

Mind-Body Medicine in Behavioral Health and Primary Care Settings

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Rajeev John MSW, LCSW,

Manager, Adult Behavioral Health

• (Certified Practitioner of Mind Body Medicine)

 Thomas Kuciejczyk-Kernan MD
Board certified in Integrative and Family Medicine Faculty member of the Center for Mind-Body Medicine

## Mind-Body Medicine

Using the mind to affect the bodyAnd the body to affect the mind

Through self-care practicesThat mobilize innate healing dynamics

## Mind-Body Self-Care Practices

- Diaphragmatic breathing concentrative meditation
- Autogenic relaxation
- Safe place imagery
- Mindfulness meditation
- Active (shaking, dynamic breathing) meditation
- Drawings of self in one's situation
- Inner guide imagery

#### A F F I N I A HEAD I HE

## Mind-Body Self-Care Practices

- Dialogue-with-a-symptom imagery
- Drawing one's genogram
- Yes/No speaking-shouting-dancing
- Forgiveness imagery
- Whole food eating, mindfully
- Tai chi / Yoga moving meditation
- Whole body exercise

## **Innate Healing Dynamics**

- Induce relaxation response to relieve toxic stress
- Heal trauma by relieving hyper-/hypo-arousal, facilitating grieving, and promoting reintegration
- Cultivate self-awareness to empower self-direction
- Positively channel emotional energy
- Reduce chronic toxic systemic inflammation
- Access inner wisdom and self-compassion
- Optimize physiologic functions, reduce intoxication

## Mind-Body Medicine

- Can be effectively applied
- By behavioral health or medical clinicians
- In our settings
- <u>To improve a wide range of emotional & physical</u> <u>problems, and enhance resilience</u>
- Satisfying patients and clinicians alike
- At minimal cost and without adverse effects
- "complementing" conventional care

#### MBM works with our nature

- We are an <u>integrated</u> system:
  - Perception, thought and emotion in the brain
  - Affect regulatory systems: nervous, immune, endocrine
    - Neurotransmitters, cytokines, hormones
  - Affect tissue state & function:
    - cardio-resp-vasc, gut-metab-renal, repro, musculo-sleletal
  - Tissues produce physiol effects & messengers that
  - Feedback to regulatory systems and affect brain state
- "psycho-neuro-immuno-endocrino-logy", MB soup

#### MBM works with our nature

- Our integrated system has built within it
- Intelligence for self-regulation
- To maintain internal conditions
- That optimize function
- To adapt to experience
- And to regain "balance" when it's lost





Optimized for Healing, Growth, & Reproduction	Relaxed Mode (Parasympathetic)	Hypothalmus / ANS Organ Systems	
Full circulation to all organs (less thrombosis)	Normal heart rate Normal blood pressure Less blood clotting Increased blood flow to skin	Cardiovascular	
Flexible muscles	Relaxed muscles	Musculature	
Normal metabolism	Lower blood sugar and fats Lower insulin, cortisol	Metabolism	
Good digestion of food, absorption of nutrients elimination of waste	More digestive secretions More intestinal blood flow More intestinal movement	Gastrointestinal	
Ovulation & Spermatogenesis Conception < Coitus Childbirth Breastfeeding	Normal GnRH > FSH & LH outflow Normal sexual arousal Oxytocin enhances labor Prolactin > lactation	Reproductive	
Resistance to infection Resistance to cancer Lower systemic inflammation Faster wound healing	Acquired Immunity <u>more protective</u> Innate Immunity <u>less</u> reactive	Immune System	
Relaxed awareness Better learning Creative problem solving Engagement with others	Calm alertness Open receptive thinking Cooperative relational behavior	Brain & Thinking	

Hypothalmus / ANS Organ Systems	Tense Mode (Sympathetic)	Optimized for Fighting or Fleeing Attacker	
Cardiovascular	Faster heart rate Higher blood pressure Increased blood clotting Less blood flow to skin	Increased blood flow to muscles	
Musculature	Tense muscles	Quick reaction	
Metabolism	Higher blood sugar and fats	More fuel for muscles	
Gastrointestinal	Less intestinal blood flow Less intestinal movement Less digestive secretions	Blood flow shifted to muscles (Danger, danger! No time to eat!)	
Reproductive	Suppressed sexual arousal	(Danger, danger! No time for sex!)	
Immune System	Acquired Immunity <u>LESS</u> protective Innate Immunity <u>MORE</u> reactive	Less infection if cut in the figh	
Brain & Thinking	Hyper-alert Closed defensive thinking Aggressive behavior	Focus on danger Self-protection	







