

## Diabetes 2 Types for Fellow an Edition \_ Part 2

**Dmitrieva Elena Germanovna\****Clinical Pharmacist, Charitable Pharmaceutical Clinic, Russia***\*Corresponding Author:** Dmitrieva Elena Germanovna, Clinical Pharmacist, Charitable Pharmaceutical Clinic, Russia.**Received:** January 09, 2019; **Published:** March 25, 2019*"We cannot solve a problem, using the same mentality which we have created them"**-A. Einstein*

Competent treatment a diabetes of 2 type at Children and Adults - psychosomatic and an infectious disease.

Clinical Clinical a BOOK (clinical cases are approved in the practice).

(Own researches and the analysis of references) 2 part.

Competent treatment of the DIABETES 2 types.

**Positive factors**

Essential positive the factor on a diabetes 2 types - not long starvation. Risk of the raised level of glucose in blood above, than at those who was born several years before hunger or later.

Attention! Are studied predictors adherences to reception Duloxetine's and its association with expenses of system of public health services among patients with diabetic neuropatic a pain - a preparation appoint at a diabetes with complications in the form of diabetic neuropatia's!

Attention! At patients with a diabetes 2 types and insulin resistance above risk of occurrence amiloid plaques, characteristic for an Alzheimer's disease.

The careful control of a diabetes in the middle of a life can benefit also in respect of Alzheimer's disease preventive maintenance (Kensuke Sasaki, 2010).

Prevalence of a diabetes 2 types and Alzheimer's diseases grows all over the world. There is it because more and more people suffer adiposity, and also because of increase in life expectancy of the population. Thus systems of public health services of the majority of the countries are not ready to deal with these chronic diseases.

Amiloid plaques also have been found in a brain of 72% of participants with insuline resistance and 62 those% at whom signs insuline resistance it was not marked. Insulin promotes growth amiloid plaques.

The present research has the longest for today the supervision period that allows to assume what exactly a diabetes 2 types lead to an Alzheimer's disease, rather the reverse.

The sufficient maintenance of magnesium in food reduces risk of a diabetes.

As has shown recent research, maintenance of sufficient level of magnesium in food can help to prevent a diabetes.

On supervision (Dr.s Ka He, 2010) at the people receiving the greatest quantity of magnesium, the risk of development of a diabetes within the next 20 years was almost twice more low, than at whom the magnesium maintenance in food was the least.

These data can explain partly why the risk of a diabetes decreases at the active use wholegrain products: in them a lot of magnesium contains.

Apparently, influence of level of magnesium on risk of a diabetes is connected by that this substance is a part of some the enzymes participating in processing of glucose, and it is necessary for their normal work. The previous researches of interrelation between level of magnesium and risk of a diabetes have yielded inconsistent results.

And, at the persons receiving the greatest quantity of magnesium, about 200 mg on each 1000 kals of a diet, risk of development of a diabetes within 20 years was on 47% more low, than at those participants who received the least quantity of magnesium - about 100 mg on 1000 kals.

With growth of level of magnesium the quantity of some markers of an inflammation and stability to insulin decreases. The increase in the maintenance of magnesium in food can raise sensitivity to insulin and reduce a system inflammation, reducing thereby risk of a diabetes. The further large-scale researches will allow to clear the mechanism of this communication.

Attention! Rye products reduce occurrence risk factors diabetes 2 types. Products from integral grain of a rye it is much better, than the mix of wheat flour and bran, support an insulin and sugar optimum level in blood.

The people, having breakfast products from integral rye grains, for a long time kept sensation of satiety. Besides, their dinner has appeared on 16% less high-calorie, than at those who has had breakfast a white loaf with bran.

Rye products are capable to reduce development of insulin and thus to protect an organism from occurrence insuline resistance, preventing thereby occurrence of a diabetes of the second type and cardiovascular diseases.

### Higher levels of Vitamin D associate with decrease in risk of a diabetes

Higher levels of Vitamin D in blood are connected with decrease in risk of a diabetes among people with high risk of illness. Anastassios G. Pittas, (2011) and colleagues have presented results of the carried out research on 71 scientific sessions of the American Association of the Diabetes.

Vitamin D could play a role in a diabetes, improving secretion of insulin and sensitivity to insulin. The majority of certificates concentrates on favorable effect on pancreatic beta-cages.

