

Medical Terminology Endocrine System

Directions:

1. Print cards double sided and cut vocabulary cards
2. Choose an activity method for learning vocabulary words

Class method

- Read the vocabulary word aloud and ask for volunteers to provide the definition
or
- Read the definition aloud and ask for volunteers to provide the vocabulary word

Small group method

1. Divide the class into small groups
2. Give each group a set of the cards
3. Have one person pick a card and read it aloud to the group
4. The first person in the group to get it right gets a point and is the next person to read a card

Concentration method

1. Pair the students up
2. Give each pair a set of cards
3. Lay the vocabulary cards on a table with the definition side down
4. Each player takes a turn reading a word and saying the definition
5. If the definition is correct, the player picks up the card and keeps it as a point
6. If the definition is incorrect, the next player takes a turn
7. Continue until all cards are drawn



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HYPOTHALAMUS

PINEAL GLAND

PITUITARY GLAND

ANTERIOR PITUITARY

POSTERIOR PITUITARY

THYROID GLAND

PARATHYROID GLANDS

THYMUS GLAND

Centrally positioned in the brain, this gland is important to the sleep-wake cycle, also known as the circadian rhythm. The suprachiasmatic nucleus of the hypothalamus directs pineal gland function

This is a deep collection of neurons (nerve cells) at the base of the brain that is roughly the size of an almond. The hypothalamus intimately connects with the pituitary gland and regulates its functions

This is the anterior lobe of the pituitary gland. It is regulated by releasing and, in some cases, inhibiting hormones secreted by the hypothalamus. Anterior pituitary hormones regulate hormone release from multiple endocrine organs throughout the body

This is a pea-sized gland, sometimes called the hypophysis, located below the hypothalamus. Because of its control over other endocrine glands, it is known as the master gland

This gland plays a key role in regulating the body's metabolism. It is in the anterior neck, inferior to the larynx, or voice box

Posterior lobe of the pituitary gland, also called the neurohypophysis, that stores two hormones produced in the hypothalamus

This gland is located inferior to the thyroid gland in the upper chest. It helps regulate immune system function and atrophies with age

Miniscule glands, usually four in total, that are located on the surface of the thyroid gland and help regulate calcium levels

ADRENAL GLANDS

PANCREAS

OVARIES

TESTES

POSTERIOR PITUITARY HORMONES

ANTIDIURETIC HORMONE (ADH)

OXYTOCIN

HYPOTHALAMIC/ ANTERIOR PITUITARY HORMONES

Plays an important role in the digestion of food by releasing digestive enzymes (an exocrine function) in addition to releasing hormones (an endocrine function) to help regulate blood sugar levels

Sit atop the kidneys and release hormones that help regulate blood pressure, fluid balance, stress response, and metabolism

Primary male reproductive organs that produce sperm cells and release the hormone testosterone

Primary female reproductive organs that produce eggs cells and release the hormones estrogen and progesterone

This is a hormone that acts on the kidneys to increase its water permeability. Consequently, more water is reabsorbed from urine, resulting in less urine and more reclaimed water for the body to use

Created in the hypothalamus and then stored in the posterior pituitary, where the nerve endings from specific neurons in the hypothalamus reside

These are the hormones produced by the hypothalamus and the anterior pituitary. The hypothalamus secretes releasing hormones and, in some cases, inhibiting hormones that orchestrate the release (or cessation) of anterior pituitary hormones that in turn act on endocrine glands to stimulate them to release hormones

This hormone serves multiple functions. In women, it acts on smooth muscle to stimulate uterine contractions and milk ejection during breastfeeding. It is also important in human bonding, particularly parent-child bonding

GONADOTROPIN- RELEASING HORMONE (GNRH)

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LUTEINIZING HORMONE (LH)

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FOLLICLE- STIMULATING HORMONE (FSH)

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THYROTROPIN- RELEASING HORMONE (TRH)

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THYROID- STIMULATING HORMONE (TSH)

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PROLACTIN-RELEASING HORMONE (PRH)/PROLACTIN- INHIBITING HORMONE (PIH) (AKA DOPAMINE)