Hypothalmus / ANS Organ Systems	Tense Mode (Sympathetic)	Stuck in the Tense Mode: TOXICSTRESS
Cardiovascular	Faster heart rate Higher blood pressure Increased blood clotting Less blood flow to skin	palpitations chest pain thrombosis cold hands and feet
Musculature	Tense muscles	headache, neck pain muscle cramps, back pain
Metabolism	Higher blood sugar and fats Higher cortisol	hi cortisol > central obesity insulin resistance > syndrome
Gastrointestinal	Less intestinal blood flow Less intestinal movement Less digestive secretions	gastroesophageal reflux dyspepsia, indigestion gas/bloating, diarrhea, constipation
Reproductive	Suppressed genital parasymp fxn	igvee sexual arousal (vag trans lub)
Immune System	Acquired Immunity <u>LESS</u> protective Innate Immunity <u>MORE</u> reactive	increased systemic inflammation impaired wound healing
Brain & Thinking	Hyper-alert Closed defensive thinking Aggressive behavior	tense, fearful, insomnia, fatigue poor concentration, distractibility irritability, anger

Tense Mode (Sympathetic & Hormonal)	Stuck in the Tense Mode: CHRONIC TOXICSTRESS	Conditions Worsened by STRESS
Faster heart rate Higher blood pressure Increased blood clotting Less blood flow to skin	palpitation, chest pain LV hypertrophy accelerated atherosclerosis, increased thombosis cold hands and feet	Arrythmias Hypertension, LVH CAD: infarction, heart failure Deep vein thrombosis Stroke, migraine
Tense muscles	headache, neck pain muscle cramps, back pain	
Higher blood sugar and fats Higher cortisol, insulin	increased central obesity metabolic syndrome	Diabetes Hyperlipidemia
Less intestinal blood flow Less intestinal movement Less digestive secretions	gastroesophageal reflux dyspepsia, indigestion gas/bloating, diarrhea, constipation	Reflux esophagitis Gastric ulcers Irritatble bowel syndrome
↓ GnRH > ↓LH ↓Hypothal & genital parasymp fxn elevated CRH (? Mechanism) higher estrogen / lower progest	anovulation √sexual arousal, √ vag lubrication preterm labor Impaired lactation estrogen dominance	Infertility Sexual dysfunction Premature birth Failure of breastfeeding PCOS
Acquired Immunity <u>LESS</u> protective Innate Immunity <u>MORE</u> reactive	increased systemic inflammtion impaired wound healing	Infections, Cancers Auto-immune diseases
Hyper-alert Closed defensive thinking Aggressive behavior	tense, fearful, insomnia, fatigue poor concentration, distractibility irritability, anger PMS	Anxiety disorders Depression Relational conflict Professional burnout







## "Soft Belly" concentrative meditation with diaphragmatic breathing

- Diaphragm action neurally associated with relaxation: vagal afferents stimulated by diaphragm > brain > efferent parasymp outflow
- 2. Longer expiration > reduces blood return to heart > parasympathetic outflow to slow HR. Optimal RR 6/m with exp twice as long as insp
- 3. Replacing stressor thinking with concentration on belly movement with breathing



Am J Cardiol. 2005 May 1; 95(9): 1060-1064.

#### Long-Term Effects of Stress Reduction on Mortality in Persons ≥55 Years of Age With Systemic Hypertension

Robert H. Schneider, MD, Charles N. Alexander, PhD<sup>\*</sup>, Frank Staggers, MD, Maxwell Rainforth, PhD, John W. Salerno, PhD, Arthur Hartz, MD, Stephen Arndt, PhD, Vernon A. Barnes, PhD, and Sanford I. Nidich, EdD

From the Institute for Natural Medicine and Prevention, Maharishi University of Management, Fairfield, Iowa; the West Oakland Health Center, Oakland, California; the Departments of Family Medicine and Psychiatry, University of Iowa College of Medicine, Iowa City, Iowa; and the Georgia Prevention Institute, Medical College of Georgia, Augusta, Georgia.

