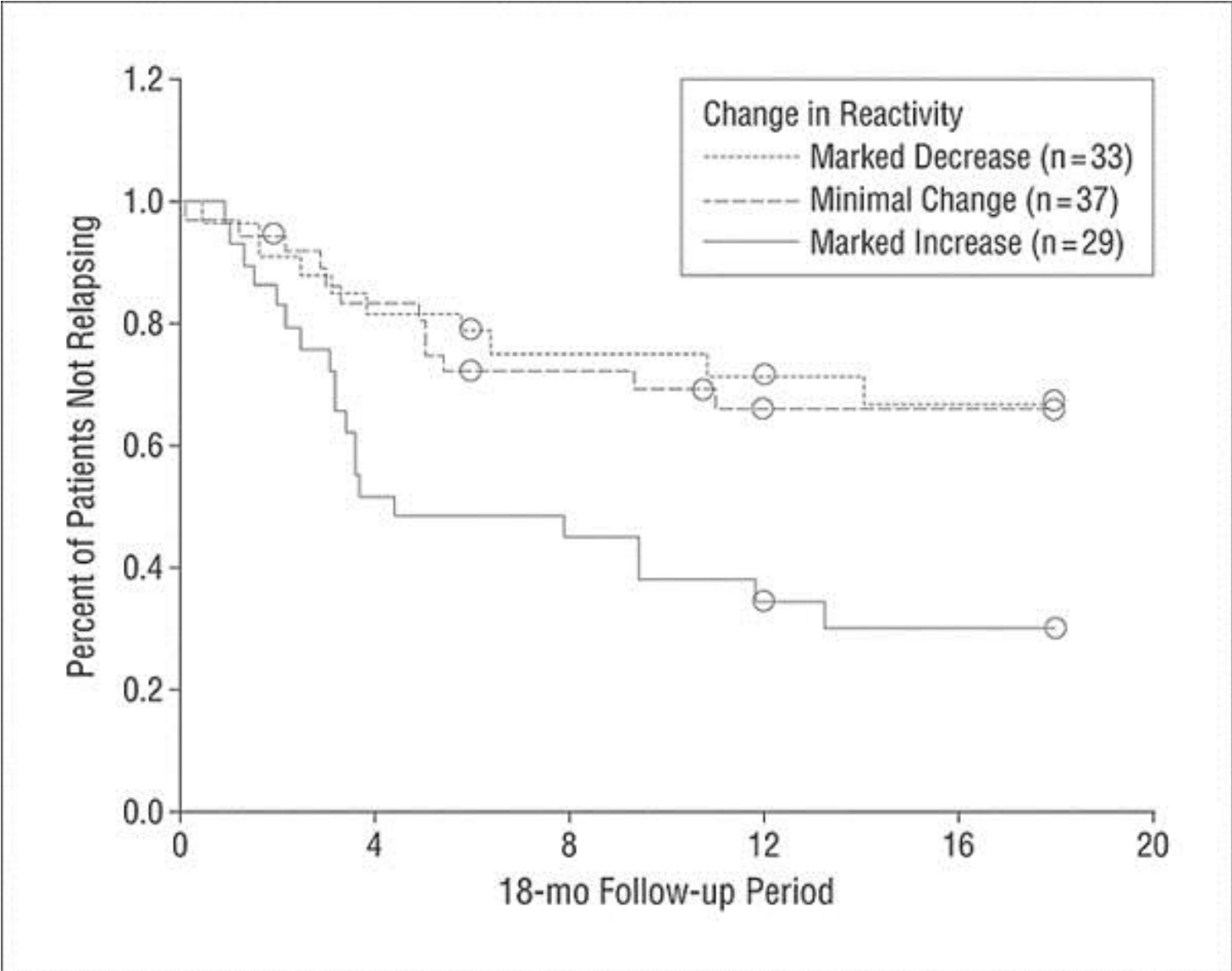
After 3 or more episodes 70 – 80% recurrence

Treatment guidelines –

- Antidepressant medication for 6-12 mos. beyond remission of symptoms after first episode
- Maintenance treatment after 2 or more episodes

Treatment outcomes and recurrence

- **50% relapse, 70-80% after ≥ 3 episodes**
- **Treatment guidelines –**
 - **Antidepressant medication for 6-12 mos. beyond remission of symptoms after first episode**
 - **Maintenance treatment after 2 or more episodes**



MBCT may be more effective than active control interventions for certain populations at greater risk of relapse:

- **More previous episodes**
- **Earlier onset**
- **Early trauma**
- **Residual symptoms**



Doing

&

Being

1. Living on “Automatic Pilot” vs Living with Conscious Awareness and Choice

Doing

- To live in the “automatic pilot” zone: driving, walking, talking, swimming, etc.
- No awareness mode
- Automatic mode on a mismatching phase
- No surrounding awareness
- Missing out in life

Being

- An intentional mode
- Presently choosing the next steps
- Mindful of what’s in front of us
- Awakening of our perception
- Feeling alive, aware

THE BALANCE OF DOING AND BEING IN YOUR LIFE

1. More
Doing
than
Being

2. Equal
Doing
than
Being

3. More
Being
than
Doing

2. Relating to Experience through Thought vs Directly Sensing Experience

Doing

- Working with ideas and goals
- Thinking about the world, feelings, and thoughts
- Treat thoughts about life as reality
- Connecting indirectly with the world through filter of thoughts

Being

- Connecting with the present directly
- Sensing, knowing, experiencing, living it intimately
- Savoring the richness and wonder of the moment

THE BALANCE OF DOING AND BEING IN YOUR LIFE

1. More
Doing
than
Being

2. Equal
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than
Being

3. More
Being
than
Doing

3. Dwelling on and in the Past and Future vs Being Fully in the Present Moment

Doing

- Mind traveling; Looking back or forward
- Seeking guidance from the past without knowing what the future will present
- Detachment from life in the present
- Re-experiencing past negative situations or worrying about the future
- Over-thinking leads to stressing over things that may not happen

Being

- Mind is fully present, in this moment
- Open to whatever presents itself to us
- Thoughts about past and future are part of the present moment
- Observing thoughts about past/future without being drawn into them

THE BALANCE OF DOING AND BEING IN YOUR LIFE

1. More
Doing
than
Being

2. Equal
Doing
than
Being

3. More
Being
than
Doing

4. Needing to Avoid, Escape, or Get Rid of Unpleasant Experience vs Approaching It with Interest

Doing

- Instant reaction to unpleasant experience is to find a way to avoid or get rid of it (aversion)
- Aversion triggers thinking habits that keep us stuck in negative emotions

Being

- Turning toward experience whether positive or negative with curiosity
- Not thinking about how something should be different from what it is
- Being interested in all experience – pleasant, unpleasant, or neutral

THE BALANCE OF DOING AND BEING IN YOUR LIFE

1. More Doing than Being
2. Equal Doing than Being
3. More Being than Doing

5. Needing Things to be Different vs Allowing Things to Be Just as They Already Are

Doing

- Goal is changing experience to be what we think it should be
- Focus on the gap between the way things are and how we want them to be
- Dissatisfaction with experience as falling short of expectations
- Self-judgment and lack of kindness toward ourselves stemming from dissatisfaction

Being

- The attitude of “allowing” and accepting
- Self-acceptance mode
- Accepting experience just as it is, even if unpleasant
- Content with ourselves with unconditional kindness

THE BALANCE OF DOING AND BEING IN YOUR LIFE

1. **More Doing than Being**
2. **Equal Doing than Being**
3. **More Being than Doing**

6. Seeing Thoughts as True and Real vs Seeing them as Mental Events

Doing

- Treating thoughts and ideas about things as if they were real rather than mental events
- Confusing thoughts about experience with experience itself
- Negative thoughts about ourselves experienced as reality

Being

- Experiencing thoughts as events in the flow of our experience just as sensations and feelings
- Seeing thoughts as thoughts, mental events that come and go
- Not allowing thoughts to control our emotions and actions promotes a sense of freedom

