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MEDICINES AFFECTING METABOLISM

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Abstract: The endocrine system plays an important role in the body. The internal secretory glands that enter it produce biologically active substances - hormones during their activity. They participate in and control various physiological processes of the body necessary for life. More precisely, the central nervous system, with the help of the hormones of these internal secretion glands, ensures the normal passage of various physiological processes in the body. This article provides information about drugs that affect metabolism.

Key words: Endocrine system, drugs, hormones, pathological conditions, suspension.

Thyroid hormones increase metabolism, in which oxygen consumption by tissues increases, body temperature rises. The breakdown of proteins, carbohydrates and fats accelerates, the amount of cholesterol in the blood decreases. Tachycardia (rapid heartbeat) is observed due to the increased effect of thyroid hormones adrenaline. These hormones are also involved in controlling the growth and development of the body. They participate in the formation of the brain, bone tissue and some organs. If these hormones are lacking, children develop cretinism. In this case, the child lags behind in terms of mental and physical development. In adults, metabolic processes slow down, work capacity decreases, apathy, frustration, edema, heart failure are observed. This pathology is called "myxedema" disease. In medical practice, the following preparations of thyroid hormones are used: thyroxine, triiodothyronine hydrochloride, thyroidin. L Thyroxine disodium salt is usually administered orally, and in some cases intravenously. The effect of thyroxine develops slowly, reaches a high level after 8-10 days and lasts for several weeks. When thyroxine is administered once, an increase in basic metabolism is observed for 2-4 weeks. The effect of triiodothyronine hydrochloride develops quickly, reaches a high level after 24-48 hours and persists for several days. It has a 3-5 times stronger effect on the main metabolism than thyroxine. The drug is given to drink. Thyroidin

consists of dried bovine thyroid gland. The thyroid gland stores a mixture of hormones. Thyroid hormones are mainly given in hypothyroidism, cretinism and myxedema. When the dose of these drugs increases, excessive excitability, sweating, tachycardia, tremors, and a decrease in body weight are observed.

A drug is a substance used to treat or prevent disease. Any medicine is tested on animals and observed in clinics before it is used on humans. Medicines are prepared in chemical and pharmaceutical plants from synthetic substances, plant, animal or microbiological products, and some perishable medicines are prepared in pharmacies. Medicines are of different types, liquid (decoction, tincture, solution, suspension, etc.), soft (ointment, liniment, cream, paste, etc.), solid (drops, tablets, dragees, granules, etc.) and ampoules for separate injection purposes. is issued in the case of. It is known that the pituitary gland has secretory and secretory functions. The excretory function is defined by the production of enzymes involved in the digestion of food, while the incretory function is related to the production of hormones by the cells of the islets of Langerhans, located in the gland. The hormone insulin is produced by β cells, and glucagon is produced by α cells. The most important of these is the hormone insulin. Its production, first of all, disrupts carbohydrate and fat metabolism, and diabetes develops. The main effect of insulin is aimed at carbohydrate metabolism, which it controls. In addition, it indirectly affects the metabolism of other substances. As a result of the pharmacological effect of insulin: - the amount of sugar (glucose) in the blood decreases due to its accumulation in the form of glycogen in tissues (mainly, the liver). The formation of glucose from fat and proteins is inhibited; — the entry of glucose in the blood into tissue cells and its consumption is ensured; — formation of partially oxidized substances (ketone bodies) formed as a result of metabolism is reduced and oxidation is accelerated; - protein and fat synthesis increases. In the mechanism of action of insulin, it is considered to be of great importance that it ensures the passage of glucose through the membrane of tissue cells and its consumption. Due to various reasons (hereditary factor, alimentary - food factor, hypodynamia - lack of movement, nervous factor, etc.) as a result of insufficient production of insulin, metabolism, especially carbohydrate metabolism, is disturbed. The entry and consumption of glucose into tissue cells and the transfer of glucose to glycogen are reduced. The amount of sugar in the blood increases (hyperglycemia), the production of glucose from proteins and fats increases. A certain amount of glucose in the blood causes it to be excreted in the urine (glucosuria). Although insulin is synthesized, in medicine it is extracted from the pancreas of slaughtered cattle (including pigs) by a much cheaper method. Later, human insulin was obtained by genetic engineering.

Diet plays an important role in the treatment of patients with diabetes. In the mild form of the disease, dieting is sufficient. In moderate and severe cases, insulin and long-acting drugs are used. They include protamine - m x insulin suspension, crystalline suspension, zinc insulins and others. Their effect can be up to 24-40 hours. These are sent once a day or once every two days. These drugs are not used in hyperglycemic coma. Sulfanylurea products. Butamid, tolbutamid, chlorpramide and others are used from sulfonylurea products of the 1st generation. They stimulate pancreatic β-cells when their activity is reduced and increase insulin production. Increases the sensitivity of glucoreceptors of p-cells, slows the conversion of liver glycogen to glucose, increases the activity of hormones and receptors, and reduces the amount of sugar in the blood. Butamide is well absorbed when administered enterally. The maximum amount in the blood appears in 3-4 hours. Hypoglycemic effect lasts up to 12 hours. Butamide is metabolized (oxidized) in the liver and excreted through the kidneys. In practice, it is widely

used in mild forms of the disease. It can cause side effects (dyspepsia, allergic reactions, sometimes leukopenia, thrombocytopenia, etc.).

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