



*Come experience,
discover and learn.*

Resolve to get

Healthy

UNIVERSITY OF
Cincinnati

 **AIHM**
Academy of Integrative Health & Medicine

Introduction to Mindfulness Meditation

Geraldine Wu, MD

A Community Day Focused on Integrative Health & Wellness | **Saturday, January 23, 2016**

What is Mindfulness

Knowing directly what is going on
inside and outside us, moment by
moment

Mark Williams

Mindfulness Meditation

To focus, on purpose, without judgment, on whatever is coming up in the mind, moment by moment

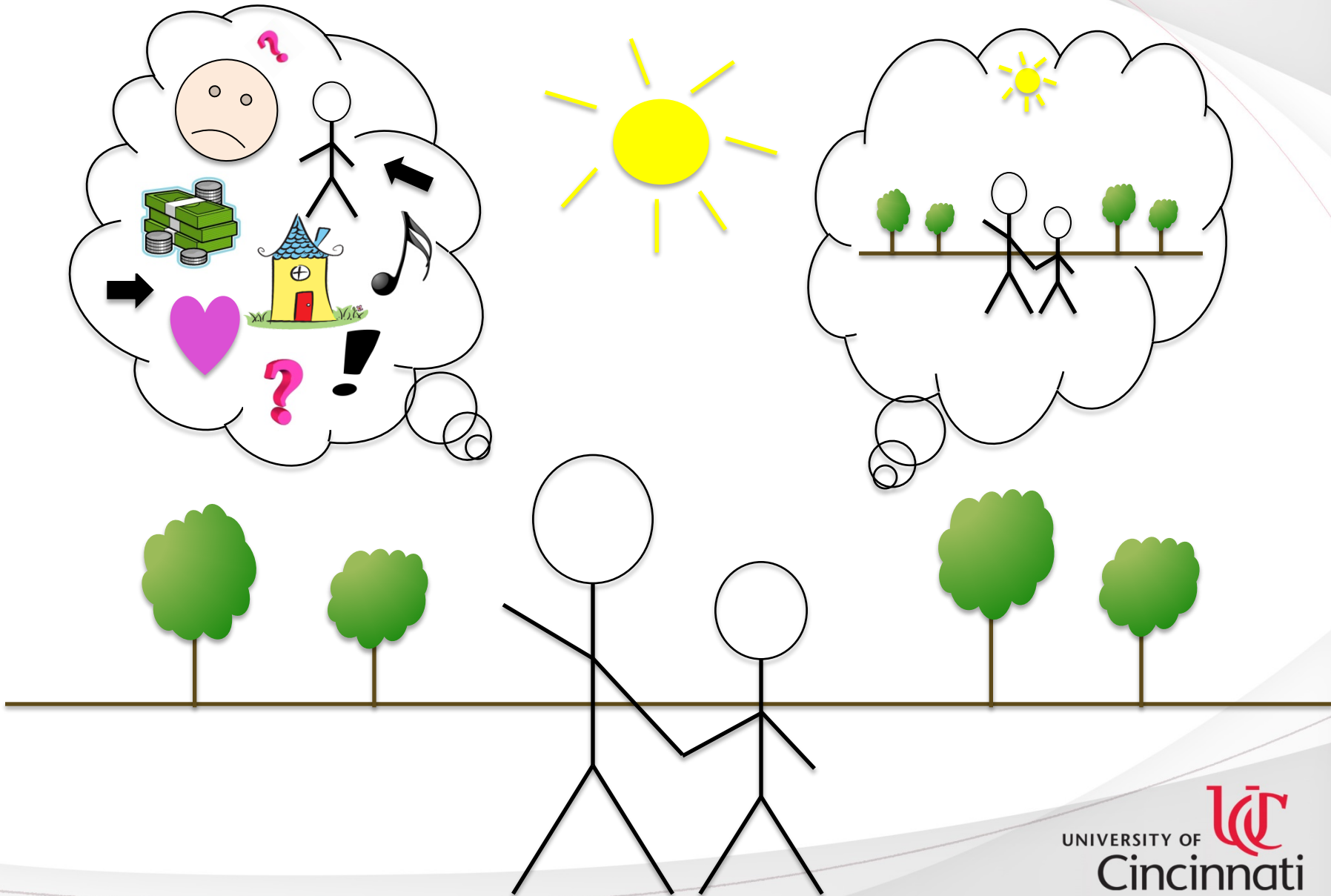
Jon Kabat Zinn

Mindfulness Meditation

- Continually bringing your attention back to whatever is happening in the present moment
- Noticing present moment events with openness and acceptance – without judging or trying to change them

When we are able to focus on just what is happening in the present moment, our minds cannot be anxious, worried or distressed about other issues

Mind Full or Mindful?