THE BALANCE OF DOING AND BEING IN YOUR LIFE

1. **More Doing than Being**
2. **Equal Doing than Being**
3. **More Being than Doing**

7. Prioritizing Goal Attainment vs Sensitivity to Wider Needs

Doing

- Focusing all of our energy and attention on achieving a goal, ignoring everything else – even our own health and well-being and the impact on others
- Giving up things that nourish us in pursuit of goals, depleting inner resources and leaving us feeling drained and exhausted

Being

- Keeping the bigger picture in view
- Awareness of the narrow focus and its cost
- Maintaining balance between achieving goals and being kind and compassionate toward ourselves and others
- Appreciating what the moment hold rather than only focusing on the desired outcome

THE BALANCE OF DOING AND BEING IN YOUR LIFE

1. **More Doing than Being**
2. **Equal Doing than Being**
3. **More Being than Doing**

MBCT Sessions

1: Automatic pilot

2: Living in our heads

3: Gathering the scattered mind

4: Recognizing aversion

5: Allowing & letting be

6: Thoughts are not facts

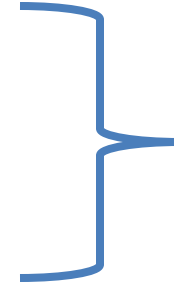
A day of mindful practice

7: How can I best take care of myself?

8: Maintaining and extending new learning

MBCT Sessions

- 1. Awareness and automatic pilot**
- 2. Living in our heads**
- 3. Gathering the scattered mind**



Developing
Awareness

Daily practice: Pleasant/Unpleasant experiences calendar

Pleasant Experiences Calendar

As best you can be aware of the pleasant event as it is happening. Use the questions below to help you focus on the details of the experience as it is happening. Plan to write it here later.

What was the experience?	Were you aware of the pleasant feelings <i>while</i> the event was happening?	How did your body feel, in detail, during this experience?	What moods, feelings, and thoughts accompanied this event?	What thoughts are in your mind now as you write this down this event?

Unpleasant Events Calendar

As best you can be aware of the unpleasant event as it is happening. Use the questions below to help you focus on the details of the experience as it is happening. Plan to write it here later.

What was the experience?	Were you aware of the pleasant feelings <i>while</i> the event was happening?	How did your body feel, in detail, during this experience?	What moods, feelings, and thoughts accompanied this event?	What thoughts are in your mind now as you write this down this event?

Situation + Interpretation = Emotion

Interpretation of events determines effect on mood

Identifying with thoughts, seeing them as truth

vs.

Awareness, openness and acceptance

Habitual patterns of mind

vs.

**Awareness of actual experience,
seeing thoughts as mental events**

3 Minute Breathing Space

Awareness

Gathering

Expanding

Breaking with habitual patterns.....

Lunch in silence

Mindful eating

Mindful walking

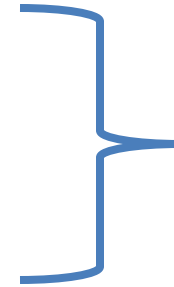
Pleasant &

Unpleasant

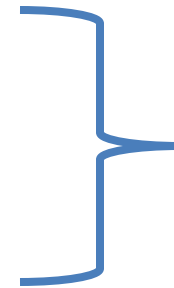
Experiences

MBCT Sessions

1. Awareness and automatic pilot
2. Living in our heads
3. Gathering the scattered mind
- 4. Recognizing aversion**
- 5. Allowing and letting be**
- 6. Thoughts are not facts**



Developing
Awareness



Turning toward
the unpleasant

The territory of depression – Automatic thoughts

<u>Frequency</u>	<u>Items</u>	<u>Degree of belief</u>
1 2 3 4 5	1. I feel like I'm up against the world	1 2 3 4 5
1 2 3 4 5	2. I'm no good	1 2 3 4 5
1 2 3 4 5	3. Why can't I ever succeed?	1 2 3 4 5
1 2 3 4 5	4. No one understands me	1 2 3 4 5
1 2 3 4 5	5. I've let people down	1 2 3 4 5
1 2 3 4 5	6. I don't think I can go on	1 2 3 4 5
1 2 3 4 5	7. I wish I were a better person	1 2 3 4 5
1 2 3 4 5	8. I'm so weak	1 2 3 4 5
1 2 3 4 5	9. My life's not going the way I want it to	1 2 3 4 5
1 2 3 4 5	10. I'm so disappointed in myself	1 2 3 4 5
1 2 3 4 5	11. I'm a failure	1 2 3 4 5
1 2 3 4 5	12. It's just not worth it	1 2 3 4 5
1 2 3 4 5	13. I'm worthless	1 2 3 4 5

It's nothing personal!

Turning toward difficult emotion –

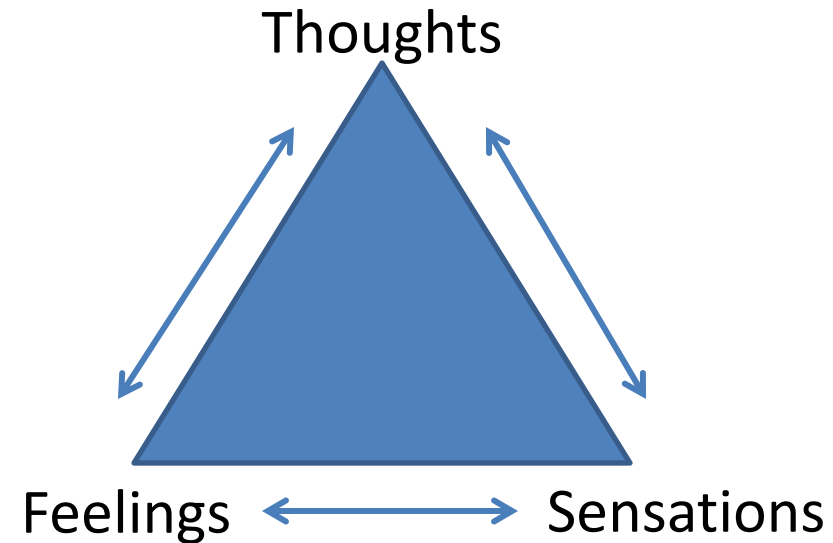


– without trying to change it



The triangle of awareness

Emotions are “packages” of body sensations, feelings and related thoughts



Mindfulness

- **Becoming aware of how we relate to whatever is arising, however unpleasant**
- **Learning to recognize our reactions to unpleasant experience and turning towards them**



Allowing and letting be – a radically different relationship to unwanted experience

Relating differently –

We disempower aversion by intentionally bringing an attitude of kindness and curiosity to the experience – allowing it to be just as it is, without judgment or trying to change it.

We access aversion through its signature in the body.

The responsive 3 minute breathing space is used whenever difficulty arises, to step out of automatic reaction of wanting things to be different.

Seeing thoughts as thoughts

Thoughts as objects of awareness

Developing a new relationship to thoughts as mental events

The ‘stickiness’ of thoughts is rooted in our identification with them

“From thoughts come actions. From actions come all sorts of consequences.... Our great task is to see them clearly, so that we can choose which ones to act on and which to simply let be”

– Joseph Goldstein

Suffering = Pain + Aversion

The two arrows –

First is objective pain of adverse event or trauma

**Second is our reaction to it – resistance , anger, fear,
distress**

MBCT Sessions

1. Awareness and automatic pilot
2. Living in our heads
3. Gathering the scattered mind
4. Recognizing aversion
5. Allowing and letting be
6. Thoughts are not facts



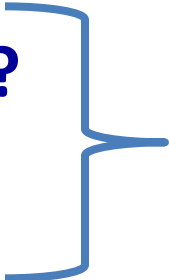
Developing
Awareness



Turning toward
the unpleasant

Day of practice

- 7. How can I best take care of myself?**
- 8. Maintaining and extending
new learning**



Staying well,
taking action
when mood is
low

Skillful action.....

