

Endocrine System

You will be responsible for knowing the location of all endocrine glands, the hormones they release, and the functions of those hormones

GLAND	HORMONE	LOCATION OF TARGET CELLS	HORMONE FUNCTION
Anterior pituitary	1. Human growth hormone (hGH)	Cartilage, bone, skeletal muscle, liver, and other body tissues	Stimulates secretion of hormones that stimulate body growth and metabolism.
	2. Thyroid-stimulating hormone (TSH)	Thyroid gland	Stimulates growth of thyroid gland and secretion of its hormones.
	3. Follicle-stimulating hormone (FSH)	Testes Ovaries	Stimulates sperm production. Stimulates oocyte production and estrogen secretion.
	4. Luteinizing hormone (LH)	Testes Ovaries	Stimulates secretion of testosterone. Triggers ovulation and stimulates secretion of estrogen and progesterone.
	5. Prolactin (PRL)	Mammary gland	Stimulates production and secretion of milk.
	6. Adrenocorticotropic hormone (ACTH)	Adrenal cortex	Stimulates secretion of hormones by adrenal cortex.
	7. Melanocyte-stimulating hormone (MSH)	Skin	Darkens skin pigmentation.
Posterior pituitary	1. Antidiuretic hormone (ADH)	Kidneys	Decreases water lost in urine by returning water to the blood.
	2. Oxytocin (OT)	Uterus and mammary glands	Stimulates uterine contractions and milk ejection during suckling.
Thyroid gland	1. Thyroxine (T ₄)	Most body cells	Increases metabolism and basal metabolic rate (BMR).
	2. Triiodothyronine (T ₃)	Most body cells	Increases metabolism and BMR.
	3. Calcitonin	Osteoclast cells in bones	Decreases blood calcium levels by inhibiting osteoclasts.
Parathyroid glands	Parathyroid hormone (PTH)	Osteoclast cells in bones	Increases blood calcium levels by stimulating osteoclasts to break down bone matrix.
Adrenal cortex	1. Aldosterone	Kidneys	Decreases sodium and water loss in urine by returning sodium and water to the blood.
	2. Cortisol	Liver, muscle, and cells involved in body defenses	Increases resistance to stress, increases blood glucose levels, and decreases inflammation.
	3. Androgens	Uterus, mammary glands, and other body cells involved in secondary sex characteristics	Insignificant in males; increases sex drive in females.
Adrenal medulla	1. Epinephrine	Body cells involved in fight-or-flight response	Promotes fight-or-flight response.
	2. Norepinephrine (NE)	Body cells involved in fight-or-flight response	Promotes fight-or-flight response.
Pancreas	1. Insulin	Most body cells	Decreases blood glucose levels by transporting glucose into body cells.
	2. Glucagon	Liver	Increases blood glucose levels by stimulating liver to break down glycogen into glucose.
Ovaries	1. Estrogen	Uterus, mammary glands, and other body cells involved in female sexual characteristics	Stimulates development of female sex characteristics; helps regulate menstrual cycle.
	2. Progesterone	Uterus, mammary glands and other body cells involved in female sexual characteristics	Stimulates development of female sex characteristics; helps regulate menstrual cycle.
Testes	Testosterone	Testes, muscle, and other body cells involved in male sexual characteristics	Stimulates development of male sex characteristics; stimulates male sex drive; regulates sperm production.
Pineal Gland	Melatonin	Brain	Helps to set biological clock.
Thymus	Thymosin	T cells (type of white blood cell involved in immune response)	Promotes the maturation of T cells for the immune response.