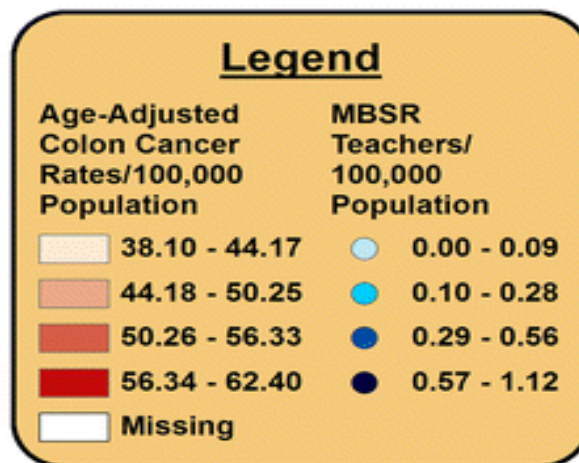
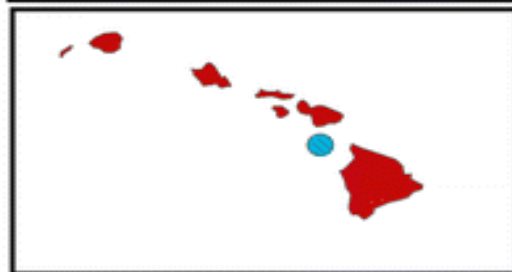
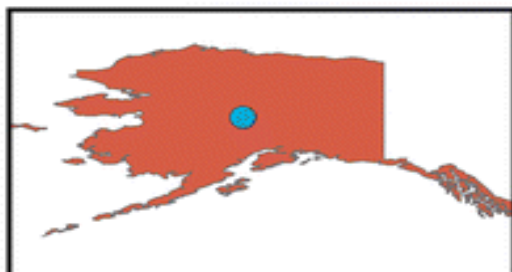
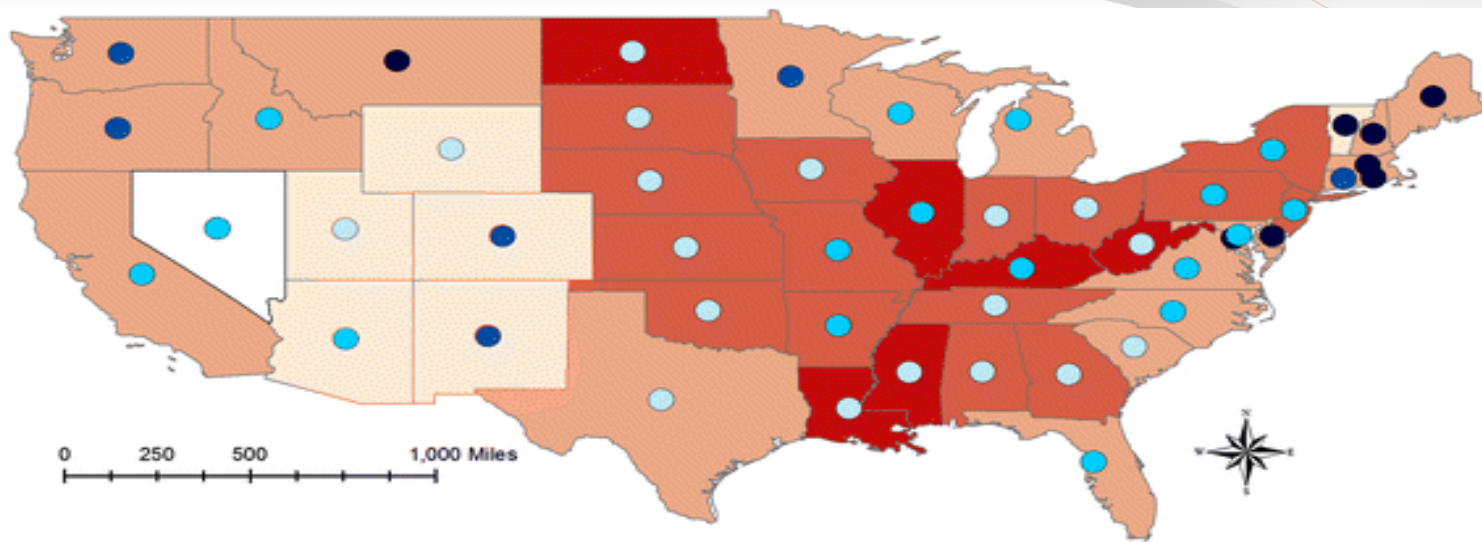
Is There Any Evidence Supporting the Correlation of Mindfulness Meditation and Improved Health?

