

Hormones are chemical messengers produced by various glands in the endocrine system that regulate many physiological processes in the body. Some of the major hormones and their functions include:

1. Insulin: Produced by the pancreas, insulin regulates blood sugar levels by facilitating the uptake of glucose into cells for energy production.
2. Thyroid hormones (T3 and T4): Produced by the thyroid gland, these hormones regulate metabolism, growth, and development.
3. Cortisol: Produced by the adrenal glands, cortisol helps regulate stress response, metabolism, and immune function.
4. Estrogen and progesterone: Produced by the ovaries in females, these hormones regulate menstrual cycles, fertility, and secondary sexual characteristics.
5. Testosterone: Produced by the testes in males and in smaller amounts by the adrenal glands in both sexes, testosterone regulates male reproductive function, muscle mass, and bone density.
6. Growth hormone: Produced by the pituitary gland, growth hormone stimulates growth and cell reproduction.
7. Melatonin: Produced by the pineal gland, melatonin regulates sleep-wake cycles.