The Responsive Breathing Space

Begin by adopting an erect and dignified posture

**Step 1: Recognize and acknowledge your current experience:
Thoughts, Feelings, Body Sensations**



Step 2: Gather your attentiveness on the movements of the breath



Step 3: Expand awareness to the body as a whole, then to all present experience



Enter the hall of doors and make a choice

Re-entry

Mentally re-enter the original situation with a new frame of mind

Body

Bring open, friendly awareness to body sensations linked to the difficulty

Thoughts

Consciously approach any negative thinking patterns as mental events

Action

Take care of yourself - pleasure, mastery, or mindful action

Inquiry in mindfulness-based treatment

Inquiry and facilitation in mindfulness-based treatment

Motivational Interviewing style

Acceptance, openness, curiosity, kindness, authenticity

Personal mindfulness practice as foundation for embodying these qualities

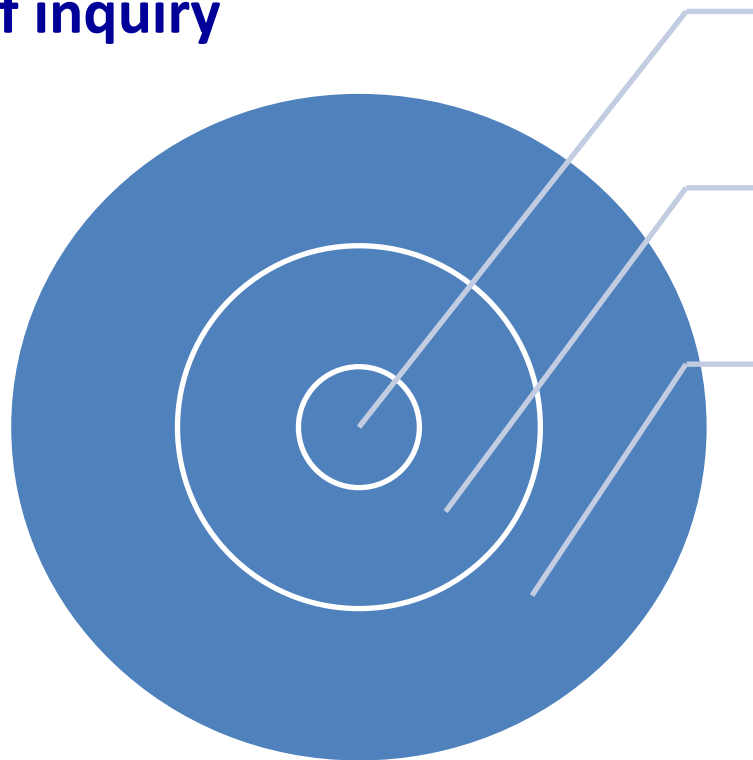
Spontaneity, creativity

Inquiry

This requires the instructor to sharpen his/her ability to listen closely, allow space, refrain from the impulse to give advice, and instead, to inquire directly into the actuality of the participant's experience.

Jon Kabat-Zinn, Santorelli 2005

Three layers of inquiry



NOTICING: Observing the direct experience

DIALOGUE: Exploring the effects of bringing awareness to direct experience

LINKING: Exploring how these learnings relate to ways of being with inner and outer experiences in daily life

Crane, R. 2009

Certification in MBCT

<http://mbpti.org/>

**STEP 1: Prerequisites for
5-day MBCT training**

See UCSD CFM website

**STEP 2: Attendance at
5-day MBCT training**

or an equivalent training

**STEP 3: On completion of
5-day MBCT training, apply for
“teacher In training” status**

Receive Provisional Certificate of Qualification

**STEP 4: Complete 14 hours
of mentorship; teach
one 8-week MBCT course**

**STEP 5: Apply for
teacher qualification**

Training in MBCT

- **Training in counseling and psychotherapy including cognitive therapy and leading groups**
 - **5-day residential MBCT training program**
 - **7- to 10-day residential mindfulness meditation retreat**
 - **Establish your own daily mindfulness meditation practice – for example:**
 - **Enroll in MBSR class**
 - **MBCT training retreat**
 - **Mindfulness retreat**
- (see handout – Places to study and practice)**

**Comorbidities
&
Other treatment considerations**

Medications

Current depressive episode

- **Augmentation with antidepressants (ADM) for residual symptoms – several studies have found MBCT superior to TAU**
- **Alternative to medication for mild to moderate severity episode –**
 - **Patient preference including side effects**
 - **Risk/benefit including suicidality, functional impairment, ability to participate in treatment and learn new skills, previous response**
 - **Growing evidence but not definitive**

Current depressive episode

Sequential approach

- Until well enough to participate and learn skills, risk reduction
- “get a grip on my mental health with **medication**, which I was then able to maintain with **meditation**”

Between episodes

Segal et al 2010

- Patients who achieved remission on ADM and were stable for additional 5 months randomized to continue ADM or receive MBCT with 4 week taper off ADM
- Relapse rates identical: $< 1/2$ of placebo

Safety – On the one hand...

NCCAM Clinical Digest Nov 2014

- **Meditation is considered to be safe for healthy people**
- **There have been rare reports that meditation could cause or worsen symptoms in people who have certain psychiatric problems, but this question has not been fully researched**
<http://nccam.nih.gov/health/providers/digest/meditation-science#hyper>

Williams et al 2014

- **MBCT was most effective in preventing relapse for participants with a history of childhood trauma**
- **No adverse effects related to trauma history**

Mindfulness skills are used in trauma-focused therapy for affect regulation

On the other hand – Proceed with caution

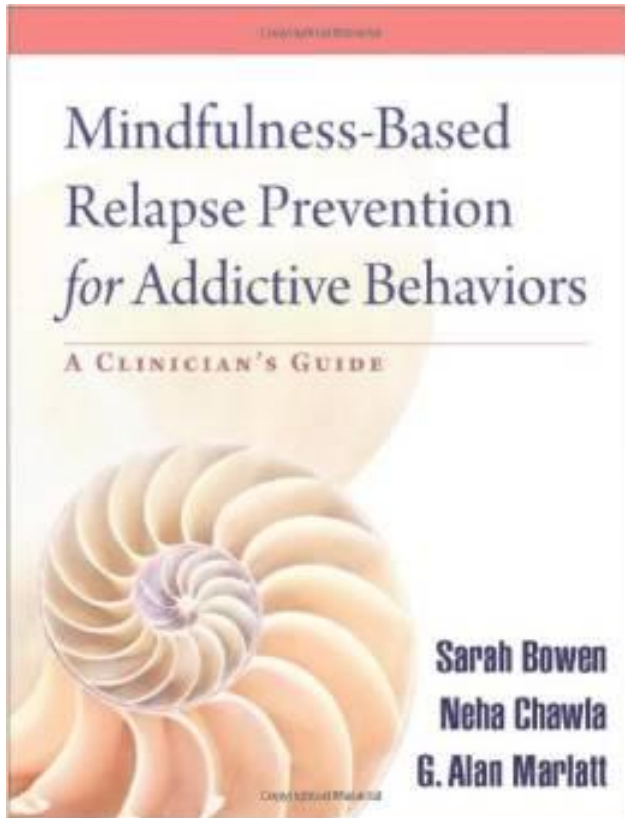
Conditions that may cause distress with meditation and mindfulness practice:

- Experiencing intrusive memories, thoughts, flashbacks
- Tendency to dissociate

Contraindications:

