

# CAUSES , SYMPTOMS OF THE DEVELOPMENT OF DIABETES MELLITUS IN GANT

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***Abstract:** At present, the hereditary predisposition to diabetes is considered proven. In Type 1 diabetes, genetic heterogeneity is observed, which means that the disease can be called by different gene groups. As a laboratory-clinical indicator in the detection of Type 1 pathology, the detection of antibodies to  $\beta$ -cells of the pancreas in the blood serves. The nature of the transition from generation to generation has not been fully studied. The pathogenetic basis of diabetes depends on the type of disease. There are two types that are radically different from each other. Although modern Endocrinology calls the classification of the disease conditional, it is important to establish a treatment strategy for each of its types.*

**Key words:** Glucose, insulin, diabetes, langergans islands, feoxromocytoma, hyperthyroidism, hepatitis,

To the main causes of the development of the disease:

1. Heritage. Of course, the disease does not develop without factors affecting it, but the predisposition is higher.
2. Obesity. Excess weight leads to the formation of diabetes of the second type.
3. Diseases. Diseases that cause damage to  $\beta$ -cells responsible for the production of Insulin. These include pancreatitis, pancreatic cancer, other diseases of the endocrine glands.
4. Viral infections-measles, chickenpox, infectious hepatitis and other diseases. These infections contribute to the development of diabetes. Especially for people in the risk group.
5. Irritability, stress. It is recommended to avoid Stress, irritability.
6. Young. With an increase in age, the probability of developing diabetes doubles every ten years.

This can be caused by the following factors in the origin of the disease

- \* Feoxromocytoma — a tumor of the adrenal gland, as a result of which a lot of hormones are produced that affect insulin;
- \* Hyperphaemia of the adrenal glands (hypercorticism);
- \* Hyperthyroidism;
- \* Cirrhosis of the liver;
- \* Violation of sensitivity to carbohydrates;
- Transient hyperglycemia-a temporary increase in the amount of glucose in the blood.

### Pathogenesis

In the pathogenesis of diabetes, two main chains are distinguished:

1. Insufficient production of insulin by endocrine cells of the pancreas in sufficient quantities.
2. Violation of the interaction of insulin with cells of the tissues of the body (insulin resistance). To the reasons for this:
  - o changes in the structure or decrease in the amount of specific receptors for insulin;
  - o insulin changes in its structure;
  - o disturbance of the transmission of signals from receptors to organelles within cells.

As already mentioned above, diabetes can pass from parents to children. If one of the parents is infected with this disease, the probability of his procreation is 10% for the 1st Type, 80% for the 2nd type.

### Pancreatic insufficiency (type 1 diabetes)

The old name is insulin-dependent diabetes. Often young people, those under 40 years old, suffer from underweight people. The disease is severe, insulin is given for treatment. The initial process in the development of diabetes of this type is a massive disruption of pancreatic endocrine cells (langergans islets). This is due to a sharp decrease in the amount of insulin in the blood.

Violations of cells can be caused by viral infections, oncological diseases, pancreatitis, toxic damage to the pancreas, stressful situations, various autoimmune diseases.

In Man, this disease will be genetically determined and given a predisposition by the defect of a number of genes located in the 6 chromosome. These defects negatively affect the body's ability to regenerate autoimmune aggression and  $\beta$ -cells, which are present in the cells of the pancreas.

As well as provocative factors, a long-term hypoxia of the cells of the pancreas, rich in carbohydrates and fats, and a diet with a low in protein can also serve. This leads to a decrease in the secretory function of cells and, eventually, their destruction. After the massive destruction of cells, their mechanism of autoimmune damage is activated.

Diabetes can not be completely cured from 1-th type, but in some cases the activity of the gland is normalized and the disease does not disturb the excess, if the diet is adhered to. It requires constant intake of artificial insulin.

Since Insulin breaks down in the gastrointestinal tract, it is introduced only by injection. Adhering to a strict diet, it is necessary to completely exclude from the diet light digestible carbohydrates (sugar, sweets, fruit juices) from the diet.

Extrapancreatic insufficiency (type 2 diabetes)

The old name — insulin-dependent diabetes. Most often, older adults, suffering from obesity (the main risk factor, an excess of body weight is noted in 80% of patients), people over the age of 40 are ill.

Receptors can not interact with the hormone as a result of a change in its structure or a decrease in the number. Also sometimes it is possible to change the hormone in its structure (genetic defects).

In addition to obesity, the risk factors for Type 2 diabetes include:

Old age; Smoking; • Alcohol consumption; Arterial hypertension; Excessive feeding on the broom; Low-spirited lifestyle.

It is proved to be a hereditary predisposition to type 2 diabetes. This is indicated by the fact that the presence of the disease in homozygous twins is 100% compatible.

In the treatment of the disease, insulin is not always needed. Only a qualified doctor can prescribe a treatment regimen.

First of all, such patients are prescribed a diet. It is important to follow the doctor's recommendation. It is recommended to gradually, from 2-3 kg per month, until the body weight comes to normalization. When not adhering to the diet, drugs that lower the level of sugar in the blood, in the most severe cases, insulin is prescribed.

***1-table. In a Normal and pathological condition,  
the amount of glucose in the blood.***

State of carbohydrate metabolism		The amount of glucose
Standard	When hungry	3,3-5,5 mmol/l
	2 hours after carbohydrate intake	<7,8 mmol/l
Sensitivity change	When hungry	5,5-6,7 mmol/l
	2 hours after carbohydrate intake	7,8-11,1 mmol/l
In diabetes	When hungry	>6,7 mmol/l
	2 hours after carbohydrate intake	>11,1 mmol/l

## SIGNS AND SYMPTOMS OF THE DISEASE

symptoms of the disease develop gradually and begin to manifest slowly. Basically, there is a high level of glucose in the blood.

When the disease begins to appear in patients, the following symptoms are noted:

- Constant dryness of the mouth; unsatisfactory thirst; increased daily excretion of urine; decreased body weight or increased suddenly; strong skin itching and dryness; the appearance of purulent wounds on the skin and soft tissues; muscle weakness and excessive sweating;
- Difficult healing of any wounds. It is recommended to go to the doctor when these symptoms occur. The disease can leave serious complications and lead to a coma.

- Complications of the disease can be attributed to the following, for example: impaired vision; headache and a decrease in mental activity; heart pain, enlarged liver; pain in the legs and a violation of gait; decreased sensitivity of the skin, especially in the legs; the appearance of ulcers; increased blood pressure;

Swelling of the face and feet; the smell of acetone from the patient; dizziness.

Different levels of qaeab disease in the body the amount of sugar is varied

The first method for the diagnosis of diabetes and its dynamic assessment during treatment is the study of glucose (sugar) levels in the blood. Treatment and subsequent action are assigned depending on the same indicator.

Experts have compiled a table of specific visualizers in the process of studying the disease. These quantity indicators are necessary not only for endocrinologists, but also for patients.

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