Hypothalamus

The hypothalamus is located in the brain and links the nervous and endocrine system to each other. It releases a variety of neurohormones that either stimulate or inhibit secretion of pituitary hormones, and also uses electrical signaling to affect the posterior pituitary. The anterior pituitary is stimulated through the hypophyseal portal, which is a vascular system designed to bring hormones from the hypothalamus to the anterior pituitary directly. It releases growth hormone-releasing hormone (GHRH) during the periods of development and growth, which stimulates growth hormone (GH) release. It also release gonadotropin-releasing hormone (GnRH), which stimulates the release of luteinizing hormone (LH) and follicle-stimulating hormone (FSH). Thyrotropin-releasing hormone (TRH) triggers the release of thyroid-stimulating hormone (TSH) and dopamine, also known as prolactin inhibitory factor (PIF), prevents release of prolactin. Finally, corticotropin-releasing factor (CRF, also known as CRH) stimulates adrenocorticotropic-hormone (ACTH) release as part of the stress response system.



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Characteristics

Anterior Pituitary Stimulated Through the Hypophyseal Portal
Anteater, Pit-bull and Hippo-portal
The hypothalamus innervates the anterior pituitary through CRF, GHRH, GnRH, PIF, and TRH. All of these hormones stimulate further hormone release from the anterior pituitary.

GHRH
Giant with Harmonica-key
Growth-hormone releasing hormone (GHRH) stimulates the release of growth hormone from the anterior pituitary.

GnRH
Gonad-gopher with Harmonica-key
Gonadotropin-releasing hormone (GnRH) stimulates the release of follicle-stimulating hormone (FSH) and luteinizing hormone (LH) from the anterior pituitary.

TRH
Thigh-rope-guy with Harmonica-key
Thyrotropin-releasing hormone (TRH) stimulates the release of thyroid-stimulating hormone (TSH) and prolactin from the anterior pituitary.

PIF
Anti-milk guy
Prolactin-inhibiting factor (PIF, also known as PIH) regulates the release of prolactin from the anterior pituitary.

CRF Released During Stress
CRying-Fat-kid is Stressed-out
Corticotropin-releasing factor (CRF, also known as CRH) stimulates the release and synthesis of adrenocorticotropic-hormone (ACTH) from the anterior pituitary.

Posterior Pituitary Stimulated Through Neural Control
Post Pitbull-terrier with Neuron-leash
The hypothalamus uses electrical signals to stimulate the posterior pituitary into secreting oxytocin and vasopressin (ADH).

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