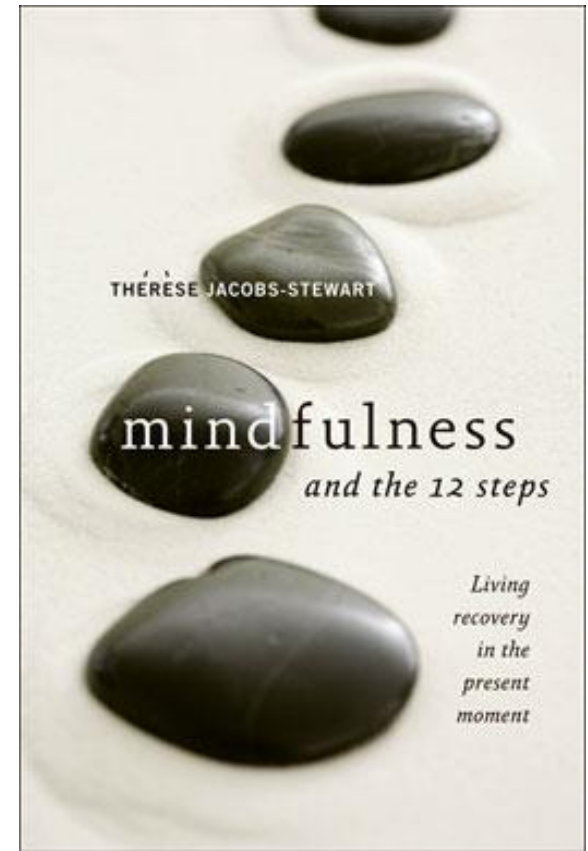
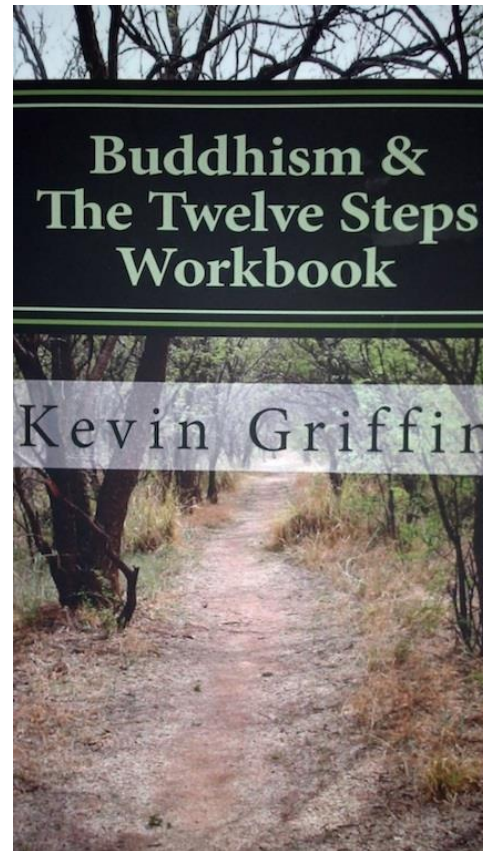
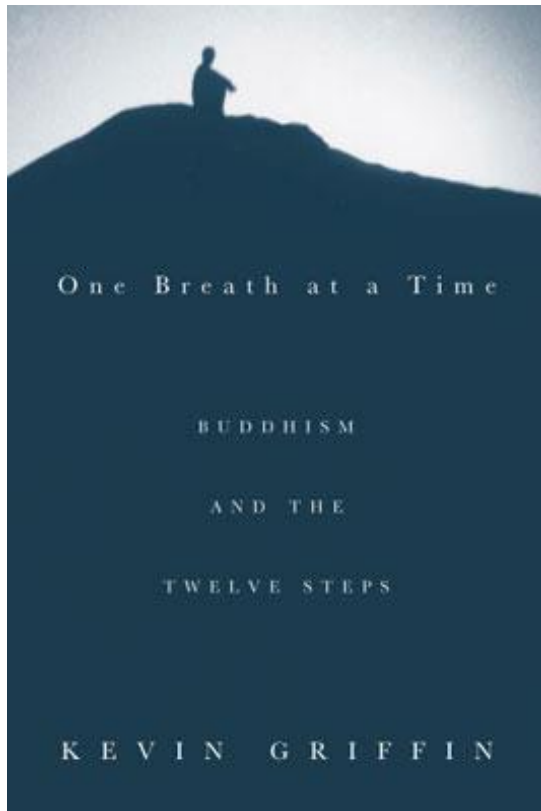
- Psychosis
- Severe depression, suicidal ideation

Addiction like major depression is a chronic, relapsing condition



- **Mindfulness practices with relapse prevention skills training**
- **Patterned after MBCT**
- **Aftercare or post-detoxification/stabilization**

Integrating Mindfulness and 12 Steps for cormorbid depression and alcohol/substance abuse



Integrating Mindfulness and 12 Steps

Admitted we were powerless over alcohol...

Awareness that we are suffering – that we are the cause of our own suffering and have caused suffering in others

Came to believe that a Power greater than ourselves could restore us to sanity

Accessing deep inner sources of wisdom that we share with all beings

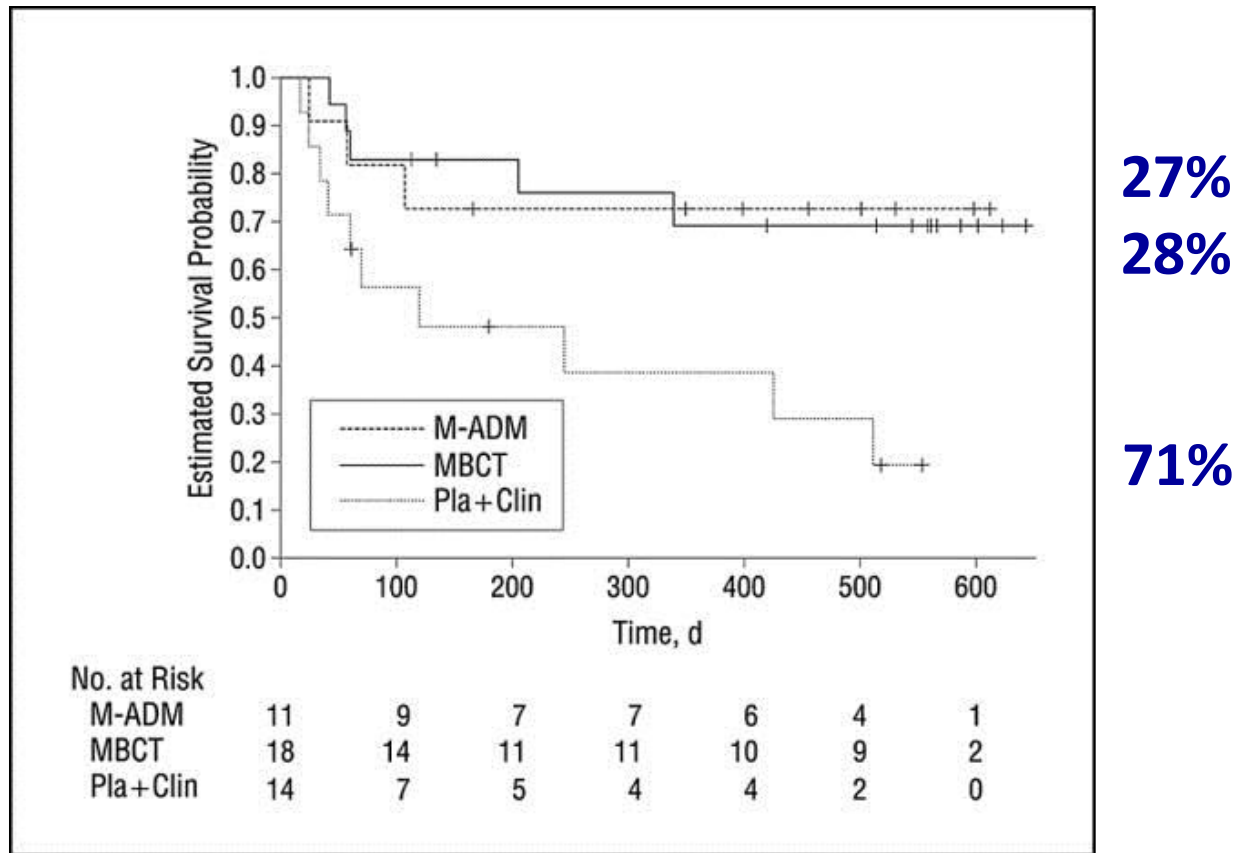
Decided to turn if over to a higher power

Letting go of delusions of control, following a wisdom path with an ethical foundation of generosity, compassion and loving-kindness

