



Coping with Stress: Neuroendocrine Reactions and Implications for Health.

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A new stress model, the Allostatic Load Model, refers to the ability to achieve stability through change. The various biological functions activated during stress serve an important role in the organism's adaptation to the environment by protecting and restoring the body but may, under certain conditions, also have health damaging consequences. Two different psychoneuroendocrine stress systems are of particular interest: (1) the sympathetic adrenal medullary (SAM) and (2) the hypothalamic pituitary adrenocortical (HPA) systems. Sustained activation of the SAM system with overexposure to epinephrine (adrenaline) and norepinephrine (noradrenaline) is considered to contribute to the development of cardiovascular disease (CVD). Chronic stress exposure influencing the HPA-axis is associated with metabolic changes which also increase the risk of CVD but, in addition, also contribute to impaired immune function, diabetes, depressive symptoms and cognitive disturbances. The present paper is focused on the possible biological pathways between environmental stress and somatic illness, including the role of environmental stress for the development of musculoskeletal disorders. It is concluded that the SAM and the HPA systems play an important role in linking environmental stress to various negative health outcomes and that knowledge about these psychobiological pathways is of considerable importance for the possibilities to prevent and treat environmentally induced ill health.

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