

# MODULE 1 L04

# Function of Pituitary Gland Hormones

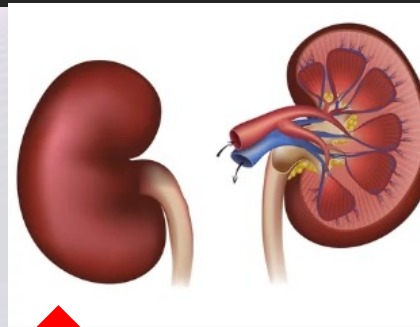
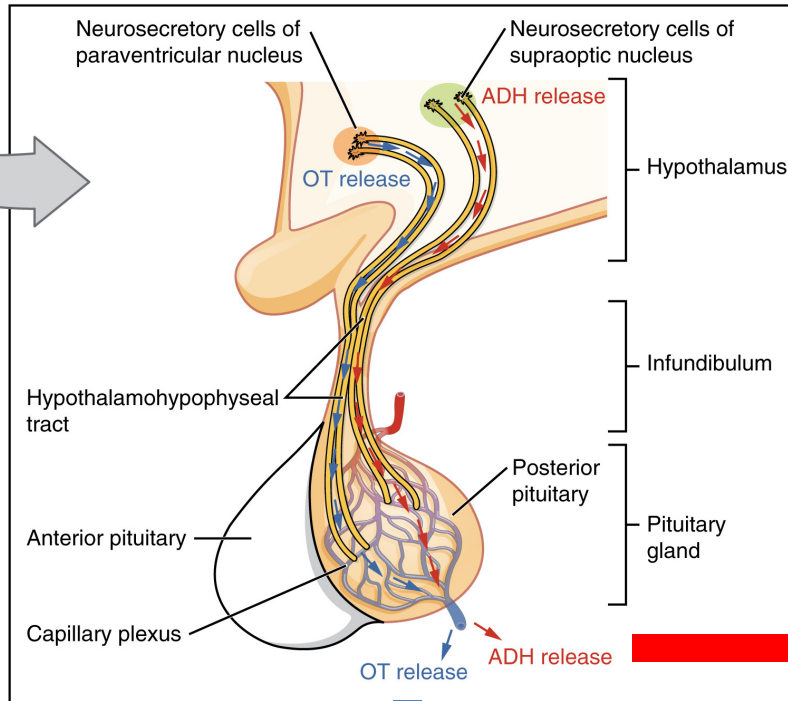
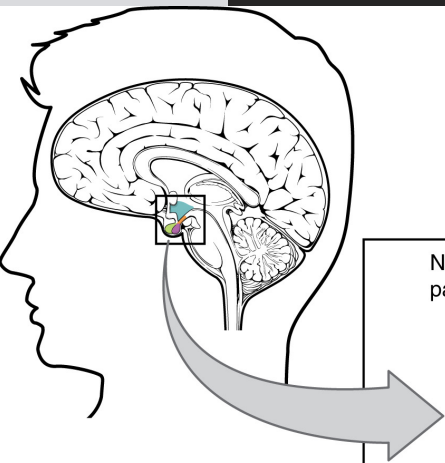
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# 4. Posterior Pituitary Gland

Mnemonic : Anti-OXidant



Kidneys

Male



Uterus



Mammary glands

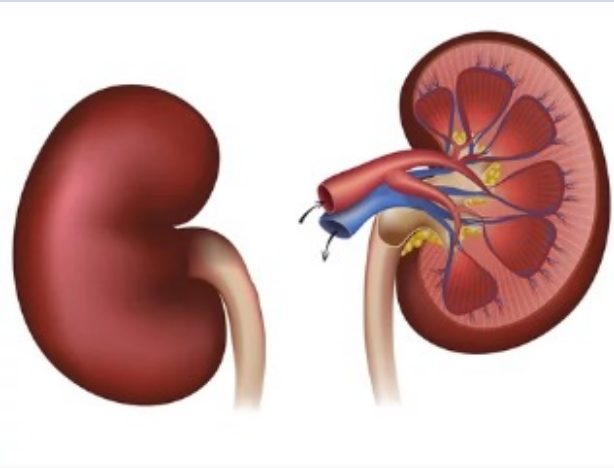
# Hypothalamus – Direct Release of Hormones

## Posterior Pituitary Hormones

### Antidiuretic Hormone (ADH)

ADH (vasopressin) targets kidneys which results in reabsorption of water.

↑ blood volume  
↑ blood pressure

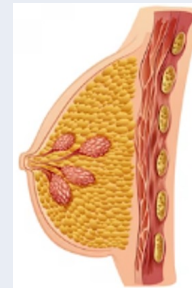


### Oxytocin

Oxytocin targets:

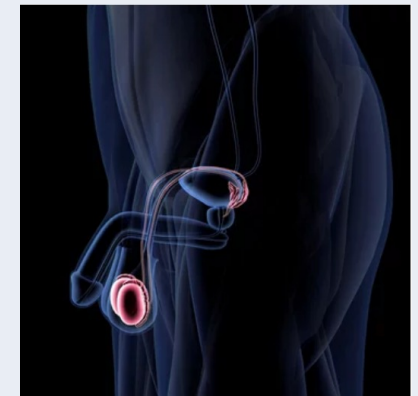
#### In females:

