



Meditation in Health Care For people living with PD & providers

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Objectives

- ▶ Examine role of meditation in health care, education, and well-being
 - ▶ Effects on motor and psychological symptoms associated with PD
 - ▶ Benefits for people living with other health conditions
 - ▶ Benefits for health care providers and students
 - ▶ Impact on the brain, telomeres, and epigenetics
- ▶ Explore your perceptions of time management and life balance
 - ▶ Stressors & challenges
 - ▶ Opportunities for improvement
- ▶ Experience Heartfulness Meditation
- ▶ Apply practice of meditation in real life, both within and outside of work

Mindfulness Meditation / Yoga vs Stretching / Resistance Training

Kwok et al, JAMA Neurology, 2019

Design: Compared Mindfulness/Yoga to Stretching /Resistance training in people with mild to moderate PD:


- ▶ 138 participants
- ▶ Once a week for 8 weeks; Average # sessions: 6
 - ▶ Yoga and Mindfulness: 90 min
 - ▶ Stretching and resistance: 60 min

Results:

- ▶ Mindfulness / Yoga
 - ▶ Reduced anxiety and depression, increased spiritual well-being, **reduced motor symptoms at 8 and 20 weeks**
- ▶ Stretching / resistance
 - ▶ Reduced motor symptoms at 8 and 20 week

A variety of physiological changes occur With meditation


Physical Benefits <ul style="list-style-type: none"> • Less Stress • Sleep • Breathing • Circulation • Healing 	Mental Benefits <ul style="list-style-type: none"> • Focus • Awareness • Productivity • Positive Energy • Creativity 	Emotional Benefits <ul style="list-style-type: none"> • Less Anger • Tolerance • Relationships • Happiness • Compassion
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Examples of Studies - A Variety of Health Conditions

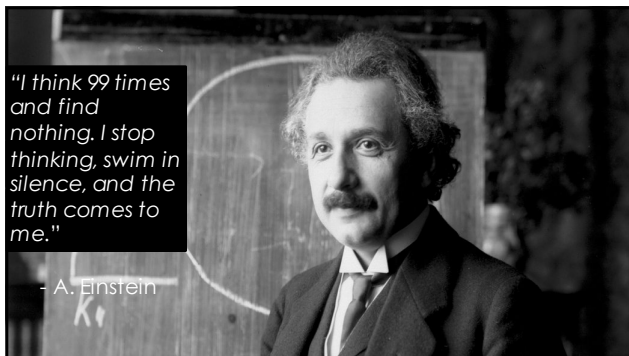
- ▶ Depression aside from PTSD
- ▶ Anxiety and mood
- ▶ PTSD
- ▶ Blood pressure (?)
- ▶ Cognitive decline
- ▶ Insomnia
- ▶ Pain

Examples of Studies – Health Care Providers & Students



- ▶ Providers
 - MDs, RNs, psychologists, social workers, health care students
- ▶ Types of benefits
 - Decreased stress, burnout, anxiety, health related complaints ...
 - Improved mood, empathy



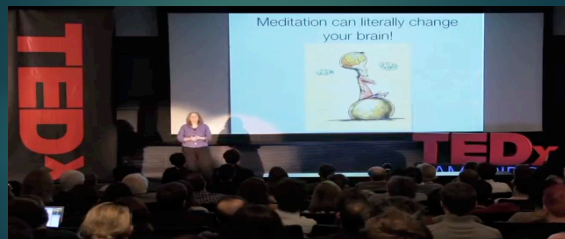


Physical changes in Brain Before and After Meditation

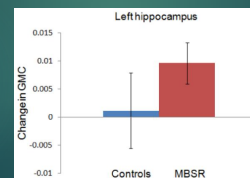
- Harvard neuroscientist, Sara Lazar
 - Studied people who had never meditated before.
 - Found differences in brain volume in various regions of the brain when comparing before and after the 8 weeks.
- Findings of the study showed:
 - The amygdala (fight or flight part of the brain, important for anxiety, fear and stress) got smaller
 - The hippocampus (important for memory) got bigger