Study by Sara Wegner et al. correlating number of MBSR teachers and various cancers including colorectal, cervical, Hodgkin's lymphoma in each state

Weak to moderate state-level correlations between meditation and colorectal and cervical cancer incidence were detected,

States with more meditation (e.g., more MBSR teachers per population) correlated with a decreased cancer incidence.

- Mindfulness-based stress reduction teachers, practice characteristics, cancer incidence, and health: a nationwide ecological description. Sara Wagner Robb, Kelsey Benson, Lauren Middleton, Christine Meyers, and James R Hébert



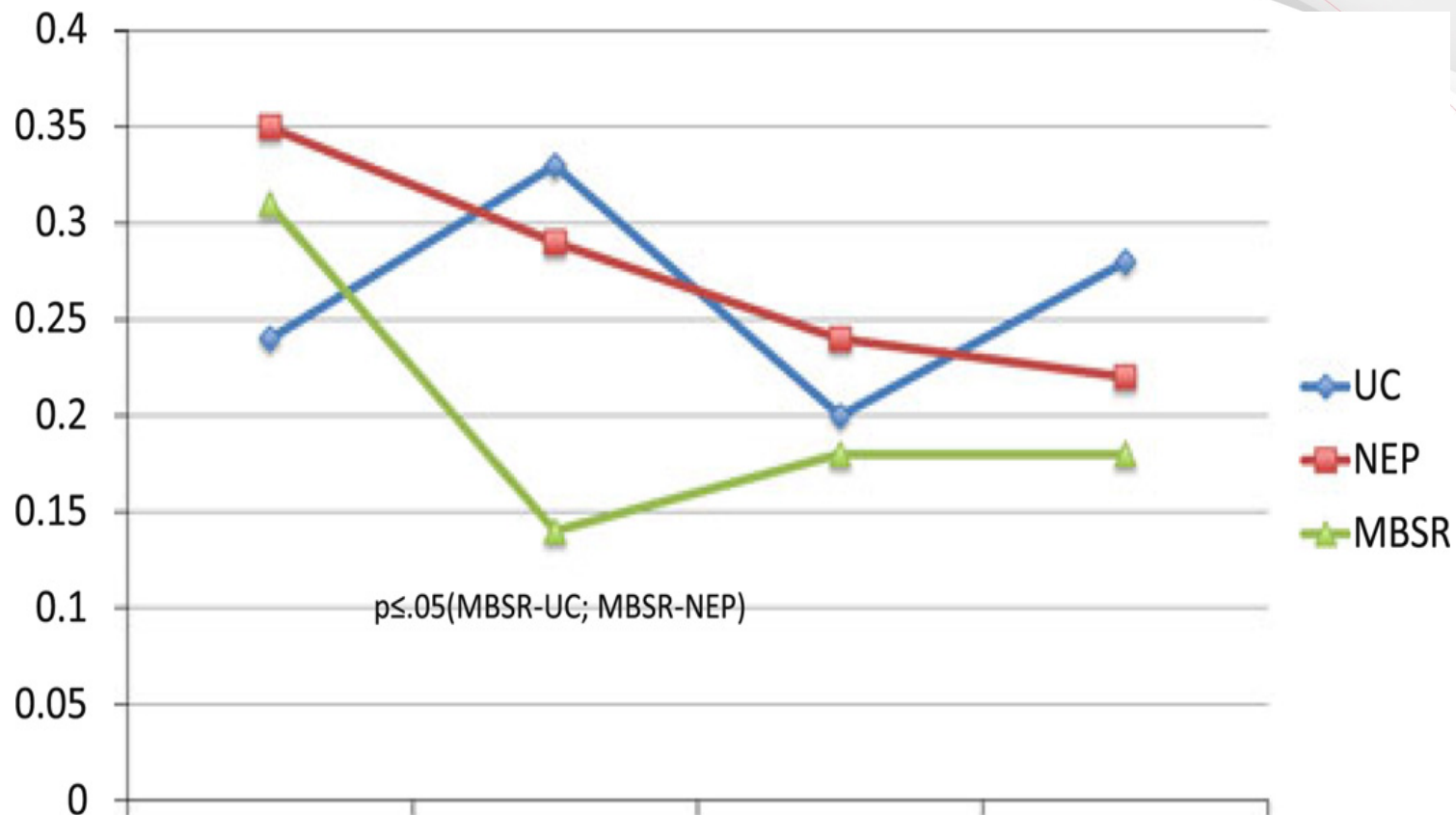
*MBSR Teachers are in Natural Breaks and Age-Adjusted Colon Cancer Rates are in Quartiles.