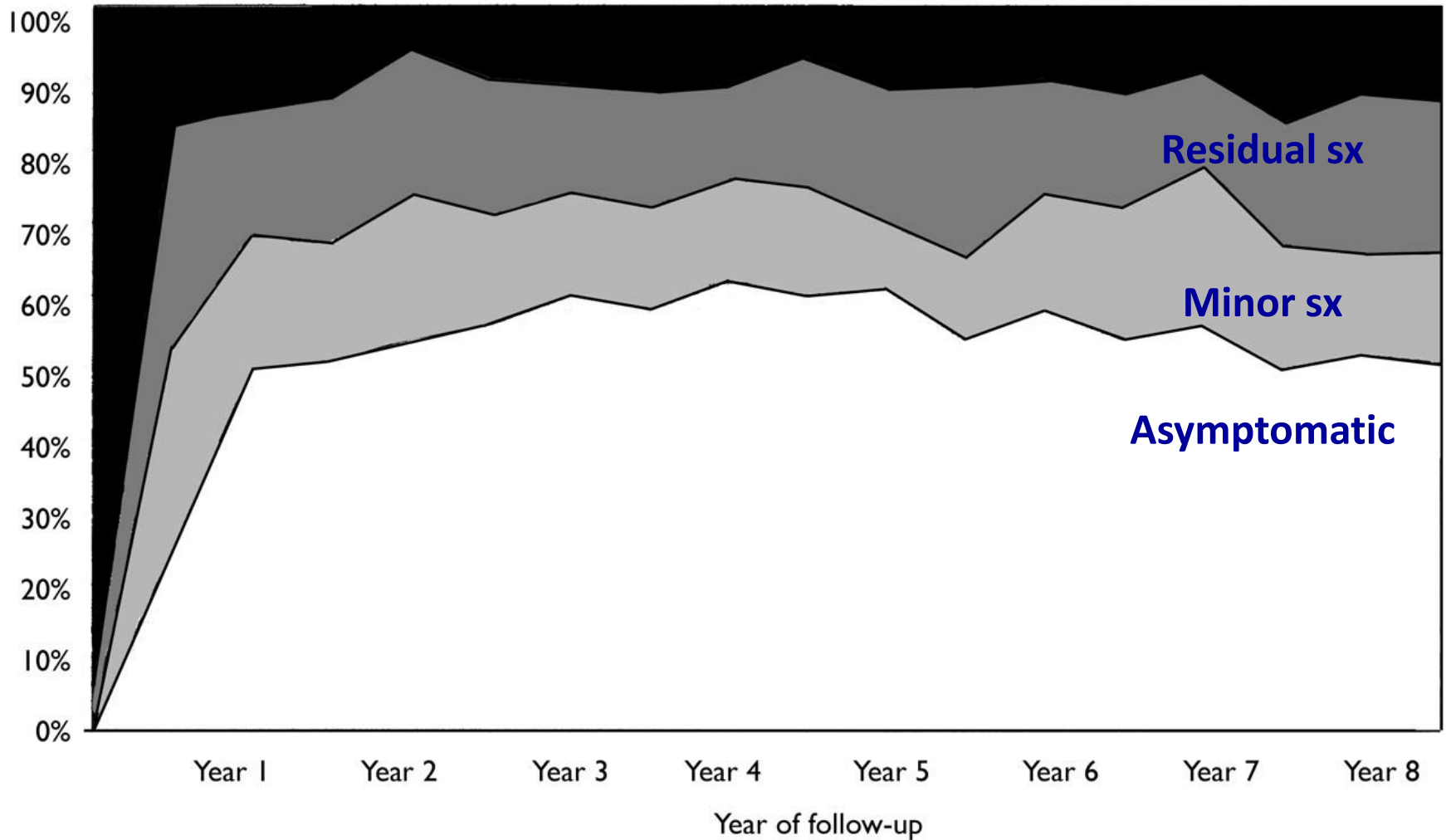


Antidepressant Monotherapy vs Sequential Pharmacotherapy and Mindfulness-Based Cognitive Therapy, or Placebo, for Relapse Prophylaxis in Recurrent Depression

Zindel V. Segal, PhD; Peter Bieling, PhD; Trevor Young, MD; Glenda MacQueen, MD; Robert Cooke, MD; Lawrence Martin, MD; Richard Bloch, MA; Robert D. Levitan, MD



Symptom levels over 8-year follow-up



Majority have incomplete response, non-response, or recurrence

Evidence for efficacy of MBCT for current episodes of depression

Residual depressive symptoms – MBCT vs. TAU

– 30-35% improvement vs. 10%

Geschwind 2012 Br J Psychiatry

Currently depressed with history of recurrent depression – MBCT+TAU vs. TAU

– MBCT more effective for current symptoms

van Aalderen 2012 Psychol Med

Mindfulness-based treatment may be as effective as individual CBT for depression and anxiety

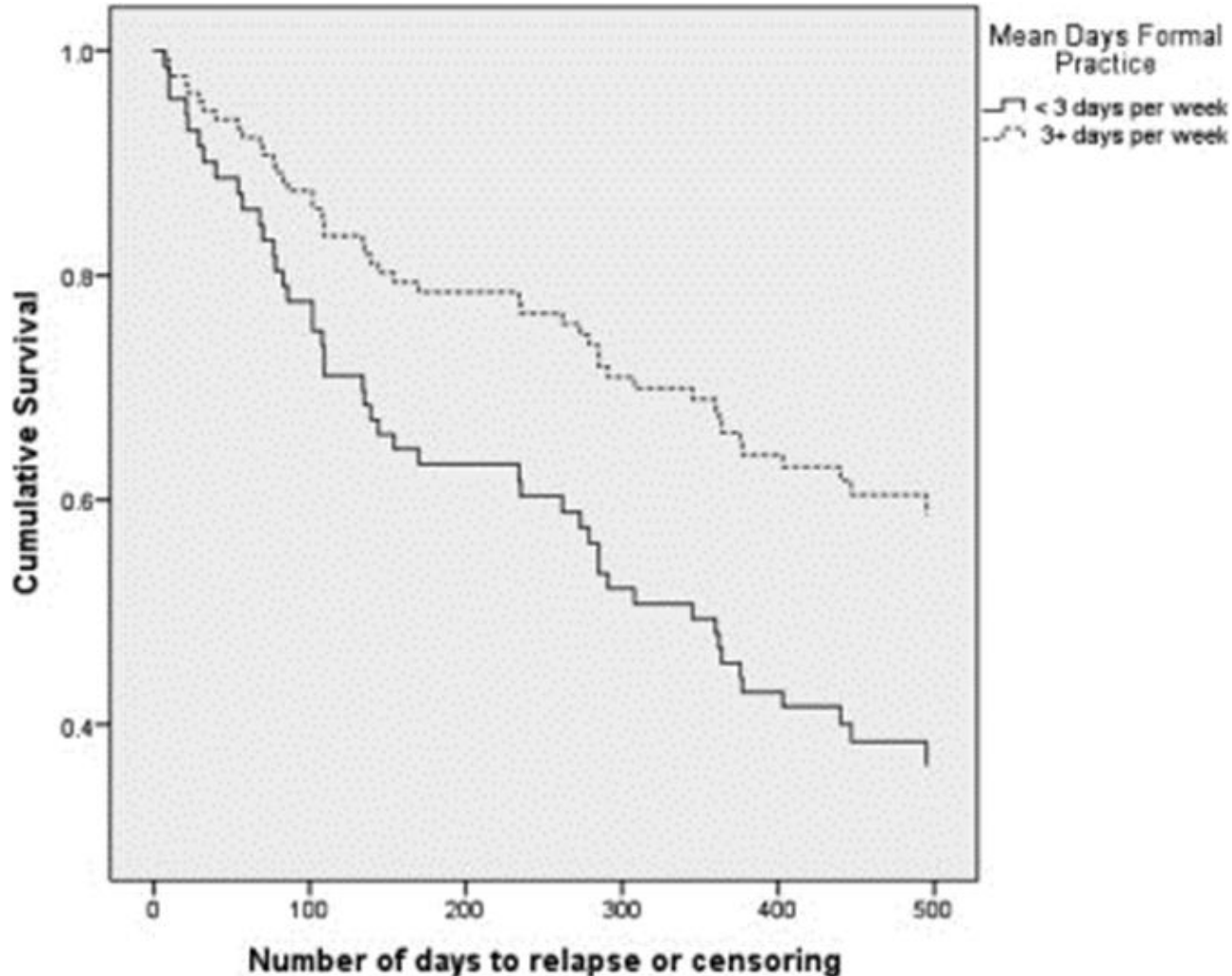
Mindfulness group therapy in primary care patients with depression, anxiety and stress and adjustment disorders: randomised controlled trial

