The Use of Mind Body Medicine in Patients with Celiac Disease, Non Celiac Gluten Sensitivity and Irritable Bowel Syndrome

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Learning Objectives:
(1) Discuss the principles of Mind Body medicine, specifically how the Relaxation Response counteracts stress and builds resiliency
(2) Discuss the Resiliency Building program at the Benson-Henry Institute for Mind Body Medicine
(3) Discuss the application of a Resiliency Building Program in patients with Celiac Disease, Non Celiac Gluten Sensitivity and Irritable Bowel Syndrome
Mind Body Medicine: Principles

- What is Stress?
- Stress is the perception of a threat to the physical and psychological well-being and the perception that the individual’s responses are inadequate to cope with the threat
- Stress elicits the flight or fight response
- How stress affects the body
Mind Body Medicine: Principles

Central Nervous System
Perception - Narrowed
Memory - Coarse, Imprecise
Learning - Blocked
Conditioning - Defense
Expectancies – Negative

Somatic Motor System
Tension
Jaws Clench
Body Braces for Action

Autonomic Nervous System
Heart rate increases
Blood pressure increases
Breathing rate increases
Blood sugar increases
Adrenalin flows
Digestive tract shuts down
Blood to muscles
Blood vessels constrict in hands
The stress response is an adaptive response built to ensure our survival, but a chronic stress response is maladaptive and can lead to symptoms of anxiety, depression, fatigue, hopelessness, difficulty sleeping, etc.

Stress Disinhibition Effect

As stress increases, so does likelihood of stress reduction behaviors, including drinking, drug use, overeating and other maladaptive behaviors.
In the adaptive person, the arousal reaction returns to normal after the stressor is dealt with.

In the maladaptive person, the arousal reaction continues even after the stressor has been dealt with. The set point or baseline of arousal reactions steadily moves upward.
The Relaxation Response is opposite of the Stress Response
Described by Dr. Herbert Benson in the mid 1970s

- Stress Response: All Increase
  - Metabolism
  - Heart Rate
  - Blood Pressure
  - Breathing Rate
  - Muscle Tension

- Relaxation Response: All Decrease
Mind Body Medicine: Relaxation Response

- **Basic Elements for eliciting the RR:**
  - A comfortable position in a quiet environment
  - The repetition of a simple sound, word, phrase or movement
  - The passive (nonjudgmental) return to the repetition when other thoughts intrude

- Ways to elicit the RR include meditative techniques such as mindfulness, guided imagery, repetitive prayer, progressive muscle relaxation, diaphragmatic breathing, yoga, tai chi, among others

- Benefits seen when performed 1-2x daily for 15-20 minutes
Mind Body Medicine: Relaxation Response

• Benefits of eliciting the RR:
  • Reduces muscle tension, heart rate, and blood pressure
  • Quiets the mind, increases ability to focus and promotes creative problem solving
  • Breaks one from conditioned responses
  • Reduces the physical and emotional impact of stress through building resiliency
• Resiliency is the ability to properly cope with, adapt to and overcome stress and adversity
Mind Body Medicine: Resiliency Program

"I'm learning how to relax, doctor—but I want to relax better and faster! I WANT TO BE ON THE CUTTING EDGE OF RELAXATION!"
Mind Body Medicine: Resiliency Program

- Benson-Henry Institute for Mind Body Medicine at MGH was founded in 1988
- The Relaxation Response is the foundation of the Clinical Programs
- Clinical Programs include Cancer, Cardiac Wellness, Fertility, Chronic Pain/Chronic Fatigue Syndrome, Stress Management and Resiliency Training (SMART), among others
- Researchers have published > 50 peer reviewed articles showing the benefits of resiliency training in various fields of medicine
Mind Body Medicine: Resiliency Program

- Curriculum usually consists of 8-10 weekly sessions
- Three Essential Components to all Programs:
  - **Relaxation Response.** A multitude of meditative techniques that elicit the RR are taught
  - **Stress Awareness.** The different ways in which stress affects an individual (cognitively, emotionally, physically, behaviorally, relationally, spiritually) are explored
  - **Adaptive Strategies.** Adaptive strategies to respond to stressful situations are taught. Strategies are grouped into four categories: reappraisial and coping, positive perspectives, healthy lifestyle behaviors, and social connectedness
Mindy Body Medicine: Mindfulness