How Meditation can reshape our brain

: <https://youtu.be/m8rRzTtP7Tc>



Physical changes in Brain Before and After Meditation



Epigenetics and Meditation

- ▶ Effects of stress and meditation on the neuro-immune system, epigenetics and human microbiota. Househam, 2017
- ▶ Histone deacetylases and inflammatory gene expression. Kaliman, 2014
- ▶ Methylation of FKBP5 and SLC6A4 with mindfulness meditation for posttraumatic stress disorder. Bishop 2018

Histone Deacetylase and Inflammatory Genes in Experienced Meditators. Kaliman et al, 2014

- ▶ Compared Meditators (n=19) to Non-meditators (n=21)
 - ▶ Meditators: day immersion in mindfulness
 - ▶ Non-meditators: day of leisure activities (e.g., quiet time, reading, no internet)
- ▶ Outcomes
 - ▶ Regulatory and inflammatory genes; Cortisol response to stress (Trier Stress Test)
- ▶ Results
 - ▶ Similar baseline gene expression levels in the two groups
 - ▶ Alteration of some gene expression at the end of the day in meditators compared with controls
 - ▶ Expression of two genes was associated with a faster cortisol recovery to the TSST in both groups

Meditation and Axial Mobility

- ▶ Axial mobility is most effective in the relaxed state
- ▶ Who should be relaxed?
 - ▶ The person with PD
 - ▶ The physical therapist treating that person

What about Health Care Providers & Students? A look into our lives...



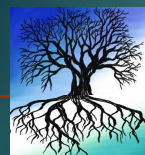
Perceptions of Our Own Time Management and Life Balance

- ▶ How do you operationalize time management?
- ▶ What do you do when there's too much to do/when you are overwhelmed?
- ▶ How do you prioritize?
- ▶ How well do you meet your deadlines?
- ▶ How would you rate your work - life balance?
- ▶ How resilient are you?

Sense of Identity



Cultivating Balance through Meditation



Balance

Just as a tree is sustained by its roots, our outer development needs to be supported by the strength of our inner development

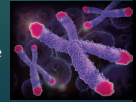
What does meditation mean to you?



Benefits of Heartfulness Meditation

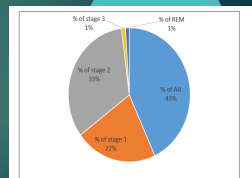
- ▶ Investigation conducted at Internal Medicine Department of Wellspan Hospital, York, PA
 - Significant decrease in **burnout, anger, stress**, and other negative traits
 - Significant increase in **joy and calmness**
 - Significant increase in **telomere length**

▶ Thimmapuram et al. Journal of Community Hospital Internal Medicine Perspectives, 2016



What Happens During Heartfulness Guided Relaxation and Meditation?

- From beta (wakefulness) to alpha (state of relaxation).
- With time, slip into a delta state, (associated with deep sleep).
- Both alpha and delta have rejuvenation benefits associated with these brain waves forms.



From CN Reddy et al, manuscript in preparation

Why the Heart?



Pumping station of the blood throughout the system – affects us physically, emotionally, spiritually

Place of our deepest feelings

As heart opens, we become sensitive to ourselves, our inner wisdom, our inspiration

