



Cynthia Moore MS, RD, CDE, FAND
University of Virginia & Hygeia Center

Incorporating

Mind-Body Skills: group &
individual nutrition and diabetes care settings



What makes Mind Body skills relevant now?

Convergence of factors:

- Rising healthcare costs
- Science about benefits
- Stress of modern life
- Science of neuroplasticity

A strong argument can be made for the need for inclusion of mind-body practices such as yoga into both the education and healthcare systems, with their potential to prevent the growing epidemic in lifestyle disease in modern society.”



Sat Bi Singh Khalsa, PhD
Asst. Prof of Medicine
Brigham & Women's Hospital, Harvard Medical School
Yoga and Diabetes, by Annie Kay & Lisa. Nelson, 2016



Mind-Body Skills

- Skills that enhance the capacity to **respond** rather than merely **react** to physical or mental stressors
- Skills that enhance control of the autonomic nervous system
 - heart rate, BP, stress hormone levels, glucose



Yoga philosophy, breathing, postures
Mindfulness mindset, breathing, eating, moving
Self-compassion

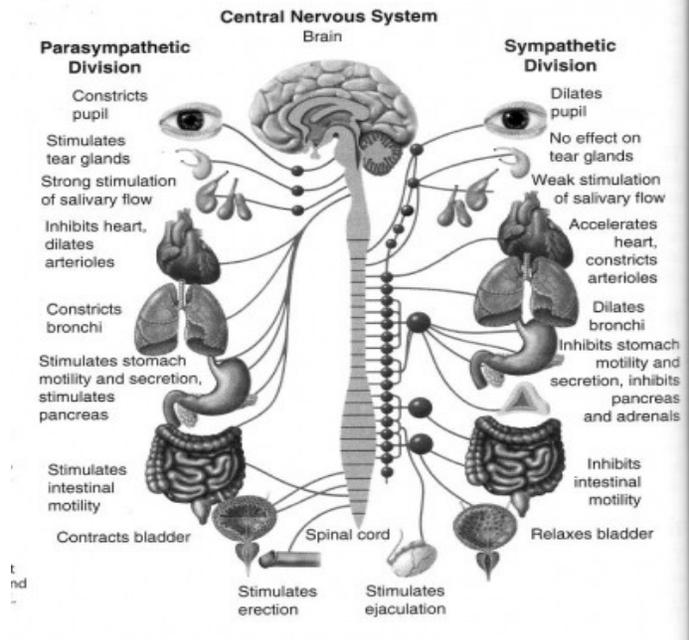
**Mind-Body skills are
foundational for balance
as essential as...**

Objectives: Incorporating Mind-Body skills



Stress and relaxation: why does it matter in health & disease?

- 1- Body is designed to respond to acute stress/threat via the sympathetic (SNS) & to restore relaxation with parasympathetic nerve systems (PNS)
- 2-Hypothalamus-Pituitary-Adrenal (HPA) axis influences blood pressure, heart rate and blood glucose
- 3-Modern life → chronic stress → insufficient PNS balance



How Yoga Works

- Improves function of nervous system- balance of the ANS-autonomic nervous system (SNS & PNS)¹
- Lowers blood sugar, blood pressure¹
- Improves bowel function¹
- Increases flexibility, strengthens muscles, improves balance¹
- Improves lung function, leads to slower deeper breathing, increased oxygenation²
- Improves brain function and activates left prefrontal cortex³, changes neurotransmitter levels and lowers stress hormone cortisol ¹

1-McCall, T, *Yoga as Medicine*, 2007

2- Lancet, 1998, CHF;

