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Tip for That #8 – Integrative Medicine Competency: Stress Management (Heart Math TM)

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Tip for That # 8**Integrative Medicine Competency: Stress Management (Heart Math™)****7.15.16**

Thank you to Kathleen Engles, PA-C, MPH, Department of Integrative Medicine, for this elegant piece on Heart Math™:

As humans, we possess a brilliantly designed division of our nervous system that operates beyond the periphery of our consciousness - the autonomic nervous system (ANS). It responds to our interpretations of our external and internal environments. When we perceive a threat to our wellbeing, the sympathetic nervous system prepares us for battle with a myriad of physiologic weapons, arming us to either confront or flee the situation. It does so by increasing heart rate and blood pressure, stimulating cortisol secretion, and decreasing intestinal circulation. All of this occurs in the interest of enhancing our chances of survival. When the perceived threat abates, the parasympathetic division quells the excitatory survival mode, allowing us to “rest and digest”.

Ideally, the sympathetic and parasympathetic responses work in harmony, creating a balanced homeostasis. When a stressor arises, the body becomes activated and responds, then returns to baseline when the stressor abates. But what happens in the face of chronic, unremitting stressors with little if any return to baseline? (which is how many of us live day-to-day) Imagine a state of a persisting “Fight or Flight” response: chronically elevated blood pressure and cortisol, a dominance in the sympathetic response, and a concurrent depletion in the parasympathetic response.

Ongoing research into heart rate variability (HRV), a naturally occurring beat to beat change in heart rate, has confirmed that analyzing HRV is a powerful, noninvasive measure of the function of the ANS. Additionally, there is an appreciation of the heart as much more than a mere pump, but an integral player in the processing of emotions via neural communication with the brain. Interaction between these two vital organs influences perception, regulates emotion, and transmits information to brain regions involved in executive cortical functioning.

When the sympathetic and parasympathetic nervous systems are balanced, the HRV pattern creates a smooth sine wave that can be visualized using biofeedback tools such as HeartMath™. This is called a “state of coherence” and occurs through an elegantly simple process of recreating a positive emotion. HeartMath™ devices provide moment-to-moment feedback to users on how they are responding to thoughts and emotions. With practice, users are able to cultivate the ability to sustain positive emotions and a more robust parasympathetic response, creating a psychophysiological baseline that supports

sustained positive behavioral changes. HeartMath's™ positive emotion-focused tools and techniques have been shown to produce beneficial improvements in many conditions, including:

- diabetes (<https://www.heartmath.org/assets/uploads/2015/01/diabetes-patient-study.pdf>)
- hypertension (<https://www.heartmath.org/assets/uploads/2015/01/coherence-nonpharmacological-modality-for-lowering-blood-pressure.pdf>)
- physician stress (<https://www.heartmath.org/assets/uploads/2015/01/physician-stress-randomized-controlled-clinical-trial.pdf>)
- congestive heart failure, depression, anxiety, post traumatic stress disorder and service provider burnout

HeartMath™ Research:

<https://www.heartmath.org/research/>

HeartMath™ is an important tool in the stress management portion of Aurora Health Care's Lifestyle Initiative Program, which is available at no cost to AHC employees with hypertension or diabetes.

I hope you enjoyed this installment of Tip for That. My intent is to educate and provide quick tips for excellent patient care. I welcome your feedback.

In Health,
Kristen

Access previous editions of Tip for That at **Aurora Health Care's Digital Repository - Integrative Medicine:**
<http://digitalrepository.aurorahealthcare.org/integrative/>

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