#### Abstract

Psychosocial stress contributes to high blood pressure and subsequent cardiovascular morbidity and mortality. Previous controlled studies have associated decreasing stress with the Transcendental Meditation (TM) program with lower blood pressure. The objective of the present study was to evaluate, over the long term, all-cause and cause-specific mortality in older subjects who had high blood pressure and who participated in randomized controlled trials that included the TM program and other behavioral stress-decreasing interventions. Patient data were pooled from 2 published randomized controlled trials that compared TM, other behavioral interventions, and usual therapy for high blood pressure. There were 202 subjects, including 77 whites (mean age 81 years) and 125 African-American (mean age 66 years) men and women. In these studies, average baseline blood



N of 202, 8 year study, urban US •Calmer, happier life •30% less CV death •49% less cancer death •23% lower total mortality

Tense Mode (Sympathetic & Hormonal)	Stuck in the Tense Mode: CHRONIC TOXICSTRESS	Conditions Worsened by STRESS
Faster heart rate Higher blood pressure Increased blood clotting Less blood flow to skin	palpitation, chest pain LV hypertrophy accelerated atherosclerosis, increased thombosis cold hands and feet	Arrythmias Hypertension, LVH CAD: infarction, heart failure Deep vein thrombosis Stroke, migraine
Tense muscles	headache, neck pain muscle cramps, back pain	[Effect Size: 1/3 CV death 1/2 cancer death, 1/4 all death]
Higher blood sugar and fats Higher cortisol, insulin	increased central obesity metabolic syndrome	Diabetes Hyperlipidemia
Less intestinal blood flow Less intestinal movement Less digestive secretions	gastroesophageal reflux dyspepsia, indigestion gas/bloating, diarrhea, constipation	Reflux esophagitis Gastric ulcers Irritatble bowel syndrome
↓ GnRH > ↓LH ↓Hypothal & genital parasymp fxn elevated CRH (? Mechanism) higher estrogen / lower progest	anovulation √sexual arousal, √ vag lubrication preterm labor Impaired lactation estrogen dominance	Infertility Sexual dysfunction Premature birth Failure of breastfeeding PCOS
Acquired Immunity <u>LESS</u> protective Innate Immunity <u>MORE</u> reactive	increased systemic inflammtion impaired wound healing	Infections, Cancers Auto-immune diseases
Hyper-alert Closed defensive thinking Aggressive behavior	tense, fearful, insomnia, fatigue poor concentration, distractibility irritability, anger PMS	Anxiety disorders Depression Relational conflict Professional burnout



### **Relaxation Response Practices**

- "Soft Belly" concentrative meditation with diaphragmatic breathing
- Safe place guided imagery
- Mindfulness meditation (additional dynamics)
- Autogenic Technique
- Vigorous physical exercise (additional dynamics)
- Hatha Yoga
- Progressive Muscle Relaxation
- "Heart Math" technique
- Other concentrative meditations (mantras, prayers)

## **Relaxation Efficacy in Anxiety**

- Int Clin Psychopharmacol. 2015 Jul;30(4):183-92.
- Efficacy of treatments for anxiety disorders:
- a meta-analysis.
- <u>Bandelow B</u><sup>1</sup>, <u>Reitt M</u>, <u>Röver C</u>, <u>Michaelis S</u>, <u>Görlich Y</u>, <u>Wedekind</u>
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- Effect size for psychotherapies were mindfulness therapies, 1.56 (n = 4); **relaxation**, **1.36** (n = 17); individual cognitive behavioural/exposure therapy (CBT), 1.30 (n = 93); group CBT, 1.22 (n = 18); psychodynamic therapy 1.17 (n = 5); therapies without face-to-face contact (e.g. Internet therapies), 1.11 (n = 34); eye movement desensitization reprocessing, 1.03 (n = 3); and interpersonal therapy 0.78 (n = 4).

#### **Relaxation Efficacy in Depression**

- <u>Cochrane Database Syst Rev.</u> 2008 Oct 8;(4)
- Relaxation for depression.
- Jorm AF<sup>1</sup>, Morgan AJ, Hetrick SE.
- MAIN RESULTS:
- There were 15 trials with 11 included in the meta-analysis. Five trials showed relaxation reduced self-reported depression compared to waitlist, no treatment, or minimal treatment post intervention (SMD -0.59 (95% CI -0.94 to -0.24)). For clinician-rated depression, two trials showed a non-significant difference in the same direction (SMD -1.35 (95% CI -3.06 to 0.37)). Three trials showed no significant difference between relaxation and psychological treatment on clinician-rated depression at post intervention (SMD 0.29 (95% CI -0.18 to 0.75)). Nine trials showed relaxation produced less effect than psychological (mainly cognitive-behavioural) treatment on self-reported depression (SMD = 0.38 (95% CI 0.14 to 0.62)).