Effect of MBSR on Psychosocial Outcome and Quality of Life in Early Stage Breast Cancer

N- 172 , age 20-65, stage I / II breast cancer 3 groups:

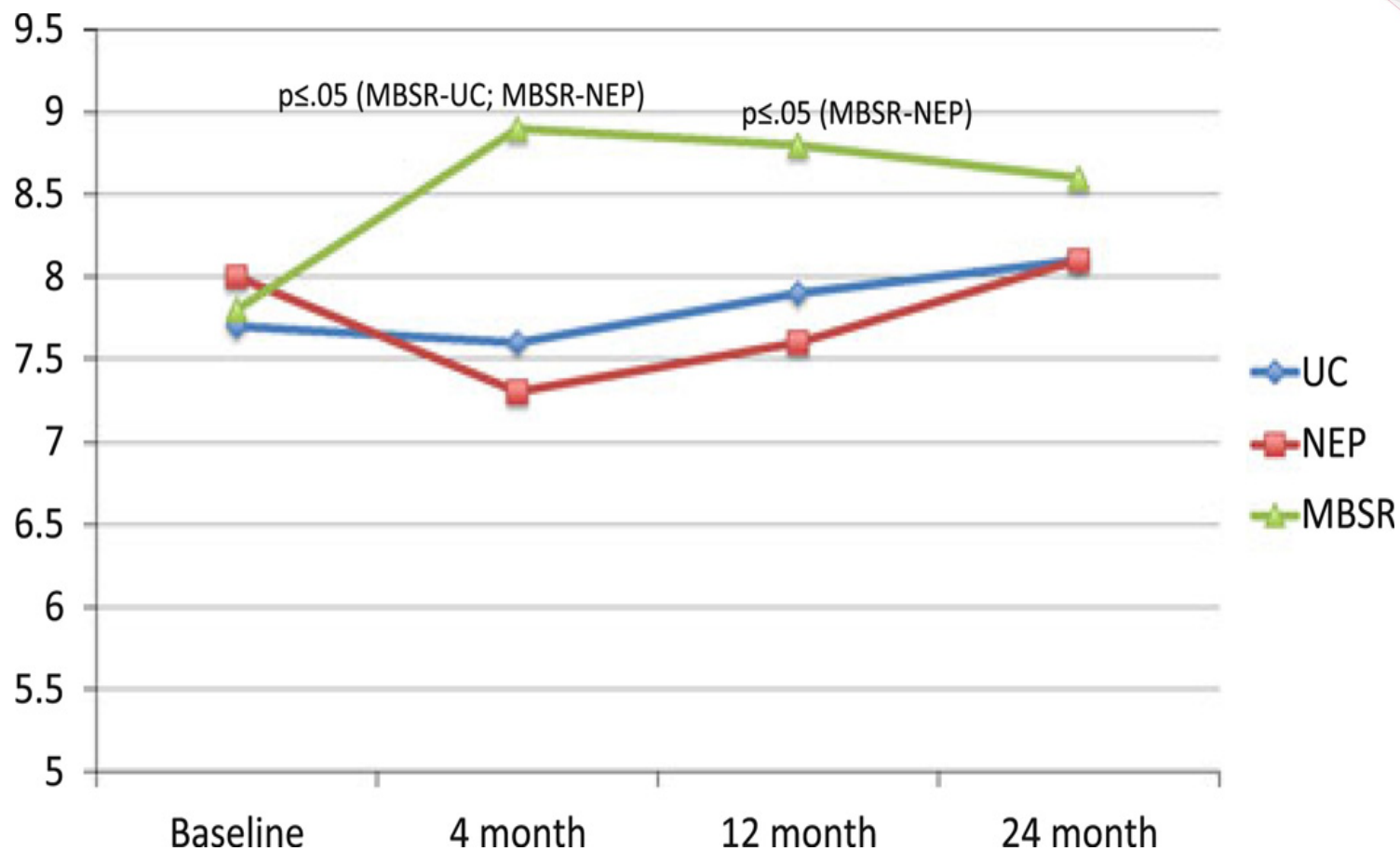
- nutrition education program(NEP)
- Usual supportive Care (UC)
- MBSR

Studied at beginning , end of program and follow up at 4 mos,
12 mos and 24 mos.