3-Davidson, R, functional MRI

Practice of Yoga/Mindfulness & Mind Body skills

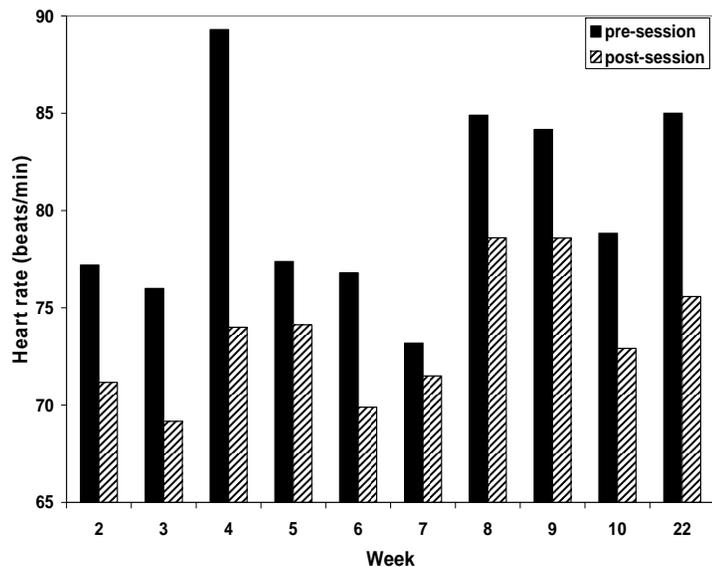
- Can even alter gene expression
- Enhance immune function
- Change brain structure

Pilot Study of the Effects of Mind-Body Skills Training in Type 2 Diabetes

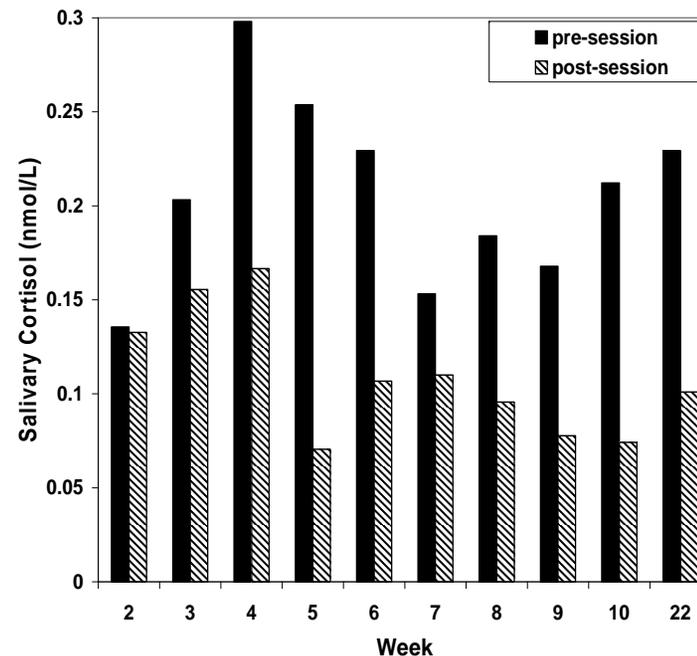
Joslin Center/University of Maryland

Overview: 8 weeks mind-body skills, prior 2 weeks with knowledge focus.





Heart rate, diastolic blood pressure and salivary cortisol consistently decreased during sessions.



Results

Measure	Week 1	Wk 10	Wk 22	Findings
HbA1c (n=6)	7.7%	7.9%	7.5%	No significant reductions except for 2/6 individuals
Urinary cortisol (n=5)	94 ug/day	59 ug/day	66 ug/day	Wk 1-10 (p=0.06) Wk 1-22 (p=0.19) in 4/5 subjects
Stress hormones (n=5) (Epinephrine, Nor epi, total catecholamines, Dopamine)				Wk 1-10 (variable per subj, no net change) Wk 1-22 all had lower dopamine, nor epi and total catechol. (p= 0.06) Wk 1-22 all lower or same epinephrine (p=0.31)

Quality of Life: Pen & Paper Tests

Test	Wk 1	Wk 10	Wk 22	Result
BDI- Beck Depression Inventory	8.4	1.8	1.8	Wk 1-10 (p=0.06) Wk 1-22 (p=0.06)
PAID 2 – Problem Areas in Diabetes	62.0	47.8	45.8	Wk 1-10 (p=0.13) Wk 1-22 (p=0.09)
Diabetes Self-Care	273.5	273.1	268.1	Wk 1-10 (p=0.84) Wk 1-22 (p=0.81)
SF 36	70.8	80.4	77.3	Wk 1-10 improvements (p=0.38) Wk 1-22 improvements (p=0.09)



Stress and relaxation: why does it matter?

