

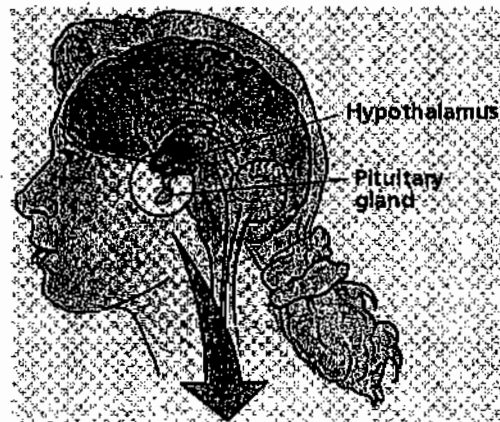
Nervous system  
 Hormonal system  
 Trophic hormones

non-trophic hormones

e.g., trophic hormone:  
 Thyroid stimulating hormone (TSH) or thyrotropin  
 Hypothalamus: TSH-releasing hormone

Ant. pituitary (TSH hormone)  
 Thyroid (thyroxine)  
 Cretinism

e.g., non-trophic hormone: Growth hormone or somatotrophic hormone  
 produced by ant. Pituitary gland  
 GH-releasing hormone produced by the hypothalamus  
 hypertrophy  
 hyperplasia  
 protein synthesis metabolism  
 bone growth



Anterior pituitary	Posterior pituitary
<b>Hormones produced and released:</b>	<b>Hormones released:</b>
Thyrotropin	Oxytocin
Adrenocorticotropin	Vasopressin
Luteinizing hormone	
Follicle-stimulating hormone	
Growth hormone	
Prolactin	
Melanocyte-stimulating hormone	
Endorphins	
Enkephalins	

giantism, acromegaly, dwarfism

1) thyroid hormone: thyroxine

TRH (thyrotrophin-releasing hormone); hypothalamus: TSH  
cretinism

2) Insulin (islets of Langerhans of Pancreas)

diffusion of glucose

protein synthesis

3) Androgen (e.g., testosterone)

4) Estrogen

Diseases and Nutritional Inadequacies

thalidomide

pre-natal growth period

post-natal growth

diet

protein, carbohydrates, lipids

vitamins

minerals

water

undernutrition

malnutrition

Protein-calorie malnutrition (PCM)

Kwashiorkor (Ghanaian) "second child disease"

Marasmus

hypercalcemia (excess vit. D)

Secular trends

decline in age of menarche

increase in height

socioeconomic

males reaching maturity earlier

Population variability

Seasonal

psychological

Widdowson 1951

Socio-economic

Size of Family