#### **Relaxation Efficacy in Anxiety & Depression**

- <u>Aging Ment Health.</u> 2015;19(12):1043-55.
- Effects of relaxation interventions on depression and anxiety among older adults: a systematic review.
- <u>Klainin-Yobas P<sup>1</sup></u>, <u>Oo WN</u>, <u>Suzanne Yew PY</u>, <u>Lau Y</u>.
- **RESULTS**:
- Our findings suggested that older adults who received relaxation interventions experienced greater reductions in depression and anxiety than controls in most studies. Progressive muscle relaxation training, music intervention, and yoga had the strongest intervention effects on depression. Music intervention, yoga, and combined relaxation training most effectively reduced anxiety symptoms among older adults. Furthermore, the impact of some relaxation interventions remained in effect for between 14 and 24 weeks after the interventions.

#### **Relaxation Response**

- Innate <u>skill</u> easily developed with simple techniques, improves with practice
- Induced by various forms of meditation and imagery, also vigorous physical exercise
- Benefits extend beyond practice period
- Therapeutic dose: 10-15 minutes 5 days/week
- Effective immediately, or may take 6 weeks
- Physical symptoms improve sooner than mental symptoms
- Practice reduces reactivity, increases resilience



#### **Relaxation Practice**

- enjoyable
- free
- no adverse effects
- accommodates personal preferences
- available wherever you are
- self-regulation in stressful moment
- no conflict with other therapies
- Requires 10-15 minutes (1/100)



#### **Relaxation Practice**

- Effective even as stressors persist
- Enhances ability to cope effectively

Relaxed	Calm alertness	Brain	Tense	Anxiety
awareness		&	Fearful	disorders
	Open receptive	Thinking	Irritable	
Better	thinking		Angry	Depression
learning				
	Cooperative		Insomnia	Relational
Creative	relational		Fatigue	conflict
problem	behavior			
solving			Poor	Professional
			Concentration	burnout
Engagement			Easily	
with others			distracted	



#### **Relaxation Practice**

- Effective even as stressors persist
- Enhances ability to cope effectively
- Awakens a locus of control: very helpful when threatened (no control terrifying)
- Engenders self-efficacy (there's something I can do about it) > empowerment > hope
- Mobilizes innate resources for healing, being more well, coping with difficulty, prevention



## Relaxation is the beginning of Mind-Body Medicine

- Simple, easy, palpable first step
- Relieves ubiquitous toxic stress
- Relaxing the brain makes next steps possible
- Allows access to a wellspring of internal resources for healing in the conscious and unconscious mind



#### Other Mind Body self are practices

#### Relaxation



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HEALTHCA

#### A F F I N I A HEOFIHSORE

#### Autogenics and Bio-feedback

#### "Open your mind to the power of selfsuggestion"

Johannes Schultz







## Spirituality

#### Power of Faith, Hope

- praying for others
- placebo effect

Forgiveness – imagery

#### Loving Relationship

- resilience
- healing

GOD GRANT ME THE SERENITY TO ACCEPT THE THINGS I CANNOT CHANGE COURAGE TO CHANGE THE THINGS I CAN AND WISDOM TO KNOW THE DIFFERENCE

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## **Healthy Eating**

- Relationship with food
  - Emotional
    - Serotonin spike with junk food

"what we eat = who we are'



AFF

#### Mindful Eating



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#### IN WHICH CASE I WILL EAT A COOKIE

## Mindful Eating- Benefits

- Enjoyment
- Eating with intention
- Eating less
- Better digestion
- Nutritional benefit



## Meditation



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HEALTH

## Meditation

• 3 Types: Concentrative, Mindfulness, Expressive

#### Benefits

- Brain
  - Increase in neurotransmitter level
  - Increase in grey matter
  - Increase in serotonin, melatonin, endorphins
  - Increase in "alpha waves" in brain
    - Positivity, love and happiness

#### **Meditation Efficacy in Depression**

• <u>Psychosomatics</u>. 2015 Mar-Apr;56(2):140-52.

Critical analysis of the efficacy of meditation therapies for acute and subacute phase treatment of depressive disorders: a systematic review.

- Jain FA<sup>1</sup>, Walsh RN<sup>2</sup>, Eisendrath SJ<sup>3</sup>, Christensen S<sup>4</sup>, Rael Cahn B<sup>5</sup>.
- CONCLUSIONS:

A substantial body of evidence indicates that meditation therapies may have salutary effects on patients having clinical depressive disorders during the acute and subacute phases of treatment.

