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Stress and women's health: An aspect of its role in the female reproductive system

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Abstract:

The milestone in women's health is their ability to the reproduction process. Puberty and adolescence are signs of a child's transformation into an adult. Biologists often view puberty from an endocrine perspective because the obvious signs of reproductive maturity are due to hormonal variations that occur during this period of development. Over the past four decades, the appreciation of neural control of hormone secretion and the gradual awareness of extensive brain regeneration during adolescence have shifted the emphasis on the neural basis for reproductive maturity. The terms puberty and adolescence are often used interchangeably. Most problems in females can go back to this period, including psychological problems and even the causes of infertility. Today stress is a normal part of everyday living and the physiological and behavioral consequences of the stressful conditions experiences have been widely studied for decades. In spite of the stress response being a necessary mechanism, it disrupts the homeostatic process and

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is subserved by a complex system located in both the central nervous system (CNS) and the periphery. Stressor-induced stimulation of the hypothalamus-pituitary-adrenal (HPA) axis and the sympathetic nervous system (SNS) affects the neuroendocrine system adaptations known as the "stress response" or "stress cascade". The stress cascade permits the body to the required physiological and metabolic responses; which are necessary for managing the demands of homeostatic challenges. In this challenge, normal activation of the HPA axis is vital for reproduction, growth, and metabolic homeostasis and this challenge can occur for adapting to changes in the external environment. Gonadal function in males and females is under the control of the HPA axis. This regulation is very complex and sex steroids are important regulators of GnRH and gonadotropin release through feedback mechanisms in the hypothalamus and the pituitary. The present overview focuses on the neuroendocrine infrastructure of the adaptive response to stress and its effects on the sympathetic nervous system in the body's female reproductive system.

Keywords: Female reproductive system; stress; HPA-axis; sympathetic nervous system

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