To define the relation between the status of Vitamin D and risk of cases of a diabetes, researchers have analysed data "Diabetes Prevention Program" (DPP), researches with 3 groups, compared intensive updating of a way of life or Metformin with placebo for prevention of a diabetes at patients with a prediabetes.

The average period of supervision of a cohort has made of 2039 subjects 3, 2 years. Plasma levels of Vitamin D have been measured with annual intervals, and participants have been estimated concerning a diabetes. For this analysis estimated only participants of groups of updating of a way of life and плацебо "Diabetes Prevention Program".

Patients with levels of Vitamin D from the highest tertel's (average concentration of 30, 1 nanogramm/ml) had a relation of risks 0, 74 for diabetes development, in comparison with levels of Vitamin D from the lowest tertel's (average concentration, 12, 8 nanogramm/ml).

Results also have allowed to assume effect dependent on a dose for vitamin D levels; the relation of risks for a diabetes case was the lowest (0, 46) at people with the highest levels of Vitamin D (50 nanogramm/ml or above), in comparison with the lowest levels (below 12 nanogramm/ml).

In the analysis of subgroups tertel's Vitamin D the association was similar in group placebo (0, 72) and group of updating of a way of life (0, 80).

### Amber acid against the diabetes

Last researches have shown, that amber acid stimulates development of own insulin in an organism, and it regulator activity raises resistibility of an organism and provides its aspiration to metabolism normalization.

Synthesis of insulin under the influence of amber acid is caused by strengthening metabolic processes in islet pancreas fabrics, and stimulation of secretion of insulin by beta cages is provided at the expense of activization of enzymes which do not depend on concentration of glucose in the extracellular environment. Amber acid contains in a currant.

Apple water with cinnamon is considered the natural accelerator of a metabolism!

To prepare a detoks-drink, take fragrant apples cut small slices, add 1 stick cinnamon in a jug or to bank. Place in a refrigerator on pair hours. The combination of an apple and cinnamon improves a metabolism, reduces weight at the expense of a conclusion of a superfluous liquid from a body.

Juice contains a maximum quantity of vitamins and minerals, besides they contain water, so necessary for our organism. Juice contains cellulose, vitamins and mineral substances, they are a food version. Freshly-squeezed juice for growing thin is simply irreplaceable. The juice glass will satisfy feeling of hunger and thirst, will easily be digested in a stomach and will be acquired by an organism, not promoting adjournment of superfluous kgs.

Important! Juice from vegetables is rich with mineral salts, and here juice from juicy fruit - a source of quickly acquired sugars, therefore they are better for mixing with vegetable juice for reception of optimum advantage for growing thin and health.

### The most effective juice for growing thin, are apple, pineapple and grapefruit

- **Apple juice:** freshly-squeezed apple juice is useful at growing thin, therefore before playing sports or keeping to a diet, drink one - two glasses freshly-squeezed apple juice is will go only on advantage to your figure. It is useful to mix freshly-squeezed apple juice with other juice: carrot, celery.
- **Pineapple juice:** is known for the ability to burn fat as pineapple contains bromeline - natural substance which take part at splitting of fats and organism rejuvenescence.

Freshly-squeezed pineapple juice is not combined with vegetables and many fruit, therefore he is better for drinking independently.

- **Grapefruit juice:** freshly-squeezed grapefruit juice is very useful at growing thin. It recommend to drink to people with bad digestion. Freshly-squeezed grapefruit juice improves appetite. Juice contains very few calories and is vitamin-rich, that allows to use this juice as a part of various diets, and also to use at employment by fitness. Also grapefruit juice does not cause an allergy.

In day it is authorised to use no more than 300 gramme not sweet fruit not to add also some insulin, among such products can be and exotic, but it is possible to learn, that it for fruit – Pomelo.

From drinks it is authorised - green and black tea, natural juice with the low maintenance of sugar, not strong coffee.

### Consumption of nuts reduces HbA1c at patients with a diabetes 2 types

Consumption of nuts as replacement to consumption of carbohydrates improves glicemic the control at patients with a diabetes 2 types

Researchers had been analysed data of 117 men and women during the period postmenopause with a diabetes 2 types which accepted peroral hypoglycemic means. Indicators HbA1c of participants of research have made 6%. Patients were randomized on three groups: a diet with a full dose of nuts, a diet with fruitcakes from integral wheat (the same maintenance of fibers, as at consumption of nuts), a diet and a half a dose of nuts.