Jan Sundquist, Åsa Lilja, Karolina Palmér, Ashfaque A. Memon, Xiao Wang, Leena Maria Johansson and Kristina Sundquist

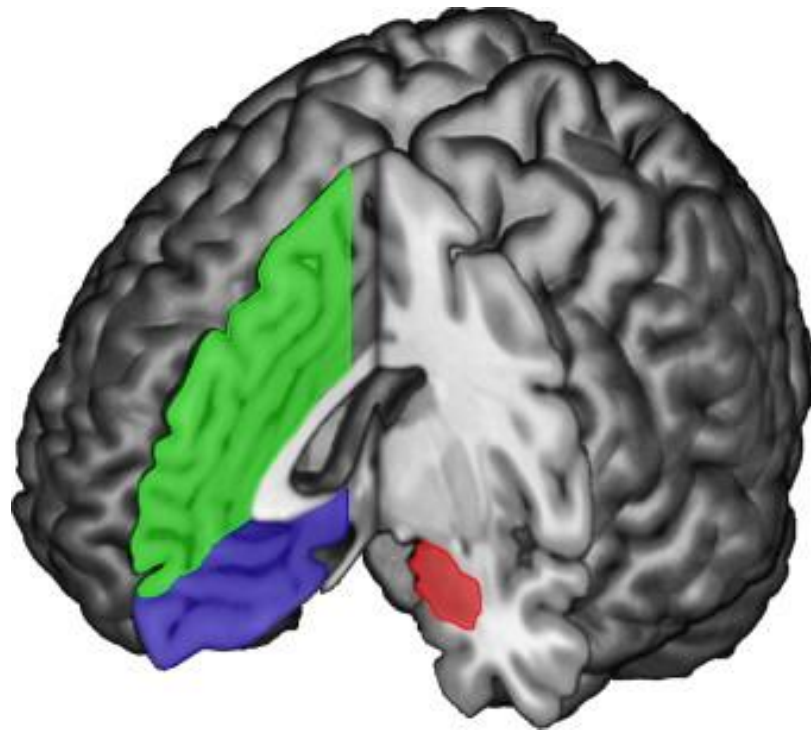
BJP published online November 27, 2014 Access the most recent version at DOI:

[10.1192/bjp.bp.114.150243](https://doi.org/10.1192/bjp.bp.114.150243)

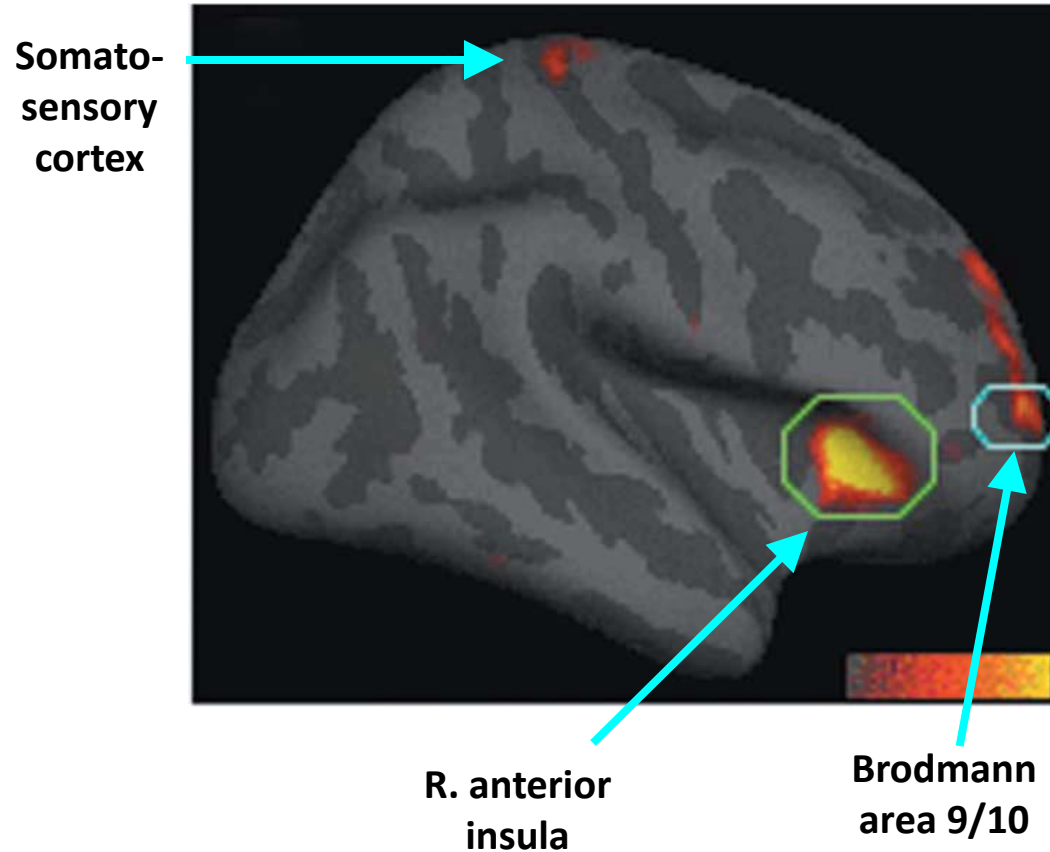
Practice, practice, practice – Formal meditation practice mediates improvement



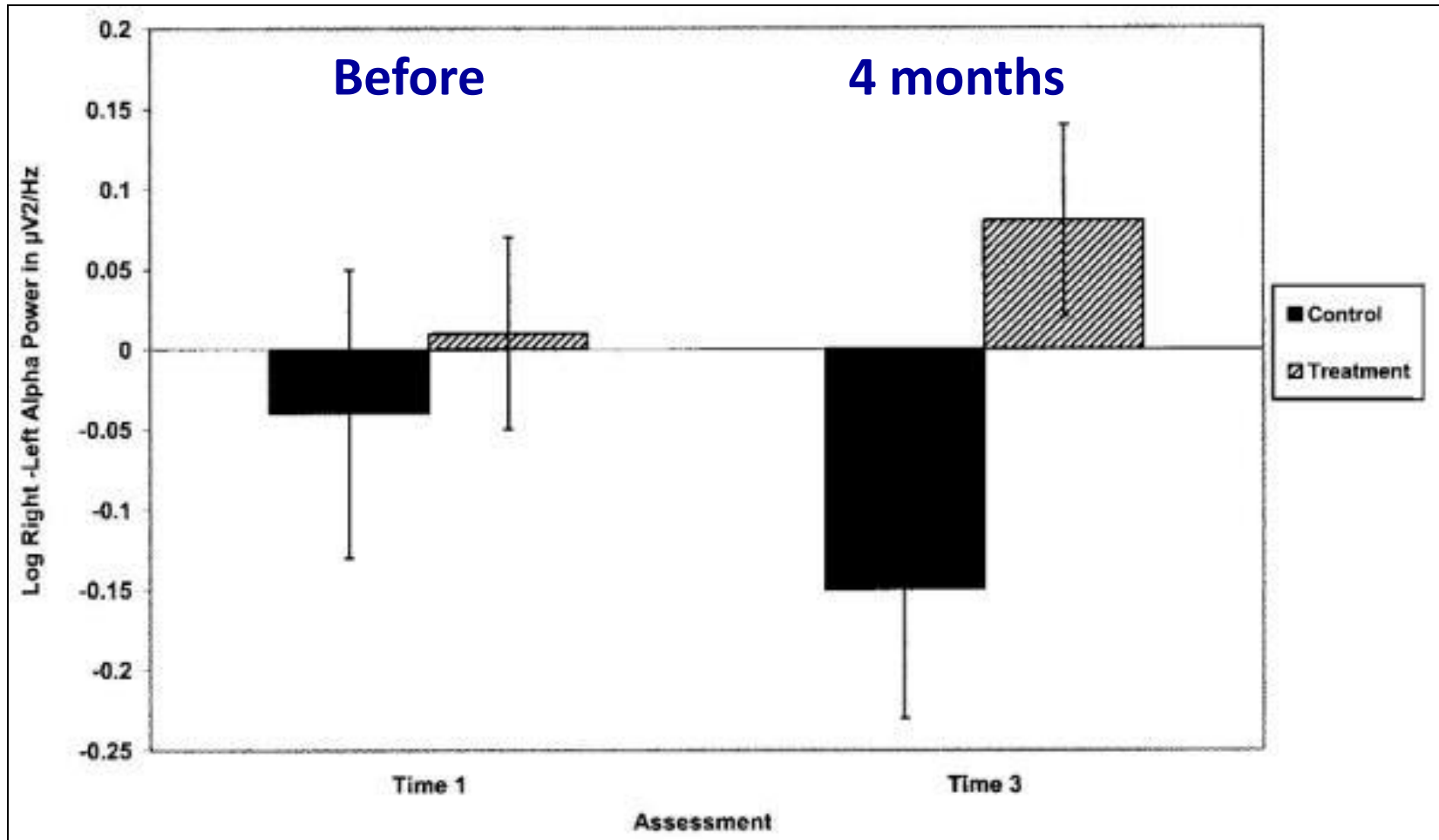
How does it work?



