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E-Book

Competent Treatment a Diabetes of 1 Type at Children - Psychosomatic and an Infectious Disease. Part-1

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"We cannot solve a problem, using the same mentality which we have created them".

A. Einstein

Ancient Greeks knew about this illness still, however believed, that the syndrome is connected with a pathology of "a water incontinence" on the basis of one of the brightest symptoms of illness - unquenchable thirst and superfluous allocation of urine. Eventually, representation about a syndrome changed - in 17 - 18 centuries it already connected in passing, with a glucose incontinence, with illness of "sweet urine".

Only to the beginning of 20 centuries true aetiologies have been revealed - as the pioneer of an essence of a problem Edward Albert Sharpej-Shefer who has defined has acted, that illness directly depends on a lack then still the unknown substance allocated with islets Langerhans in a pancreas, and has excellent confirmed its theory Frederik Bunting, received well-known hormone and put it into practice.

Since 1920th years rapid development of manufacture of insulin though the mechanism and differences between diabetes types have been proved by two ten years later has begun - final "watershed" was established by Harold Persival Himsvort, having created a paradigm about absolute insulin insufficiency of the first type and relative insulin insufficiency of the second type.

To begin preventive maintenance of illness is easier and few expenses demand.

Disease of children of a diabetes of 1 type 1 in Finland one of the highest in the world: 64 new cases on 100 000 children till 15 years are annually registered. According to the American diabetic association, in the USA about 25,8 million adults and children are sick of a diabetes. Approximately 25% from them require the certain form Insulin therapy. The author offer new methods of treatment for children.

Pre-illness condition on the pancreas (author's workings out):

1. Sleepiness in the afternoon
2. problems with memory
3. fast weariness (after games, exercises and walking)
4. Fixation a sight in one point
5. Unstable appetite
6. Aspiration there is a sweet
7. Tendency to defects of a connecting fabric (to omission of bodies, myopathies).

It gives possibilities for a further researches of patients. Early diagnostics is important for early preventive prophylactic illnesses.

Diabetes of I type

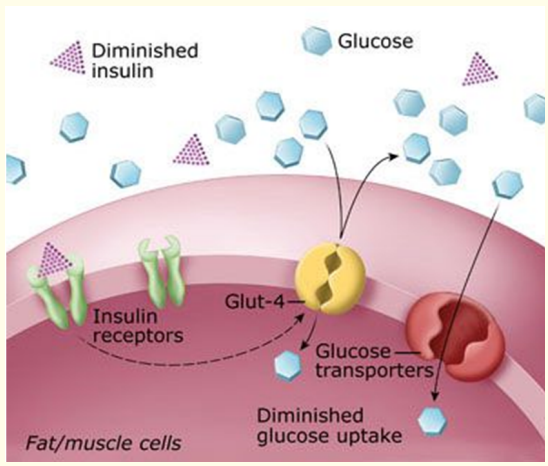

Figure 1

Disease develops as a result autoimmune destruction Insulin formation pancreas cages, as the basic damaging factor act T-cytotoxic lymphocytes. Active a role in development insulin's play macrophages, which are a powerful source proinflammatory cytokines (IL-1, FNOa, major histocompatibility complex (MHC) and proteolytic enzymes. Influence of the cytotoxic factors produced by T-cages and macrophages, on pancreas B-cages leads destruction islets Langerhans's. Autoantigens, developed to insulin formation to cages through system activation complement's and Antibody the dependent cellular cytotoxicity (ADCC) is carried out by NK-cages and eosinophils. Its object is the cage bearing an alien antigen that leads destruction insulin islets. At achievement of critical level of the maintenance of B-cages in a pancreas (less than 10%) appear clinical symptoms of a diabetes. The manifestation it is connected with deficiency of insulin in an organism and infringement thereof all kinds of a metabolism, first of all, the carbohydrate. Infringement of exchange processes, in turn, leads to accumulation of toxic products and a poisoning with them of an organism. Progressing of illness or its recourse is defined by balance between destruction processes insulin formation cages and their restoration.

There are complaints to dryness in a mouth, thirst, plentiful urination the raised appetite or its decrease, weakness, a weight loss, a skin itch, infringement of a dream and working capacity decrease. Quite often the diabetes proceeds asymptomatic and casually comes to light at prophylactic medical examination in connection with occurrence glycosuria. At a diabetes metabolism and function infringements practically all bodies and systems are observed. Especially expressed changes concern cardiovascular (micro-and macroangiopathic) and operon-impellent systems (exchange arthritis's, an osteoporosis of bones of finiteness's, vertebras), kidneys, nervous system (polyneuritis, a neuralgia). Defeat of vessels of a brain is capable to lead to infringement of brain blood circulation, a thrombosis of vessels, focal and diffuse to hemorrhages, apoplectic to a coma and death. Infectious defeats of various bodies and fabrics are often observed.

Islets Langerhans's produce:

1. Alfa-cages: Contain glucagon (15 - 20%) - increases blood sugar.
2. Beta-cages: Secret insulin (65 - 80%) - reduce blood sugar.
3. Delta-cages: Their quantity of 3 - 10% - secret somatostatin (oppresses function of many glands internal secretions).
4. Software-cage 3 - 5%: Secret pancreatic polypeptide - brakes formation of pancreatic juice and strengthens allocation of gastric juice.
5. Epsilons-cages - (to 1%): Secret ghrelin - a hormone of hunger which strengthens appetite.

Frustration as cellular, and humoral immunity come to light

In peripheral blood lowered maintenance T-lymphocytes, T-helpers, against the raised maintenance of T-active cages (CD25 +, HLA-DR +), increases of concentration of gamma interferon is defined. In a pancreas it is observed intensive infiltration islets Langerhans's lymphocytes. Histologic research of a pancreas of the persons who have died soon after an establishment of the diagnosis a diabetes, has shown, that in the amazed islets there is a progressing destruction of B-cages both their the subsequent fibrosis and an atrophy. With the help monoclonal antibodies it is established, that infiltrating islets lymphocytes concern subpopulation of T-killers (CD8 + cages) and Nk-cages. Antibodies to antigens of B-cages of a pancreas are found out. They are defined in 85 - 90% of cases at again revealed patients if from the moment of diagnosis statement has passed no more than 4 weeks, in 50% of cases at patients with duration of disease (diagnosis statement) more than 1 month; At patients with prescription of a diabetes more than 1 year - in 10 - 20% of cases. Produced autoantibodies show specificity to components of cytoplasm of B-cages, fiber from m. of m. 64 KD a plasmatic membrane and to insulin. Last kind of antibodies comes to light practically at all patients receiving injections of insulin. As a rule, autoantibodies belong to the class IgG, is more rare IgM and IgE, that speaks about a prevalence of inflammatory infectious process.

OxPTM-INS - it is possible to consider as a new biomarker for early revealing of a diabetes of 1st type at children.

Results have shown presence autobodies at least to one of oxPTM-INS at 91,3% of children with a progressing diabetes of 1st type. OxPTM-INS-Ab accompanied presence autobodies to decarboxylases Glutamic acids, Tirozinfosfotaza's, native to insulin or a zinc carrier β-cages of a pancreas at 65,2; 56,5; 38,9 and 33,3% of children with a progressing diabetes of 1st type accordingly. Besides, oxPTM-INS-Ab were present at 17,4; 26,1; 38,9 and 41,6% of children with a progressing diabetes of 1st type, with negative result of the analysis of revealing autobodies to decarboxylases Glutamic acids, Tirozinfosfotaza's, native to insulin or a zinc carrier β-pancreas-cages accordingly.

The given research has shown, that auto-reactivity to oxPTM-INS can be a distinctive marker of development of a diabetes of 1st type for patients of early age, irrespective of presence of others autobodies to islet to fibers of a pancreas. It specifies in a potential role oxPTM-INS-Ab in quality predictor a diabetes of 1st type.

Presence auto-reactivity to oxPTM-INS prior to the beginning of clinical display of a diabetes of 1st type will be co-ordinated with the assumption, that infringement of an oxidation-reduction condi-

tion is characteristic for an early stage of disease. Thus at patients infringement antioxidant functions and more is early enough marked than in 3 times level peroxy oxidations lipids, irrespective of the control of level of glucose in blood raises.

According to the received results authors define predictive value of presence of antibodies to decarboxylase's Glutamine acids and native to insulin as low enough while presence autobodies to Tirozinfosfotaza's shows rather specific communication with progressing of a diabetes of 1st type.

Thus, oxPTM-INS it is possible to consider as a new biomarker for early revealing of a diabetes of 1st type at children (Strollo R., Vinci Ch., Napoli N., 2017).

The author of the book can add, that my researches on expediency of treatment are justified by antioxidants, zinc preparations (the note of the author).

The reasons and risk factors:

1. Provokers of start of a diabetes of 1 type - infections (viruses Koksaki, an epidemic parotitis, flu, adenovirus, Rubella, fetal syndrome of Rubella's and others, they possess tropism's to in to cages Langerhans's of a pancreas). Occurrence in blood HLA - antigens of several loci genome's B8, B15, increases risk of development of illness many times over. Loci are located on a short shoulder of a chromosome 6.
2. Vaccines - a virus infection at small children and teenagers.
3. Stress - start autoimmune the mechanism - illness original cause - a lot stress at parents of the child - it is frequent at the father in conception when there is a bookmark of bodies, their power. I could investigate this mechanism.
4. Children's, persons till 30 years.
5. From 30 till 40 years - the risk is on a diabetes 1 and 2 types.
6. Poisonings from medicines - stimulators an alpha-adrenoceptors, Diazoxide, Defenin, Nicotinic acid.

Diuretic preparations, antinarcotics, psychotropic preparations and preparations for treatment of a human immunodeficiency virus (HIV), can lead to deterioration of functioning of beta cages or break insulin action.

Pentamidine: The preparation appointed for treatment of a pneumonia, can increase risk of development of a pancreatitis, damage of beta cages and a diabetes.

Glucocorticoids: Steroid hormones which are chemically similar on developed cortisol, can worsen insulin action. Glucocorticoids are used for treatment of inflammatory diseases, such as rheumatoid an arthritis, an asthma, lupus and ulcer coli.

Some researches show, that high consumption nitrogen chemical substances, such as nitrates and nitrites, can increase risk of development of a diabetes.

Arsenic also now is actively studied about possible communications with a diabetes.

Toxic substances: Many connections nitrosoureas and others nitro-or amine containing substances selectively damage beta-cages.

Medical products

1. The antineoplastic preparation Streptozotocin destroys beta cages, causing fast accumulation of free radicals of oxygen. Streptozotocin apply to modelling insulin dependent a diabetes at animals.
2. Hypotensive means Diazoxide (it apply also to suppression of secretion of insulin at insulinoma's or nezidioblastoz's) in the big doses can cause destruction of beta-cages.
3. Azo dye Alloxan operates the same as Streptozotocin. It too apply to modelling insulin dependent a diabetes at animals.
4. Means for deratization - Vacor (N-3-piridil-metil-N'-nitrofenilmochevina) - is extremely toxic for beta cages. Even small amounts Vacor cause heavy insulin dependent a diabetes with the extremely a stable current.
5. The use of alcoholic drinks on a hungry stomach not simply harmfully, and can even be dangerous to a life, especially among diabetics.

At the use of alcohol the organism in 4 times increases insulin manufacture. At the alcohol maintenance in blood in 0,4 promille blood circulation in a pancreas becomes more active in 4 times that means instant processing of sugar as a result of quadruple increase in development of insulin, in turn sugar level sharply decreases in blood.

