

## 1-State the functions

Function of amine hormone :

increased blood sugar levels

increased heart rate

increased contractility (how hard the heart squeezes)

relaxation of smooth muscle in the airways to improve breathing

These effects are designed to provide your body with extra energy. When you're very stressed or afraid, your body releases a flood of epinephrine. This is known as the fight-or-flight response, or adrenaline rush. eg. Epinephrine

Norepinephrine, also called noradrenaline, has effects similar to those of epinephrine, such as:

increased blood sugar levels

increased heart rate

increased contractility

Norepinephrine can also cause your blood vessels to narrow, which increases blood pressure.

Amine hormones are synthesized from the amino acids tryptophan or tyrosine. An example of a hormone derived from tryptophan is melatonin, which is secreted by the pineal gland. Epinephrine and norepinephrine are secreted by the adrenal medulla. whereas dopamine is secreted by the hypothalamus.

Function of peptide hormone:

Peptide hormones act as ligands for a wide range of G protein-coupled receptors. Peptide hormones are secreted and function in an endocrine manner to regulate many physiological functions, including growth, appetite and energy metabolism, cardiac function, stress, and reproductive physiology

Oxytocin has been best known for its roles in female reproduction. It is released in large amounts during labor, and after stimulation of the nipples. It is a facilitator for childbirth and breastfeeding. One of the oldest applications of oxytocin as a proper drug is as a therapeutic agent during labor and delivery. It is a stimulant widely employed to induce or augment labor, especially at term, when adequate oxytocin receptors are present. It is also one of the principal uterotonic drug used to prevent post partum hemorrhage.

Peptide hormones are synthesized in endoplasmic reticulum, transferred to the Golgi and packaged into secretory vesicles for export. They can be secreted by one of two pathways: Regulated secretion: The cell stores hormone in secretory granules and releases them in "bursts" when stimulated.

2-State where it is synthesized in human

Function of protein hormone & synthesis in human

These proteins are secreted by endocrine cells that act to control or regulate specific physiological processes, which include growth, development, metabolism, and reproduction. For example, insulin is a protein hormone that helps to regulate blood glucose levels

Function & synthesised in human of steroid hormone

Steroid hormones are derived from the lipid cholesterol. For example, the reproductive hormones testosterone and the estrogens—which are produced by the gonads (testes and ovaries)—are steroid hormones. The adrenal glands produce the steroid hormone aldosterone, which is involved in osmoregulation, and cortisol, which plays a role in metabolism.

Like cholesterol, steroid hormones are not soluble in water (they are hydrophobic). Because blood is water-based, lipid-derived hormones must travel to their target cell bound to a transport protein. This more complex structure extends the half-life of steroid hormones much longer than that of hormones derived from amino acids. A hormone's half-life is the time required for half the concentration of the hormone to be degraded. For example, the lipid-derived hormone cortisol has a half-life of approximately 60 to 90 minutes. In contrast, the amino acid-derived hormone epinephrine has a half-life of approximately one minute.