Authors of research notice, that consumption of nuts as replacement to consumption of carbohydrates improves glicemic the control at patients with a diabetes 2 types.

### The cellular theory of occurrence of the diabetes 2 types

From a position of cellular power we will look at the reasons causing a diabetes of the second type. It is known, that the glucose oxidised by oxygen is necessary for satisfaction of energy needs of a cage. The percentage parity of glucose and oxygen thus, should make 50/50.

At a diabetes of the second type this parity is broken towards the expressed reduction of oxygen and, accordingly, glucose increase. The cage starts to receive less energy, that as a result, leads to the expressed decrease in a metabolism.

### Decrease in level of oxygen in an organism at a diabetes of the second type

Hypoxia - a condition of oxygen starvation, both all organism as a whole, and separate bodies and the fabrics, caused by various fac-

tors: a breath delay, painful conditions, the small maintenance of oxygen in atmosphere. Owing to hipoxia in the vital bodies irreversible changes develop. The most sensitive to oxygen insufficiency are the central nervous system, a muscle of heart, a fabric of kidneys, a liver. Can cause occurrence of inexplicable feeling of euphoria, leads to dizzinesses, a low muscular tone (to E.E.Lesiovskaja, L. P.Pastushenkov, 2003).

Decrease adaptogen organism possibilities at a diabetes, connected with influence of numerous extreme factors, has caused universal growth of disease among the population.

Adaptable reactions at hipoxia (as well as itself hipoxia) are nonspecific and participate in process at all forms of oxygen starvation of fabrics at a diabetes. However the volume, and also their time initiation and an inclusion order are defined by the concrete mechanisms inherent in this or that kind hypoxic of a condition.

At long hypoxia's at sick of a diabetes, despite inclusion enough powerful sanogenetic mechanisms, in bodies structural pathological changes which will not disappear any more at liquidation hipoxia can develop. At a diabetes at the raised sugar in blood it is formed glycolized haemoglobin and blood function on carrying over by oxygen haemoglobin is broken. At insufficient receipt of oxygen in cages of fabrics the free radicals starting the cascade of reactions peroxid of oxidation, destroying cages are formed. Deficiency of receipt in an oxygen fabric causes infringements in a metabolism and reduces an organism bioenergy potential.

According to K.A.Treskunov's, (2009), one of the most frequent reasons of a diabetes and a primary factor of its development - an inflammation of a duodenal gut (duodenitis sharp and chronic). These nozologies it is necessary to treat in parallel with a diabetes (the note of the author).

### Herbal medicine

The first works on studying antihypoxic properties of herbs have been devoted preparations of plants adaptogens. Purposeful search phytoantihypoxants has quickly enough led to success. Throughout the first decade of work (1981-1991) only in S-Peterburg Pharmaceutical Academy it has been revealed more than 500 kinds of medicinal vegetative raw materials, extraction from which possessed properties antihypoxants (L. V.Pastushenkov, E.E.Lesiovskaja, 1991; L. V.Pastushenkov, E.E.Lesiovskaja, 2003).

### Plants-antigipoksanty on expressiveness of effect can be subdivided into following basic groups (an asterisk are noted non official plants

Means of the expressed action. Calamus marsh, an arnica mountain, Astrogalus, a birch, Pawthorns, Borage\*, the Camel prickly ordinary\*, Melilot medicinal, Stellaria average\*, Iris milky-white\*,

Fireweed\*, a Nettle, a Nettle burning, Cinquefoil goose\*, a Linden\* (leaves), a Balm medicinal, Cuff\* (grass), Saponaria medicinal\*, Sowing campaign oats, Oxytrop\*, a Mountain ash ordinary, Cyanosis blue, a Currant\* (leaves), Cudweed uliginose, a Horsetail field, Betony marsh\*, Betony wood\*, Dead-nettle\*.

Means of moderate action (the effect is comparable to action reference antihypoxants).