- 4-When under stress, reptilian brain is in charge
- 5-Executive function of the brain that helps us with wise choices is less available during peak stress

Triune Brain

Neocortical Brain (prefrontal cortex)
Emotional Brain (mammalian brain and reptilian brain)



Experiential Practice

Mind-Body skills that can be used in session



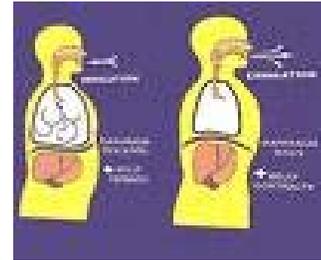
Mind-Body Skills Practice

- Medical Yoga/Cardiac Yoga
- *Progressive Muscle Relaxation
- *Breathing practices
- *Yoga psychology
- *Yoga Nidra
- Meditation: mindfulness or mantra focused
- Autogenic Training
- Self-compassion
- Biofeedback
- Writing to heal
- Mindful eating

Breathing

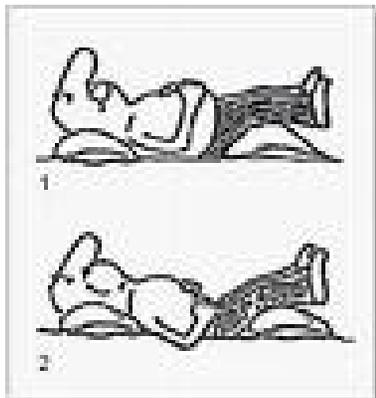
- Preparation
- Benefits: calming, reduction of stress, decrease angina attacks, & balancing parasympathetic nervous system
- Breathing Practices
 - 1-Diaphragmatic breathing
 - 2-Deep breathing – belly breathing
 - 3-Even breathing

Diaphragmatic Breathing



- Diaphragm is dome-shaped muscle
- When you exhale, diaphragm muscle goes into a dome
- When you inhale the muscles relaxes and goes down into a flattened position

Diaphragmatic Breathing



- Have students lie on their backs with a pillow under neck & knees
- Hands on belly
- Gently press in on exhale, ride hands up on inhale
- Nostril breathing

Deep Breathing (3-part breathing)



- Inhale- breathe into
 - Belly
 - Chest
 - Shoulder area
- To release – exhale
 - Shoulder area
 - Chest
 - Belly

Even Breathing



- Awareness preparation
 - become aware of breathing
 - count length of inhalation
 - Allow in and out breath to become same length

Medical / Cardiac Care Pointers

- Breathing practice may aid in
 - Reducing insomnia
 - Staying connected within for mindful eating
 - Improving lung function
- Nostril breathing
- Supine position for diaphragmatic breathing

Asanas/Postures

- Standing 3-part breathing- Breath of Joy
- Simple forward bend
- Side bend
- Twist
- Balancing pose - tree



Mindfulness

Paying attention
on purpose
in the present moment
without judgment

Mindfulness – 7 qualities of mindfulness

Nonjudging: to observe simply and impartially

Patience: some things unfold in their own time

Beginner's Mind: fresh experience of the present

Trust as Self-Reliance: trusting own wisdom

Nonstriving: noticing our usual patterns to strive or reach, instead, simply observing

Acceptance: seeing things as they actually are in the present

Letting Go: letting things be as they are

Kabat-Zinn, J. *Full Catastrophe Living: Using the Wisdom of Your Body and Mind to Face Stress, Pain and Illness*, 1990.

Deep Relaxation/Yoga Nidra



- Preparation
 - Body position
 - Temperature/wrap
 - Lights
- Sequence (script)
 - Tensing & relaxing body parts (Progressive Muscle Relaxation)
 - Mentally relax body
 - Observe the body, brain, breath, 5 min relax
 - Returning attention

RDNs utilize mind body skills in nutrition & diabetes practice

- Personal presence/peace
- Patient/client care
 - Stress management, able to make better choices
 - *Calm* anxiety-fear; *energize* depression
 - Patient/client tools of self-empowerment
 - Reducing blood pressure, heart rate, blood glucose
 - Weight reduction, improved sleep, breathing
 - Digestive health – improving function brain-gut-axis
- Practice settings, qualifiers and cautions



How will I use this?

IDEAS: As part of group instruction to help focus the group
Centering practice with an anxious patient
Mindful eating experiment/goal with a client
Strategy to assist with sleep or pain

8 Weeks Toward Wellness for persons with DM or pre DM

- 2 individual nutrition/coaching sessions
- 8 group classes, 1.5 hr.
 - 6 mind body skills intro & practice, 1 yoga class
 - Coaching in class & weekly SMART goal setting
 - Diabetes Self-Care 7 review
 - Fitness guidance & support
 - Nutrition goal setting & education

Workbook + 2 texts:

Surwitt, R. *Mind-Body Revolution* & IDC, *Diabetes Basics*

Results & Feedback...