## **Meditation Efficacy in Anxiety**

- <u>Br J Clin Psychol.</u> 2012 Sep;51(3):239-60. doi: 10.1111/j. 2044-8260.2011.02024.x. Epub 2011 Sep 9.
- Mindfulness- and acceptancebased interventions for anxiety disorders: a systematic review and meta-analysis.
- <u>Vøllestad J</u><sup>1</sup>, <u>Nielsen MB</u>, <u>Nielsen GH</u>.
- CONCLUSIONS:
- MABIs are associated with robust and substantial reductions in symptoms of anxiety and comorbid depressive symptoms. More research is needed to determine the efficacy of MABIs relative to current treatments of choice, and to clarify the contribution of processes of mindfulness and acceptance to observed outcome.

#### Meditation Efficacy in Mental Illness

J Psychosoc Nurs Ment Health Serv. 2015 May;53(5):15-9. doi: 10.3928/02793695-20150330-01. Epub 2015 Apr 8.
Meditation for older adults: a new look at an ancient intervention for mental health.

<u>Sorrell JM</u>.

#### Abstract

New research is providing health care professionals with evidence for the effectiveness of mindfulness meditation as an intervention for older adults. Recent studies have provided evidence that meditation results in observable changes in brain structure related to memory, sense of self, empathy, and stress. Health care professionals should consider mindfulness training as a helpful intervention for older adults with problems such as depression, anxiety, chronic pain, loneliness, and caregiver burden.

#### A F F I N I A HEALTHCARE

#### Yoga Efficacy in Mental Illness

#### Effectiveness of Yoga Therapy as a Complementary Treatment for Major Psychiatric Disorders: A Meta-Analysis

Patricia Cabral, BA, Hilary B. Meyer, BA, and Donna Ames, MD

#### Abstract

**Objective:** To examine the efficacy of yoga therapy as a complementary treatment for psychiatric disorders such as schizophrenia, depression, anxiety, and posttraumatic stress disorder (PTSD).

**Conclusions:** As current psychopharmacologic interventions for severe mental illness are associated with increased risk of weight gain as well as other metabolic side effects that increase patients' risk for cardiovascular disease, yoga may be an effective, far less toxic adjunct treatment option for severe mental illness.



## Active / Expressive Meditation

#### Shaking and Dancing







### Mind Body Skills Group model



#### Group format



#### **CMBM Model Application Settings**

- War torn villages: Kosovo, Gaza,
- Refugee camps: Macedonia, Syria
- Bomb-stricken cities: New York (911), Tel-Aviv
- Natural disasters: New Orleans, Haiti, New Jersey
- Traumatized US veterans: DC, San Fran, Kansas City
- Medical Students in 15 US medical schools
- Native Americans: Minneapolis, Pine Ridge
- Medical Center & Community Mental Health: Indy

#### MBSG efficacy in PTSD, depression

- Staples JK, Abdel Attai JA, Gordon JS. Mind-body skills groups for posttraumatic stress disorder and depression symptoms in Palestinian children and adolescents in Gaza. *Int J Stress Manag*. 2011; 18(3): 246-262. doi: 10.1037/a0024015
- PTSD symptom scores were significantly decreased (56%) following the program. This improvement was partially maintained at 7 month follow-up with a 39% decrease in scores compared to baseline. The depression scores were significantly decreased (29%) following the program. This improvement was partially maintained at 7 month follow-up with a 20% decrease in scores compared to baseline. The children felt more hopeful about their future and their lives as indicated by a statistically significant decrease in hopelessness scores (28% decrease) following participation in the mind-body skills groups. This improvement was fully maintained at follow-up.

## MBSG efficacy in PTSD

• <u>J Clin Psychiatry.</u> 2008 Sep;69(9):1469-76.

Treatment of posttraumatic stress disorder in postwar Kosovar adolescents using mind-body skills groups: a randomized controlled trial.

<u>Gordon JS<sup>1</sup></u>, <u>Staples JK</u>, <u>Blyta A</u>, <u>Bytyqi M</u>, <u>Wilson AT</u>.

• CONCLUSIONS:

Mind-body skills groups can reduce PTSD symptoms in war-traumatized high school students and can be effectively led by trained and supervised schoolteachers.

## Our training with CMBM

- Center for Mind-Body Medicine (<u>www.cmbm.org</u>)
- Initial Professional Training Program <u>self-care</u>
- Advanced Training Program facilitating groups
- Certification Program personal supervision



# You can do MBM in your setting

- Using the mind to affect the bodyAnd the body to affect the mind
- Through self-care practicesThat mobilize innate healing dynamics



## Questions?

Thomas K Kernan, MD (314)898-1748 thomask@affiniahealthcare.org

Rajeev John, MSW, LCSW (314)814- 8755 rajeevj@affiniahealthcare.org