Uterus – labor contractions  
Mammary glands – milk ejection



#### In males:

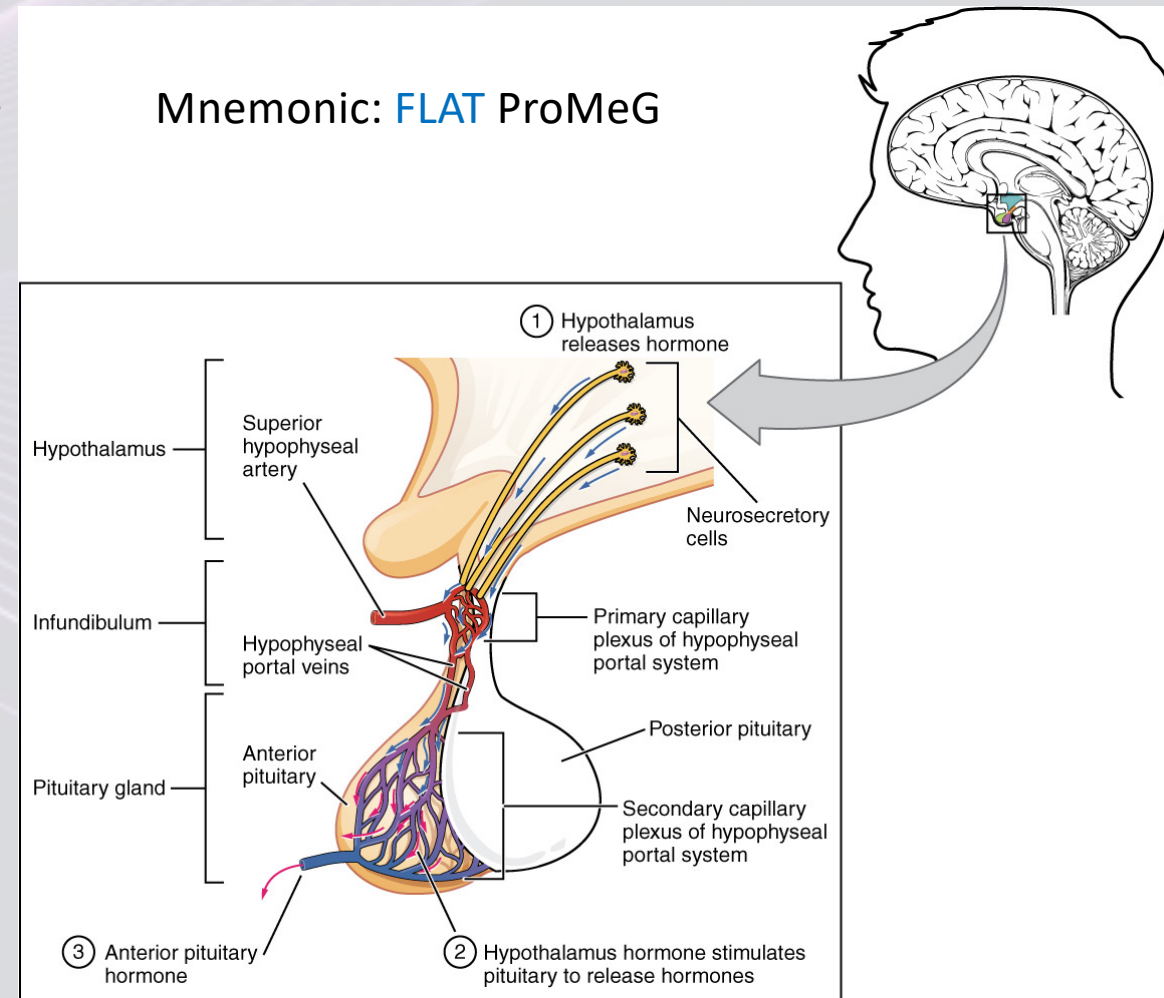
Ductus deferens and prostate gland resulting in contraction of both and ejection of secretions.



# Anterior Pituitary Lobe

- Hypothalamus
  - ❖ Produces separate hormones that stimulate or inhibit hormone production in anterior pituitary
- Hypophyseal Portal System
  - ❖ Hormones produced by the hypothalamus reach the anterior pituitary by a collection of blood vessels
- Hormones produced by the anterior pituitary:
  - A. TSH – thyroid-stimulating hormone
  - B. ACTH – adrenocorticotrophic hormone
  - C. FSH – follicle-stimulating hormone
  - D. LH – luteinizing hormone
  - E. Prolactin
  - F. Melanocyte-stimulating hormone
  - G. GH – growth hormone

Mnemonic: **FLAT** ProMeG



Known as tropic hormones (trope = "turning") – turn on and off the function of other endocrine glands



# Hypothalamus – Indirect Control Through Release of Regulatory Hormones

Thyrotropin Releasing Hormone (TRH)	Corticotropin Releasing Hormone (CRH)	Gonadotropin Releasing Hormone (GnRH)		Prolactin Releasing Hormone (PRH)	Growth Hormone Releasing Hormone (GHRH)	X
Anterior Pituitary Hormone						
Thyroid-stimulating hormone (TSH)	Adrenocorticotrophic hormone (ACTH)	Gonadotropins		Prolactin (PRL)	Growth hormone (GH)	Melanocyte-stimulating hormone (MSH)
		Follicle-stimulating hormone (FSH)	Luteinizing hormone (LH)			
<b>TSH</b> targets thyroid gland to produce thyroid hormones (T3 and T4)	<b>ACTH</b> targets suprarenal cortex to secrete glucocorticoid	<b>FSH</b> targets follicular cells in ovaries and nurse cells in testes. In females = follicle development and secretion of estrogen Males = sperm maturation	<b>LH</b> targets follicular cells in ovaries and interstitial cells in testes. Females = ovulation, corpus luteum formation and progesterone secretion Males = testosterone	<b>PRL</b> targets female mammary glands to produce milk	<b>GH</b> targets all cells in body, causing growth, protein synthesis, lipid mobilization and catabolism	<b>MSH</b> targets melanocytes, increasing melanin production in epidermis when exposed to UV light.
