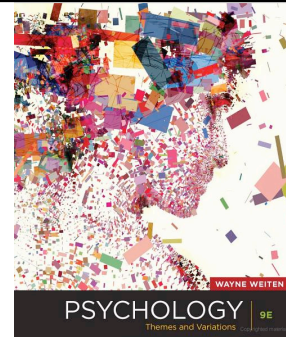


### The Hypothalamus: A Regulator of Biological Needs



The *hypothalamus* is a structure found near the base of the forebrain that's involved in the regulation of basic biological needs. The hypothalamus lies beneath the thalamus (*hypo* means "under," making the hypothalamus the area under the thalamus). Although no larger than a kidney bean, the hypothalamus contains various clusters of cells that have many key functions. One such function is to control the autonomic nervous system (Card, Swanson, & Moore, 2008). In addition, the hypothalamus serves as a vital link between the brain and the *endocrine system* (a network of hormone-producing glands, discussed later in this chapter).

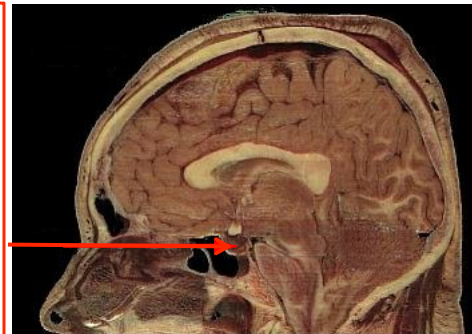
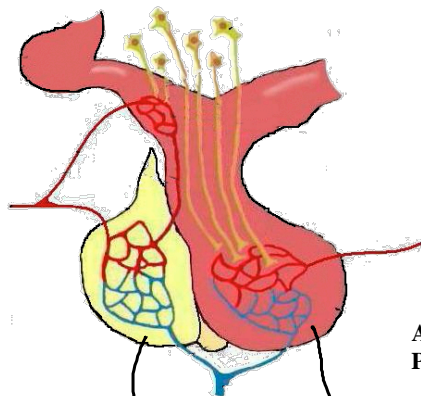
The hypothalamus plays a major role in the regulation of basic biological drives related to survival, including the so-called "four F's": fighting, fleeing, feeding, and "mating." For example, when researchers lesion the lateral areas (the sides) of the



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### Pituitary



Anterior: Towards the front (the head, the nose)  
Posterior: Towards the rear (the anus, the tail)