Mean SCL-90-R hostility: group \times time

Virginia P. Henderson et al, The effects of mindfulness-based stress reduction on psychosocial outcomes and quality of life in early-stage breast cancer patients: a randomized trial. *Breast Cancer Res Treat.* 2012 Jan; 131(1): 99–109.



Mean FACT-B spirituality: group \times time

Virginia P. Henderson et al, Res
Treat. 2012 Jan; 131(1): 99–109.

Types of Meditation

Focused Attention Meditation

- Aims to tame and center the mind in the present moment while developing a capacity to remain vigilant to distraction

Mindfulness or Open Monitoring Meditation

- Cultivating a less emotionally reactive awareness to emotions, thoughts, sensations occurring in the present moment

Compassion or Loving Kindness Meditation

- Foster compassion and an altruistic perspective toward others

Meditation and Their Unique Characteristics

Different parts of the brain are activated in different meditation

Different cognitive cycles are detected on MRI scans

Different EEG characteristics are found with different meditations

Changes in the Brain with Meditation

- ↑ gray matter in the insula, hippocampus, PFC(prefrontal cortex)
- ↓ cortical thinning found with aging in PFC
- ↑ activation of L frontal cortex, ↑ mood
- ↑ power of γ (gamma) brainwaves

Changes in the volume of the Brain

Sara Lazar of Harvard observed increased in the gray matter in the insula and PFC, changes are more prominent in older participants

Association with cortical thinning found with aging.

Decrease in the size of the amygdala, the fear processing center in the brain

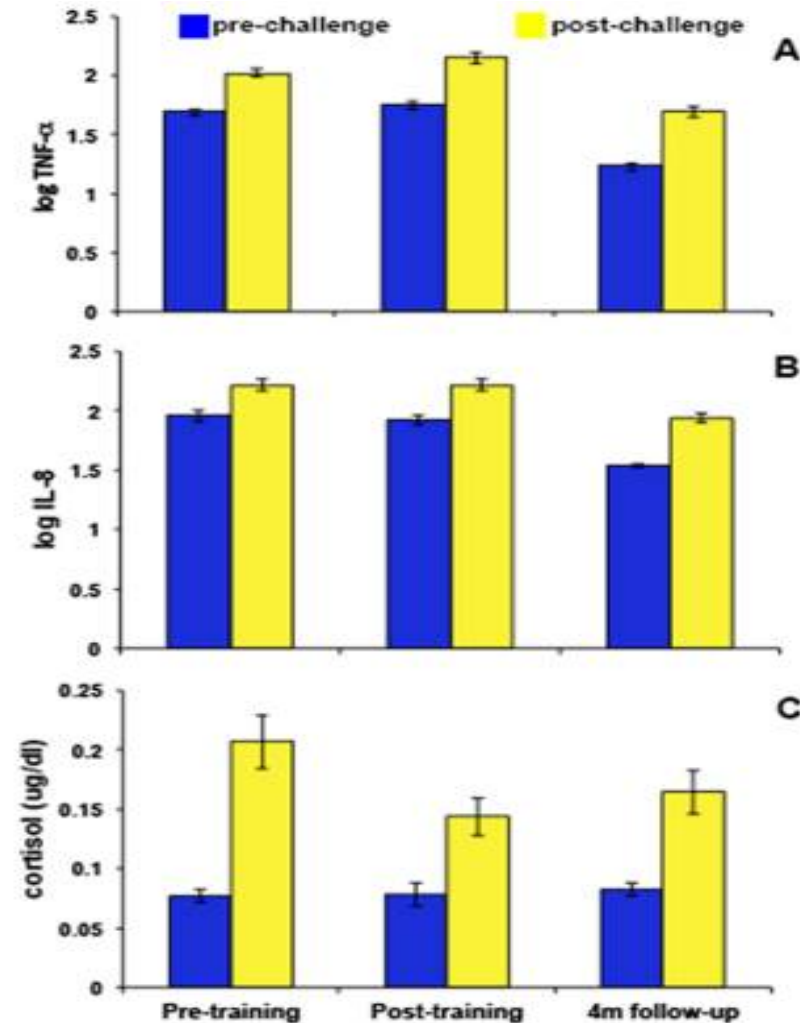
Luder found increase in the number of axons in the brain that connect to different regions of the brain

Molecular Changes

- ↓ inflammatory parameters- cytokine
- ↓ ACTH
- ↓ cortisol
- ↓ Norepinephrine
- Changes in immune function

