The endocrine system worksheet chapter 9

The pituitary gland hangs from the base of the brain with a stem and is encased in the bone. It consists of the glandular (front) part and the nervous (back) part (Figure 9.4). With the exception of growth hormone and prolactin, the hormones of the anterior pituitary gland are all tropical hormones. Growth hormone (GH): an anabolic and protein-nutrient hormone that promotes the full growth of the body. Its most important effect is on skeletal muscles and bones. Hyposecretary in childhood leads to pituitary dwarfism; hypersecretia produces gigantism (in childhood) and acromegaly (in adulthood). Prolactin (PRL): Stimulates the production of breast milk. Adrenocorticotropic hormone (ACTH): Stimulates adrenal cortex to release hormones. Thyroid hormone (TSH): stimulates the thyroid gland to release thyroid hormone. Gonadotropic hormones of the follicle-stimulating hormone (FFG): Starting from puberty, stimulates the development of the follicle and the production of estrogen by the female ovaries; contributes to the production of sperm in the male. Luteinizing hormone (LH): Starting from puberty, stimulates ovulation, converts the torn follicle of the ovaries into the lutein of the body, and causes the lutein of the corpus to produce progesterone; stimulates male testicles to produce testosterone. The release and inhibition of hormones produced by the hypothalamus regulates the release of hormones produced by the anterior pituitary gland. The hypothalamus also makes two hormones that are transported to the posterior pituitary gland for storage and later release. The posterior pituitary gland stores and releases hypothalamic hormones on command. Oxytocin: Stimulates powerful uterine contractions and causes milk to be released in a nursing woman. Antidiuretic hormone (ADH): Causes renal tubular cells to reabsorbate and preserve water in the body and raises blood pressure by narrowing blood vessels. Hyposecretary leads to diabetes. Back to the upper thyroid gland is located in front of the throat. The thyroid hormone (thyroxine (T4) and triiodothyronine (T3)) is released from the thyroid follicles when TSH levels in the blood rise (Figure 9.5). Thyroid hormone is the metabolic hormone of the body. This increases the rate at which cells oxidize glucose and is necessary for normal growth and development. Lack of iodine leads to goiter. Hyposecretia thyroxine leads to cretinism in children and mixed in adults. Hypersecretia is the result of Graves' disease or other forms of hyperthyroidism. Calcitonin is released by C cells surrounding thyroid follicles in response to high levels of calcium in the blood (Figure 9.6). This leads to calcium deposition in the bones. Parathyroid glands parathyroid glands are four small glands located on the back of the thyroid gland. Low levels of calcium in the blood stimulate parathyroid glands to parathyroid hormone (PTH). This leads to bone calcium to be released into the bloodstream. Blood. PTH results in tetany; hyper-secrecy leads to extreme bone waste and fractures. Back to the beginning of the adrenal glands of the paired glands sat on the kidneys. Each gland has two functional endocrine parts, bark and medulla. Three groups of steroid hormones are produced by the adrenal cortex. Mineralocorticoids, primarily aldosterone, regulate sodium ion (NH) and potassium ion (IC) reabsorbion of the kidneys (Figure 9.7). Their release is stimulated primarily by low levels of Na and/or high levels of KP in the blood. Glucocorticoids allow the body to withstand long-term stress by increasing blood glucose levels and depressing inflammatory reactions. Sex hormones (mostly male sex hormones) are produced in small amounts throughout life. Generalized hypoactivity of the adrenal cortex leads to Addison's disease. Hypersecretia can lead to hyperaldosteronism, Cushing's disease and/or masculinization. Adrenal medulla produces catecholamines (epinephrine and norepinephrine) in response to sympathetic stimulation of the nervous system. Its catecholamines enhance and prolong the action of combat or flight (sympathetic nervous system) in response to short-term stress. Hypersecretia leads to symptoms typical of the sympathetic nervous system of excessive activity. Back to the upper pancreatic islets located in the abdominal cavity close to the stomach, the pancreas is both exocrine and endocrine gland. The endocrine part (islands) releases insulin and glucagon into the bloodstream (Figure 9.8). Insulin is released when blood glucose levels are high. This increases the rate of glucose absorption and metabolism of the body's cells. Insulin hyposecretary leads to diabetes, which seriously disrupts metabolism in the body. The cardinal signs are polyuria, polypsia and polyphagia. Glucagon is released when blood glucose levels are low. It stimulates the liver to release glucose into the bloodstream by accelerating the conversion of glycogen into glucose, thereby increasing blood glucose levels. The pineal gland located in the third ventricular brain releases melatonin, which affects biological rhythms and reproductive behavior. The thymus gland, located in the upper chest, functions in youth, but atrophied in old age. Its hormone thymosin promotes the maturation of T-lymphocytes, which are important for the protection of the body. Gonadi female ovaries located in the pelvic cavity release two hormones. Estrogens: The release of estrogen by ovarian follicles begins during puberty under the influence of FFC. Estrogens stimulate the maturation of female reproductive organs and the development of secondary sexual characteristics of the female. With progesterone, they cause a menstrual cycle. Progesterone: Progesterone is released from the lutein of the ovary body in response to high levels of LH in the blood. He with estrogens in the creation of the menstrual cycle. Male testicles begin to produce testosterone in in response to LG stimulation. Testosterone promotes the maturation of male reproductive organs, male secondary sexual characteristics and sperm production by the testicles. Hyposecretary of gonad hormones leads to infertility in both women and men. Power Points Review of the endocrine hormone system of the anterior pituitary hormones of the posterior pituitary gland and thyroid glands of the hormones of the pancreas and adrenal hormones cones, Thymus and Gonada Aspects of Endocrine System Development Notes Key Terms of the Endocrine System Key Terms Research Guide to The Endocrine System Guide to the Study of the Useful Hormone Mechanisms : Glands and Hormones Crash Course Endocrine System Part 2: Hormone Imbalance crash-rate endocrine system Bozeman Cancer Endocrine Hormone Review Khan Academy TEDed brainplusiqs.com a sheet of free printed © a sheet of free print editions 2020 (en) Copyright Privacy Policy Contact Contact Anatomy and Physiology Group 9-11-Nervous System, Feelings and Endocrine Student Online Training Center-Head Of Outlines: Ch9, Ch10, Ch11Optional: Final Exam Package Package Package Package