

Autonomic nervous system activity and psychophysiological symptoms during the menstrual cycle

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Regular menstrual cycles offer a window into women's overall reproductive health. Regardless of nationality, however, every woman who ovulates is aware of the menstrual cycle's influence on the physical, psychological and social aspects of her life. During the days prior to menstruation, especially, a majority of women experience myriad symptoms that can alter behavior and well-being, and affect family, friends, and working relationships. We commonly know this enigmatic condition appears in the late-luteal phase as premenstrual syndrome (PMS). Although no clear consensus exists as to the underlying causes of PMS, increasingly consistent research findings point to clinically relevant biopsychosocial factors that contribute to symptomatic expressions, which, if addressed, can lead to effective treatment options. The autonomic nervous system-a critical player in the integrity of mind-body connection as the functional driver of general health and wellness-plays vital roles in dynamically controlling the response of the body to a range of external and internal stimuli and ingeniously modulating biological homeostasis. Instability, or even a slight disorder of the system, therefore, could induce broadly ranged psychophysiological phenomena and, ultimately, far-reaching adverse effects on health. A series of studies on women's health in the author's laboratory has measured heart rate variability and salivary chromogranin А as reliable. non-invasive electrophysiological and biochemical indexes of the sympatho-vagal activity, respectively, among women who report varying degrees of PMS during the menstrual cycle. The author has also investigated the efficacy of therapeutic modalities, including aromatherapy, to alleviate the symptom complex from the perspective of autonomic function. Based on the findings of the previous research, together with classic and contemporary literature, this presentation will discuss the extent to and the manner in which autonomic nervous system activity relates to the menstrual cyclicity of psychophysiological conditions.

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