- **What is Mindfulness?**
- Mindfulness is defined as “the awareness that emerges by way of paying attention on purpose, in the present moment, and non-judgmentally to the unfolding of experience moment by moment” \(^1\)
- Paying attention to what is present in our inner and outer experiences, including our thoughts, emotions and sensations
- Mindfulness elicits the RR and builds self awareness (e.g., mindful eating and drinking)
Mind Body Medicine: Guided Imagery

- Imagery is creating thoughts and pictures in one’s mind
- Imagery is most effective when it incorporates as many of the senses (sight, sound, smell, touch, and taste) as possible
- What is the most common form of imagery? Worry
- Positive Imagery elicits the RR
- All thoughts and images created by your mind affect your body
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Mind Body Medicine: Use in GI Disorders

- Numerous studies have shown the efficacy of a Mind Body Program on symptom reduction in pediatric and adult patients with IBS \(^2-8\)
- Some persons with IBS have heightened stress perception, which adversely affects symptoms \(^9-12\) and hypervigilance towards bodily sensations and symptoms \(^13,14\)
- GI-specific anxiety includes the thoughts, emotions and behaviors that stem from fear of GI sensations, symptoms and the context in which they occur
• GI specific anxiety has been hypothesized to function as an endogenous stressor, leading to exaggerated autonomic responses, changes in intestinal function, and visceral pain perception and GI symptoms.\(^{15,16}\)
• In the context of IBS, enhanced mindfulness decreases GI-specific anxiety by teaching techniques that foster reappraisal of fears and beliefs related to GI sensations.\(^4\)
• Enhanced mindfulness also builds awareness of symptom triggers while also mitigating the effects of known triggers.
Mind Body Medicine: Use in GI Disorders

- Ljotson et al. in an open pilot study of 34 subjects with IBS showed an improvement in IBS-QOL and GI-specific anxiety measures 6 months following a 10 week intervention specific to IBS using mindfulness and exposure therapy. ²
- In a follow up study of 86 patients randomized either to a wait list or an online version of the same intervention, Ljotson et al. showed a significant improvement in IBS-QOL in both 3 month and longer term follow up (mean 16.4 months) ³,⁶
- In a study of 13 adults with IBS who completed a 6 week course in Relaxation Response Meditation, Keefer and Blanchard showed significant within-subject improvement in bloating, belching, flatulence and diarrhea at 3 months post treatment. ⁷
- For 10 adults who completed a 1 year follow up, improvement in symptoms persisted. ⁸
Mind Body Medicine: Use in GI Disorders

- Kearney et al. studied 93 adult patients with IBS who underwent an 8-week mindfulness-based stress reduction program.
- Participants met weekly to practice mindfulness and yoga.
- **Intention** involved bringing to mind their personal motivation for participating in MBSR (e.g., pain control).
- Sustained **Attention** to an aspect of their experience (thought, emotion, bodily sensation) and flexibility of attention (“letting go”).
- Emphasized an **Attitude** of openness, kindness, curiosity and nonjudging of the present moment experience.
Mind Body Medicine: Use in GI Disorders

- Participants practiced daily meditation or yoga for 45 min per day, 6 days a week
- Study showed a significant improvement in IBS-QOL (33%) and decrease in GI-specific anxiety (40%) at 6 months post treatment
- There was a significant correlation between the change in GI-specific anxiety and attainment of mindfulness skills
Mind Body Medicine: Celiac Disease and NCGS

- Being evaluated for (doctor visits, blood draws, endoscopies) and/or diagnosed with Celiac disease or non Celiac Gluten Sensitivity, and adjusting to a gluten free diet can be a very stressful experience, especially in adolescence and young adulthood.
- Patients with CD and NCGS, especially in the presence of concomitant IBS or anxiety stand to gain benefit from a Resiliency Building program.
- To date, no studies have been performed in these patient populations, but are needed.
Mind Body Medicine

The quieter you become
the more you can hear.

* Rumi *