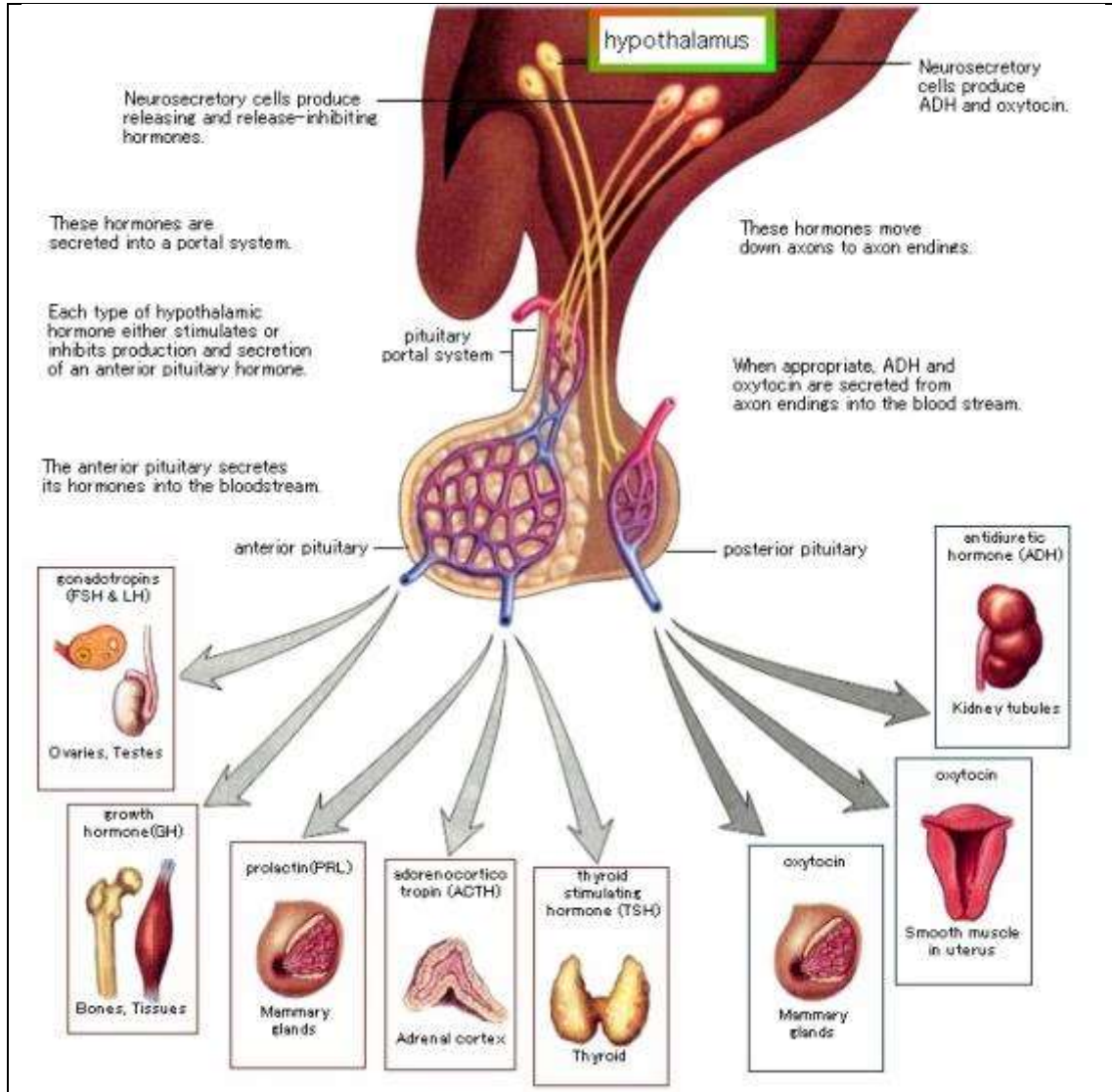


## Hypothalamic syndrome



# Hypothalamus Disorders

✓	Obesity	✓	Hashimoto's disease
✓	Adrenal insufficiency	✓	Secondary male hypogonadism
✓	Cluster headaches	✓	Growth hormone deficiency
✓	Brain tumors	✓	Gonadal deficiency or secondary failure
✓	Hypothyroidism		

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## Hypothalamic Dysfunctions and Obesity

### Common Symptoms of Hypothalamic Dysfunction

- \* Fatigue
- \* Temperature dysregulation
- \* Weight gain
- \* Changes in sleep
- \* Pain (especially in trigger points)
- \* Mood disorders
- \* Low libido



### Signs of Hypothalamic Obesity Disorder

- \* Continued weight gain that is unresponsive to diet and exercise
- \* Increased appetite

### Potential Treatments Include...

- |                           |                          |
|---------------------------|--------------------------|
| Daily exercise            | Mediterranean-style diet |
| Optimal thyroid treatment | Antidepressants          |
| Anti-anxiety medications  | Low-dose naltrexone      |
| Injectable diabetes drugs | Trazodone                |
| Spirolactone              | Topiramate               |
| Phentermine               | HCG                      |

## Developmental Hypothalamic Dysfunction

### ❑ Kallmann Syndrome

Defective hypothalamic GnRH syn & is assoc with anosmia or hyposmia due to olfactory bulb agenesis

Characterized by low LH and FSH levels and low conc of sex steroids (testosterone or estradiol)

Repetitive GnRH admin restores normal pit gonadotropin responses, pointing to a hypothalamic defect

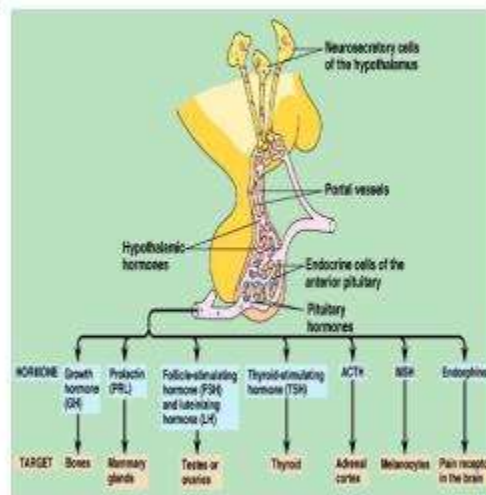
### ❑ Bardet-Biedl Syndrome

Rare genetical disorder characterized by mental retardation, renal abnormalities, obesity, and polydactyly. Central diabetes insipidus may or may not be associated.

- GnRH deficiency occurs, Retinal degeneration begins in early childhood, and most patients are blind by age 30

## Hypothalamus & Pituitary Gland

- Releasing and inhibiting hormones
- Anterior pituitary:
  - Growth (GH)~bones
    - √ gigantism/dwarfism
    - √ acromegaly
  - Prolactin (PRL)~mammary glands; milk production
  - Follicle-stimulating (FSH) & Luteinizing (LH)~ovaries/testes
  - Thyroid-stimulating (TSH)~ thyroid
  - Adrenocorticotropic (ACTH)~ adrenal cortex
  - Melanocyte-stimulating (MSH)
  - Endorphins~natural 'opiates'; brain pain receptors



(b) The anterior pituitary

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