What Is Hypo And Hyper Thyroid

CpG site CpG sites occur with high frequency in genomic regions called CpG islands. This allows methylation information to be preserved during cell division. The information above shows that, in cancers, promoter CpG hyper/hypo-methylation of genes and of microRNAs causes loss of expression (or sometimes increased The CpG sites or CG sites are regions of DNA where a cytosine nucleotide is followed by a guanine nucleotide in the linear sequence of bases along its 5' → 3' direction. CpGs are the common unit of methylation because their information is double stranded (the GpC complement is also methylated) 1cf17a0457

There are five general types of thyroid disease, each with their own symptoms. A person may have one or several different types at the same time. The five groups are: 1cf17a0457

Delayed puberty The term sexual infantilism has also been used medically as a synonym for delayed puberty. Hypogonadism can be differentiated between hyper- and hypo-gonadotropic hypogonadism by measuring Delayed puberty is when a person lacks or has incomplete development of specific sexual characteristics past the usual age of onset of puberty. The person may have no physical or hormonal signs that puberty has begun. an erythrocyte sedimentation rate, and thyroid studies 1cf17a0457

== Pathophysiology == 1cf17a0457 Most commonly, puberty may be delayed for several years and still occur normally, in which case it is considered constitutional delay of growth and puberty, a common variation of healthy physical development. Delay of puberty may also occur due to various causes such as malnutrition, various systemic diseases, or defects of the reproductive system (hypogonadism) or the body's responsiveness to sex hormones. 1cf17a0457 Amenorrhea is a symptom with many potential causes. Primary amenorrhea is defined as an absence of secondary sexual characteristics by age 13 with no menarche or normal secondary sexual characteristics but no menarche by 15 years of age. It may be caused by developmental problems, such as the congenital absence of the uterus, failure of the ovary to receive or maintain egg cells, or delay in pubertal development. Secondary amenorrhea, ceasing of menstrual cycles after menarche, is defined as the absence of menses for three months in a woman with previously normal menstruation, or six months for women with a history of oligomenorrhea. It is often caused by hormonal disturbances from the hypothalamus and the pituitary gland, premature menopause, intrauterine scar formation, or eating disorders. 1cf17a0457

Thyroid disease The thyroid gland is located at the front of the Thyroid disease is a medical condition that affects the structure and/or function of the thyroid gland. Thyroid disease is a medical condition that affects the structure and/or function of the thyroid gland. The thyroid gland is located at the front of the neck and produces thyroid hormones that travel through the blood to help regulate many other organs, meaning that it is an endocrine organ. These hormones normally act in the body to regulate energy use, infant development, and childhood development 1cf17a0457

In humans, about 70% of promoters located near the transcription start site of a gene (proximal promoters) contain a CpG island. 1cf17a0457 == CpG characteristics == 1cf17a0457 There are two main lobes of the pituitary, an anterior lobe, and a posterior lobe joined and separated by a small intermediate lobe. The anterior lobe (adenohypophysis) is the glandular part that produces and secretes several hormones. The posterior lobe (neurohypophysis) secretes neurohypophysial hormones produced in the hypothalamus. Both lobes have different developmental origins and they are both controlled by the hypothalamus. 1cf17a0457 Hyperthyroidism (high function) caused by having too many free thyroid hormones 1cf17a0457 In the United States, girls are considered to have delayed puberty if they lack breast development by age 13 or have not started menstruating by age 15. Boys are considered to have delayed puberty if they lack enlargement of the testicles by age 14. Delayed puberty affects about 2% of adolescents. 1cf17a0457 Although amenorrhea has... 1cf17a0457 Homeostasis is brought about by a natural resistance to change when already in its optimal conditions, and equilibrium is maintained by many regulatory mechanisms; it is thought to be the central motivation for all organic action. All homeostatic control mechanisms have at least three interdependent components for the variable being regulated: a receptor, a control center, and an effector. The receptor is the sensing component that monitors and responds to changes in... 1cf17a0457 In addition to the alteration of menstrual periods and infertility, chronic anovulation can cause or exacerbate other long-term problems, such as hyperandrogenism or osteopenia. It plays a central role in the multiple imbalances and dysfunctions of polycystic ovary syndrome. 1cf17a0457

Anovulation However, a woman who does not ovulate at each menstrual cycle is not necessarily going through menopause. For instance, women with hyper- or hypothyroidism sometimes have ovulation problems. Therefore, ovulation does not take place. affect ovulation. Thyroid dysfunction can halt ovulation by upsetting Anovulation is when the ovaries do not release an oocyte during a menstrual cycle. Chronic anovulation is a common cause of infertility 1cf17a0457

== Female == 1cf17a0457

Amenorrhea levels. Physiological states of amenorrhea are most commonly seen during pregnancy and lactation (breastfeeding). In humans, it is where a woman or girl who has reached reproductive age and who is not on birth control does not menstruate. Elevated prolactin levels prompt evaluation Amenorrhea or amenorrhoea is the absence of a menstrual period in a female organism which has reached reproductive age. Abnormal TSH levels prompt evaluation for hyper- and hypo-thyroidism with additional thyroid function tests 1cf17a0457

Tumors which can be benign (not cancerous) or cancerous 1cf17a0457 == Mnemonics with wikipages == 1cf17a0457 Hypothyroidism (low function) caused by not having enough free thyroid hormones 1cf17a0457

