

TABLE 15.1 Hormones Secreted by the Pituitary Gland—cont'd

Hormone	Target Organs and Effect	Overproduction Causes...	Underproduction Causes...
<b>Front or Anterior Pituitary Gland</b>			
<b>Somatotropin, or growth hormone (GH)</b>	Regulates the growth of bone, muscles, and other tissues by affecting the liver and adipose tissue	Gigantism (abnormally tall stature; patient becomes a “giant”) Acromegaly (growth of hands and feet after puberty when growth is supposed to stop) Treatment of acromegaly: medications that suppress growth hormones	Dwarfism (abnormally short stature) Treatment: growth hormone
<b>Prolactin</b>	Stimulates milk production in the mammary gland	Overproduction of breast milk in women Milk production in a nonlactating patient can be a sign of a pituitary tumor Parlodel is used to suppress lactation in women who choose not to breast-feed, but a side effect is increased fertility	Underproduction of milk in women; baby has difficulty nursing
<b>Follicle-stimulating hormone (FSH)</b>	Stimulates sperm production in men and egg production in women	Increased fertility	Men: sterility Women: irregular or absent menses
<b>Luteinizing hormone (LH)</b>	Stimulates the release of a ripened egg in women (ovulation); also helps in the production of female hormones ( <b>estrogens</b> and <b>progestins</b> )	Multiple gestations (e.g., twins, triplets)	Infertility (woman cannot ovulate and therefore cannot conceive)
<b>Interstitial cell-stimulating hormone (ICSH)</b>	Stimulates the production of androgens (the male hormone testosterone)	Aggressiveness, excess hair	Feminine attributes in men (e.g., high voice, small muscles)
<b>Back or Posterior Pituitary Gland</b>			
<b>Antidiuretic hormone (ADH)</b>	Conserves fluids by changing the permeability of the kidneys	Syndrome of inappropriate antidiuretic hormone (SIADH): too much fluid is retained Treatment: diuretics	Diabetes insipidus; too much fluid is excreted by the kidneys, with resulting dehydration Treatment: desmopressin (DDAVP)*
<b>Oxytocin</b>	Contracts the uterus and milk ducts in the breasts; contracts the prostate gland in men	The uterus or prostate can contract so much that it ruptures (rarely)	Labor may be slowed or milk expulsion constricted Treatment: Pitocin (oxytocin in synthetic form) may be given intramuscularly or intravenously to the laboring or postpartum patient to increase the force of contractions

\*DDAVP is also used to help chronic bedwetters stop urinating at night and to stop bleeding in patients with hemophilia.