

# МЕДИЦИНА, ПЕДАГОГИКА И ТЕХНОЛОГИЯ: ТЕОРИЯ И ПРАКТИКА

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Том 2, Выпуск 11, Ноябрь

## CAUSES AND COMPLICATIONS OF DIABETES

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**Abstract:** This article provides information about diabetes, its causes, and the changes and symptoms that occur in the cardiovascular system due to this disease. This disease develops slowly and suddenly leads to severe complications. In the beginning, symptoms such as dry mouth, thirst and weight loss are not obvious. The patient is more disturbed by weakness, fatigue and thirst. Despite the high level of glucose in the blood, in type 2 diabetes, the amount of acetone cells in the blood increases, and its appearance in the urine is very rare. Such patients can live without taking insulin. they can use diet, exercise, and blood sugar-lowering medications[1,2].

**Keywords:** endocrine diseases, insulin, hyperglycemia, genetic factors, somatostatin, glucose, compensation, subcompensation, decompensation, parches.

**Introduction.** Diabetes mellitus is the most common chronic disease in developed countries today. The number of people suffering from this disease is increasing from year to year in all countries of the world. This disease is one of the endocrine diseases, which develops as a result of the destruction of beta cells that produce the hormone insulin, as well as as a result of autoimmune damage to the pancreas. Because when beta cells are damaged, insulin is not produced in sufficient quantities. Beta cells are cells that do not regenerate[3,4]. As a result of severe stress, excessive stress, severe fear, these cells are inhibited and do not regenerate. As a result, carbohydrate metabolism is disrupted, the conversion of glycogen to glucose is accelerated, and the absorption and utilization of glucose by tissues decreases, and it accumulates in the blood, as a result of which sugar increases. in the blood, it is excreted in the urine, and the patient becomes very obese. Excess sugar in the blood damages blood vessels and capillaries - that is, their walls become more fragile. As a result, vision decreases, the image becomes blurry. It should be said here that the problem can manifest itself in one or both eyes at the same time. At the same time, if diabetes is not treated, vision may be lost over time. Some diseases, such as rubella, viral hepatitis, mumps, as well as some drugs, nitrosamines and toxic pesticides, can cause gastritis. leads to the destruction of the gland, and if more than 80% of its cells are damaged, diabetes develops. As a result, there is a constant increase in the level of glucose in the blood - hyperglycemia. Complications from this disease can be fatal, which is called hyperglycemic coma[5,6].

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Diabetes can be severe, mild or moderate. In addition, two main types are distinguished. Type 1 diabetes is insulin-dependent and occurs in young children and people under 35 years of age. With this type, the natural production of insulin completely stops, so these patients need constant insulin injections. This type is manifested by the following symptoms: nausea, vomiting and sudden weight loss, and in children, difficulty urinating at night. Patients with this type may develop life-threatening symptoms. Therefore, patients need urgent help. Type 2 is not insulin-dependent. It occurs mainly in people over forty and fifty years of age. Because of this, the sensitivity of tissues to insulin is impaired. As a result, glucose absorption by tissues becomes difficult and insulin injections are not required. In this case, metabolic processes are disrupted and immunity decreases. As a result of this long-term process, bone tissue is destroyed, that is, osteoporosis develops. Approximately ninety percent of all patients have type 2 diabetes. Also, symptomatic (secondary) diabetes occurs due to other diseases (for example: pancreatic diseases). It is also caused by long-term drug use and genetic pathologies. It also occurs as a result of poor nutrition in people living in tropical regions. Even pregnant women can develop diabetes. and this is called gestational diabetes[7-11].

We diagnose this disease when the blood sugar level exceeds 6.5 mmol/l. Normally, the blood sugar level is 5.5 mmol/l or 80-120 mg%. In diabetes, its level can be 150-250 mg% or more. When the blood sugar level is normal, it is excreted through the kidneys in the urine. it is not excreted, that is, there is absolutely no sugar in the urine of a healthy person. If the blood sugar level exceeds 140-150 mg%, sugar can be detected in the urine. Since the carbohydrates in the food you eat are not absorbed by cells and tissues, they are excreted in the urine, which is why a person quickly becomes hungry and eats quickly. When the fat reserves under the skin break down into fatty substances and turn into glucose, even the proteins and fatty substances in the cells and tissues turn into glucose, enter the blood and are excreted in the urine. As a result, the patient loses weight and becomes weak. and working capacity decreases. Depending on the level of glucose in the blood, it is characterized as follows. Combined diabetes - the patient does not complain about his health, the blood sugar level on an empty stomach does not exceed 4 mmol / l, and during the day it does not exceed 9 mmol / l. Subcompensated diabetes does not show signs, but the blood sugar level is from 8 mmol / l to 11 mmol / l. Decompensated diabetes is characterized by complaints of poor condition of the patient, symptoms of the disease are detected, the blood glucose level is above 11 mmol / l. It should also be clear to us that the origin of this disease depends on other factors besides the endocrine system. These factors include: overweight,