Meditation experience is associated with increased cortical thickness in specific areas

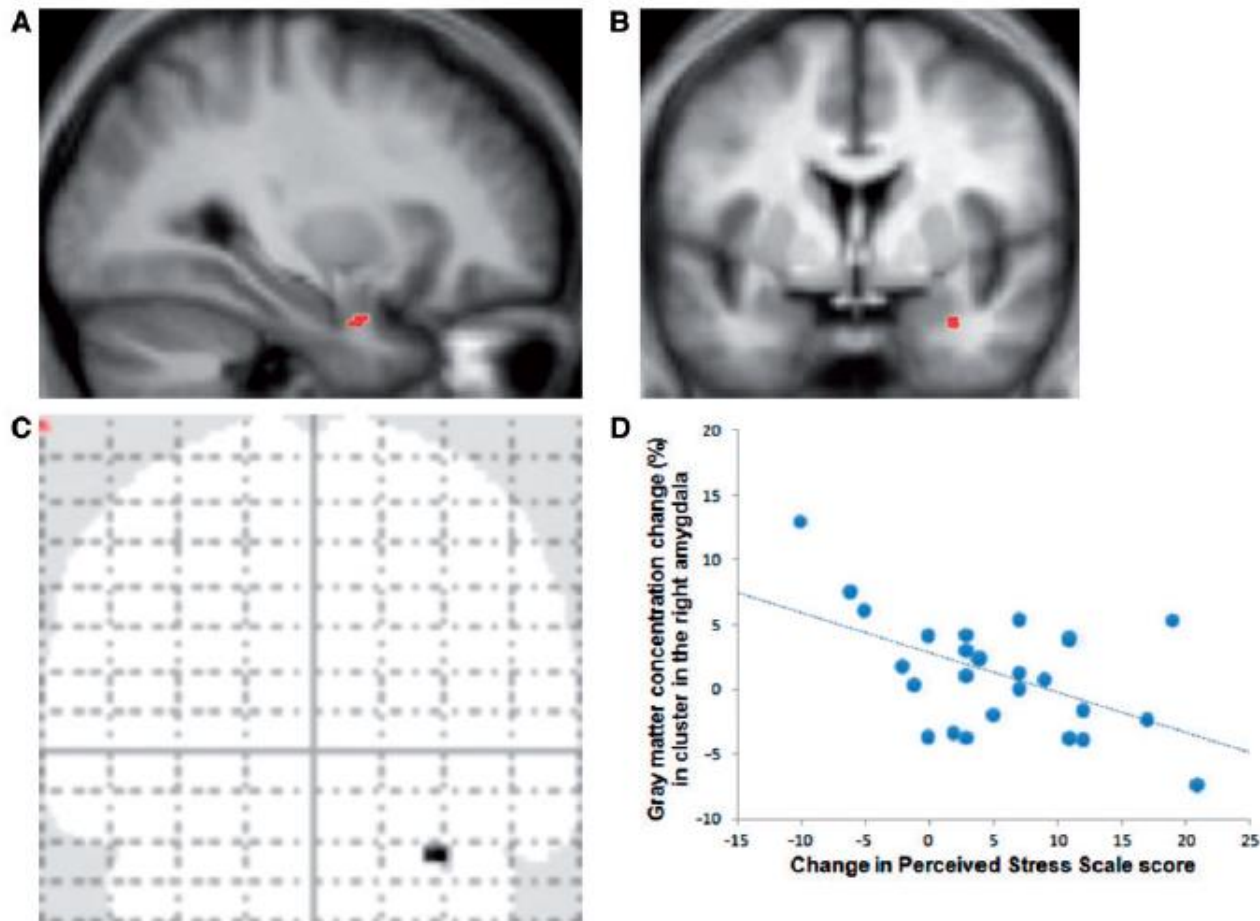


8-week MBSR training results in lasting changes in the brain



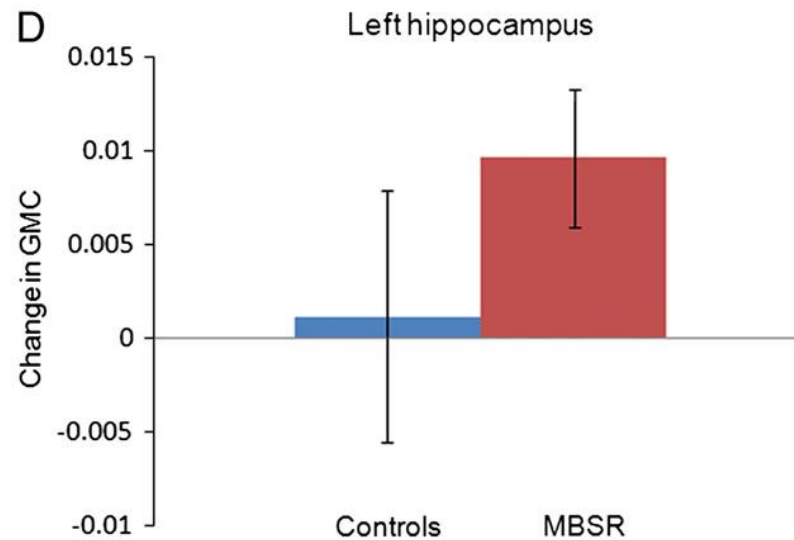
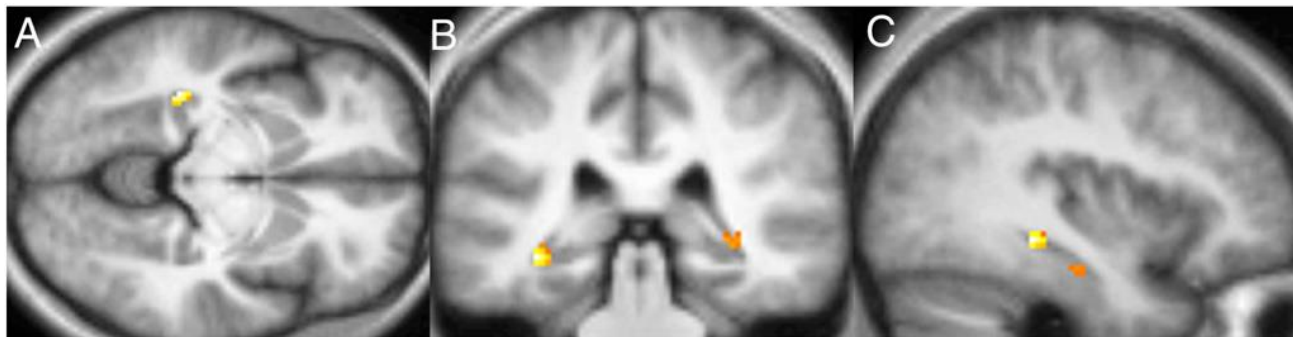
Stress reduction correlates with structural changes in the amygdala