As a result of sharp decrease in level of sugar the person can have a specific semiology: it becomes covered cold then, palpitation becomes frequent, the person difficultly thinks and can run into an aggressive condition. It is very strong stress for an organism.

The highest risk interfaced to alcohol, at diabetics as sharp differences of level of sugar in blood for such patients are huge loading and stress for an organism. The direct interrelation between splitting of insulin and presence of alcohol at blood explains, why it is necessary for an organism more than food when it is necessary to process alcohol: there is a shortage of sugar. This circumstance explains, why after the drunk there is a sensation of hunger.

Even low level of air pollution can represent threat for health.

The analysis of concentration of disperse particles which can get into lungs and a blood-groove has been carried out, promoting development of malignant new growths, infringements of brain blood circulation, diseases of kidneys and hearts. At a diabetes air pollution reduces development of insulin and starts inflammation reaction, interfering with glucose transformation to blood in the energy necessary for maintenance of health.

Now in the USA safe for the population the pollution threshold makes 12 microgram on air cubic metre. The risk of development of a diabetes is raised at 2, 4 micrograms on air cubic metre.

Positive factors

According to the research published in magazine of the American medical association if the woman nurses not less than year at it the risk of development of a diabetes decreases for 15% within the next 15 years of a life. Thus, feeding by a breast gives the chance protection against a diabetes of 1 type.

Organism of one third of 1 type sick of a diabetes in a condition to develop insulin

The results of research published in magazine "Diabetes Care", testify that measurable insulin level is present almost at one third of such patients.

On the average C-peptide has been found out in blood in 29% of patients, as a by-product of synthesis of insulin. In the samples taken in three-five years after an establishment of the diagnosis, S-peptide has been found in 78% of cases at patients is more senior 18 years and in 46% causes at persons 18 years are younger. In 40 years after an establishment of diagnosis C-peptide still was present at 16% of persons with the diagnosis established at adult age, and at six percent of patients at which disease has begun at children's age.

Researchers assert, that till now preservation of ability to development of insulin at 1 type sick of a diabetes was considered as an unusual case. Now the proof is received, that these patients make a true subgroup of the diseased; the given fact also should find the reflex ion in managements on medicamentous treatment (approval insulin pumps).

New data about B-cages

Processes infiltration CD45 + cages and cytokines accompany a diabetes of 1 type. It leads to increase in a share of cages with lower granularity. This phenomenon has been most expressed at mice with a diabetes and adiposity. To 12-week at the given group of rodents normal level of glucose in blood remained, however, the share of beta cages with low granularity reached 50%. The Same subgroups of cages it was not observed at mice with a diabetes and an immunodeficiency and mice from control group.

As a result of attacks to B-cages two subgroups of beta cages are formed. The first group are those cages which perish owing to immune reaction of an organism. Cages of the second group find some lines allowing them to "be protected" from attack of immune system. Moreover, these cages are capable to return of earlier step of development that allows them to "survive" and even to be reproduced in conditions autoimmune attacks (Kevan Cherold, 2015).

Within the limits of experiment, scientists have found out, that cages with low granularity contain less insulin, than others. The high expression of genes has been found in these cages - processes in which course the hereditary information from a gene will be transformed to a functional product. The expression of genes in the found out group of cages has been connected with raised proliferation and the lowered tendency to apoptosis. Also available processes in the given group of cages were similar to the processes occurring in atem cages. At last, the increase in population of beta cages with low granularity was observed even at hyperglycemia's - a condition at which there is a loss of the parental beta cages which do not have lowered granularity.

Similar results have been received and at carrying out of experiences over human islet cages. The obtained data show behaviour of beta cages in the conditions of immune attack. Researchers managed to find out processes which allow cages to survive.

The further researches will be directed on finding out, what preparations promote increase in population of beta cages and turn them in making insulin.

Important! The proof of residual development of insulin can lower risk of statement of the erroneous diagnosis of a diabetes 2 types. It also will increase possibilities of a choice of variants of treatment.

In model on animals it was possible to stop development of a diabetes of type 1 (Thomas Burris, 2014).

In experiment it was possible to block development autoimmune the reaction causing destruction of beta cages and a diabetes of 1 type.

It was known, that the subtype helper T-cages TH17 is somehow involved in autoimmune process. That the immune cage has got phenotype TH17, two receptors - orphan the receptors connected with retinoid by acid should be activated. Researchers have applied substance SR1001 developed by them, selective return agonist these receptors which reduces their response, in model of a diabetes of 1 type on mice. At use of connection SR1001 frequency of a diabetes and insulin's at animals considerably decreased.

These results confirm great value T-helpers of cages in development of a diabetes of type 1 and specify in possibility to prevent disease development. Are necessary Immunomodulators (the note of the author).

Investigated immune cages of mice sick of a diabetes and people. They have found out two important things: immune cages perish under the influence of substance TNF-alpha and many cages do not develop own peptides, necessary for prevention autoimmune reactions.

These two supervision also have prompted treatment strategy. First, researchers stimulated development TNF-alpha at sick mice to destroy "wrong" immune cages. Such approach never was used at treatment of a diabetes of I type earlier. On the contrary, the patient antagonists TNF-alpha registered. Doctor Faustman, heading group of researches, believes, that for effective treatment of a diabetes antagonists, and agonists this substance will use further not.

The risk and terms of development of a diabetes of type 1 at children with its high risk can be estimated on time of occurrence defined autobodies.

In research TEDDY it has been shown, that at children with high risk of a diabetes of type 1 it is possible to predict its development on presence autoantigens. Work of the international group of scientists has been published in magazine Diabetologia.

All children had hereditary risk factors of development of a diabetes of type 1 (genotypes HLA-DR DR3/4, DR4/4, DR4/8 and DR3/3), that proved to be true the analysis umbilical blood. The level estimation autoantigens was made each three months in the first 4 years of a life, and then - once in half a year.

Autoantigens have appeared at children (6,5%) several years of supervision. Taking into account their type, age of detection and a diabetes debut if it has developed, authors have allocated some laws, allowing to predict disease.

First of all, sugar type 1 diabetes arose at children at whom the first revealed autoantigens contacted insulin. In this subgroup disease developed for certain at detection of the second antibody though from revealing of antibodies to a diabetes debut there could pass 20 years. At children middle age of detection of these antibodies has made of Sweden of 18 months, in the general studied population - 12 months there are less.

Type 1 diabetes developed at children, at which the first found out antibodies of a steel of an antibody to GAD65 (anti-GAD-antibodies), to the fiber located inside insulin-producing of cages. Among Swedish children they came to light on the average at the age of 2, 5 years, and in all sample - in two years.

Important! At simultaneous detection of both types of antibodies too it is necessary to expect development of a diabetes of type 1.

The heredity influences what autoantigens will be formed by the first. Can be involved and external factors. For example, after one virus infection antibodies to insulin, and after one more - to fiber GAD65 are formed.

Risk factors on other pathologies

Often at patients with a diabetes of I type develop polyendocrinopathy. Associations of a diabetes with diffuse a toxic craw, tiroiditis Hashimoto, idiopathic hypocorticism, hypoparathyroidism are observed. Antibodies in whey sick of a diabetes against a thyroid gland come to light in 3 - 4 times more often, than at children without the given pathology. The close connection between antigens histocompatibility (HLA) and insulin-dependent a diabetes is established. It is shown, that presence of one haplotypes promotes diabetes development (for example, HLA-B8), others - interferes. At 95% sick of a diabetes antigens HLA-DR3 and-or HLA-DR4 come to light. Seldom there is a diabetes at persons with HLA-DR2. Such complication of a diabetes as retinopathies', meets at patients with HLA-B15 and HLA-B8 is more often. The highest titer antibodies to insulin comes to light at persons with HLA-B15, and genotype HLA-B7 - prevents their accumulation. It gives a wide field of activity for preventive maintenance of complications and treatment of the diabetes of 1 type at children.

Last years the big attention is taken away to value of a virus infection in development of a diabetes in children. For the first time the assumption about etiologic in occurrence of this disease has been stated a role of viruses in 1964 when four cases of development of a diabetes after the transferred epidemic parotitis have

been described. In 1971 it has been informed on development of a diabetes in children with congenital measly an infection on the second year of a life. Later communication of development of a diabetes with a cytomegalovirus has been proved. All these data specify, that the starting mechanism autoimmunization an organism can be a various kind of an infection.

The diagnosis - a diabetes of I type is put on the basis of clinical symptoms of disease and the given laboratory researches: on an empty stomach - 6,1 mmol sugar in blood, at loading glucose in 2 hours - 11,1 mmol.

At any severity level of a diabetes therapy is directed on level normalisation glycemia's within days, elimination glucosuria's, But it the last century. Now it is necessary to normalise level regulator connections for cured a diabetes of 1 type at children. It is possible, considering new diagnostics and medicines.

Age features at children

All children are born with a small pancreas which doubles in sizes approximately by tenth year of a life. The basic function of this body - synthesis of insulin by beta-cages - is formed in five years. In pancreas development exchange processes occur very actively, and is elderly with 5 till 11 years at children usually diabetes symptoms are shown.

The growing organism requires carbohydrates, on papillae language it is a lot of the receptors which are responsible for sweet taste, therefore children so love sweets. A day on each kg of weight the child needs to receive 10 gram of carbohydrates, that much more exceeds requirements of the adult person.

Healthy and the lively child easily acquires carbohydrates and sugar. On the statistical, the diabetes of 1 type is observed at premature children and the teenagers testing serious physical activities. Provoke a diabetes virus illnesses and usual for children measles, Rubella, an epidemic parotitis can. The same action vaccines possess also. The premature children is impossible to vaccinate (the note of the author).

Weight of course of a diabetes depends on age, the child, the more sharply symptoms and above threat of complications is more younger. The diabetes of 1 type at children practically does not give in to full treatment, but at correct insulin support and a healthy way of life development of accompanying diseases can be reduced to a minimum.

The diabetes of 1 type arises against destruction more parts of cages of a pancreas. In blood chronic increase of glucose is marked. High sugar cause metabolism infringement. It promotes accumulation of the toxins poisoning an organism.

More often illness is diagnosed for children and persons, 35 years are younger. For disease stable increase of level of glucose in blood is characteristic. Still it is impossible to name unitary jump of sugars a diabetes. The illness arises for the various reasons.

Conditionally them divide on two big groups

The congenital diabetes is connected with infringement of a bookmark or pre-natal defeat of a pancreas. It is diagnosed in the first days after a birth of the child. Such form of disease in the absence of adequate treatment often leads to development of diabetic complications. Propensity to a diabetes of 1 type is descended, but risk for the child not the big. Scientists gradually reveal combinations of genes which raise risk of this disease.

"Unsuccessful" genes are more extended among the people of white race living in Europe and the North America. Also genes which presumably protect from diabetes insulin-dependent are found out.

Norm of sugar of blood at children till 14 years 3, 3-5, 55 mmol/l.

Important! Is at officials from medicine and at doctors the tendency - to reduce levels of norm of sugar of blood, but it gives illness hyperdiagnostics. Children wish to make patients since the childhood. It is assured, that it is a bad invention.

Risk factors is the big weight at a birth. At the "athletes" who were born with weight from above 4,5 kg.

