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Science of acupuncture; measuring autonomic and endocrine health benefits of acupuncture therapies

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Aim of this study is to: Describe the dimensions and relationships of HRV, cortisol levels and autonomic nervous system testing, and their relationship and implications to the current acupuncture setting; describe and scientifically analyze the influence of micro-current acupuncture (MA) applied to battlefield acupuncture protocol has on HRV, stress, parasympathetic and cortisol levels when applied to chronic pain patients and; learn to identify and locate key acupuncture-trigger points that have been scientifically supported to positively influence autonomic regulation and stress cortisol levels. It is widely accepted in science that imbalances of the parasympathetic (rest and healing, calming) and sympathetic (flight/fight/stress) branches of the autonomic nervous system (ANS), called stress, are directly linked to wide variety of pain and disease. The sympathetic system is designed for short term survival creating a cascade of neurophysiological responses. However, it is up-regulation or persistent tone (stress) in this system that is believed to be related to chronic pain, disease and the impediment of patient health. Real time analysis of HRV and sympathetic up-regulation may be now accurately measured two ways, heart rate variability (HRV) and cortisol levels. This study will report findings of micro-current therapy applied to battlefield acupuncture (BFA) protocol on nervous system regulation. The autonomic nervous system response to micro-current acupuncture applied to BFA protocol reflected a statistically significant pre-post improvement in seven of the 29 markers collected: pain on the VAS scale was reduced by 63%, heart rate variability improved by 42%, high frequency-vagal tone improved by 56% exercise tolerance increased by 22%, parasympathetic activity improved by 38% , stress reduced by 27% , PTGi cardiac marker of endothelial function, arterial blood flow, and autonomic nervous system regulation improved by 48% and cardiac marker PTGVLfi - an autonomic nervous system regulation marker of endothelial function and an indicator of beta cell activity had a reduction of 36% salivary cortisol decreased by 14%, but was not statistically significant. This evidenced-based seminar will explore the relationship between acupuncture therapies, HRV, cortisol stress levels, and their influence on exercise tolerance and pain management in the acupuncture setting. Autonomic nervous system testing and cortisol measurement levels are effective tools for real time measurements of several key acupuncture metrics, including: HRV, stress, muscle oxygenation, chronic pain an exercise tolerance. The implications are significant industry wide as a measurement of acupuncture outcomes and for an informed choice of modalities for the present or future rehabilitation of chronic pain and stress related patients.

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