Homeostasis Each of these variables is controlled by one or more regulators or homeostatic mechanisms, which together maintain life. Other variables include the pH of extracellular fluid, the concentrations of sodium, potassium, and calcium ions, as well as the blood sugar level, and these need to be regulated despite changes in the environment, diet, or level of activity. If an entity is homeostatically controlled In biology, homeostasis (British also homoeostasis; HOH-mee-ə-STAY-sis) is the state of steady internal physical and chemical conditions maintained by living organisms. This is the condition of optimal functioning for the organism and includes many variables, such as body temperature and fluid balance, being kept within certain pre-set limits (homeostatic range). often prefixed with hyper- and hypo-, respectively such as hyperthermia and hypothermia or hypertension and hypotension 1cf17a0457

In the US, hypothyroidism and hyperthyroidism were respectively found in 4.6 and 1.3% of the >12y old population (2002). 1cf17a0457 Agents that enhance ovarian activity can be classified as either gonadotropin releasing hormone, estrogen antagonists or gonadotropins. 1cf17a0457 Abnormal thyroid function tests without any clinical symptoms (subclinical hypothyroidism or subclinical hyperthyroidism). 1cf17a0457

Pituitary gland In humans, the pituitary gland is located at the base of the brain, protruding off the bottom of the hypothalamus. The pituitary gland and the hypothalamus control much of the body's endocrine system. increased (hyper) secretion of one or more of the hormones normally produced by the pituitary gland Hypopituitarism, the decreased (hypo) secretion of The pituitary gland or hypophysis cerebri is an endocrine gland in vertebrates. 035 oz) in weight on average, and about the size of a kidney bean. 018–0. 5–1 gram (0. It is seated in part of the sella turcica, a depression in the sphenoid bone, known as the hypophyseal fossa. The human pituitary gland is oval shaped, about 1 cm in diameter, 0 1cf17a0457

In some types, such as subacute thyroiditis or postpartum thyroiditis, symptoms may go... 1cf17a0457

List of medical mnemonics A mnemonic is any technique that assists the human memory with information retention or retrieval by making abstract or impersonal information more accessible and meaningful, and therefore easier to remember; many of them are acronyms or initialisms which reduce a lengthy set of terms to a single, easy-to-remember word or phrase. and T alcoholics) Endocrinopathies – hypo-/hyper-cortisol, hypoglycemia Acute vascular – hypertensive encephalopathy, septic hypotension Toxins and Drugs This is a list of mnemonics used in medicine and medical science, categorized and alphabetized 1cf17a0457

Cytosines in CpG dinucleotides can be methylated to form 5-methylcytosines. Enzymes that add a methyl group are called DNA methyltransferases. In mammals, 70% to 80% of CpG cytosines are methylated. Methylating the cytosine within a gene can change its expression, a mechanism that is part of a larger field of science studying gene regulation that is called epigenetics. Methylated cytosines often mutate to thymines. 1cf17a0457 Ultrasound is composed of sound waves with frequencies greater than 20,000 Hz, which is the approximate upper threshold of human hearing. Ultrasonic images, also known as sonograms, are created by sending pulses of ultrasound... 1cf17a0457 Initial workup for delayed puberty not due to a chronic condition involves measuring serum FSH, LH, testosterone/estradiol, as well as bone age radiography. If it becomes clear that... 1cf17a0457 It is possible to restore ovulation using appropriate medication, and ovulation is successfully restored in approximately 90% of cases. The first step is the diagnosis of anovulation. The identification of anovulation is not easy; contrary to what is commonly believed, women undergoing anovulation still have (more or less) regular periods. In general, women only notice that there is a problem once they have started trying to conceive. 1cf17a0457 Structural abnormalities, most commonly a goiter (enlargement of the thyroid gland) 1cf17a0457

Fertility medication For women, fertility medication is used to stimulate follicle development of the ovary. Reproductive Biology and Endocrinology. There are very few fertility medication options available for men. LH in women with hypo-response to controlled ovarian stimulation: a systematic review and meta-analysis". 17 Fertility medications, also known as fertility drugs, are medications which enhance reproductive fertility 1cf17a0457

Medical ultrasound In diagnosis, it is used to create an image of internal body structures such as tendons, muscles, joints, blood vessels, and internal organs, to measure some characteristics (e. Sonography using ultrasound reflection is called echography. colors: green for continuous hyper-enhancement (contrast uptake higher than healthy tissue one), blue for continuous hypo-enhancement (contrast uptake Medical ultrasound includes diagnostic techniques (mainly imaging) using ultrasound, as well as therapeutic applications of ultrasound. The practice of examining pregnant women using ultrasound is called obstetric ultrasonography, and was an early development of clinical ultrasonography. The visual image formed using this technique is called an ultrasonogram, a sonogram or an echogram. , distances and velocities) or to generate an informative audible sound. g. The usage of ultrasound to produce visual images for medicine is called medical ultrasonography or simply sonography. The machine used is called an ultrasound machine, a sonograph or an echograph. There are also transmission methods, such as ultrasound transmission tomography 1cf17a0457

Temperature charting is a useful way of providing early clues about anovulation, and can help gynaecologists... 1cf17a0457 Hormones secreted from the pituitary gland help to control growth, blood pressure, energy management, all functions of the sex organs, thyroid gland, metabolism, as well as some aspects of pregnancy, childbirth, breastfeeding... 1cf17a0457 During the first two years after menarche 50% of the menstrual cycles could be anovulatory cycles. 1cf17a0457 Treatment decision-making involves four major factors: efficacy, burden of treatment (such as frequency of injections and office visits), safety, and financial costs. 1cf17a0457

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