NET, IAS, State-SET (KSET, WBSET, MPSET, etc.), GATE, CUET, Olympiads etc.: Human Endocrine Glands

Gland	Hormone	Functions
Hypothalamus	• Releasing and inhibiting hormones and factors • Posterior pituitary hormones produced here	Control of another pituitary hormones
Posterior pituitary gland	• Receives hormones from hypothalamus no hormones synthesised here • stores and secretes the following: • Oxytocin • Antidiuretic hormone (ADH) (vasopressin)	• Ejection of milk from mammary gland, contraction of uterus during birth • Reduction of urine secretion by kidney
Anterior pituitary gland	• Follicle stimulating hormone (FSH) • Luteinising hormone (LH) • Prolactin • Thyroid stimulating hormone (TSH) • Adrenocorticotrophic hormone (ACTH or corticotrophin)	• In male, stimulate spermatogenesis • In female, growth of ovarian follicles • In male testosterone secretion • In female secretion of oestrogen and progesterone, ovulation and maintenance of corpus luteum • Stimulates milk production and secretion

	• Growth hormone (GH)	• Synthesis and secretion of thyroid hormones growth of thyroid glands. • Synthesis and secretion of adrenal cortex hormones growth of gland • Protein synthesis, growth, especially of bone of limbs
Parathyroid gland	Parathormone	• Increases blood calcium level • Decreases blood phosphate level
Thyroid gland	• Triiodothyronine (T3) and thyroxine (T4) • Calcitonin	• Regulation of basal metabolic rate, growth and development • Decreases blood calcium level
Adrenal cortex	• Glucocorticoids (cortisol) • Mineralocorticoids (aldosterone)	• Protein breakdown, glucose/glycogen synthesis, adaptation to stress, anti-inflammatory/allergy effects • Na + retention in kidney, Na + and K + ratios in extracellular and intracellular fluids, raises blood pressure
Adrenal medulla	• Adrenaline (epinephrine) • Noradrenaline (norepinephrine)	• Increase rate and force of heartbeat, constriction of skin and gut capillaries • Dilation of arterioles of heart and skeletal muscles, raising blood glucose level • General constriction of small arteries, raising of blood pressure
Islets of Langerhans	• Insulin (beta cells) • Glucagon (alpha cells)	• Decreases blood glucose level, increases glucose and amino acid uptake and utilisation by cells • Increases blood glucose level, breakdown of glucogen to glucose in liver
• stomach	• Gastrin	• Secretion of gastric juices

• Duodenum	• Secretin • Cholecystokinin (Pancreozymin)	• Secretion of pancreatic juice • Inhibits gastric secretion • Emptying of gall bladder and release of pancreatic juice in to duodenum
• Kidney • Ovary	• Renin • Oestrogens (17 Beta-oestradiol) • Progesterone	• Conversion of angiotensinogen into angiotensin • Female secondary sex characteristics, oestrous cycle • Gestation, inhibition of ovulation
Corpus luteum	• Progesterone and oestrogen • Progesterone ans oestrogen	• Growth and development of uterus • Foetal development
Placenta	• Chorionic gonadotrophin • Human placental lactogen	• Maintenance of corpus luteum • Stimulates mammary growth
Testis	Testosterone	Male secondary sexual characteristics

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