Blood pressure reduction in class, lipid lowering

"Improved sleep with autogenic training"

"Calmer at work - doing the breathing check in"

- *"Being a lifelong learner of personal growth and wellness in body and mind; the class helped me both pull together, re-call to mind and affirm previous knowledge as well as to learn to implement new ideas, update outdated views on perceptions and discover new science which gave me a fresh kick start to my goals."*

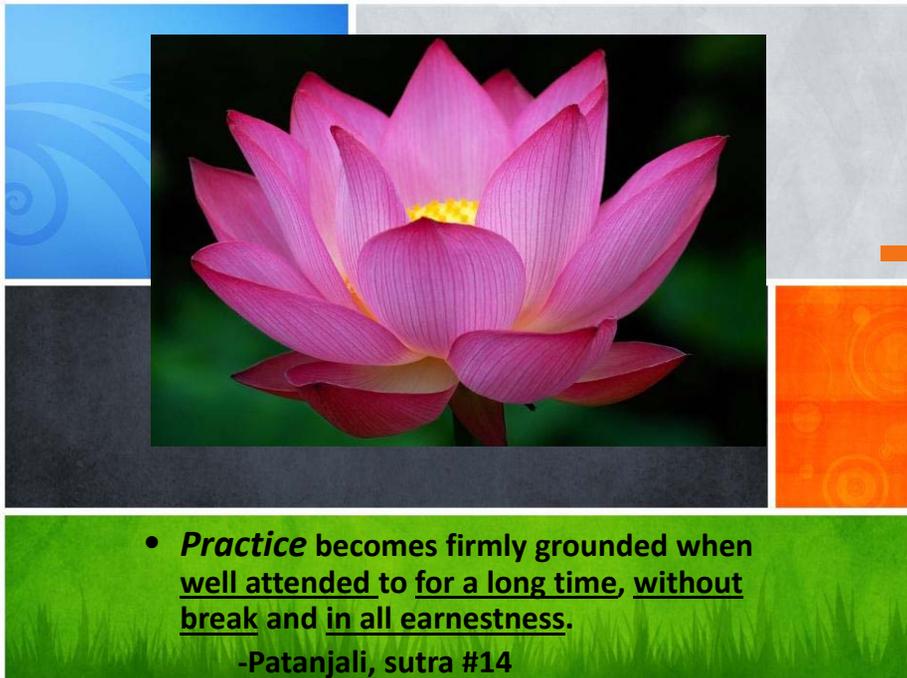
To Enhance Your Skills/Practice:

Training options

- Yoga Workshops or teacher training: Integral Yoga- www.yogaville.org/programs
- Yoga Therapist or Yoga Nidra skills www.irest.us
- Nutrition and Mind Body skills, A. Kay RD www.anniebkay.com/books-by-annie-b-kay/yoga-diabetes
- Mind Body Therapies
 - Benson Henry Institute at Harvard www.bensonhenryinstitute.org/professional-training
 - Center for Mind Body Medicine www.cmbm.org/trainings

TAKE HOME POINTS!

- Mind Body skills enhance the capacity to **respond** rather than merely **react** to physical or mental stressors – reduce damage
- Examples: yoga, meditation, mindfulness, autogenic training, yoga nidra
- Use with individual clients or group process to promote mental balance and enhance wise choices, better sleep, BP, BG, CV function.



- ***Practice*** becomes firmly grounded when well attended to for a long time, without break and in all earnestness.

-Patanjali, sutra #14

Thanks to my team mates and mentors

University of Virginia- 7 weeks toward wellness program
Beth Frackleton MS, RN, MEd.

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Workbook & Upcoming Training

- Complimentary copy of the **8 weeks towards wellness** workbook and mini-syllabus is available electronically. Request/email Cynthia @ clp6g@virginia.edu
- Sept 15-17 @ Yogaville, Buckingham VA.
Mind-Body skills for people with diabetes and healthcare professionals
<http://www.yogaville.org/programs/4939/mind-body-skills-for-people-with-diabetes-and-health-professionals>