Cytokine Levels Pre and Post Meditation-

Rosenkrantz, Brain Behav Immun, 2013

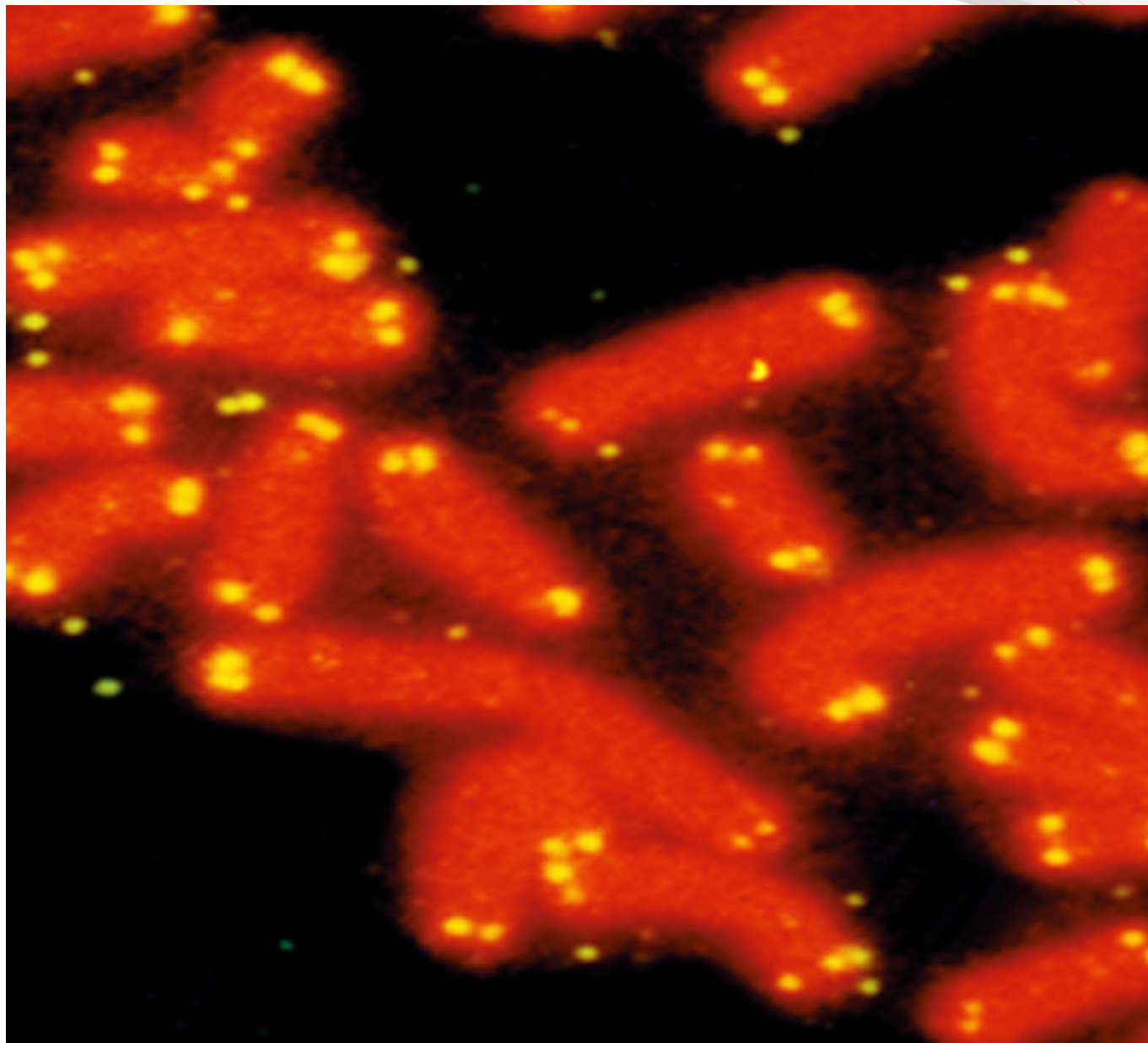


Telomere and Meditation

Elizabeth Blackburn first discovered the telomeres in the 1990's

Telomere are segments of DNA at the ends of the chromosome which ensures the stability of the genetic material during cell division.