At whom from parents the father has disease risk the highest when mother gives birth till 25 years and is more senior 25 years - the risk of a diabetes of 1 type decreases.

Often diabetes of 1 type develops after the person has transferred a virus infection. The virus Rubella's often serves as "a trigger hook" for attacks of immune system to pancreas beta cages. However it is far not each person who has had been ill Rubella's, then suffers from autoimmune a diabetes. It is obvious, that genetic factors play here the big role.

Single twins have absolutely identical genes. If one of them falls ill with a diabetes of 1 type for the second risk makes 30 - 50%, but not 100% nevertheless are far. It means, that much depends on environment. For example, in Finland prevalence of a diabetes of 1 type especially high.

The got reasons of a diabetes of 1 type:

1. Traumas of area of a stomach
2. Infectious diseases
3. Autoimmune processes
4. Sharp poisonings with chemical substances.
5. Vaccination and the transferred infectious virus diseases against inoculations, (measles, an epidemic parotitis, a hepatitis, a chicken pox) - often I observe such phenomena's. The occurrence role vaccine strains occurrence of infections and the subsequent splash in illness is proved.
6. Stress, a constant intense mental condition - cruel treatment with children and other stresses.
7. The Cesarean section - is frequent after this operation, often unjustified, disease develops is a serious stress for the child.
8. Medicines (Moxonidine, Carvedilol, Bisoprolol, Statins and others) is characteristic for adults though true (it is checked up for clinical practice be me), to children too often appoint Beta blocker.
9. The virus infection transferred by mother during pregnancy or the child in the early childhood, becomes the starting mechanism of development of a diabetes. Viruses provoke growth the antibodies causing defeat of a pancreas.
10. Children born with agenezia's (developmental anomaly) of a pancreas, suffer a diabetes and problems with digestion. It is a question of sites of DNA which are not containing a code. These sites regulate timely activation of genes in certain parts of a body, therefore vital the complex analysis genome's gives the chance researches of genes and appointment pharmacogenetic preparations. For today it only Vitamin A.
11. Each hour spent before TV, raises risk of development of a diabetes on 3%. Before sitting down to look the favourite shows and serials, think is concerns twice, both small children, and teenagers.

Later girls and women start to consider appearance as the unique significant factor for relations with an opposite sex is can provoke the deep neurosis connected with deformed perception of a corporality. Instead of attempts to limit consumption of food by the child it is much more expedient to accustom it to regular physical activity. Wise fathers never should make comments on weight of the daughter.

Pathogenesis a diabetes of 1 type at children

The main reason of a diabetes at children - the infections leading to destruction of beta cages of islet Langerhans's of a pancreas, responsible for development of a hormone of insulin. If all vaccinated as I them name, give birth to children the risk of occurrence of a diabetes of 1 type increases (the note of the author).

However one of the brightest acknowledgement of participation of immune system in development of a diabetes of I type is the high association of this disease with certain genes of system of the Ministry of Taxes and Tax Collection (Major Histocompatibility the Complex-main thing of a complex of fabric compatibility), presented at the person system NLA (Human Leucocyte Antigen).

1. It leads to destruction of fatty cages and accumulation of free fats in blood, that, in turn, tempts the strengthened appetite and sharp loss of weight;
2. Cause disintegration of fibers of muscles to amino acids which together with fats a liver are processed in ketones the bodies poisoning an organism;
3. Lead to that organism cages start to test power hunger, and not acquired glucose is in blood.

Important! Here, when my power diagnostics and power treatment of a diabetes of 1 and 2 types (author's workings out) is especially pertinent. But it is necessary to do it after have cured an infection. In each clinical case an infection different (there are author's workings out).

Important! Here, when my power diagnostics and power treatment of a diabetes of 1 and 2 types (author's workings out) is especially pertinent. But it is necessary to do it after have cured an infection. In each clinical case an infection different (there are author's workings out).

The interrelation between infections of the virus nature and a diabetes 1 is established. Viruses of a hepatitis, a measles, Rubella's, a parotitis, a chicken pox, a flu and the similar vaccines causing damage of beta cages of a pancreas. The organism cannot restore completely after such damage the damaged cages, therefore after a while after the transferred infectious disease the probability of development sugar insulin-dependent a diabetes increases.

The genetics plays the role. A diabetes of 1 type - disease with hereditary predisposition. The statistics asserts, that if both parents have a diabetes of the first type, probability of disease of the child to 80%.

Symptoms of a diabetes of I type at children

At children are shown so sharply what not to notice them it is impossible. The child complains of weakness, at it the head is turned, there are hunger attacks soon after meal. Energy does not suffice, the organism derives strength, basically, from glucose, and for nervous system and a brain this unique "fuel". Insulin is developed, when "learns" the glucose arriving with carbohydrate food. Under the influence of insulin of a membrane of cages pass glucose. At failure this mechanism is broken also cages lose a food.

Sugar, not delving in cages, arrives in blood and urine, and at the child sharp symptoms of a diabetes develop:

1. Unquenchable thirst
2. Fast fatigue
3. Speeded up urination, especially at night
4. Weight loss at normal appetite
5. Vomiting
6. Bad trainability
7. Irritability, petulance
8. At girls-teenagers - the milkwoman (vaginal a candidiasis), which are cured hardly
9. Pricking and numbness tips of fingers
10. Sight infringements.

As disease is diagnosed more often for small children, parents should show observation to notice changes occurring at the child. Kids are incapable to describe the complaints accurately. It is much easier to find out demonstration of illness in teenagers and adult people.

Diabetes of the first type name still juvenile or youthful as the pathology amazes children and persons to 35 summer age is more often.

If diabetes first signs are shown in especially sharp form, symptoms can be menacing:

1. Wearisome vomiting
2. Diabetes leading to dehydration
3. Rare deep breaths and strong exhalations
4. An acetone smell in exhaled air
5. Loss of consciousness or a preunconscious condition with a disorientation in space
6. The speeded up pulse, cyanosis of hands and feet.

Unfortunately, the diabetes of 1 type at children quite often begins with these displays demanding acceptance of urgent measures.

Diabetes at the baby

At babies the diabetes meets extremely seldom, and a problem of its timely detection that the kid cannot tell about indispositions. To define, that the child is too often wetted, while it in diapers, too it is inconvenient.

Symptoms of a diabetes at children of 1 year of a life look so:

1. The child with good appetite does not add in weight
2. Worries, yet will not receive drink
3. Suffers from intertrigo which are difficult for curing
4. The dried up diapers seem starched
5. The urine which has dripped on a floor, a table or other surface leaves sticky stains
6. At sharp displays at baby vomiting and dehydration begins
7. The raised salivation.

Diabetes at children of 5 - 10 years

At children at this age of display of a diabetes of 1 type often happen sharp. Parents can underestimate gravity of position as symptoms are similar to displays of other children's illnesses. It is necessary to pay attention to following signs hypoglycemia's at the child:

1. Overexcitation and uncontrollability;
2. Slackness, drowsiness, including day;
3. Refusal of meal, vomiting of sweets.

Heavy hypoglycemia it is dangerous, it is fraught with irreversible defeats of a brain and internal bodies. At suspicions it is necessary to measure level of glucose and to take adequate measures.

Diabetes at teenagers

Are active At you With a diabetes of 1 type low oxidizing capacity mitochondrion in skeletal muscles is observed.

Scientists have revealed, that in comparison with control group, participants of research with a diabetes of 1 type had much lower xilitla energy mitochondrion, especially in a complex of II chain of transport electrons, thus it was not revealed distinctions in contents mitochondrion. At participants of research with a diabetes of 1 type raised issue H_2O_2 in mitochondrion in a complex III and lowered keeping ability Ca^{2+} is observed. Also at participants with a diabetes of 1 type the increase in size and quantity autophagic the rests in muscles has been revealed, thus levels phosphorylated AMF-ACTIVATED protein kinases and its descending targets were similar between groups.

Symptoms of a teenage diabetes same, as is at adults. Illness develops not so quickly as at the kids, the latent period lasts from a month before half a year and longer. Complaints to fatigue, parents, doctors wrongly consider headaches and weakness as the age phenomenon or weariness from school loadings.

1. At teenagers with not shown diabetes hypoglycemia it is not accompanied by faints and spasms;
2. Periodically there is a persevering desire to eat something sweet;
3. The skin often suffers - furuncles and barley do not manage to be cured the means intended for it;
4. At cetoacidoza (an acetone smell)there can be a nausea, vomiting and a pain in a stomach.

Symptoms of already revealed diabetes at teenagers can be shown in the sharp form as sensitivity to insulin decreases because of hormonal reorganisation.

Competent treatment (an author's technique, 2018)

Adequate water loading - artesian water daily is necessary. And calcium, but vegetative calcium - from a tops of vegetable of plants - a tops of vegetable of carrots, a beet and others. From vegetative raw materials calcium especially well sucked.

Power medicines are necessary is a gooseberry, it is possible not mature where there is lemontar an acid, a red currant.

Only decrease in sugar by insulin is a way in anywhere. Prefer, that an illness original cause to eliminate, instead of it is stupid to reduce sugar. It will grow, unfortunately, and the big doses of preparations will be necessary still, and it will have no time for infinity. Reserves will be exhausted. It is better to choose a way are cured, and it lays only through an illness original cause. It is necessary to select the treatment influencing an original cause of illness.

Differential diagnostics of a diabetes I and II types

Some risk factors of development of a diabetes of 1 type at the child can be minimized, but at first it is necessary to find out, whether there are already infringements in an exchange of glucose and what type a diabetes.

The exact answer will be received after laboratory researches of blood on antibodies to cages of islets Langerhans's, insulin. At a diabetes of II type insulin level in the blood taken on an empty stomach and under carbohydrate loading, raises - to this sign differentiate disease of different types.

Displays of a diabetes of 1 and 2 types

Symptoms	I type	II type
Strong thirst	+	+
Strengthened urination	+	+
Constant feeling of hunger	+	+
Aggravation during infectious diseases	+	+
Acetone smell in exhaled air	+	Sometimes
Diagnostics at the inspections which are not concerning a diabetes	Seldom	As a rule
Age of display of illness	From infancy	Usually teenage
Weight	Variants are possible	The superfluous
Characteristic pigmentation of a skin, papilloma	Very seldom	In most cases
At girls - the milkwoman and a candidiasis	Not often	As a rule
The raised blood pressure	It is not characteristic	As a rule
Cholesterol and fats in blood	It is not characteristic	As a rule
Antibodies (Antigens)	+	-

Untimely treatment of a diabetes of 1 type leads to dangerous consequences:

1. Hyperglycemias (it is abnormal to high level of sugar in blood);
2. Angiopathies (to damage of the vessels, caused by power insufficiency of capillaries);
3. Nephropathies (to defeat nephritic glomerulus, owing to the broken blood supply);
4. Retinopathies (to defeat of a retina of an eye);

5. Neuropathies (to defeat of nervous fibers);
6. Diabetic to stop (to occurrence of plural defeats of finiteness's at which there is a destruction of cages and there are trophic ulcers).

There is a defeat practically all bodies, including there is a risk of occurrence of a gangrene of the bottom finiteness's, chronic nephritic insufficiency, a heart attack, a stroke and even cancer tumours.