Quince ordinary, Actinidia\*, Altea medicinal, an Anise ordinary, Aralia high, a Water-melon\*, an Immortelle sandy, a Cowberry ordinary, an Elder black, a Cornflower dark blue, a Vervain medicinal\*, a Heather ordinary\*, Grapes cultural\*, Thoroughwax\*, Clove a tree\*, Gingko, the mountaineer peppery, the Mountaineer, the Mountaineer bird's, buckwheat a sowing campaign, Hernia smooth, Elecampane high, Marjoram ordinary, Marjoram medicinal, a Ginseng ordinary, Wild strawberry wood, Goldenrod Canadian\*, Ginger chemist's\*, a Calendula medicinal, a Guelder-rose ordinary, Cardamom present, a Clover meadow\*, a Sowing campaign coriander, Mullein, Burnet medicinal, Turmeric long\*, Meadowsweet six-petal, a Lavender, Laurels noble\*, Cinquefoil upright, Leuzea, Sowing campaign flax, Schizandra Chinese, a Burdock big, Lovage medicinal\*, Mother-and-stepmother, Mint peppery, Sea-buckthorn berries, a Dandelion medicinal, the Shepherd's bag, a Primrose spring, a Plantain big, a Wheat grass creeping\*, Burdock chemist's, Agrimony ordinary, Rhodiola pink, a Camomile chemist's, a Celery odorous\*, a Soya cultural\*, Aegopodium ordinary\*, Licorice naked, the Harrow field, a Thyme ordinary, a Thyme creeping, a Poplar black, a Yarrow ordinary, Hop ordinary, Chicory ordinary, a Train three-separate, a Bilberry ordinary, Chelandine big, Skullcap Baikal, Eucalyptus the ball.

At a choice of phytopreparations for realisation of main principles of therapy at the concrete patient it is necessary to consider expressiveness degree antihypoxic effect of concrete preparations, availability of means, and also kliniko-experimental acknowledgement of therapeutic effect.

In the practice in Russia are widely used in treatment of patients with a diabetes a dry extract bark birches (Diabetulain), Florenta (a water extract of needles of a fir, and also Dihydroquercetin (Capillary, Taxifolin) from larch wood.

At application Capillary observed pressure ricochets at neuro-circulator distonia (the note of the author).

Diabetulain contains an extract bark birches, dry, fruits of a bilberry, a rhizome with roots Elecampane's. It is proved, that the extract bark birches shows bracing, anti-inflammatory, nootropic, antioxidant, antigipoxant, hepatoprotector, hypoglycemic, anti-inflammatory, immunomodulator, adaptogenic and oncoprotector action (H.H.Sharafetdinov and co-authors, 2006).

Betulin (the basic component BUD "Diabetulain" counterbalances an endocellular ionic homeostasis at the expense of stabilisation of a plasmatic membrane and membranes endocellular organells, and also activation of the basic detoxic enzyme - cytochrome P-450. In it specifies ability Betulin's in conditions hipoxia's to raise in it level of cytochrome P-450 and relative activity monoxygenases.

Advantage betulin's is that fact, that the quantity antivirus preparations is limited, many Immunomodulators cannot widely be applied in clinical practice because of toxicity and by-effects. For example, Interferon preparations the short duration of action distinguishes, necessity to apply in an initial stage of illness, high cost. Long application of Interferon causes alarm and irritability, sharp psychoses and suicide attempts. Ribavirin causes a strongly pronounced anaemia though, my researches have not pulled out such complication. Obviously, doses and course of treatment were selected optimum (the note of the author). «Diabetulain»promotes normalisation of a carbohydrate and fatty exchange, maintenance of functions of a pancreas, a liver and bile ways, improves an organism condition at a diabetes. Vegetative means promotes decrease trio-acylglycerids in blood, considerably accelerates restoration and regeneration of walls of vessels, raises efficiency special hypoglycemic medicines. It is important, that «Diabetulain»promotes increase of mood of the patient by the direct beneficial influence on nervous system. The additive to food is applicable at a diabetes complicated micro-and macroangiopatias as shows antioxidant, angioprotector and hypolipidemic action.

Efficiency of herbal medicine is high at lungs and average weight forms hipoxic conditions. At sharply arisen and heavy forms of oxygen insufficiency herbal medicine carries out an auxiliary role and is capable to raise efficiency and safety of pharmacotherapy at diabetes. However compatibility questions antigipoxants a synthetic and natural origin remain badly studied, care therefore is required at carrying out of such complex treatment (E.E.Lesiovskaja, L. V.Pastushenkov, 2003).

