Pituitary-Adrenal Axis

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Definition

The pituitary-adrenal axis comprises the pituitary gland (located at the base of the brain) and adrenal glands (located on top of the kidneys). The main interactions that take place between these two endocrine glands are part of the hypothalamic-pituitary-adrenal (HPA) axis. Corticotrophin-releasing hormone (CRH) stimulates the secretion of adrenocorticotrophic hormone (ACTH) from the anterior pituitary; this in turn stimulates the release of cortisol from the adrenal cortex (Martin et al. 1997). More detail on the pituitary-adrenal axis and its function in the HPA axis can be found in Widmaier et al. (2004), O’Riordan et al. (1988), and Greenspan and Forsham (1983).

Cross-references

- ACTH
- ACTH, Cortisol, Pituitary Adrenal Axis
- Adrenal Glands, HPA Axis, CRH, ACTH
- Basal Metabolic Rate, Food Pyramid, Weight, Overweight, Obesity, Exercise, Physical Activity and Health, Alcohol Consumption
- Corticotropin-Releasing Hormone (CRH)
- CRH
- CRH, Adrenal Glands
- Energy: Expenditure, Intake, Lack of
- Hypothalamic-Pituitary-Adrenal Axis
- Hypothalamus

References and Further Reading

- Greenspan, F. S., & Forsham, P. H. (1983). *Basic and clinical endocrinology*. Los Altos: Lange Medical Publications.
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- O’Riordan, F. L. H., Malan, P. G., & Gould, R. P. (1988). *Essentials of endocrinology* (2nd ed.). Oxford: Blackwell.
- Widmaier, E. P., Raff, H., & Strang, K. T. (2004). *Vander, Sherman, and Luciano’s human physiology: The mechanism of body function*. New York: McGraw-Hill.