Author's diagnostics

The molecular mechanism of a diabetes is that, that the pathology arises on a phase of 2 reactions of cycle Krebs when occurs aerobic glycolysis turns in anaerobic, without oxygen participation. An end-product is lactate - deadlock metabolite. It is deduced in blood and utilized: or turns to glucose (75%), natural antioxidants therefore are necessary to children. They can cure disease at the illness initial stages. Physiotherapy is oxygen cocktails. Walks on fresh air, recreational sports and treatment of virus infections. To avoid any vaccination.

At occurrence of first signs of a diabetes it is necessary to address immediately to Endocrinologist and Clinical Pharmacist. The early beginning treatment will allow to avoid complications. After all on the statistician, practically half of the patients, suffering a diabetes, perish from diabetic complications.

Special diagnostics

Dogs and smells

Scientists in the British research centre of Aylesbury John Hunt (2007) have started to train office dogs to distinguish on a smell dangerous decrease in level of glucose in blood of patients with a diabetes. "Dog" diagnostics of a cancer of a bladder on an urine smell became the first confirmed case of such ability. 65% from them animals at approach hypoglycemia's at the owner start to whine, bark or show anxiety otherwise (Navel Paul Jackson, 2009).

Diagnostics

For diagnostics of a diabetes of 1 type it is necessary to measure sugar by one of ways:

1. Analysis blood on sugar on an empty stomach;
2. Two-hour the test for tolerance to glucose's;
3. Analysis on glycerol haemoglobin.

Results which show, that at the person a diabetes:

1. Glucose in blood plasma on an empty stomach 7,0 mmol/l or above.
2. At carrying out of the two-hour test for tolerance to glucose there was a result of 11,1 mmol/l and above.
3. Sugar in blood at casual measurement has appeared 11,1 mmol/l or above, and there are diabetes symptoms.
4. Glycerol haemoglobin HbA1C - 6.5% or above.
5. "Bad" and "good" cholesterol, the C-jet protein, homocysteine, fibrinogen.

Performance of one of the conditions listed above that it was possible to diagnose confidently - a diabetes suffices. The blood analysis on sugar on an empty stomach - less sensitive, than the others. The two-hour test for tolerance to glucose - inconvenient because occupies a lot of time, and it is necessary to hand over blood some times. The analysis on glycerol haemoglobin - convenient and authentic. It do for diagnostics, and also for the control of efficiency of treatment. If is house glucometer - simply measure by it sugar, needlessly to go to laboratory. If the result appears above 11, 0 mmol/l it is exact a diabetes.

Disease usually comes to light at children's and teenage age.

For a diabetes of 1st type presence autoantigens which have direct value in destruction insulin producing cages and disease development is characteristic. The similar mechanism of development and a spectrum of antibodies is observed at autoimmune a diabetes of adults (LADA) which is considered recently, how a variant more late arisen diabetes of 1st type, however often there passes under the diagnosis "a diabetes of 2 type" in connection with age features.

Display of a diabetes within several years is preceded by level increase autoantibodies in blood that is an early sign autoimmune activity of illness. Such antibodies concern autoantigens to glutamate decarboxylase (GAD), Type II sensory fiber (IA-2), to insulin, the conveyor of zinc ZnT8.

Type II sensory fiber (IA-2)– autoantigens islet the cages, localised in dense granules of pancreatic beta-cages.

Antibodies to Tirozin Fosfataza (IA-2) come to light at 50 - 75% of patients with a diabetes of 1st type, and also before the first clinical displays.

IA-2 Together with antibodies to insulin meet more often at children, than at adult patients, and specify on aggressive destruction beta-cages.

With a current of disease level autoantigens in blood gradually decreases, that is connected with destruction of an antigen sub-

stratum. In this connection at patients, it is long a suffering diabetes of 1 type, definition autoantigens can have low diagnostic value.

It is possible to consider as a harbinger of a diabetes of 1 type more likely the fact of revealing of antibodies, than definition of their any separate kind. Presence of several antibodies considerably increases risk of development of disease in the future in comparison with the isolated increase of one of kinds of antibodies. It is necessary to consider, that antibodies to Tirozinfosfotaza's often come to light at children with a diabetes of 1 type and is much more rare at people with autoimmune a diabetes of adults (LADA).

Sensitivity of research of level IA-2 for diagnostics of a diabetes of 1 type makes 57%, specificity - 99%. At children with the raised level of antibodies to Tirozin Fosfataza the risk of development insulin dependent a diabetes within 5 years makes 65,3%.

Antibodies come to light on the average at 48% of patients with recently diagnosed diabetes of 1 type, at 57% of patients with duration of disease less than 5 years and at 46% of people with duration of illness more than 5 years.

Revealing of predisposition to development of a diabetes and early diagnostics of disease allow to carry out in due time preventive actions, to appoint adequate treatment and to warn progressing of illness and development of complications.

At inspection of children and adults with high risk of development of a diabetes (near relations of the patients, 1 type suffering by a diabetes);

At inspection of people with hyperglycemia's or tolerance infringement to glucose.

References values: 0 - 10 ME/ML.

The reasons of increase of level of antibodies IA-2:

1. Prediabetes (high risk of development of a diabetes)
2. Sugar a diabetes of 1st type (insulin dependent a diabetes) at children
3. Autoimmune a diabetes of adults (LADA)
4. Gestational a diabetes (a diabetes of pregnant women).

The raised maintenance of antibodies associated with requirement of the patient for use Insulin therapy in present time or in the near future. But it is possible to preventive.

At some system diseases of a connecting fabric (for example, system red lupus) and illnesses of a thyroid gland level of antibodies IA-2 can raise. Differential diagnostics (the note of the author) is necessary.

The important remarks

The negative result of research completely does not exclude risk of development of a diabetes of 1 type. It is recommended to define simultaneously some kinds of antibodies to islet pancreas fabrics.

The decision on necessity Insulin therapy is accepted on the basis of indicators of level of sugar in blood, instead of quantities autobodies.

Also it is recommended:

1. Antibodies to insulin
2. Antibodies to g Anti-glutamic acid decarboxylase (anti-GaD)
3. Antibodies to antigens of cages of a pancreas (GAD/IA-2)
4. Antibodies to islet to pancreas cages
5. Glucose in plasma
6. Glucose in urine
7. Glucose tolerance the test
8. Glycated haemoglobin (HbA 1c)
9. Genetic risk of development hyperglycemia's
10. C-peptide in whey
11. C-peptide in daily urine
12. Insulin

Important! I consider, that now it is necessary to define a subtype of a diabetes of 1 type to appoint competent treatment, and not just to reduce blood sugar. At autoimmune' s process it is necessary to select Immunosuppressors. At an infection to select anti-virus and antibacterial preparations - diagnostics in microbiological laboratory - crops on flora and definition of sensitivity of antibacterial preparations, definition of DNA of viruses to pick up antivirus preparations.

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Because of deficiency of insulin of a cage cannot acquire glucose and pass to a food by fats. Many by-products - ketone bodies are thus formed. They cause a smell acetone's from a mouth and acidosis - infringement of acid-alkaline balance in an organism.

Diabetic ketoacidosis: The heavy complication dangerous to a life and demanding urgent medical aid. Its symptoms have been listed above. It is desirable to diagnose and begin in time diabetes treatment not to admit development ketoacidosis.

Risk factors: In most cases the diabetes of 1 type arises at children or at young men is elderly till 35 years. Though happens still autoimmune a diabetes in the easy form at people of an average and advanced age. It is called LADA a diabetes. Doctors often confuse it to a diabetes 2 types and treat not correctly.

The diabetes 2 types is not autoimmune disease. Usually it develops at people is more senior 40 years, suffering adiposity, and also at the elderly. In medical magazines cases of a diabetes 2 types at corpulent teenagers have been described, but these are rare exceptions.

Differential diagnostics of a diabetes of 1 and 2 types

	Diabetes 1 type	Diabetes 2 type
Age of the beginning	Children's and young age	People are more senior 40 years and elderly
Weight of a body	More often is normal weight	Excess weight or adiposity
Causes	Attacks of immune system to beta cages	A wrong food, sedentary life
Preventive	Chest feeding instead of artificial - lower risk	A healthy food, physical activity - the guaranteed protection
Insulin level in blood	Low or zero	Normal or in 2 - 3 times above norm
Ways of treatment	Diet and it is obligatory insulin pricks or new methods treatment	In most cases insulin can to be pricked, enough and is low-carbohydrate diet and physical culture

Honeymoon - an initial stage

When a diabetes of 1 type start to treat insulin pricks, at many patients the situation is miracle comes back to norm. By this time remain live less than 20% of the beta cages developing insulin. However after the first injections of insulin they for some reason start to work better. It is probable, because weaken autoimmune attacks to a pancreas. Sugar keeps stably normal. And if to continue to prick insulin develops hypoglycemia - too low level of glucose in blood.

In a honeymoon to prick insulin not that that is not necessary, and even is harmful, because sugar too goes down. Many patients relax, thinking, that their diabetes by miracle has passed, and are started up in town red. In vain they do it. If to operate incorrectly the honeymoon quickly comes to an end, and instead of it the diabetes of 1 type with a heavy current begins.

At the moment of diagnosis statement many patients still develop a small amount of own insulin. It is desirable to keep this ability as it is possible longer, in an ideal - for all life.

The purpose of treatment of a diabetes of 1 type in a honeymoon - not to allow to beta cages to "burn out" completely. If it will turn out to keep them in live development of own insulin will proceed. To reach this purpose it is possible if to adhere to an is low-carbohydrate diet and sometimes in day to check sugar in blood glucometer's. If sugar after meal rises to 6, 0 mmol/l and above - prick the small, precisely calculated doses of insulin. Achieve, that sugar did not exceed 5, 5 mmol/l.

What for to try to keep live beta cages:

1. You can support stably normal sugar in blood, not supposing its "jumps" upwards and downwards.
2. Insulin dosages will appear much more low, it will be possible to do less often pricks or absolutely them to refuse.
3. When will appear new breakthrough methods of treatment of a diabetes of 1 type, you can take advantage of them before all. For example, scientists take some your beta cages, will multiply them in a test tube and will enter back in pancreas gland's.
4. Suppress insulin secretion - hypoglycemia, stimulation an alpha - adrenoreceptors, Diazoxide (hyperstat - peripheral arteriolar vasodilator myotropic actions), Defenin, Nicotinic acid. It needs to be avoided.

Principles of treatment of a diabetes of 1 type

To start to treat a diabetes of the first type it is necessary at once after diagnosis statement.

1. Diet
2. Physical loadings
3. Status psychoemotional balance
4. Treatment inflammatory and autoimmune diseases.

It is necessary to exclude all "forbidden" products from a diet:

1. Sweets: I advise sweets to give to children, but natural and gradually - for example, sweets from dried apricots, raisin, walnuts (to turn through a meat grinder and a children's food (to form sweets, to freeze in a freezer for 30 minutes, then - to store in a refrigerator and to give out on a candy).

2. Smoked: It is possible on a slice.
3. Fatty: It is possible to eat a sandwich with a slice of natural house fat.
4. Fried: It is possible to eat a small slice of a natural cutlet from a turkey.
5. Acute: A small sandwich with natural cottage cheese with grated garlic.

The menu is better for planning for a week forward. It will allow to balance a diet. A high-grade food sates an organism with vitamins and microcells which participate in a metabolism.

Among a usual foodstuff there are what possess ability to reduce sugar in blood. And at formation of the daily menu they should be considered.

Important! Chest babies and the babies receiving the additives of vitamin D, have the lowered risk of development of a diabetes of 1 type while early acquaintance to the cow milk and grain fibers can increase risk. Additional researches are necessary to find out, how a children's food influences risk of development of a diabetes of 1 type.

