

Pituitary Gland

1. Which organ controls the pituitary gland? How?
2. How might stress alter control of the pituitary gland?
3. Name the 9 hormones released from the pituitary gland.
4. Give the target for:
 - ACTH
 - TSH
 - FSH
 - LH
 - GH
 - Prolactin
 - Oxytocin
 - ADH
 - MSH
5. Give the function for:
 - ACTH
 - TSH
 - FSH
 - LH
 - GH
 - Prolactin
 - Oxytocin
 - ADH
 - MSH
6. What does it mean for an organ to be a "target" of a hormone?

Answers:

Pituitary Gland

1. Which organ controls the pituitary gland? How?
The hypothalamus controls the pituitary gland via releasing and inhibiting hormones; as well as neuronal signals
2. How might stress alter control of the pituitary gland?
The hypothalamus is part of the limbic system so our emotions affect its function.
3. Name the 9 hormones released from the pituitary gland.
 - **Adrenocorticotrophic hormone (ACTH)**
 - **thyroid stimulating hormone (TSH)**
 - **follicle-stimulating hormone (FSH)**
 - **luteinizing hormone (LH)**
 - **growth hormone (GH)**
 - **melanocyte-stimulating hormone (MSH)**
 - **prolactin (PRL)**
 - **oxytocin (OT) – released from the *posterior* pituitary gland**
 - **antidiuretic hormone (ADH) – released from the *posterior* pituitary gland**
4. hormones and targets
 - **ACTH: adrenal cortex**
 - **TSH: thyroid gland**
 - **FSH: gonads**
 - **LH: gonads**
 - **GH: everywhere, especially bones and muscles**
 - **prolactin: mammary glands**
 - **oxytocin: mammary glands, uterine smooth muscle, brain**
 - **ADH: kidneys, specifically the collecting ducts**
 - **MSH: melanocytes in skin**
5. functions for
 - **ACTH: stim adrenal cortex to release steroid hormones**
 - **TSH: stim thyroid gland to release thyroxine**
 - **FSH/LH: stim release of estrogen or testosterone from ovaries and testes**
 - **GH: growth and repair**
 - **Prolactin: milk production**
 - **Oxytocin: milk letdown, labor contractions, orgasm, bonding**
 - **ADH: water reabsorption**
 - **MSH: pigment production**
6. What does it mean for an organ to be a “target” of a hormone?
 - **That it has a receptor for that hormone.**