oral  
endoderm (gut) out pocketing of brain

Figure 41.9 The Posterior Pituitary Releases Neurohormones

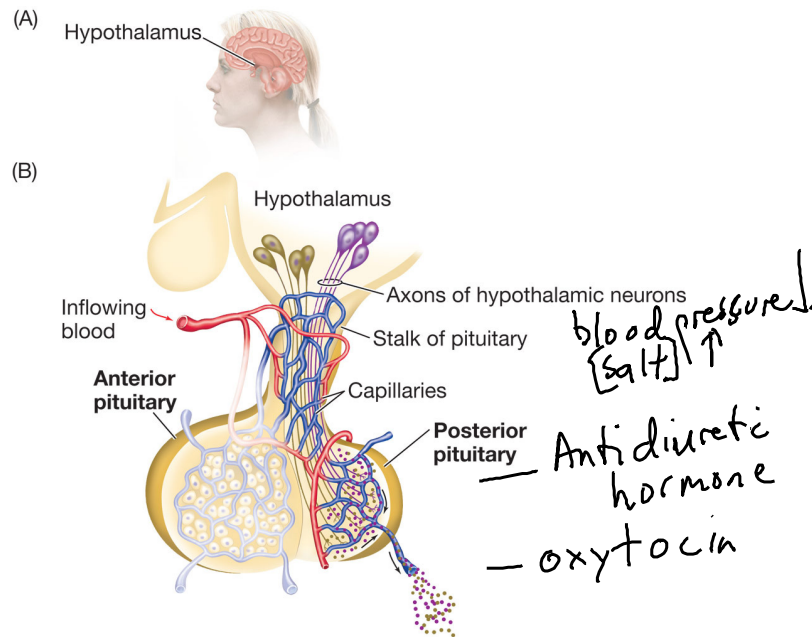