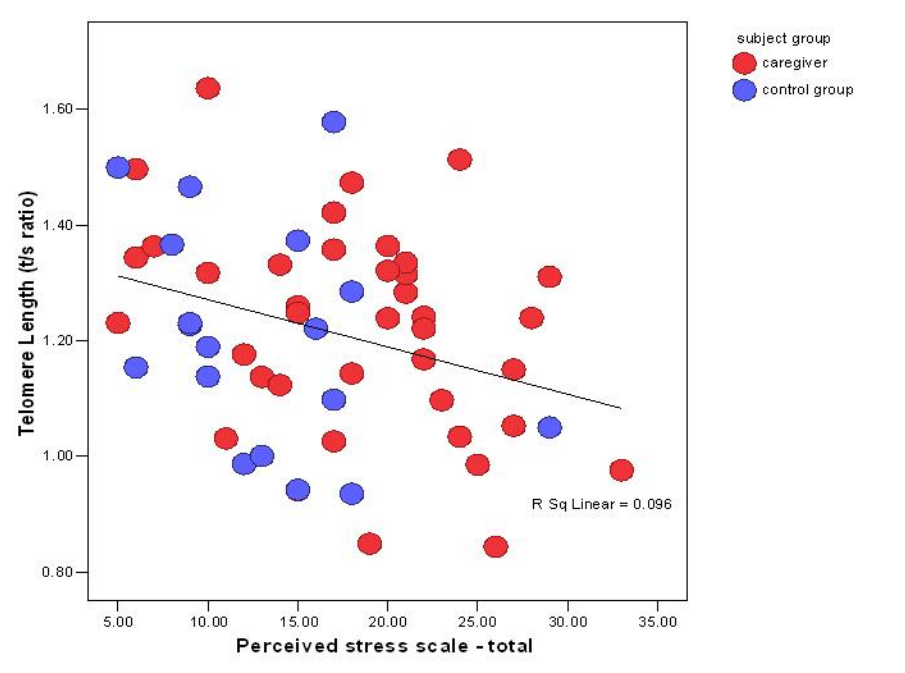
Telomeres shorten with each cell division and eventually reach a critical point where cells stop dividing.