Important! Influence of cereals from 0 till 3 months was estimated, risks increase at children is more senior 7 months. Similar results have been received for the cow milk. Such restrictions are connected by that because of backwardness mucous intestines at small children, it is capable to pass high-molecular substances in blood, such as fibers. If among these fibers which have got to blood there will be the fibers fragmentary similar to one of antigens they will provoke autoimmune reaction. Potentially dangerous are, are: the beef fat (bull), serum Albumin BSA, Beta casein, Beta-lactoglobulin, Ovalbumin, Gliadin.

Such products concern:

1. Cabbage (white and Chinese)
2. Topinambur
3. Nettle (she can be added in the salads, the first dishes and also to make from it tea)
4. Grapefruit
5. Rosehip
6. Onion and green onions;
7. Garlic
8. Fruits of a black mountain ash which well influence normalisation of indicators of glucose. From them it is possible to receive tea and to use it within all day.
9. Oat broth to which preparation apply - a glass of oats and about litre of abrupt boiled water. Components place on weak fire within three-four hours, cool and filter. To use the medicinal name - it is necessary on 100 ml before the main food intake.

Stimulate insulin development: Only D - glucose (natural fruit is necessary), amino acids (Arginine), alcohol, Sulfonamide (sulfonylurea) at peroral and intravenous introduction, but at long application this effect disappears, and also stimulation B - adrenoreceptors. At intravenous introduction D - glucose insulin stimulation passes two-phase, at peroral application - one-phase! For this process the ionized calcium is necessary. Regulates insulin increase gastrointestinal suppressing polypeptide, normal condition gastrointestinal tract is very necessary!

L - glucose from usual sugar is not acquired by an organism. A liver, muscles, a fatty fabric - the basic fabrics - targets for insulin! Insulin influences cages by means of a receptor through fermentable systems, and is activated by magnesium ions. Magnesium needs to be included in treatment standards.

Important! There is the version of a diabetes connected with hyperglucagonemia's then it is necessary to include in correction standards Somatostatin - a hormone which suppresses secretion glucagon's(opposite on action to insulin).

Hormonal changes

Glucagon it is developed by a pancreas, salivary glands, thin intestines, again normal condition gastrointestinal tract is very important for preventive maintenance of a diabetes of any type and its complications (ketoacidosis). Important also a condition of a liver and kidneys. Concentration glucagon's increases at the use of a considerable quantity of albuminous food and at starvation. There is a mobilization lipolysis before synthesis of fat acids and proteolyze to amino acids which through Gluconeogenesis are used for glucose construction. During illness inhibited processes anaerobic and aerobic oxidation. All bodies and fabrics are amazed practically.

Daily secretion Cortisol's, Somatotopic hormone (STH) changes, sharp oppression of secretion T3 and T4, Testosterone against monotonous rhythm folliculin stimulating and luteinizing hormone, that is characteristic for hypogonadotropic hypogonadism. Feedback of increase of peripheral hormones do not work. Radical changes undergo - Dopamine, Noradrenalin, serotonergic systems hypothalamus. Disappear and circadian rhythms of insulin and glu-

cose in blood, immunoreactive calcitonin, C – peptide's, prolactin's, melatonin's. The impotence and neuropathic develops.

Organism power

At the heart of a diabetes the global metabolic infringements accompanied by deficiency of bio-energetics (an author's technique) lay.

For this purpose it is necessary to raise power of work of a pancreas, a liver and kidneys! It is possible to do it by means of acupressure of the above-named bodies and by means of herbal medicine. And it is possible to exclude glucose from a food, the organism includes other energy sources. Starvation or sharp restriction of food makes active decay, disintegration of fibers occurs through the Measles cycle. Amino acid Alanine is used for glucose synthesis. There comes growing thin.

To appoint it is necessary vegetative immunosuppressants for the prevention of immune attack and preventive maintenance macro - and microangiopathies (nephroangiopathies) at once at early revealing to return to a pancreas its "honey" period of a life.

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Vitamins at a diabetes

- For condition improvement pancreas play a role such elements as A, C, E.
- Poly-enzyme are cobalt, sulphur, zinc, chrome and others.
- For completion of the formed deficiency, appoint special vitamin and mineral complexes. But natural vitamins are necessary from fruit and plants.

Doctors recommend to drink constantly vitamin complexes to diabetics for maintenance of immunity of the person. In the table necessary vitamins and their influence on an organism are presented. Constantly it is impossible, it is necessary to do differential diagnostics of vitamins (author's) and to select the necessary vitamin by means of herbal medicine. It gives the best effect (the note of the author). Herbal medicine are vitamins with colloid solutions, they are better acquired and longer circulate in an organism of the child.

Pharmacological effects of vitamins at a diabetes of 1 type

Name	Influence on an organism
Biooozes (Vitamin **B**7 or H)	Reduces sugar and supervises power processes. It is necessary for enzyme development glucokinase's without which does not occur glycolysis, that is glucose processing; Role B7 in a glucose metabolism is high, supporting its normal level in blood; Without it the normal metabolism of fats, in particular decomposition of fat acids is impossible
Tocopherol	The antioxidant, normalises a blood-groove of a retina and restores filtrational function of kidneys
Retinol	Improves protective functions and sight
Lipoate acid	Normalises a fatty exchange
Vitamin of groups B	Normalises work centre nervous system, removes annoyance
К Ascorbic acid	Strengthens protective functions, strengthens walls of vessels, slows down development cataracts

For example, bio oozes is in eggs. Two yolks of an egg burn fat in an organism of the child. It can be used for preventive maintenance ketosis and ketoacidosis.

Successful addition of therapy name acid - and dairy products, meat with the fat content low interest (Turkey meat, rabbit meat). Use grades of fish and seafood, vegetables, fruit and the berries which are not the sweet.

The teenagers who have faced the given pathology, should refuse the use of alcoholic names. The matter is that it promotes occurrence not deoxidized components of disintegration of glucose which can provoke ketoacidosis to whom.

Strengthens protective functions, strengthens walls of vessels, slows down development Cataracts.

Pyrotherapy

1. The barberry ordinary promotes decrease in level of sugar, normalisation of exchange processes, but also reduces constant thirst and sensations of dryness.
2. The lemon is capable to warn undesirable consequences of disease. The grated lemon (500) to mix with honey (500) and the crushed kernels of an apricot (20 pieces). To accept in the morning and in the evening on 1 item to a spoon.
3. The nettle promotes sugar decrease in blood.

Truly made, picked up diet will help to lower, prevent increase of level of glucose thanks to what there will be a possibility to reduce a dose of insulin or to refuse it.

A food at a diabetes of 1 type:

1. The menu should not be to the detriment of health.
2. For meal it is necessary to choose various products.
3. At a diabetes it is necessary to choose natural products.
4. It is recommended to make the menu for a week, carefully analyzing dishes and their components.
5. To observe a food intake mode, time of an injection of insulin, to avoid the use of food at night.
6. Food intake should be small portions, the minimum on 5 times a day is divided.
7. To exclude from a diet granulated sugar in the pure state which is especially dangerous to the patients, suffering a diabetes.
8. Not to use in a diet products from the list "forbidden".
9. It is necessary to refuse smoking (actually for teenagers).

Diet (continuation)

The diet at a diabetes of 1 type is basic means that it is good to supervise disease. Insulin pricks - on the second place. It is possible to manage and without them. All understand, that it is necessary to eat healthy food and to avoid improper products. However what products to consider healthy, and what harmful - an inconsistent question.

Gluten free the diet will rescue from a diabetes

It is possible to protect the posterity from development of a diabetes of the first type if to eat gluten free food in pregnancy. Today from a diabetes suffers 347 million persons in the world that makes approximately 6% of adult population of globe. Scientists have made experiments on mice which have shown, that gluten free the diet in pregnancy is capable to affect positively the microflora of intestines playing the important role in development, both immunity, and a diabetes of the first type. Gluten, or gluten represents reserving fiber of seeds of cereals, in particular wheat, a rye, an oats and barley. Maintenance by mother gluten free diets in pregnancy and a lactation can be enough considerably to lower risk of development of a diabetes at children in the future (Camilla Hartman, 2014). Also there are the facts specifying that gluten free the diet has favorable influence on a current insulin dependent a diabetes at the person (Axel Kornerul, 2014). Now scientists plan to continue the researches. If the exact mechanism of how gluten and intestinal bacteria influence a condition of immune system and physiology of beta cages of a pancreas is found out, this knowledge will help with working out of new methods of treatment of a diabetes.

Diabetes complications develop, when sugar keeps raised some hours after meal. They do not develop, if sugar after meal raises slightly, remaining not above 5, 5 mmol/l, as at healthy people, therefore from the products rich with carbohydrates, harm many times over more than advantage. To make a choice between the balanced and is low-carbohydrate diet is the basic decision which to you needs to be accepted.

The is low-carbohydrate diet normalizes simultaneously sugar in blood, arterial pressure and cholesterol. Insulin dosages go down in 2 - 7 times. Thanks to this diet, at a diabetes of 1 type the honeymoon period can be prolonged for some years, and even for all life.

During a honeymoon it can be necessary to enter insulin in low doses. Do it, be not lazy. Otherwise then it is necessary to prick it "under the full program". Try to hold sugar after meal not above 5,5 mmol/l. For this purpose it is necessary to keep to an is low-carbohydrate diet and, probably, still to prick insulin on 1 - 3 ED a day.

Important for children and their parents! Avoid the products overloaded with carbohydrates carefully. Do not save on test strips for Glucometer. Keep a self-checking diary. Correct the dosages of insulin, instead of prick all time the same fixed doses. As doctor Bernstein if at diabetes sugar after meal and on an empty stomach keeps in the morning not above 5, 5 mmol/l speaks, and also the general daily dose of the prolonged and fast insulin does not exceed 8 ED (unit) - means, all of you do correctly.

The diabetes of the first type worsens brain work

MRT-SCANNING of a brain of all examinees is spent, and also have studied results cognitive tests, case records and a state of health of volunteers. Researchers have established, that at 33% of volunteers with a diabetes and 7% of volunteers from control group were the moderate and high levels of hyperintensity of white substance is a marker of damage of white substance of the brain, appearing at ageing and neurologic frustration.

Participants with a diabetes of 1 type cope with tests for speed of processing of the information, a small motility and verbal intelligence is worse, than people from control group.

Risk factors of high levels of hyperintensity of white substance are the damages of nerves shown, in numbness finiteness's. In cognitive to sphere and timely intervention negative consequences of a diabetes of 1 type for a brain will help to prevent early revealing of problems.

Approximate diet, the menu of 1 type sick of a diabetes:

1. The main food intake - a breakfast. It is better to choose porridge, eggs, greens, unsweetened tea.
2. The first snack - fruit with the low maintenance of sugar or vegetables.
3. A dinner - a vegetable broth, vegetables prepared in a double boiler or a method of suppression, a boiled slice of meat or fish.
4. A mid-morning snack - low-fat sour-milk products, veg etable salad or small loafs with unsweetened tea.
5. A supper - boiled or stewed meat, vegetables - fresh or steam, fish on pair, sour-milk products with low percent age fat contents.

Important! Effective schemes of treatment of a diabetes in an ideal should be directed, both on suppression autoimmune process, and on correction of the immune frustration observed at this disease.

