Beyond Antidepressants: Harnessing Mindfulness for Depression

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Goals

• Recognize major depressive disorder criteria
• Learn the limitations of antidepressant treatment
• Understand how mindfulness can help treat major depression and anxiety, even when antidepressants haven’t worked
• Discover how mindfulness techniques can change brain function
DSM 5 Criteria for Major Depression

- Depressed mood: For children and adolescents, this can also be an irritable mood
- Diminished interest or loss of pleasure in almost all activities (anhedonia)
- Significant weight change or appetite disturbance: For children, this can be failure to achieve expected weight gain
- Sleep disturbance (insomnia or hypersomnia)
- Psychomotor agitation or retardation
- Fatigue or loss of energy
- Feelings of worthlessness
- Diminished ability to think or concentrate; indecisiveness
- Recurrent thoughts of death, recurrent suicidal ideation without a specific plan, or a suicide attempt or specific plan for committing suicide
How Big a Problem is TRD?

- In the largest study of people treated with antidepressants, the STAR*D study, only one-third of people treated for 12 weeks recovered and after a second course of treatment one-half had recovered.
- The Practicing Alternatives to Heal Depression study (PATH-D) was designed to see if we could teach people mindfulness-based cognitive therapy (MBCT) to offer them an empowering technique that they could use to heal themselves.
Treatment-Resistant Depression
Alternative Treatments

• This is a common occurrence. In our study participants averaged 7 years of suffering after two or more antidepressant trials. There are a range of things such people can try.

• These include additional medication trials or trying various forms of psychotherapy or ketamine, even electroconvulsive treatment or transcranial magnetic stimulation.

• Our research indicates that MBCT is a particularly effective technique that people can learn over 8 weeks. It provides a method for people to have a skillset that they can utilize on their own to deal effectively with depression.
• Mindfulness Based Cognitive Therapy (MBCT)

MBCT is a blend of some aspects of cognitive behavior therapy with mindfulness meditation. Mindfulness meditation is an ancient Buddhist technique that has been secularized so it can be used by all people regardless of their background. It teaches that in depression thoughts are often negative ones like “I’ll fail at whatever I try”. I’m not good enough” or “I’ll never get better”. In MBCT, you learn that such ideas are just thoughts, not facts.
Mindfulness Definition

• Mindfulness at its core is being aware of your experiences as you are experiencing them and suspending judgment about them.
• Typically mindfulness can be thought of in two ways. In one, the discrete form or dispositional mindfulness where you bring a mindful awareness to your everyday life.
The Observing Self

Three Senses of Self

Observing Self

Physical Self

Thinking Self

Sees, hears, smells, tastes, touches, senses, takes action

Thinks, judges, visualizes, remembers, imagines, feels, fantasizes, analyzes, etc.
Change the Relationship to Depression

- Traditional cognitive behavior therapy
- Mindfulness approach: you can let go of negative thoughts with less bandwidth available and focus on the present moment.
- Focusing on the present moment has a natural antidepressant and antianxiety effect.
• How does mindfulness help counter depression?
  • Depression and anxiety can be thought of as disorders of time
  • Mindfulness has powerful antidepressant and antianxiety effects because its focus is on the present moment.
  • When you focus on the present moment, you let go of the past and the future. If you are focused on your body sensations you aren’t focusing on the past or future.
Changing the Relationship to Depression

- With mindfulness, you learn to shift your attention from answering questions about the origins of your depressive experience to focusing on the present moment. As you do this, negative thoughts and feelings can shift into the background. This is similar to a radio playing with the volume turned down. The depressive mood and thoughts may still be present but they don’t occupy center stage.
Negative thoughts are not facts

• Depressive moods generate negative thoughts and vice versa. When you are depressed and say “I’m no good” you are actually having the thought that you are no good
• One way of looking at depressive thoughts is by imagining them being like items in store windows as you walk down the street.
CAUTION
DEPRESSION
100m AHEAD
Seeing Recurrences as Such

- not a personal weakness or moral failure.
- When depression hits, as part of the syndrome, you are often filled with self-recriminations versus other illnesses.
  With a mindfulness approach you learn to accept things as they are.