Figure 41.10 The Anterior Pituitary Is Controlled by the Hypothalamus

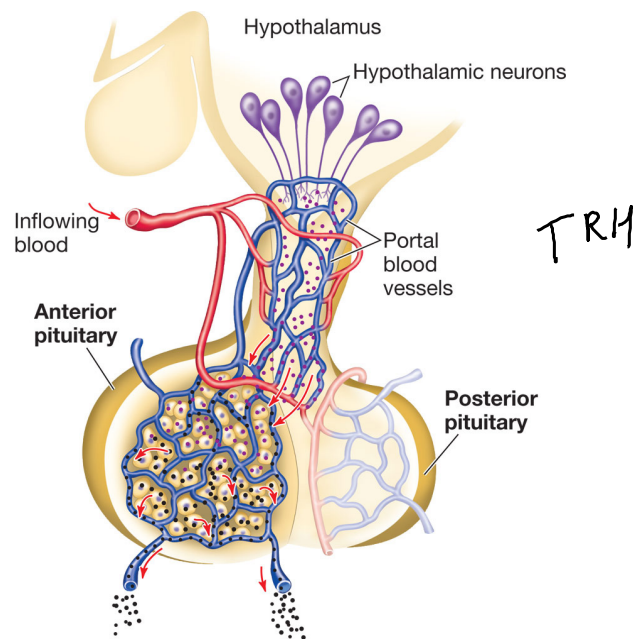
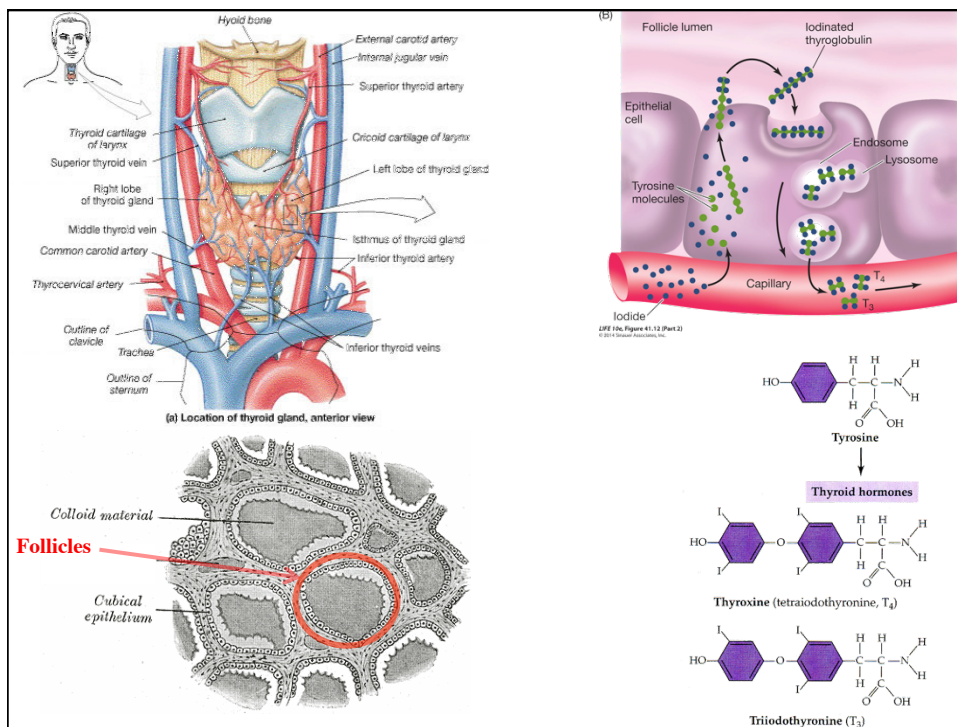
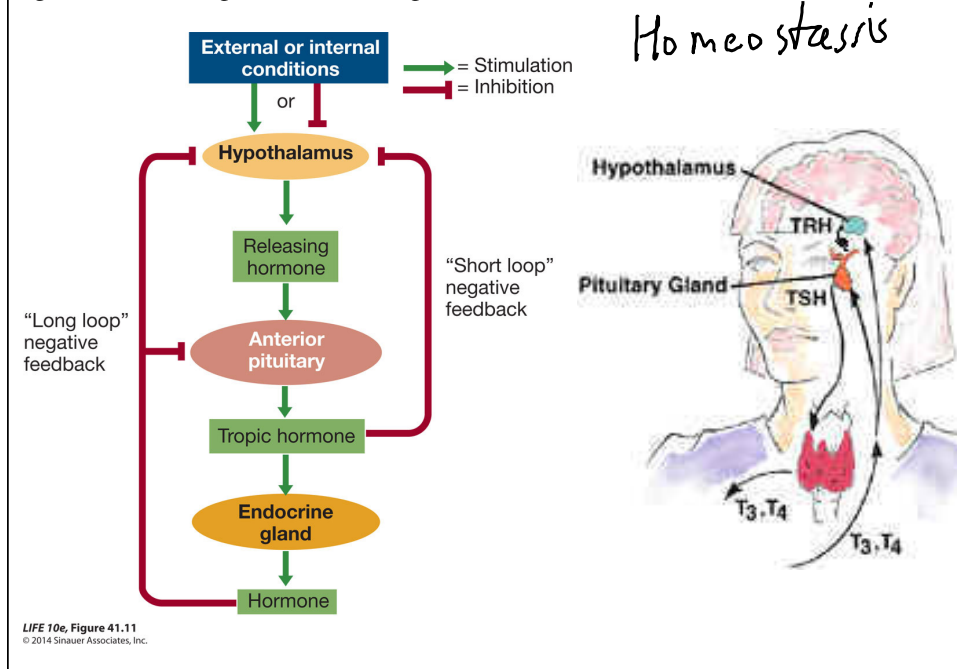