Cases of therapeutic effect of application Cyclophosphamide and antitimocitar whey are described. Application Cyclosporin A (immunodepressant, capable to suppress a differentiation and proliferation T-thymocytes) right after diagnosis establishments allowed to normalise a carbohydrate exchange in 50% of cases and in 30% of cases to achieve partial remissions.

Two types of illness differ

1a type: At small children - the reasons - different viruses at vaccination and at virus infections. A number of viruses possesses effect of an antigen mimicry. It was revealed, that antigen determinants GAD-65, GAD-67 and fragment P2C of extremely widespread virus Koksaki B4 have high degree of similarity. Hence the antibodies directed against this virus, crosswise react with the specified determinants on β-cages.

To apply treatment - Immunomodulators and antivirus means (Arbidol a children's syrup and tablets - a children's dose) is necessary. Contra-indications - vaccination is counter-indicative by any vaccines. Screening of kids on a diabetes of 1 type is necessary. DNA-diagnostics of viruses - Koksaki - B3, B4, Reovirus 3 type is necessary.

Immunofan - candles - in a rectum.

Viferon candles - in a rectum. Herbal medicine - Echinacea (grass broths) is pertinent.

About 3 summer age - it is possible to apply syrups and tablets - Arbidol.

Important! At small children - desires on vomiting, a night incontinence of urine - usually first signs of a diabetes of 1 type. To treat in such cases separately an enuresis it will not turn out. It is necessary to do expanded differential diagnostics of a diabetes of 1 type.

1b - type: Presence of antibodies to insulocytes, that reduces or absolutely stops insulin development. Such type develops at teenagers, therefore from 10 - 12 years it is necessary to apply other methods of treatment. Often there are spasms of the bottom finiteness's (crampi), that demands magnesium application. The quantity of hair, up to their full absence standing decreases. It can be at a virus infection which occurrence of antibodies joins. It turns out, that teenagers need to be treated in a complex.

Nicotinamide to enter it is possible in addition to intensive therapy by insulin at patients with the recent beginning of a diabetes of type for protection β-cages. Nicotinamide can improve function β-cages at sick of a diabetes, reducing requirement for insulin. It is necessary to look on each separate clinical situation. But only aged is more senior 15 years it is possible to apply Nicotinamide.

At children of more younger age group the preparation does not render effect. Doses Nicotinamide's applied to treatment of a diabetes of 1 type, in 100 -2 00 times exceed daily requirement for vitamin PP at the healthy person and make from 200 mg to 3g a day. Thus any essential by-effects from its application it is not marked.

Immunomodulator Polyoxidonium - special for patients of the given group that preparation Polyoxidonium restores phagocytosis function neutrophils leukocytes was important, reduces quantity of the Central Electoral Committee (circulating immune complexes) in endothelium vessels, normalizes the raised caption natural autoantigens to various organ-specific and to nonspecific antigens, promotes faster restoration glycemic a profile of patients, possesses expressed detoxicating properties, and also antioxidant and membrane-protective effect. It was not observed any by-effect from preparation application Polyoxidonium. Polyoxidonium it is appointed to children who have reached six-monthly age, inhalations, candles is the most frequent applied forms of a preparation at children.

Ways of use and dose:

1. To drip in a nose and under language it is necessary to dissolve 3 mg in 1 ml (20 drops), 6 mg in 2 ml of the distilled water. It is supposed to apply 0,9% of a solution sodium chloride or boiled water of a room temperature. As a result in one drop of a solution the dose necessary for 1 kg of weight of the kid contains.
2. It is authorized to give tablets to children since 12 years. The norm of a medicine pays off for each child separately. On 1 kg of weight 100 mkg approximately are necessary.
3. Candles appoint to kids, since six-summer age. For such children convenient the dosage is considered of 6 mg. The medicine is used rectal, for introduction in anal an aperture.
4. Some dust for children it lyophilizate which is applied to droppers and pricks. Also lyophilizate gets divorced boiled water for instillation in a nose and for introduction under language.

Powder uses sublingual

It is necessary to use a powder with concentration of 3 or 6 mg.

Thus 1 ml of the cooled boiled water is entered into a bottle about 3 mg. In a bottle about 6 mg, it is entered twice more waters.

As a result in one drop of a solution the dose necessary for 1 kg of weight of the kid contains.

At weight of the child of 20 kg, it is necessary to give it 20 drops of a solution for days. This norm can be divided on two parts to give circles in the morning and in the evening.

From a powder prepare a solution for inhalations. Into a bottle about 3 mg of a powder enter 4 ml sodium chloride. Now by means of a syringe it is necessary to select 2 ml and to pour in in the chamber Nebulizer's. Inhalations are spent 2 times a day. Course of treatment of 7 days. It is recommended to do a break between courses not less than 3 months.

Type IB is considered, how display autosome diseases that proves to be true a frequent combination of a diabetes to others autoimmune endocrine and not endocrine diseases. Circulating antibodies are found out before revealing of a clinical diabetes and are present at blood of patients during almost all period of illness. This type of a diabetes is combined with system HLA antigens: B8, DR, DRw3, Dw3. Develops at any age and more often at persons of a female. It is necessary to do differential diagnostics.

Last year's presence of one more - slowly progressing form of a diabetes of I type which is characterised by slow development insulin insufficiency is shown. The patients, suffering this form, within 1-3 years can keep to a diet and apply peroral hypoglycemic preparations that allows to compensate infringement of a carbohydrate exchange. However, in the subsequent there is a resistance to these preparations and for indemnification of infringement of a carbohydrate exchange translate on Insulin therapy. During all disease in blood whey antibodies to antigens of islets of a pancreas come to light, and progressive decrease in residual secretion differs. It is necessary to do differential diagnostics.

Immunologic Husky changes

Changes phagocytosis occur right after births of children is vaccine BCG which changes phagocytosis at small children, doing it's not finished. Then any infections quickly develop. It is necessary to cancel vaccination BCG because this vaccine does not protect from a tuberculosis, but often gives start of a diabetes of 1 type.

Vaccine BCG considerably changes a functional condition phagocytosis functions neutrophils and macrophages towards its decrease. phagocytosis activity of a cage directly is connected with an exchange of carbohydrates. To 90% of energy, even in aerobic conditions, phagocytes receive for the account glycolysis. Because

a metabolism glycogen's and glycolysis are supervised by insulin, phagocytosis it is possible to name with good reason insulin dependent process. It is obvious, that defect phagocytosis activity, basically, it is caused by infringement of a carbohydrate exchange, and also reaction between glucose and the fibers of plasma concerning to opsonization, such as C3 both a Fc-fragment of an antibody and corresponding receptors on a surface neutrophils. For this reason I advise to include in standards diagnostics of a diabetes of 1 type - Immunogram 3 levels of complexity in dynamics.

In the literature of last year's there were data about revealing autoantigens to Sulfatide's at a diabetes of 1 type.

Sulfated - derivative Glycosphingolipids: In β pancreas-cages the isoform Sulfatide's which influences many physiological effects islet cages is found out mainly C16:0. Sulfatide promotes monomerization insulin and to preservation insulin crystals in β to a-cage. It is known, that islet cages secret insulin in certain sequence. Everyone separate β a-cage demands a dormant period before a following, so-called, first phase of secretion of insulin. Insulin stimulates this own secretion through a positive feedback. S-peptide this process, on the contrary, brakes. The inhibition fact Sulfatide's clearings of insulin from glucose actions islets through stimulation To +-channels that conducts, in the subsequent, to closing Ca2+-channels that gives the chance to take rest B - a cage is undoubtedly important. Anti-inflammatory properties sulfatide's, expressed in increase regulator CD3+CD25 + T-cages and reduction of production of a number cytokines have been found out: IL-1, IL-6, IL-10 and FNO - α (the factor necrosis tumours). It also possesses ability to contact P and L-selectin and, becoming ligand's these molecules, interferes with adhesion and migration of cages of an inflammation from circulation that is of great importance in pathogenesis a diabetes of 1 type. In spite of the fact that GADA, IAA, ICA and IA2 - autoantigens are widely used in quality screening tests at a diabetes of 1 type, autoantigens to sulfatide's also can have important prognosis value, considering frequency of their detectability long before the beginning and in a disease debut. Anti-sulfatide autoantigens interfere insulin with secretion and exocytosis insulin from β-cages. In this connection use Sulfatide's is represented significant at treatment of a diabetes of 1 type.

Sulfated, being lipid's, cannot be presented Collection-complex which connects only peptides. Now it is established, that the presentation Sulfatide's is reached through Collection-like Sd1-molekuls, feature of structure which promotes anchoring lipid sequences. Allocate 5 versions CD1-molecul which, depending on properties, are divided into 2 groups. The first group: CD1 which contacting Sulfatide's stimulate production regulator CD3+CD25 + T-cages. The second group consisting from CD1d-molecul, co-operating with Sulfatide's, activates and restores regulator function of NKT-cages (natural killer T cell), promotes suppression autoreactive T-cages and, accordingly, interferes with diabetes development.

Now antibodies to islet to cages (ICA-islet-cell antibodies), autoantigens to insulin and proinsulin (IAA-insulin autoantibodies) and antibodies to Glutamate Decarboxylase (GAD-glutamic acid decarboxylase autoantibodies) are known. In the literature of last years the big attention is given autoantigen to antigens of islets of a pancreas (ICA - islet cell antibodies), autoantigen to insulin and proinsulin (IAA - insulin autoantibodies), autoantigen to Glutamate Decarboxylase (GADA - glutamic acid decarboxylase autoantibodies) and autoantigens to proteins islet cages: Tirozin Fosfataza and fagrin's, concerning group Protein Tirozin Fosfataza (IA2 - autoantibodies) which come to light at a diabetes of 1 type. The specified antibodies concern antibodies of class G that specifies in the infectious nature of this increase and demands treatment antivirus means (the note of the author).

At a diabetes of 1 type of an antibody of a class of M and D are not found out even in cases of sharply developed disease. In forecasting of a diabetes of 1 type markers GAD and IA2 which supplement each other have special value. Glutamate Decarboxylase is an enzyme, catalyzing transformation glutamate's in gamma aminobutyric acid. The given fact proves to be true that antibodies to the specified antigen cross reacted with GAMK-ERGICHESKY structures TSNS of patients with rare neurologic disease.

Thus, two isoforms at the person allocate. So pancreatic islets express GAD 65 with molecular weight 65000 Mr. Synthesis of this enzyme is coded by a gene located on 10th chromosome (islet form GAD). Brain form GAD 67 expressed GAMK-ERGICHESKY cages central nervous system, has molecular weight 67000 Mr and is coded by a gene located on 2nd chromosome. It is characteristic, that 65% consecutive amino acid the rests of molecules of both isoforms GAD 65 and GAD 67 are absolutely identical. Hence, the antibodies directed against one of isoforms, cross react with other isoform, that repeatedly proved to be true in researches *in vivo* and *in vitro.*

Diagnostic value of antibodies to GAD 65, as markers of the raised risk of development of a diabetes of I type, especially increases if to consider the fact of an expression of the given antigen, first of all β-cages of a pancreas of the person. Tirozin Fosfataza and fagrin concern group Protein Tirozin Fosfataza (IA2). Both IA2, and ICA expressed in neuroendocrine cages, including β, γ, α-cages in pancreas islets, pituitary cages and cages of brain substance of adrenal glands. Many researchers consider GAD and IA2 autoantigens as diagnostic markers of a diabetes of 1 type. And it is considered, that antibodies to GAD can be a marker of the general autoimmunity, and IA2 are more specific marker of destruction β-cages. Age dependence of occurrence of various kinds of antibodies is established: ICA and IA2 are more often found out aged till 20 years, IAA - till 10 years. On the contrary, antibodies to GAD come to light aged after 10 years is more often.

