

Principal hormones

Site of release	Name of hormone	Main 'targets'	Involved in regulation of:	Main mechanisms regulating secretion	Chemical nature
Anterior pituitary	Growth hormone	Most tissues	Growth and metabolism	Hypothalamic releasing or inhibiting hormones; negative feedback from levels of the relevant hormones in the blood.	
	Prolactin	Mammary glands	Milk production		
	Trophins: TSH	Thyroid gland	Thyroid hormone secretion		
	ACTH	Adrenal cortex	Cortisol secretion		
	FSH	Gonads	Germ cell maturation		
	LH		Gonad hormone secretion		
Posterior pituitary	Antidiuretic hormone (ADH) = Vasopressin	Kidneys	Osmolality and volume of the blood	Hypothalamic osmoreceptors	
	Oxytocin	Uterus, breasts	Labour and lactation	Reflex via hypothalamus	
	Atrial wall	Atrial natriuretic hormone (ANH)	Kidneys	Osmolality and volume of the blood	
Pancreas	Insulin	Most tissues	Blood level, storage, and cellular uptake of glucose.	Blood glucose level Sympathetic nervous system.	Proteins and peptides
	Glucagon	Liver	Release of glucose		
Gut	Gastrin Secretin Cholecystokinin Vasoactive intestinal peptide and others	Gut, liver, gall bladder, pancreas: smooth muscle and secretory tissue.	Gastro-intestinal function: motility, digestion, absorption	Chemical and mechanical factors in the alimentary canal.	
Parathyroids	Parathormone	Bone, kidneys, gut	Blood Ca <sup>2+</sup> via calcium and phosphate absorption, secretion, and turnover in bone	Negative feedback from concentration of Ca <sup>2+</sup> in the blood.	
Thyroid	Calcitonin				
	Thyroxine (T <sub>4</sub> ) Triiodothyronine (T <sub>3</sub> )	Most tissues	Cellular oxidative metabolism	TSH from anterior pituitary; negative feedback from blood hormone level.	Amino acids (iodinated)
Gonads	Testosterone	Genitalia and many other tissues	Reproductive function and sex characteristics	FSH and LH from anterior pituitary; negative feedback from blood hormone level.	
	testis				
	Oestrogens Progesterone	Uterus, breasts and many other tissues	Menstrual cycle; early pregnancy; lactation. (Placenta takes over secretion during pregnancy.)		
Adrenal cortex	Cortisol	Most tissues	Metabolism: response to stress	ACTH from anterior pituitary. Renin-angiotensin; blood levels of Na <sup>+</sup> and K <sup>+</sup>	Steroids
	Aldosterone	Kidneys	Volume of body fluids, via salt concentration		
Adrenal medulla	Adrenaline Noradrenaline	Heart, smooth muscle, glands	Cardiovascular and metabolic adjustments to activity and stress	Sympathetic nervous system	Catecholamines