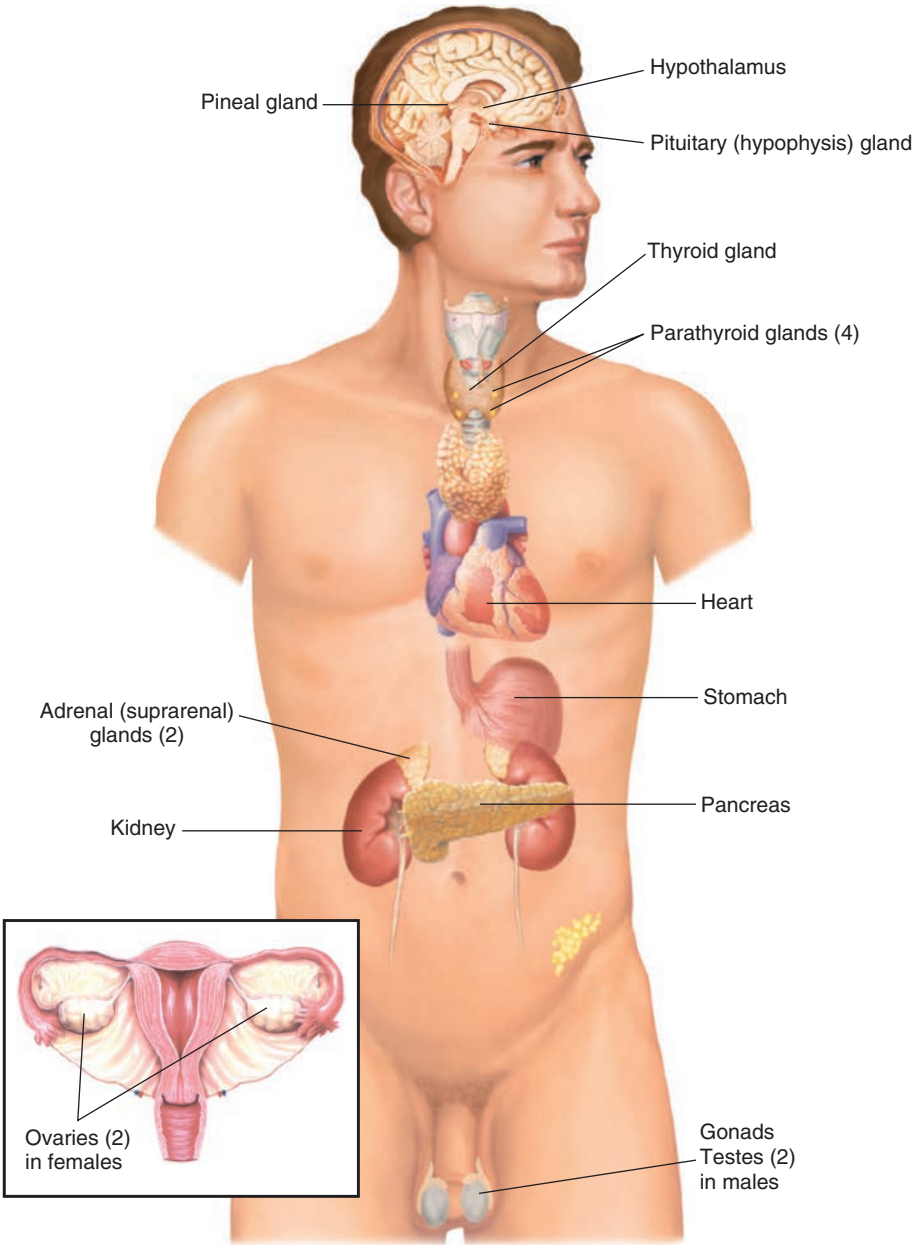

FIGURE 15-1: Endocrine system. The hypothalamus controls this system by telling the pituitary gland which hormones to secrete. Hormones have a wide range of effects on body organs, including the thyroid gland, pancreas, adrenal glands, and reproductive organs (testes and ovaries).

by the pituitary gland stimulates the adrenal medulla to release epinephrine and the adrenal cortex to release glucocorticoids.

Epinephrine, more commonly known as adrenaline, controls the fight-or-flight response, the physiological reaction to a perceived threat to survival or fright and other situations such as stress and anger. The epinephrine increases the body's heart rate; improves blood flow to major organs, skeletal muscles, and the brain; dilates airways to the lungs, and increases blood sugar. The adrenal medulla also secretes noradrenaline (norepinephrine) to constrict blood vessels, which increases blood pressure. These physical changes all help the body to exert maximum effort to meet or flee the situation.

The adrenal cortex secretes the glucocorticoids cortisol, cortisone, and corticosterone, which helps to regulate metabolism, provide resistance to stress, maintain blood pressure and cardiovascular