Since a stage latent proceeding insulin's, and also, within the first months from disease demonstration, in blood it is found out in the beginning high titer, and then gradually decreasing titre antibodies to various components islet cages. Antibodies of islets come to light not only at patients a diabetes of I type, but also at relatives of patients, and is the most frequent at the relatives having identical systems NLA. It is proved, that the majority of these antibodies possess complementary dependent cytotoxicity in this connection, possibly, can bring the certain contribution in destruction β pancreas-cages. It is necessary to check relatives on presence antibodies, therefore it is necessary to do screening of relatives before class and a birth of children (the note of the author).

At young men revealed infiltration lymphocytes islets Langerhans's (insulin). Rather new researches have shown, that it is a question mainly about activated CD8 +-cages. It is necessary to do Immunogram's for diagnostics and to apply different treatment. Diagnostic immunological it is necessary to do analyses. This research in dynamics it is necessary to include in diagnostic standards of nosology (note of an author).

Decrease in relative and absolute quantity CD3+cells, and at patients with full absence of residual secretion B - pancreas cages is noticed, it lower, that is probably connected with the formation termination by these cages not only insulin, but also peptides, in particular Amelin's which expressed B - cages and possess synergic with insulin action on glucose level in blood.

At it is long a current diabetes considerable decrease in the maintenance regulator subpopulations T-lymphocytes - CD4+cages (helpers/inductors while separate authors inform on increase of the maintenance of these cages in peripheral blood is marked. The known fact, that population CD4 + cages has, at least, two subpopulations: Th-1 and Th-2, which secreted essentially different cytokines. Th-1-cages produce IL-2, IFN - γ and FNO - α which have mainly destructive an effect on β-cages while Th-2, secreted IL-4, IL-6 and IL-10, on the contrary, possess protective antidiabetic influence. Hence, definition only general maintenance CD4+cells though also is extremely necessary, but there is already not enough for more exact information on condition T-helpers of a link of immunity (note of an author).

Now there is begun intensive studying of physiological role Th-1 and Th-2 cages in an organism, in particular, in the mechanism of occurrence of a diabetes of 1 type. In 2001, using a method of definition of receptors to chemokines on T-cages, it has been shown, that at patients, from 1 type for the first time diagnosed a diabetes, sharp decrease in the maintenance of Th-1-cages while at patients, it is long ill both 1, and 2 types is marked, it is not observed. The revealed decrease in quantity Th-1 is probably caused by their migration from circulation in a pancreas.

Maintenance CD8+limfocytes, according to the majority of authors, fluctuates within normal amounts, however, at duration of a diabetes more than 5 years, relative and absolute maintenance CD8+cells becomes more low, than at healthy people.

Subclasses T-lymphocytes, which along with a characteristic T-receptor, co-expressed antigens, characteristic for "naive cages" (CD45RA), "memory" cages (CD45RO +) and recently activated cages (CD45RA+RO +). Until recently was considered, that isoforms CD45 antigen's co-expressed only on CD4+cells, however it has been established, that they come to light as well on CD8+cells. It has been studied proliferative ability of the T-cages described above three subpopulations by a method flowing cytometry's. The carried out researches have shown, that proliferative reaction was observed, mainly, at CD45RO +. At patients with for the first time revealed diabetes of 1 type reaction comes to light mainly from party CD45RA+RO + T-cages while at patients with a long current a diabetes of 1 type - on autoantigens basically reacted CD45RO + lymphocytes. Hence, reaction of various investigated subclasses of

T-cages, in many respects, depends on the clinical status of the patient. On data (Lalic and co-authors, 2007) + and the increase in quantity CD45RO + cages specifies reduction CD45RA in an establishment of clinical remission. These data it is necessary to use in clinical practice (the note of the author).

As to CD16+cells or NK-cells, that, being the basic cages - effectors natural immunity, they create "the first line of protection", interfering with development of tumoral, virus and fungoid diseases, carrying out immunological supervision in an organism. These cages play the important role in regulation of many immune reactions thanks to the ability secreted a number cytokines. A number of authors marks normal maintenance CD16 + at a part of patients, but with the experience of disease more than 2 years are observed the tendency to their decrease.

CD19 +, CD20 + and CD21+cells at patients with a diabetes of 1 type rather smaller number of works, than T-lymphocytes is devoted research of quantity B-lymphocytes. At the majority of patients, maintenance B-lymphocytes fluctuates within norm or is a little raised, especially at infection joining. Rather recently it was revealed, that B-lymphocytes have cytotoxic potential similar to Nk-cages and can represent itself as effectors. Infringements phagocyte systems.

Infringement of the various parties of functioning phagocyte systems is described: oppression chemotaxis and endocellular bacterial action, decrease in sticking of phagocytes, change endocellular killing, defect of activity of macrophages at level of absorption of an antigen, quantity decrease hydrolytic enzymes of phagocytes. Bacterial action oppression, most likely, is connected not only with the lowered activity thrown out in blood from a bone brain functionally unripe granulocytes, but also with considerable loss of their bactericidal potential in the course of activation phagocytosis and inability of its restoration at the expense of biosynthetic processes. The main role monocyte-fungal systems in formation antibacterium immunity, does clear frequent development at diabetes bacterial complications, decrease in tolerance of these patients to an infection that can be considered as result of oppression phagocytosis, especially at decompensation a diabetes. It is important to notice, that in the course of treatment, in process of indemnification of a diabetes and level decrease glycemia's, authentic increase phagocytosis functions neutrophils was observed, however, its full normalization did not come. There is only one preparation which cleans practically all microbes without occurrence resistance -Sangviritrin - it is possible apply for Children from 1 year - strictly on 1/4 tablet in 30 minutes after meal - to dissolve in water (note of an author).

Besides phagocytosis macrophages also represent alien antigen to a determinant in a complex with the HLA-DR antigens T - and B-lymphocytes. Defect antigen representing to function phagocyte cages leads to infringement of the specific immune answer and activation autoimmune factors. The lowered activity of phagocytes can lead to accumulation lipids immune complexes of the damaged cages and to their sedimentation on vascular walls with its subsequent damage. It increases risk of occurrence of a diabetes 2 types, starts early aterogenesis.

At research nonspecific effect oral protection systems production decrease leukocyte the interferon possessing antivirus, antibacterial by action and being mediator's cellular immunity, and also decrease in indicators titre's a compliment, activity lizicim's and B - lizin in blood whey is established. It is necessary to do diagnostics (note of an author). All changes influence occurrence and an illness current.

Influence cytokines

Last years the big attention in the plan for development of a diabetes of I type is taken away Il-1. Data cytokine influences insulin secretion β-cages. So, long influence IL-1 on β-cages leads to inhibition of secretion of a hormone by blocking of ways of oxidation of glucose and, hence, to tolerance infringement to glucose. Besides, IL-1 powerful cytotoxic an effect on β-cages by formation of free radicals has. Under the influence of IL-1 in β-cages derepressible at least more than 46 genes that is accompanied by corresponding synthesis and presentation of many fibers not "known" to immune system. Various fibers of a thermal shock concern them, protooncogenes. It in turn leads to a new coil of immune attack and the subsequent destruction new β-cages. As well as any somatic, β-cages usually expressed on the membrane of the Collection-antigen of a class 1. The probability of that similar with alien own antigen will be presentation on its surface with a complex of the Collection of a

class 1, is very high. In that case it will be distinguished cytotoxic T-lymphocytes, already sensitized to it by the previous contact of the given clone of immune cages with similar, alien exogenic an antigen. A consequence of the specified contact cytotoxic T-lymphocytes with β-cage will be its adhesion on a membrane of this cage and gradual lysis last. After destruction β-cages itself cytotoxic lymphocyte remains safe and repeats 4 - 5 times the described process.

It is necessary from 3 years for younger age group, from 10 years - to do Immunogram 2 and 3 levels of complexity with definition IL-1, T-lymphocytes, antigens cash desk of the Collection-1 of a class and other parametres. Selection Immunomodulators is obligatory (the note of an author).

Genes of the Collection play extremely important role in the immune answer. First of all, they code the specific cellular fibers representing any antigens to cages of immune system. The formed complex consisting of the Collection-fiber and an antigen, presented on a cellular membrane, also is the basic trigger factor which leads to start of the cascade of the consecutive reactions providing the adequate immune answer in overwhelming majority immunological of reactions.

The main complex histocompatibility at the person settles down on a short shoulder of 6th chromosome. Depending on type of coded fibers and their role in a cycle of immune reactions genes of the Collection are divided into two classes. Genes of 1 class including loci A, B, C, codes the fibers which are presented on all nuclear containing cages of an organism and being classical transplant antigens. Genes of a class 2 and their loci DR, DQ and DP are responsible for synthesis of fibers which in normal conditions are presented only on immunocompetent cages.

The majority of researchers consider, that near to genes HLA the gene (Ir), specifically supervising immune answer of an organism is located. Besides, in this site of a chromosome located between loci B and D, there are the genes responsible for synthesis of 2 and 4 components complement's, and also properdin, therefore diagnostics Immunogram 3 levels is necessary also selection Immunomodulators.

However, despite polymorphism of genes of this system, it was possible to reveal certain law of inheritance of some genes HLA at patients a diabetes of 1 type. The given circumstance has allowed to consider defined HLA-antigens as specific immunogenetic markers of a diabetes of I type.

The first researches have allowed associate a diabetes of I type with haplotypes HLA B8 and B15. Possibility of development insulin dependent in 2, 5 - 3 times above at persons with B8 (simultaneous presence B15 and B8 increases risk of disease in 8 - 9 times) in comparison with the persons who do not have specified antigens. However the subsequent studying of features of inheritance of genes HLA has shown considerable association of this type of a diabetes with the genes concerning to D - and to DR-loci. So at patients with a diabetes of I type with more frequency in comparison with control group of the healthy HLA-antigens Dw3, Dw4, DRw3, DRw4 came to light. Presence haplotypes Dw3 and DRw3 increased relative risk of disease of a diabetes in 3, 7 times, Dw4/DRw4-in 4, 9 times, and Dw3/DRw3-in 9, 4 times.

Last years in more degrees connect predisposition to development of a diabetes of I type with locus DQ, alleles which are inherited is linked with alleles DR, 1 type often meeting at a diabetes. So, associations HLA DR3, DQw2 and HLA DR4, DQw8 are considered as the most frequent.

Results of research have allowed to reveal genetic heterogeneity of a diabetes and a marker of a diabetes of 1 type. However it is impossible to consider a question on a genetic marker completely solved as it should come to light at 90 - 100% of the patients predisposed to a diabetes and to be absent at the healthy. Difficulties of interpretation "diabetogenic" HLA-phenotypes consist that along with HLA-antigens of loci B and D, 1 type often meeting at a diabetes, the HLA-antigens possessing protector action are found out, interfering diabetes occurrence. Protector HLA-antigens are: A3, B7, Dw2, DRw2.

New treatment

1. **Derinat:** As much as possible collects in a bone brain, lymph nodes, thymus, a spleen, to a lesser degree - in a liver, a brain, a stomach, a thin and thick gut.