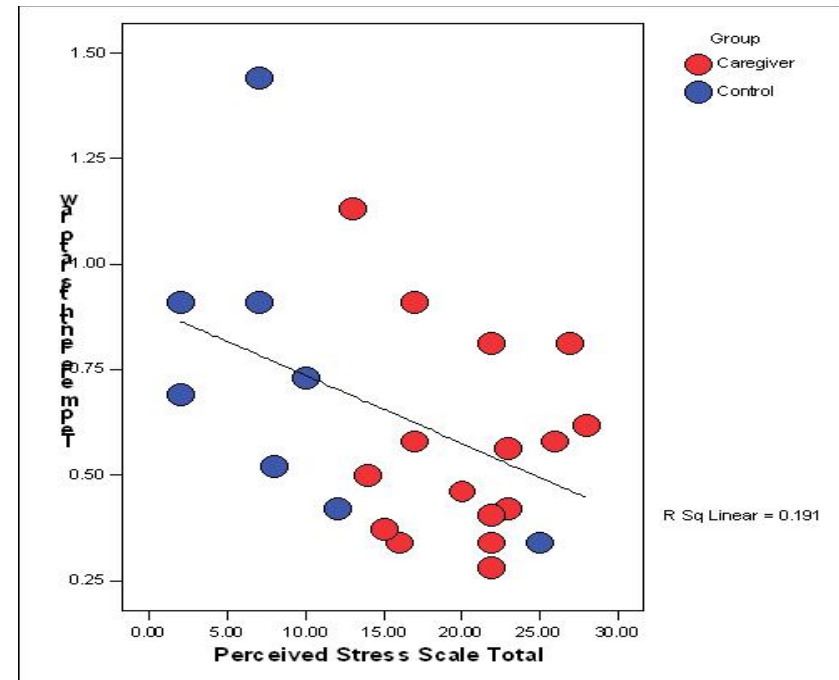


Perceived Stress and Telomere Length

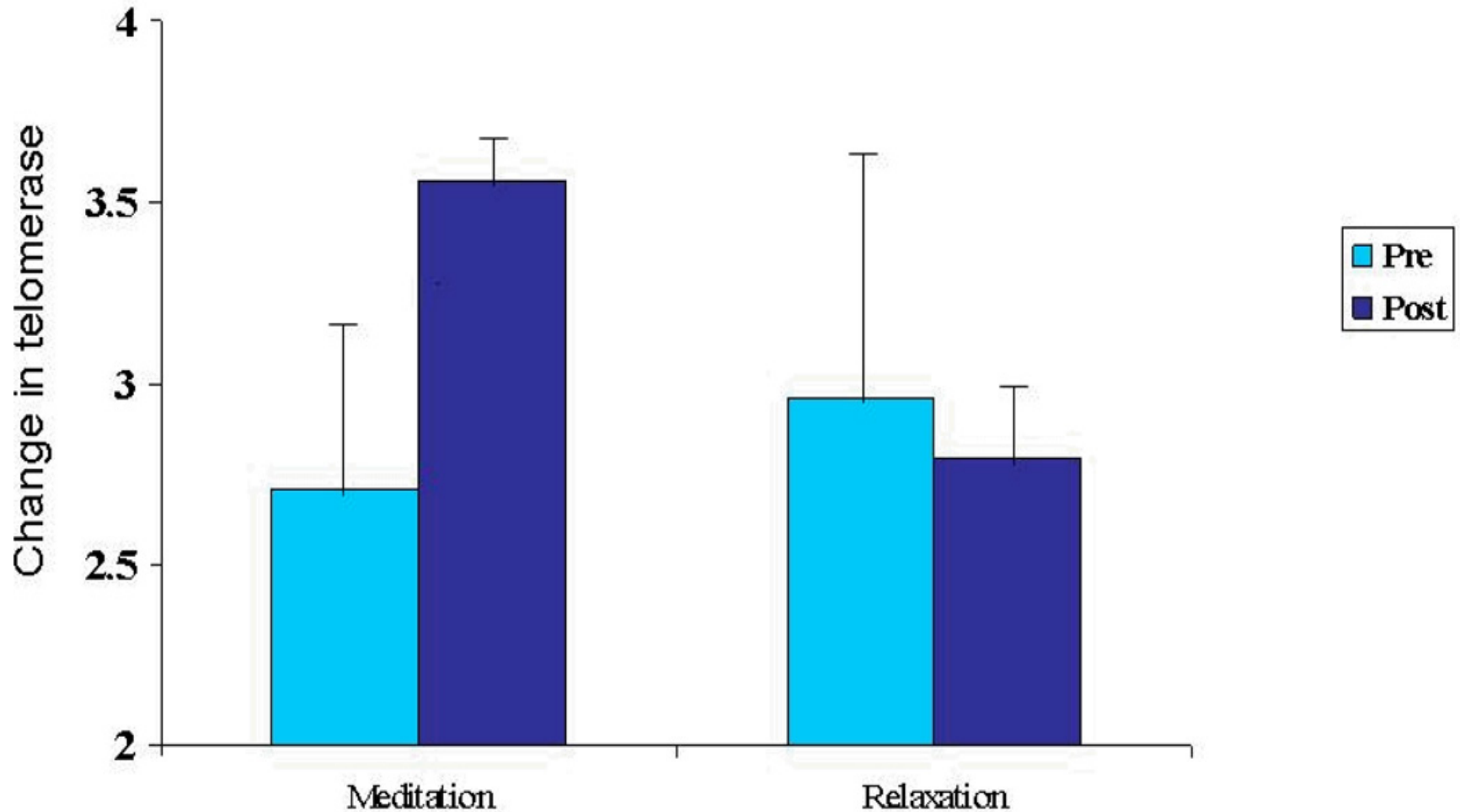
Young Women (20-45), $r = -.31$, $p < .01$



Older Women (50-80), $r = -.44$, $p < .01$



Telomerase Activity in Meditation Vs. Relaxation



Meditation is about being rather than doing

It enables us to slow down and to bring self —awareness and insight into our daily lives, so that we can more easily make decisions that are appropriate for us.

When our lives are filled with constant doing, meditation can provide periods of Stability, Clarity, Balance, Perspective ,Inner peace

Meditation is a process rather than a goal

It is most effective when we:

- Are able to let go of judgment and expectations
- Are open and accepting of whatever happens
- Are gentle and non-judgmental with ourselves
- Let go of trying to do it perfectly
- Trust in ourselves
- Are patient

Mindfulness Meditation-the Method

- Assume a comfortable position
- Bring your attention to your breath- noticing each inhalation and each exhalation
- When thoughts, feelings, sounds or sensations flow through your mind, notice them ,accept them and gently bring your attention back to your breath

Benefits of Meditation

Physiological Benefits

- Decrease in HTN
- Lower HR
- Lower cortisol level
- Strengthen the immune system
- Reduce chronic pain
- Reduce incidences of HA

Psychological Benefits of Meditation

Decrease anxiety

Reduce stress level

Decrease depression

Lower incidents of irritability and moodiness

Improve confidence and concentration

Increase peace of mind, optimism, self worth

Improved learning ability and memory

Spiritual Benefits of Meditation

Identifying one's purpose in life

Finding meaning in illness

Connection with higher aspect of self

Connection with other people

Connection with Higher Power outside of the self

General Guidelines for Meditation

Be open and receptive to whatever happens

Be gentle and non judgmental with yourself

Let go of expectations

Let go of trying to do it perfectly

Be patient