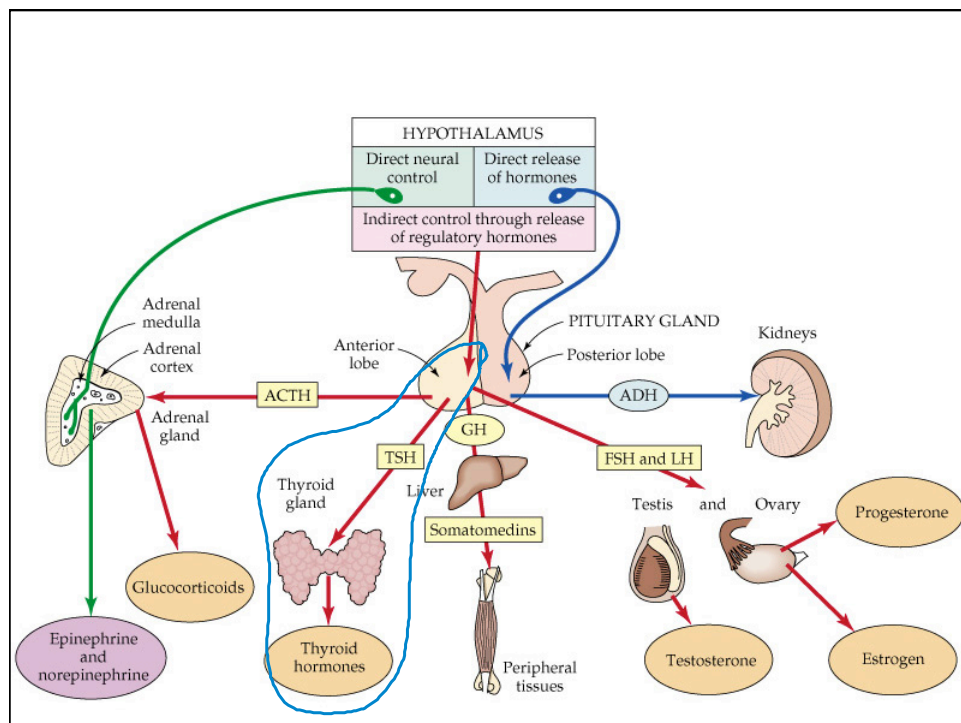
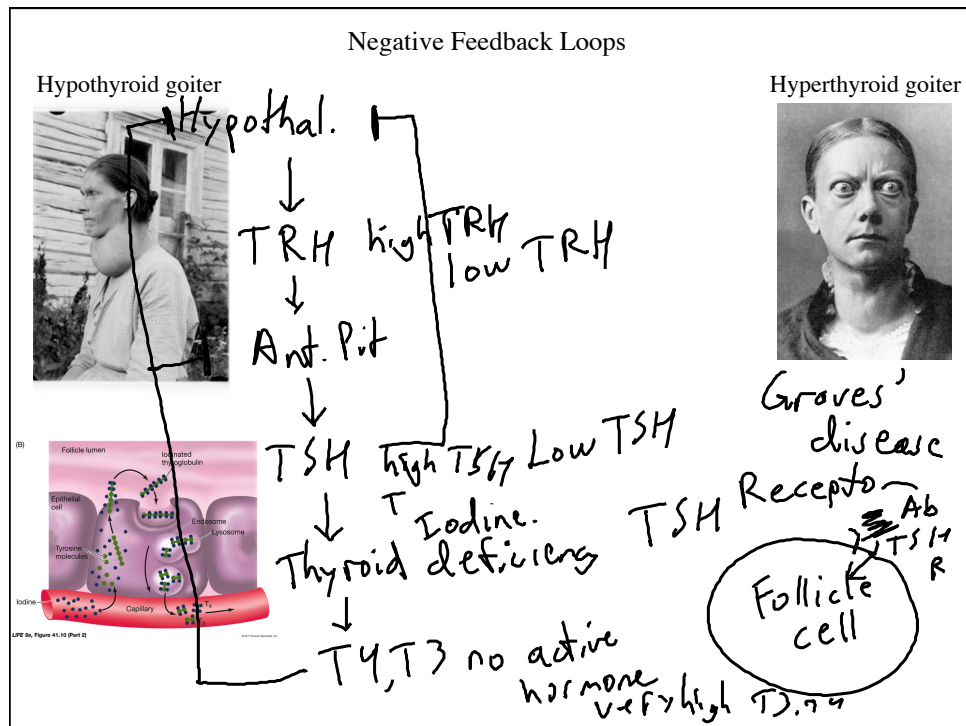
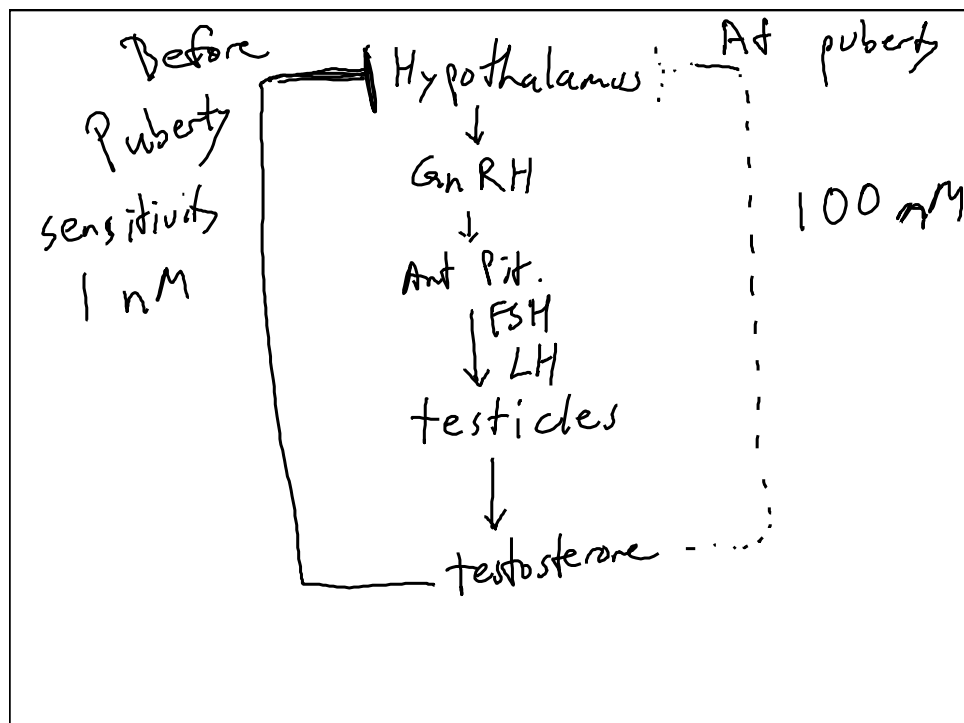
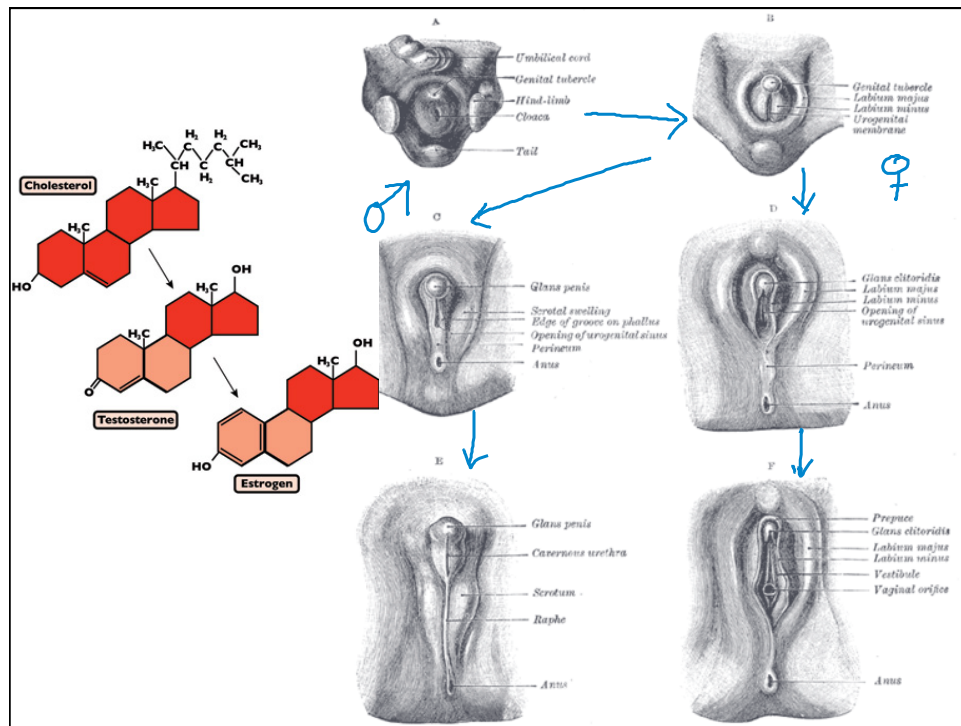