Britta K. Hölzel,^{1,2} James Carmody,³ Karleyton C. Evans,¹ Elizabeth A. Hoge,⁴ Jeffery A. Dusek,^{5,6} Lucas Morgan,¹ Roger K. Pitman,¹ and Sara W. Lazar¹



Mindfulness practice leads to increases in regional brain gray matter density

Britta K. Hölzel^{a,b,*}, James Carmody^c, Mark Vangel^a, Christina Congleton^a, Sita M. Yerramsetti^a, Tim Gard^{a,b}, Sara W. Lazar^a



Minding One's Emotions: Mindfulness Training Alters the Neural Expression of Sadness

Norman A. S. Farb and Adam K. Anderson
University of Toronto

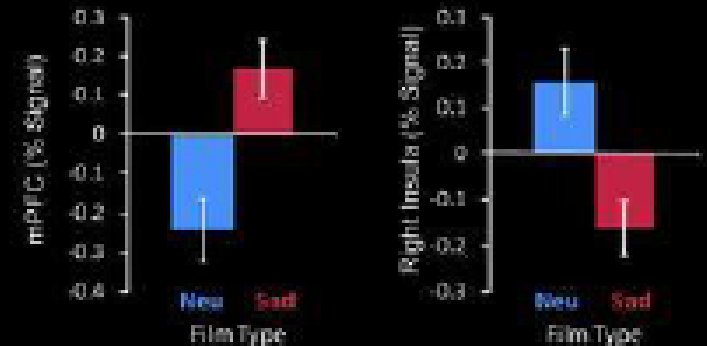
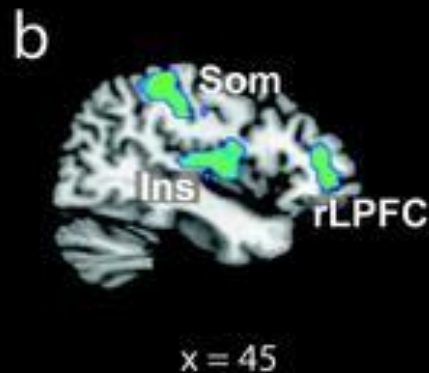
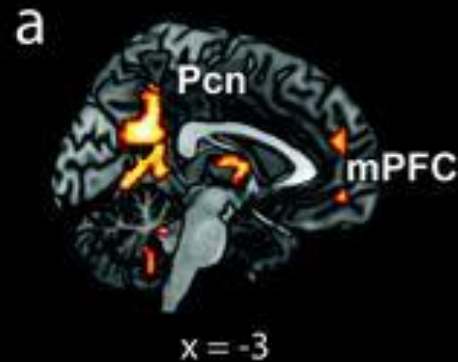
Helen Mayberg
Emory University

Jim Bean and Deborah McKeon
St. Joseph's Health Centre, Toronto, Canada

Zindel V. Segal
Centre for Addiction and Mental Health, Toronto, Canada
and University of Toronto

Sadness provocation elicits:
a) neural activation in midline self-referential processing areas,

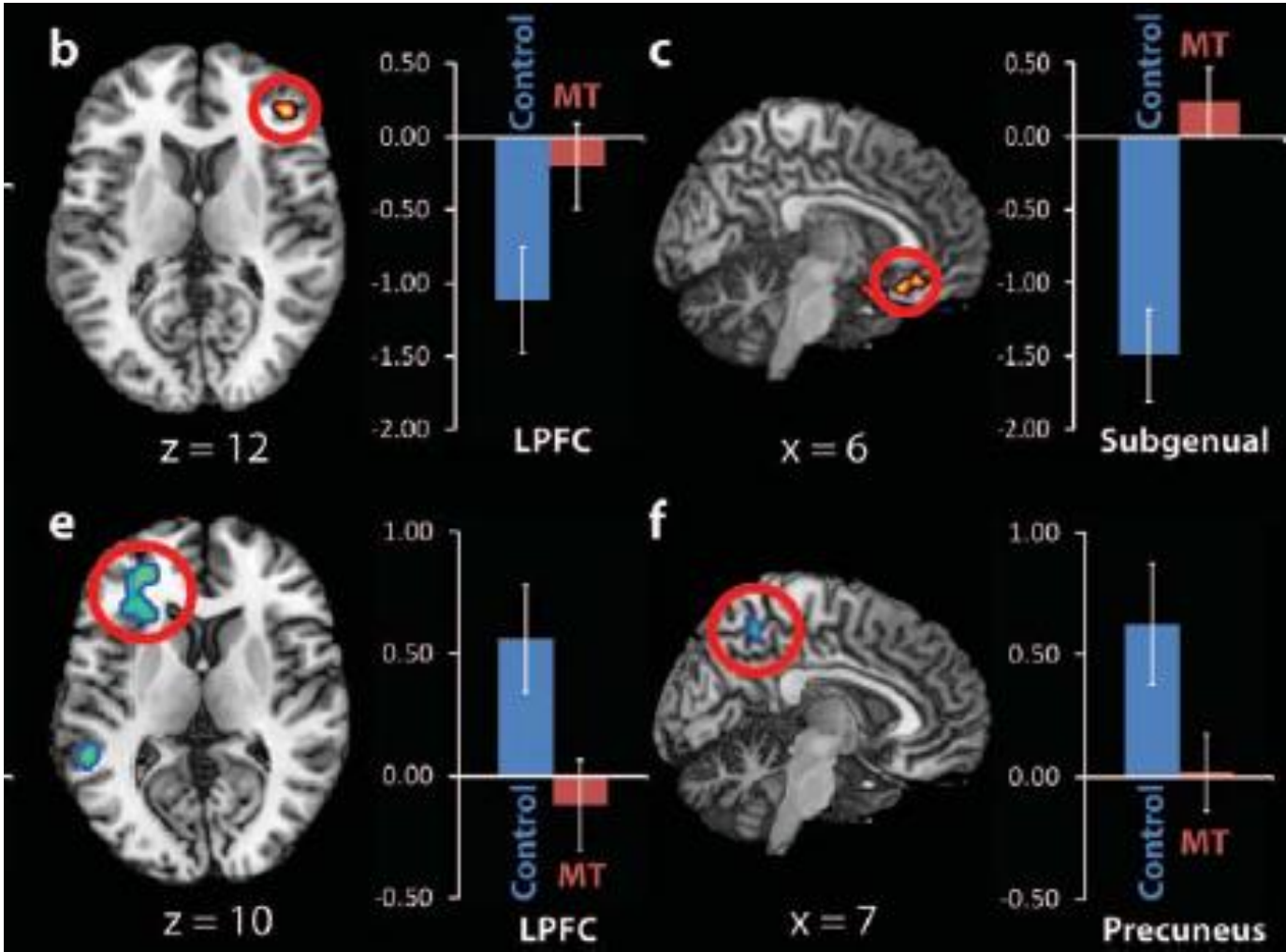
b) deactivation in visceral & somatic processing areas



Mindfulness training reduces neural reactivity

Reduced deactivation (red = MT > control)

Reduced activation (blue = Control > MT)



Conclusions

- **MBCT is effective for prevention of depression relapse**
- **Growing evidence for current episode of mild to moderate depression**
- **Equivalent to medication and CBT**
- **A radical shift**
 - **In relationship to emotional experience**
 - **In the therapeutic process**
- **A personal practice is considered essential for the therapist**
- **Improved emotion regulation mediated by neuroplasticity**