# Mindfulness-Based Stress Reduction: Tools for Success

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### **Disclosure Statement**

I have no actual or potential conflict of interest in relation to this presentation.

# My intentions

To teach you how to:

- Heal brain from stress & trauma (and pain)
- Teach your clients how to help (and heal) themselves
- Prevent burn-out
- Increase efficiency, effectiveness, focus, and success







Pascual-Leone, A., et al., "Modulation of muscle responses evoked by transcranial magnetic stimulation during the acquisition of new fine motor skills." *Journal of Neurophysiology*, 74(3): 1037-1045 (1995).

- 1. Not only can we change our brains just by thinking differently, but when we are truly focused the brain does not know the difference between the internal world of the mind and what we experience in the external environment
- 2. Our thoughts can become our experience

Pascual-Leone, A., et al., "Modulation of muscle responses evoked by transcranial magnetic stimulation during the acquisition of new fine motor skills." *Journal of Neurophysiology*, 74(3): 1037-1045 (1995).

When you change your mind, your brain changes; and when you change your brain, your mind changes.

Metaphor to Remember:
Mountain Stream and Riverbed



When the body remembers better than the conscious mind – that is, when the body is the mind – that's called a habit.

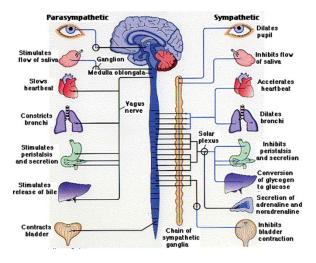
- Dispenza, J. (2012)

### **Habits**

- Habit: a usual way of behaving; something that a person does in a regular and repeated way = patterns in the brain
- Habits are behavioral, emotional, & cognitive
- Some habits are helpful...
- Some are not helpful...
  - Trauma creates habits within the nervous system

Merriam-Webster Online;

# Autonomic Nervous System (ANS)



## ANS: Long-term effects

#### **Fight-Flight-Freeze Response**

- Decreased immune function
- Chronic fatigue adrenal fatigue
- Increased inflammation
- Anxiety, nervousness
- Brain fog
- Temporary short- and longterm memory loss
- Looming sense of fear
- Closed posture

#### **Relaxation Response**

- Increased immune function
- Cellular regeneration
- Energized
- Decreased inflammation
- Faster metabolism
- Clarity of thought
- Improved memory and focus
- Overall sense of peace
- Open posture

# Important: Trauma changes the brain

- Chronic stress, trauma changes the brain's physiology
  - Decreased size and function of hippocampus
  - Hypervigilant amygdala
  - Thinning of cerebral cortex main highway system of communication between left and right hemispheres
  - Decreased ACC functioning
- ONLY Neurotherapies heal the brain
  - MBSR, Neuro-Linguistic Programming, Eye-movement Desensitization and Reprocessing/ bi-lateral stimulation therapies

### Mindfulness

- Way of being, way of life
- Mindfulness-Based Stress Reduction (MBSR) = <u>skill set</u> that changes our physiology
- Starts with the breath: slow down the nervous system and go "meta" – activates the frontal lobe
- Teaches us to savor the moment
- Equally as effective as CBT for functional somatic syndromes

Fjorback, L. et al. (2013). Mindfulness therapy for somatization disorder and functional somatic syndromes: randomized trial with one-year follow-up. *Journal of Psychosomatic Research*, 74(1): 31-40. doi: 10.1016/j.jpsychores.2012.09.006.

#### Mindfulness & the Brain

- Significant cortical thickness increase in the right insula, the somatosensory cortex, frontal lobes
- Anterior Cingulate Cortex (ACC)
- Hippocampus
- Heals the brain's physiology to allow CBT to be effective

Trafton, J. et al. (2011). Training your brain to adopt healthful habits: Mastering the five brain challenges. Los Altos, CA: Institute for Disease Management.