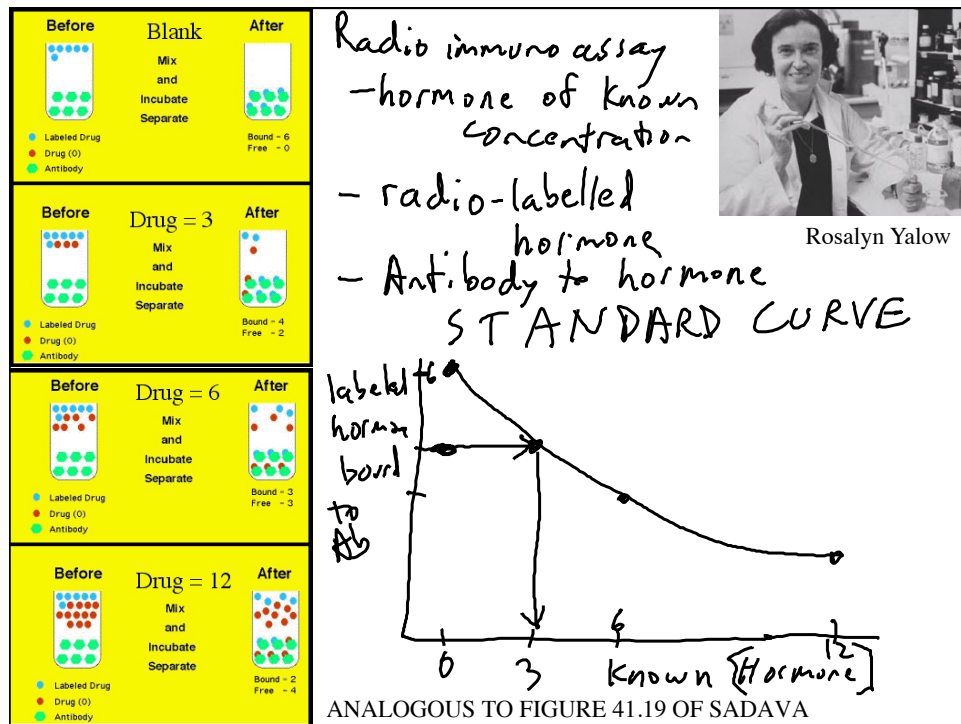
Figure 41.11 Multiple Feedback Loops Control Hormone Secretion











Rosalyn Yalow