In a phase of intensive receipt of a preparation in blood there is a redistribution between plasma and uniform elements of blood, in parallel to a metabolism and deducing. After a disposable injection for all pharmacokinetic the curves describing change of concentration of a preparation in studied bodies and fabrics, the fast phase of increase and a fast phase of decrease in concentration in the range of 5-24 is characteristic. After intramuscularly introductions C_{max} it is reached through 5. The preparation gets through the blood-brain barrier. C_{max} a preparation in a brain it is reached in 30 minutes.

Deoxyribonucleic sodium metabolic in an organism. It is deduced basically by kidneys and partially with cal's. T1/2 at intramuscularly introduction makes 72, 3 hours.

At children frequency rate intramuscularly introductions of a preparation the same, as at adults - in a day, then in 3 days. A course - 10 injections. To children about 2 years a preparation are elderly appoint in an average single dose of 7. 5 mg (0.5 ml of a solution for intramuscularly introductions of 15 mg/ml), at children at the age from 2 till 10 years the single dose is defined from calculation of a preparation of 0.5 ml for a year of a life. At children 10 years the average single dose aged is more senior makes 75 mg (5 ml of a solution for intramuscularly introductions of 15 mg/ml), a course dose - to 5 injections of a preparation.

It is possible - to do instead of insulin Derinat - renders hypoglycemic action. Besides, authentically destroys viruses, microbes and fungi ($p < 0,0005$). Possesses cytostatic action - resolve tumours and their metastasis's. It turns out, that in the childhood renders three multidirectional action.

Pricks are entered slowly intramuscularly - for 1 - 2 minutes into buttock muscles, painful, but effective!

2. A transfer factors raise immunity, help to "remember" last "enemies" and operatively to react to their new intrusions, accelerate immune reaction and regulate work of immune cages. A transfer factors possess ability to suppress the excessive immune answer at a diabetes of 1 type. A transfer factors can appear also useful to those who suffers a diabetes 2 types as promote struggle against an inflammation. A source a transfer of factors are the colostrum and eggs. By the way, chicken fibers from 2 eggs burn fat (on a note to teenagers wishes to grow thin). To small patients - to accept a colostrum from any mums.

3. **Pterocarpus marsupium:** Crushed wood of this tree was applied in India for a long time to diabetes treatment. This plant restores and rejuvenates insulin-producing of a cage of a pancreas.

4. **A bitter melon (*Momordica Charantia*):** The preparation from this plant blocks glucose formation in blood and destroys a barrier, stirring to cages to use insulin.

5. ***Gymnema sylvestre***: Is a plant can normalise sugar level in blood. *Gymnema* well influences a condition of cages of the pancreas producing insulin, and strengthens immunity. The Alpha-lipoic acid is a powerful antioxidant. At a diabetes this acid helps to avoid infringements in work nervous and cardiovascular systems. The Alpha-lipoic acid helps cages to use better insulin, is co-enzymes key enzymes of cycle Krebs that allows to restore power balance of nervous structures, and an antioxidant (a natural oxidizer) that gives the chance to prevent the further damage of nervous structures and to protect a nervous fabric from influence of free radicals. In the beginning, throughout 2-4 weeks, an alpha-lipoic acid appoint daily intravenously dropwise 600 mg/sut (the minimum course 15, it is optimum - 20 injections). Further pass to reception of the tablets containing 600 mg an alpha-lipoic acid, 600 mg/sut within 1, 5 - 2 months the Preventive course assumes reception of 600 mg/sut within 1 month each 3 months.

6. For increase antioxidant protection, improvements proliferation cages, fabric breath, the prevention of the raised permeability and fragility of capillaries the patient with diabetic neuropathies' appoint vitamin E preparations, on 1 capsule daily within 2 months.

7. For completion of deficiency of microcells in the body is prescribed magnesium and zinc preparations. For the purpose of elimination of night spasms sural muscles, improvements contractile myocardium functions use such preparations of magnesium, as magnesium sulphate and magnesium orotate. Magnesium sulphate enter together with preparations an acid alpha- lipoic acid intravenously jet slowly (during 10 minutes) on 10 - 20 ml of 10% of a solution. Further appoint magnesium orotate on 1000 mg 3 times a day within 7 days, then - on 500 mg 2 - 3 times a day daily. Duration of course of treatment - not less than 4 - 6 weeks. Deficiency of zinc at a diabetes is one of the reasons erectile dysfunctions in grownup age (zinc par-

ticipates in a metabolism Testosterone's and as consequence - decrease libido), can cause hypotrophy testicles and infringement spermatogenesis (here man's sterility - man's bareness whence undertakes). Deficiency of zinc, as a rule, is available at chronic nephritic insufficiency. For its completion appoint zinc sulphate of 10 mg/sut (in recalculation on zinc) within 1, 5-2 months it is necessary to eat the products containing zinc.

8. It is better to use natural products.

9. Milts fishes - contain Immunomodulator.

Physical activities

Moderate physical activities accelerate glucose splitting that allows to keep level of sugar within norm. However too it is necessary to approach to sports exercises cautiously. To begin employment it is possible only after the control of level of glucose. If sugar below 5 mmol/l or above 13 mmol/l it is better to refuse sports training.

Employment should not be longer 40 minutes and more often three times a week. Long or too frequent trainings lead hypoglycemic to a condition. Physical activity necessarily should be considered at introduction of a dose of insulin.

Regularity and duration of employment at a diabetes of 1 type - the half an hour, forty minutes, five times in week or 1 hour with employment in a day.

As exercises ideally will approach: jogging, an extension, knee-bends, case turns, intensive aerobics, power exercises.

The occurrence mechanism hypoglycemic lack of information

When glucose level in blood strongly decreases, the organism ceases to allocate insulin and liberation of adrenaline and Glucagon's begins. These hormones help to stabilize glucose level in blood. If sugar level in blood periodically happens low adrenaline synthesis decreases. It leads to that people with a diabetes feel approach hypoglycemia's more poorly, and in due course this process starts to pass asymptomatic.

Study to distinguish all symptoms hypoglycemia's. Probably, at you weaken physical symptoms of decrease in level of sugar in blood, but mental symptoms are all the same shown. It's problems with concentration of attention, delay of speech and thinking infringement of coordination of movements. Mental symptoms hypoglycemia's are more "thin", than classical. But, if you know, when at you sugar level can be on the alert during such moments usually decreases and feel hypoglycemia's.

Zinc and chrome - vital at the given disease, therefore it is necessary to accept these microcells. Better in a kind colloid solutions from herbs.

For teenagers - "Vitamins for sick of a diabetes" - only 1 tablet in day within 2 months and the organism is provided by full day norm of vitamins and microcells! Thus, it is enough one packing of these vitamins for one month of daily reception. For achievement optimum effect the preparation tablet "for sick of a diabetes" needs to be accepted Vitamins after meal as fat-soluble vitamins entering into their structure in this case are better acquired.

Treatment of a diabetes of 1 type - herbal medicine

1. Positive influence on an organism renders broth from flax seeds.
2. For a long time curative properties of lime colour are known. Lime colour not only reduces glucose level, but also sates an organism with necessary vitamins.
3. To stabilize sugar gathering of herbs allow. Leaves Leonu rus, leaves of a mulberry and wild strawberry leaves in a proper correlation possess good therapeutic effect.

Insulin therapy

Insulin plays the important role in a metabolism. It transforms the glucose arriving in an organism with food, in energy, and the received energy the hormone delivers in cages. Insulin is entered hypodermically. Tableted forms have not found applications. It is connected by that the preparation is split in a stomach under the influence of digestive enzymes.

Insulin on duration of action in an organism distinguishes:

1. Ultrashort (Novorapid, Humalog);
2. Short (Actrapid, Humulin);
3. Middle (Protaphane);
4. Prolonged (Lantus).

The scheme Insulin therapy steals up the doctor and the Clinical Pharmacist individually. A preparation dose influence:

1. Age the patient;
2. Diabetic the experience;
3. Degree disease indemnifications;
4. Weight;
5. Mode a food;
6. Physical activity.

The characteristic of insulin

Most known of them:

1. Insulin of ultrashort action (Humalog, Novorapid, Api dra). Starts to operate in 15 minutes, reaches action peak in 0, 5 - 2 hours, duration of action - 3 - 4 hours.
2. Insulin of short action (Actrapid, Humulin R, Insuman slow motion and so forth). Starts to operate in 30 minutes, reaches action peak in 1-3 hours, duration of action - 6-8 hours.
3. Insulin of average duration of action (Protafan NM, Hu mulin NPh, Insuman basal and so forth). Starts to operate in 60 - 120 minutes, reaches action peak in 6-8-10 hours, duration of action - 16 - 18 hours.
4. Insulin of long action (Lantus, Levemir). Starts to operate in 2 - 4 hours, duration of action works till 20-28o'clock without notable peak of action.

The combined insulin is not applied to treatment of a diabetes of 1 type, they are necessary at treatment of a diabetes 2 types as soon as it will reach stages insulin requirements.

In our organism insulin is developed round the clock: each time in reply to reception carbohydrate food (bolus secretion) and between food intakes and at night (basal secretion). To simulate such natural secretion of insulin, use combinations of insulin with short and long periods of validity. For example, in quality basal - Protaphane, and as bolus insulin - Novorapid.

Treatment schemes there is a set, there are schemes when there is a fixed dose of insulin and the person is arranged under it and selects meal, and there is a scheme where at first gets out peeping, and the necessary quantity of insulin then pays off.

The second scheme much more physiologic, it gives a certain freedom in choosing and does not adhere to certain volume of meal. But, correctly to calculate an insulin dose on certain quantity of food, it is necessary to pass “diabetes school” where will learn to various nuances at calculation.

Collateral actions Insulin therapy

At some patients at treatment by insulin arise a following sort of complication: hypoglycemia, lipodystrophy, allergic reactions, insulin resistance. Allergic reactions can be shown in the form of local and generalized forms, both immediate, and the slowed down type. Quite often at first local allergic reactions of the slowed down type against which then reactions of immediate type develop are observed, and also transition to generalized to reactions is possible. Very often clinical signs of an allergy disappear spontaneously, despite proceeding therapy by insulin, and, as a rule, in such situations signs of development of resistance to a preparation accrue. Treatment of the allergic phenomena includes appointment antihistamine preparations, replacement of used insulin on more cleared preparation and carrying out specific desensibilisation (since a dose of insulin 1/100 ED units).

The special medical problem is made by resistance to insulin. The pancreas of the healthy person develops a day 30-50 ED endogene insulin. In an initial stage of disease by a diabetes the requirement for insulin, as a rule, makes 7 - 20 UNITS. At patients with the experience of persons such requirement can make 200 ED exogene insulin a day. In this case speak about true resistance to insulin. Cases when the daily requirement of insulin was equaled 10000 UNITS In special Researches are described is shown, that circulating antibodies are responsible for resistance development to the insulin, presented by usual class IgG. For their definition use Radioimmunoelectrophoresis and immunoenzyme the analysis (IEA). Immunologic Husky correction insulin resistance is brought by appointment Corticosteroids (taking into account their by-effects at a diabetes) within 2 weeks on 50 mg daily or appointments Immunosuppresses. But glucocorticoids can give by-effects. Preventive maintenance of development of resistance consists in avoiding of breaks in reception of insulin which stimulations antigen formation (buster-effect) can lead.

To be continued.

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