Santarnecchi, E., et al. (2014). Interaction between neuroanatomical and psychological changes after mindfulness-based training. *PLoS One*, *9*(10): e108359. doi: 10.1371/journal.pone.0108359

Holzel, B., et al. (2011). Mindfulness practice leads to increases in regional brain gray matter density. *Psychiatry Res* 191(1): 36-43. doi: 10.1016/j/psychresns.2010.08/006

### **CBT & MBSR**

- Combine the skills for ultimate results
- Equally as effective as antidepressants for treating recurrent depression
- MBSR allows us to access and regulate our emotional state = increases access to other areas of the brain

Kuyken, W. et al. (2015). Effectiveness and cost-effectiveness of mindfulness-based cognitive therapy compared with maintenance antidepressant treatment in the prevention of depressive rela[se or recurrence: a randomised controlled trial. Lancet Medical Journal, 386(9988): 63-73. DOI: <a href="http://dx.doi.org/10.1016/S0140-6736(14)62222-4">http://dx.doi.org/10.1016/S0140-6736(14)62222-4</a>

# 4 Elements to Change Our Brains

- 1. Learning
- 2. Instruction
- 3. Pay Attention
- 4. Repeat

# BUT I DON'T HAVE TIME TO DO THIS...



### **New Habit Formation**

- Short-term rewards for long-term goals
- 21 = lucky number
- Be mindful of your triggers
  - Environment
  - People/ social reinforcement
  - Smells
  - Sounds
  - Lights

Trafton, J. et al. (2014)

### **Habit Substitution & Habit Hierarchies**

- It takes a habit to alter a habit.
- Master Habits
  - Developing and revising your life plan
  - Reviewing your successes and setbacks
  - Proactive thinking one day at a time

# Mindfulness-Based Stress Reduction Exercises

- Pranayama breath work exercises as described in the practice of yoga
- Body Scan
- Playing "I spy" with all senses
- Guided Visualization
- Brushing teeth with non-dominant hand
- Mindful Eating
- Posture opening chest, relieving autonomic nervous system

## **Concluding Remarks**

- 15 minutes a day could change your physical, mental, emotional, spiritual wellbeing – it could change your life
- Don't have 15 minutes? Break it up 5 minutes 3x/day
   or 2 minutes every hour
- I've told you why to practice, so I ask you: Why not?

How we live our days is, of course, how we live our life.

Live mindfully.

### **Ideal Resources**

- Guided Meditations for Mindful Living (2012) by Alexandra Milspaw, audio CD
- Mindfulness-Based Cognitive Therapy for Depression by Segal, Williams, & Teasdale (2012)
- Breaking the Habit of Being Yourself by Joe Dispenza (2012)
- Training your brain to adopt healthful habits: Mastering the five brain challenges by Joe Trafton,Ph.D., William Gordon, Ph.D., and Supriya Misra, M.A. (2011)

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# Five Brain Challenges

- 1. Learning to highly value behaviors that promote wellness and devalue behaviors that lead to poor health
- 2. Enriching your life to tame the need for immediate gratification
- 3. Enhancing resiliency to new threats and chronic stressors
- 4. Training your addiction circuits to make healthy behaviors habitual
- 5. Making flexible decisions to empower your brain to make healthful choices

Trafton, J. et al. (2011). Training your brain to adopt healthful habits: Mastering the five brain challenges. Los Altos, CA: Institute for Disease Management.

# Brain Challenge #1 Exercises

- Practice creating positive expectations
- Identify positive associations for behavior change
- Identifying social enablers versus disablers
- Turning values and goals into a plan of action

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# Brain Challenge #2 Exercises

- Assertiveness Skills
- Avoiding non-ideal environments for an ANT (automatic negative thought)
- Creating an ideal environment for an ANT

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# Brain Challenge #3 Exercises

- Identifying stress symptoms and their triggers
- Creating a sleep journal
- The power of structuring one's life
- Work/rest balance and activity pacing
- Relaxation and play

Trafton, J. et al. (2011). Training your brain to adopt healthful habits: Mastering the five brain challenges. Los Altos, CA: Institute for Disease Management.

# Brain Challenges #4 & #5 Exercises

- Using your mirror neurons to master a new behavior
- Finding social supports for practicing the new behavior
- Building problem-solving skills by playing games
- Pre-planning solutions to situations where you have difficulty acting healthfully

Trafton, J. et al. (2011). Training your brain to adopt healthful habits: Mastering the five brain challenges. Los Altos, CA: Institute for Disease Management.