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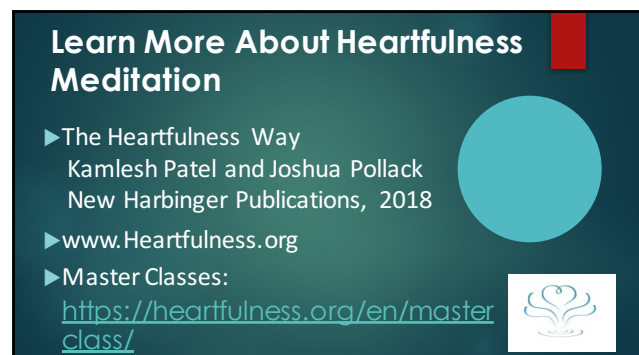
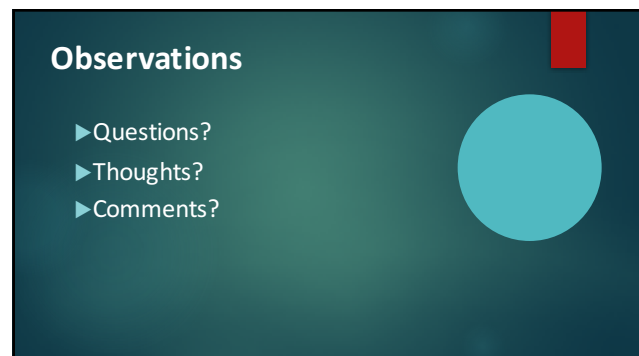
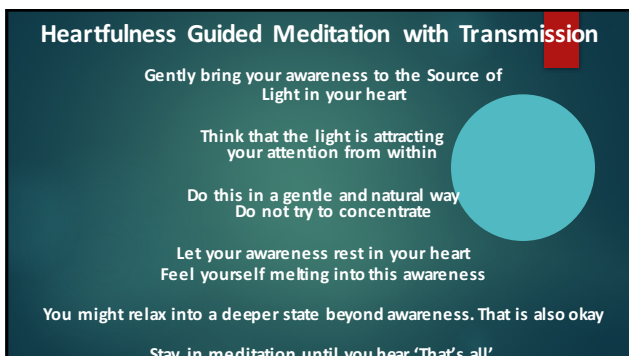
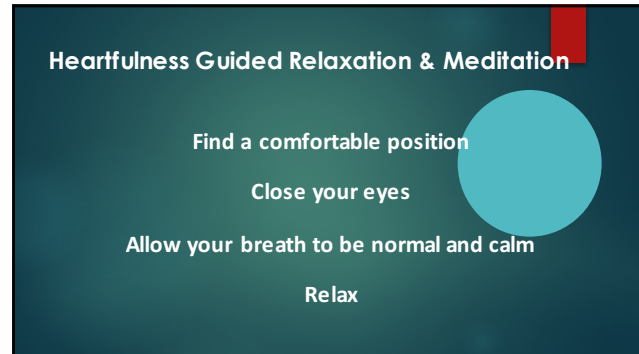
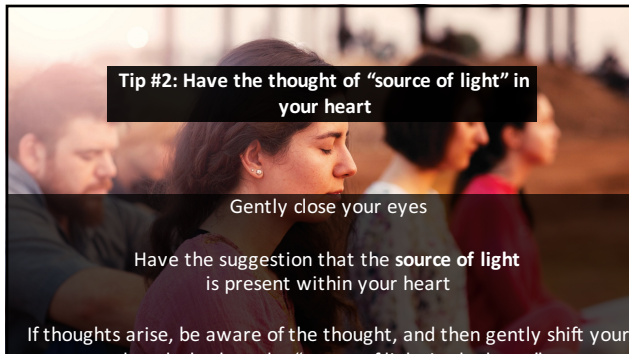
Heartfulness Meditation

Simply bring the mind that is going in all directions to one thought. Make a suggestion that the source of light is in our heart and our mind is resting in it.



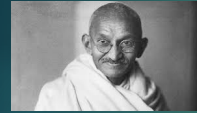
Awareness

Tip #1: Become aware of your thoughts



Summary and Next Steps

- ▶ Food for thought: Meditation can help people living with PD in several important ways
- ▶ For health care providers – How do we remain balanced for ourselves and to best assist people that we treat and work with?
- ▶ Next steps - Evidence is needed examining benefits of meditation for
 - ▶ Person with PD
 - ▶ Person assisting that individual



"I have so much to accomplish today that I must meditate for two hours instead of one."

Gandhi



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