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PROLACTIN

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GROWTH HORMONE-RELEASING HORMONE (GHRH)/GROWTH HORMONE-INHIBITING HORMONE (GHIH) (AKA SOMATOSTATIN)

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In women, this hormone works in concert with FSH to stimulate ovulation (release of egg cells) in the ovaries and prepares the uterus for pregnancy. In men, this hormone stimulates production of testosterone

Hypothalamic hormone that triggers the release of gonadotropins by the anterior pituitary, which regulates the function of the primary reproductive organs, namely the ovaries and testes

Released by the hypothalamus and triggers release of TSH from the anterior pituitary

Acts on the ovaries in concert with LH to stimulate ovulation in women and acts on the testes to stimulate sperm production in men

These hypothalamic hormones regulate the release of prolactin by the anterior pituitary. Dopamine also serves as an important neurotransmitter (neuronal chemical messenger) in the brain involved in motivation and motor control

Anterior pituitary hormone that triggers the release of thyroid hormones from the thyroid gland

GHRH is a hypothalamic hormone that stimulates the anterior pituitary to release GH. GHIH is a hormone that is secreted by the hypothalamus in reaction to insulin-like growth factor (IGF) released by the liver in response to GH. It serves in a negative feedback fashion to inhibit the release of GH by the anterior pituitary

This hormone affects follicular maturation and the release of estrogen and progesterone. It also stimulates milk production in glandular breast tissue

GROWTH HORMONE (GH)

CORTICOTROPIN- RELEASING HORMONE (CRH)

ADRENOCORTICOTROPIC HORMONE (ACTH)

PINEAL GLAND HORMONE

THYROXINE

TRIIODOTHYRONINE

CALCITONIN

PARATHYROID HORMONE (PTH)

Hypothalamic hormone that triggers the release of ACTH by the anterior pituitary

Also known as somatotrophic hormone, GH stimulates the growth of long bones and muscles while triggering gluconeogenesis (the formation of glucose from amino acids, the building blocks of proteins) and the breakdown of glycogen to glucose in the liver

The pineal gland produces the hormone, melatonin, which plays a key role in inducing sleepiness at night, thus regulating the sleep-wake cycle

Anterior pituitary hormone that stimulates the release of cortisol and other corticosteroid hormones from the adrenal cortex, which play an important role in stress response

Active form of thyroxine, formed by the removal of an iodine atom from thyroxine, a process called de-iodination

This hormone, which contains four iodine atoms, regulates growth as well as metabolism and even differentiation (specialization) of tissues. It is an inactive form for the most part

This hormone functions to increase levels of calcium and phosphorus in the blood. Calcitonin and PTH work in concert with opposing actions to maintain calcium levels in a normal range

This thyroid hormone lowers levels of calcium in the blood by decreasing its reabsorption in the kidneys. It also blocks the breakdown of bone by osteoclasts

PANCREATIC HORMONES

GLUCAGON

INSULIN

ADRENAL CORTEX HORMONES

MINERALOCORTICIDS

GLUCOCORTICIDS

ADRENAL ANDROGENS

ADRENAL MEDULLA HORMONES

Hormone that stimulates the breakdown of glycogen in the liver into glucose

Produced by clusters of endocrine cells, known as the islets of Langerhans or pancreatic islets, scattered along the length of the pancreas, control glucose metabolism

Produced in the outer layer of the adrenal glands, called the cortex

This hormone promotes the uptake of glucose into the cells of the body so they can be used for energy. It also stimulates the liver to store glucose in glycogen form

The major glucocorticoid is cortisol. These hormones promote metabolic breakdown of fats, carbohydrates, and proteins, which is critical during times of stress. Glucocorticoids, such as cortisol, also suppress immune system function

Major mineralocorticoid is aldosterone, which acts on the kidneys to retain sodium and excrete potassium, promotes fluid retention thereby raising blood volume and blood pressure

These hormones are created in the central regions of the adrenal glands. They stimulate the sympathetic nervous system, which controls the automatic "fight or flight" response to stress or danger

These hormones include dehydroepiandrosterone (DHEA). Androgens can be converted into estrogens in the tissues. Adrenal androgens supplement the sex hormone activity of the gonads (the testes and ovaries)