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## Major Complications of Diabetes

### Microvascular

#### Eye

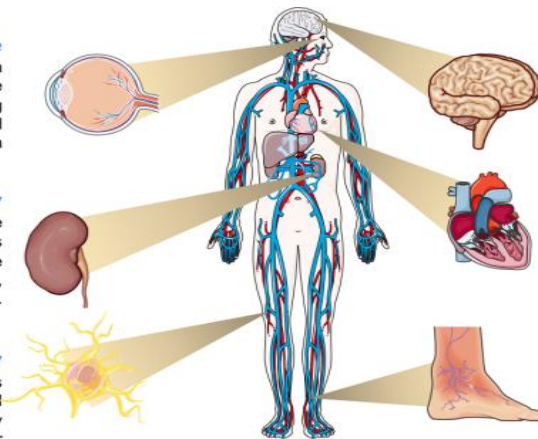
High blood glucose and high blood pressure can damage eye blood vessels, causing retinopathy, cataracts and glaucoma

#### Kidney

High blood pressure damages small blood vessels and excess blood glucose overworks the kidneys, resulting in nephropathy.

#### Neuropathy

Hyperglycemia damages nerves in the peripheral nervous system. This may result in pain and/or numbness. Feet wounds may go undetected, get infected and lead to gangrene.



### Macrovascular

#### Brain

Increased risk of stroke and cerebrovascular disease, including transient ischemic attack, cognitive impairment, etc.

#### Heart

High blood pressure and insulin resistance increase risk of coronary heart disease

#### Extremities

Peripheral vascular disease results from narrowing of blood vessels increasing the risk for reduced or lack of blood flow in legs. Feet wounds are likely to heal slowly contributing to gangrene and other complications.

The above information suggests that diabetes mellitus is a metabolic syndrome, so to speak, this syndrome can be called a complex disaster, since it consists of four terrible diseases: hypertension, coronary heart disease and type 2 diabetes. and obesity, that is, becoming very fat, this is called abdominal obesity. In addition, arterial pressure rises and becomes less than 130/85 mercury column. This disease is increasingly developing in modern times, and it leads to a lot of bad consequences. Causes Hypodynamia, that is, inactivity, is considered the scourge of modern civilization. Frankly speaking, we are lazy, we spend most of our time on the sofa and car seats, we watch TV for hours, sit at the computer and do not raise our heads. play, this is the case at work. We have almost stopped walking, we go to the nearest place by bus or car. In addition, the number of fast, dry foods is increasing every day. Doctors often associate the development of metabolic syndrome with skipping breakfast and walking on an empty stomach. This leads to a decrease in blood glucose levels, which results in insulin resistance. Well, since the situation has reached this point, the question arises: what to do now, is it possible to correct the situation? This requires us, most importantly, to try to treat metabolism without medication, give up bad habits, walk more, eat 5-6 times a day less often, eat less sweets, pasta, refined rice. ,cookies are very useful. Mineral water is also very useful, but it should be consumed in moderation.

**Conclusion.** According to the World Health Organization, 30% of the world's population suffers from obesity. Of these, 14.9% are men, 16.8% are women. 44% of them are over 50 years old. The incidence of obesity is increasing by 10% every 10 years. As a result, diabetes develops, diabetes is diagnosed in one in ten people in the world. Type 2 diabetes is a common disease. 84 million people have the second type



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of the disease. 65-70% of children born to both parents with diabetes have diabetes. Causes of the development of the disease. 15% of the population of our republic suffer from diabetes, they regularly eat diet foods, take medications that lower blood sugar levels. This chronic, long-term disease damages important organs, tissues and blood vessels and shows them its complications. This is primarily manifested in the functioning of the nervous system. The legs and arms ache, itch and become hot. Pain perception decreases, complications of the disease called polyneuropathy increase. It disables kidney function, as a result of which the kidneys cannot perform their functions. Vision deteriorates, skin ulcers develop into serious diseases due to a decrease in the body's immunity, and dark spots appear on the legs. It is clear that diabetes is considered dangerous due to its complications.

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