Winston Churchill embodied this approach when speaking of his depression; he said “the black dog is back today”
Ways to prevent relapse

- MBCT twice as effective as TAU in preventing relapse over a one year period.
- More importantly in a larger study, MBCT was compared to medications for relapse prevention over 2 years.
- These studies indicate that the techniques of MBCT such as focusing attention, decentering (distancing yourself) from negative thoughts and feelings, and being compassionate towards yourself can have powerful effects in preventing depression and limiting its impact when it does recur.
Can anyone practice mindfulness meditation and does it require a big time commitment?

• If you can breathe, you can be mindful. Mindfulness is a skill like others.
• When you start learning to build your muscles, you start with small weights and gradually increase them. The same approach applies to mindfulness.
• There is no evidence that a specific amount of time is necessary to learn mindfulness skills
What are the psychological and brain effects of Mindfulness-Based Cognitive Therapy (MBCT)?

- MBCT not only has powerful psychological effects, it also has effects on the brain itself.
- In the PATH-D study we investigated participants by looking at how their brains functioned before and after treatment. In our studies, we found that areas of the brain associated with emotion regulation were enhanced while areas of the brain associated with emotion production—such as anxiety and depression—were reduced.
PATH-D Study: Practicing Alternatives to Heal Depression

- Is Mindfulness-Based Cognitive Therapy an efficacious augmentative treatment for reducing depressive symptoms in adults with TRD after 8 weeks?

- Is MBCT more effective after 8 weeks than treatment with an active comparator condition that controls for non-specific factors?
Design

Eligibility Screening

Telephone Interview
   MDD symptoms and current antidepressant treatment
   Intake Interview
   MDD and HAM-D ≥ 14

Baseline/Randomization

MBCT Intervention + TAU

HEP Intervention + TAU

Primary/Secondary Outcome

Secondary Outcome

Week 0
  Short-term Acute Treatment Phase
  8 week randomized control trial, of MBCT + TAU versus HEP + TAU

Week 8

Week 24

Week 36
  Long-term Follow-up Phase
  One year follow-up for all participants
## Demographic Characteristics

<table>
<thead>
<tr>
<th>Variable</th>
<th>MBCT (N=87)</th>
<th>HEP (N=86)</th>
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<tr>
<td>Age</td>
<td>47.4</td>
<td>45.2</td>
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<tr>
<td>Education (years)</td>
<td>15.6</td>
<td>15.9</td>
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<tr>
<td>Female (%)</td>
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<td>Hispanic</td>
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<tr>
<td>Non-Hispanic</td>
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<tr>
<td>Race (%)</td>
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<tr>
<td>White</td>
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<tr>
<td>Asian</td>
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<tr>
<td>African American</td>
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<td>8.1</td>
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<tr>
<td>Other</td>
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<td>3.5</td>
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<tr>
<td>Employment (%)</td>
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<td></td>
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<tr>
<td>Full-time</td>
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<tr>
<td>Part-time</td>
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<tr>
<td>Unemployed</td>
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<td>Retired</td>
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<td>Disability (%)</td>
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<td>Mental Health</td>
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<tr>
<td>Physical</td>
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<tr>
<td>Marital Status (%)</td>
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<tr>
<td>Single</td>
<td>37.9</td>
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<td>Married/cohabitating</td>
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<td>33.7</td>
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<td>Divorced/separated/widowed</td>
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<td>18.6</td>
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## Clinical Characteristics