ADRENALINE (AKA EPINEPHRINE)

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NORADRENALINE (AKA NOREPINEPHRINE)

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ACROMEGALY

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ADDISON DISEASE

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CUSHING SYNDROME

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CUSHING'S DISEASE

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DIABETES INSIPIDUS

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DIABETES MELLITUS (DM)

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Formed from the amino acid tyrosine, noradrenaline has similar effects to adrenaline, but its effects are weaker. It only binds to alpha receptors on autonomic nervous system cells, while epinephrine binds to both alpha and beta receptors

Formed from the amino acid, tyrosine, adrenaline also functions as a neurotransmitter. It raises glucose levels and increases heart rate and blood pressure and dilates the air passageways. Adrenaline is produced in higher quantities and its effects are stronger than that of noradrenaline

Condition resulting from impaired function of the adrenal cortex that causes many symptoms, including weakness, hyperpigmentation (skin darkening), anorexia (loss of appetite), and depression as well as other mood problems

Disease characterized by excessive bone growth in the face, hands, and feet caused by abnormally elevated levels of growth hormone after puberty

Caused by a pituitary tumor that secretes excessive ACTH

Condition caused by excessive secretion of cortisol that leads to hyperglycemia (abnormally high blood glucose) and abnormal deposition of fat in the face (so-called moon facies) and neck areas

This is a condition characterized by insensitivity to insulin that leads to hyperglycemia, which can damage nerves and blood vessels over time. Eventually DM can result in loss of limbs and organ failure if hyperglycemia remains uncontrolled long term

This is a condition that results from insufficient activity of ADH. Diabetes insipidus could result from impaired production or secretion of ADH in the brain or insensitivity to ADH in the kidney. The result is dilute urine and excessive urination

DIABETIC NEPHROPATHY

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DIABETIC NEUROPATHY

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DWARFISM

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GIGANTISM

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GRAVE'S DISEASE

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HASHIMOTO'S THYROIDITIS

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HYPERPARATHYROIDISM

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HYPERTHYROIDISM

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Peripheral nerve damage that can result from DM

Damage to the kidneys that can result from DM

Condition characterized by an overall increase in body size due to excessive GH secretion prior to puberty

Condition characterized by an overall decrease in body size due to insufficient GH secretion prior to puberty

Autoimmune condition that destroys healthy thyroid tissue, leading to insufficient hormone production (hypothyroidism)

Autoimmune condition that results in excessive thyroid hormone activity (hyperthyroidism)

Condition characterized by excessive thyroid hormone activity

Condition characterized by excessive parathyroid hormone secretion that results in abnormally elevated blood calcium levels

HYPOPARATHYROIDISM

HYPOTHYROIDISM

PANHYPOPITUITARISM

SYNDROME OF INAPPROPRIATE ANTIDIURETIC HORMONE (SIADH)

THYROTOXICOSIS

ADRENOCORTICAL CARCINOMA

PANCREATIC CARCINOMA

ISLET CELL CARCINOMA

Condition characterized by insufficient thyroid hormone activity

Condition characterized by insufficient parathyroid hormone secretion that results in inadequate blood calcium levels

Condition characterized by too much ADH secretion that leads to concentrated, less voluminous urine and dilute concentrations of electrolytes in the blood, such as low blood sodium (hyponatremia)

Rare condition describing globally insufficient secretion of pituitary hormones, which can result from traumatic brain injury or a tumor, for example

This is a rare and deadly cancer that develops in the outer layer of the adrenal gland. Certain genetic syndromes increase the risk of getting this cancer

Hypermetabolic toxic state that results from excessive release of thyroxine and triiodothyronine

Tumor that develops from pancreatic endocrine cells in the islets of Langerhans that can cause hyperinsulinemia (excessive insulin levels in the blood) and resultant hypoglycemia

These are cancers that develop within the cells of the pancreas and usually affect individuals that are at least 40 years of age or older. Histologically, most are ductal adenocarcinomas and involve cells responsible for the exocrine function of the pancreas (the secretion of digestive enzymes). However, pancreatic endocrine cancers do occur

PITUITARY ADENOMA

PROLACTINOMA

THYROID CARCINOMA

PARATHYROID CARCINOMA

PHEOCHROMOCYTOMA

THYMOMA

ENDOCRINOLOGIST

FASTING BLOOD GLUCOSE LEVEL

Subtype of pituitary adenoma in which the tumor cells produce excessive levels of prolactin

This is a typically benign and slowly growing tumor of pituitary gland cells that occurs more frequently in women than in men, primarily between the ages of 30 and 60. Pituitary carcinoma is a rare, more aggressive pituitary tumor

Rare form of cancer that develops from the cells of the parathyroid glands

This is the most frequent cancer of the endocrine system. It affects women more than men, occurring in individuals between the ages of 25 and 60. It develops from the cells of the thyroid gland and can take on multiple histologic subtypes

This is a type of cancer that develops from cells of the thymus gland and can range in severity from benign to malignant. Thymomas can be associated with an autoimmune neuromuscular disease that causes weakness, called myasthenia gravis

This is a benign tumor of the adrenal medulla that makes excessive amounts of adrenaline and noradrenaline, leading to severe hypertension and other symptoms and signs. Some symptoms include flushing, heart palpitations, headaches, hyperhidrosis (excessive sweating), and hyperglycemia

Taken in the morning after an overnight fast

Physician who specializes in the diagnosis and treatment of diseases affecting the endocrine system

ORAL GLUCOSE TOLERANCE

GLYCOSYLATED HEMOGLOBIN (HBA1C)

COMPUTED TOMOGRAPHY (CT SCAN)

SERUM ADRENOCORTICOTROPIC HORMONE (ACTH) STIMULATION WITH COSYNTROPIN

SERUM ACTH SUPPRESSION

GROWTH HORMONE STIMULATION TEST

MAGNETIC RESONANCE IMAGING (MRI)

RADIOACTIVE IODINE UPTAKE

Measurement used as a three-month average of one's blood glucose levels based on the quantity of sugar molecules that attached to hemoglobin, a component of red blood cells

Test that measures insulin sensitivity and the ability of the body to bring down blood glucose levels two hours after an oral glucose load in the form of a syrupy drink

Test that evaluates for impairment of adrenal cortical function

This is a scan that takes multiple X-rays to visualize cross-sections of tissue using computer analysis. An abdominal CT can be used to find pancreatic tumors, for example. Any part of the body can be visualized this way

Uses insulin or arginine (an amino acid), which normally promotes growth hormone release, to evaluate for growth hormone deficiency

Test that evaluates for hyperactive adrenal cortical function and Cushing's syndrome

This test measures uptake of ingested iodine into the thyroid gland, which is used in the production of thyroid hormone. Thus, it measures thyroid gland activity

Imaging modality that uses the movement of molecules within a magnetic field to create detailed three-dimensional images of internal organs

THYROID SCAN

THYROID ULTRASOUND

URINE KETONES

DIABETIC KETOACIDOSIS

ADRENALECTOMY

HYPOPHYSECTOMY

PANCREATECTOMY

PARATHYROIDECTOMY

Scan that uses the reflection of sound waves to visualize the thyroid and evaluate thyroid nodules

Like a radioactive iodine uptake scan, this test also uses radioactive iodine. However, it uses emitted radiation (gamma rays) to visualize the thyroid and assess thyroid nodules

In severe diabetes, runaway ketone body formation can become life threatening

In the setting of inaccessibility to glucose, as can happen in uncontrolled diabetes mellitus or extended fasting, cells start breaking down fats into ketone bodies for energy, which can be measured in the urine

Surgical removal of the pituitary gland, which may be necessary in the setting of a pituitary tumor

Surgical removal of the adrenal gland, which may be necessary in the setting of an adrenal tumor

Surgical removal of one or more parathyroid glands, which is performed in the setting of hyperparathyroidism

This is the term for the surgical removal of the pancreas, which may be partial or total. It may be necessary in the setting of a pancreatic tumor or severe infection

THYROIDECTOMY

Surgical removal of the thyroid gland,
which may be necessary in the setting
of a thyroid tumor