<table>
<thead>
<tr>
<th>Variable</th>
<th>MBCT (N= 87)</th>
<th>Mean</th>
<th>SD</th>
<th>HEP (N=86)</th>
<th>Mean</th>
<th>SD</th>
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<tr>
<td>Age at depression onset</td>
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<td>18.8</td>
<td>10.9</td>
<td>21.7</td>
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<td>Total number depressive episodes</td>
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<td>3.6</td>
<td>2.6</td>
<td>3.5</td>
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<td>Length of current depressive episode (months)</td>
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<td>84.4</td>
<td>119.5</td>
<td>78.5</td>
<td>93.5</td>
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<td>HAM-D score</td>
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<td>3.4</td>
<td>17.4</td>
<td>3.5</td>
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<tr>
<td>Single episode (%)</td>
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<td>20.7</td>
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<td>22.1</td>
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<td>≥ 3 Lifetime episodes</td>
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<td>62.2</td>
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<td>58.0</td>
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<td>Previous treatment for depression (%)</td>
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<td>Hospitalization</td>
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<td>Suicide attempt</td>
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<td>Recruitment Source (%)</td>
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<td>Community</td>
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*Note. HAM-D = Hamilton Depression Rating Scale*
Post-intervention Outcomes

% Reduction HAM-D

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<th>Week 4</th>
<th>Week 8</th>
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<tr>
<td>23</td>
<td>25.3</td>
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<tr>
<td>23.4</td>
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<td>10.67</td>
<td>17.19</td>
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P = 0.0293

Treatment Response*

*Response defined by ≥ 50% reduction in Hamilton Depression Rating Scale (HAMD) total score from baseline
Post-intervention Outcomes

Remission*

% of Sample

Week 4
Week 8

P = 0.1797

*Treatment remission defined by HAMD total score of ≤ 7
Clinical Outcomes

- Depression, Rumination, Anxiety

- Self-Compassion, Mindfulness
PATH-D STUDY FMRI INVESTIGATION: AFFECT MATCHING & WORKING MEMORY TASKS

Assessment Flow Chart

Randomization

1. **T1 fMRI: MBCT + TAU (N=44)**
2. **T1 fMRI: HEP + TAU (N=44)**
3. **T1 fMRI: Healthy Control (N=40)**

8-week Treatment

1. **T2 fMRI: MBCT + TAU (N=44)**
2. **T2 fMRI: HEP + TAU (N=44)**

Pre-Treatment Behavioral Baseline

*If HAMD≥14

Post-Treatment Behavioral Assessment

*R01/NCCAM*
Emotion Regulation Systems

WITH PERMISSION FROM McCARTHY
TRD Patients Time 1
(unc, P<.0005)

Dolcos & McCarthy, 2006
Change (T2-T1) WM Maintenance – Scramble
(voxel threshold p<.025, cluster unc p<.04)
Change (T2-T1) in VLPFC Activation during WM Maintenance (averaged over neutral and emotional distractors)

Treatment x Time Interaction p<.05
Change (T2-T1) in Amygdala Activation During Post-Emotion Probe vs. Percent Change in HDRS

- Treatment Condition: HEP
  - $r = 0.09$, $p = 0.63$

- Treatment Condition: MBCT
  - $r = 0.38$, $p = 0.036$
Conclusions

• Relative to HEP, MBCT was associated with:
  • Increased DLPFC activation—the emotion regulation network.
  • Decreased VLPFC activation—the emotion generating network.

• In MBCT, but not in HEP, HDRS improvement at 8 weeks was associated with:
  • Greater decline in amygdala activation—the emotion generating network.
• Key take-away

• There are new and powerful techniques like MBCT that offer hope in healing depression and empowering the individual with skills that they can utilize rapidly and effectively.

• More information in When Antidepressants Aren’t Enough: Harnessing the Healing Power of Mindfulness to Heal Depression

• [www.stuart.eisendrath.com](http://www.stuart.eisendrath.com)

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When Antidepressants Aren’t Enough
HARNESSING THE POWER OF MINDFULNESS TO ALLEVIATE DEPRESSION

STUART J. EISENDRATH, MD
Founder of the University of California San Francisco Depression Center

FOREWORD BY ZINDEL SEGAL, PhD

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— Matthieu Ricard, author of Happiness and Altruism

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