Domestic experience of preventive maintenance and treatment hipoxic conditions at diabetes proves perspectivity of the phytotherapeutic approach. Thanks to normalising influence antigipoxants a phytogenesis adaptive-adaptive possibilities extend at a diabetes, stability to various adverse influences grows. Thanks to metabolism optimisation phytoantigipoxants allow to optimise treatment of patients, accelerate remission approach, reduce (level) risk of complications of pharmacotherapy (the note of the author).

### Role of adiposity and hypodynamia

The frequent overeating and inactive way of life lead to occurrence of adiposity and aggravate insulin resistance even more. It

promotes realisation of the genes responsible for development of a diabetes of 2 types.

It occurs, because at visceral adipocytes, unlike adipocytes hypodermic fatty cellulose, sensitivity to antilipolytic to action of a hormone of insulin is lowered and sensitivity to lipolytic to action catecholamines is raised.

This circumstance becomes the activation reason lipoliz visceral a fatty layer and to receipt at first in a blood-groove of a portal vein, and then and in system blood circulation, a considerable quantity of free fat acids. In a counterbalance to it, cages hypodermic a fatty layer to slowing down action of insulin, it promotes re-esterification free fat acids to trio-acylglycerids.

Insulin resistance skeletal muscles consists that they in a rest condition mainly utilise free fat acids. It interferes miocyts to utilise glucose and conducts to sugar increase in blood and compensator to insulin increase. Fat acids do not allow to insulin to contact hepatocyts, and it at liver level aggravates insulin resistance and oppresses inhibitory hormone action on gluconeogenez in a liver. Gluconeogenez leads to the constant raised development of glucose in a liver. The vicious circle - growth of level of fat acids which causes still big insulin resistance a muscular, fatty and hepatic fabric is created. It is started lipoliz, appears hyperinsulinemia, concentration of fat acids raises. Low physical activity aggravates insulin resistance.

In a condition of rest carrying over of substances-conveyors of glucose (SLC2A4 or GFC-4) in miocyts is sharply lowered. Reduction of muscles at physical activity increases glucose delivery in miocyts, there is it because of increase of translocation (SLC2A4 or GFC-4) to a cage membrane.

Laboratory criteria of a diabetes 2 types on concentration of glucose in blood (mol/l)

Biological fluid taking	Prandial	In 2 hours after seventy five
Blood plasma	> 7, 0	> 11, 1
Capillary blood	> 6, 1	> 11, 1
Whole venous blood	> 6, 1	> 10, 1

Table

### The reasons insulin resistance

Insulin resistance connect with insulin dysfunction on receptor, pre-receptor and post-receptor levels. Receptor insulin resistance it is connected with insufficient number of receptors on a cage membrane, and as change in their structure. Pre-receptor insulin resistance it is caused - frustration of early stages of secretion of

insulin and (or) with a pathology of transformation of proinsulin in C-peptid and insulin. Post-receptor insulin resistance includes defect of activity transducer which transfer a signal of insulin in a cage, and also what participate in fiber synthesis, glicogen's and in glucose transportation.

The most important consequences insulin resistance is hyperinsulinemia, hyperglycemia and dislipoproteinemia. In infringement of manufacture of insulin hyperglycemia plays the leading part and conducts to its gradual relative deficiency. At 2 types sick of a diabetes compensator possibilities of beta cages of a pancreas are limited because of genetic breakage glucolinaza's and the conveyor of glucose GBGCG-2. The given substances are responsible for insulin development on stimulation by glucose.

### Early stages of infringement of secretion of insulin

Changes of secretion of insulin at a prediabetes to occur because of the raised concentration of free fat acids. It in turn leads to oppression piruvatdehidrogenaza's, so to delay glicoliz's. The inhibition glicoliz's leads in beta cages to reduction of formation adenosine-trio-phosphat's, which is the basic starting mechanism of secretion of insulin. The role glucose toxicity in defect of secretion of insulin at patients with a prediabetes (tolerance infringement to glucose) is excluded, as hyperglycemia is not observed yet.

Glucose toxicity is a set bimolecular processes at which long superfluous concentration of glucose in blood leads to damage of secretion of insulin and sensitivity of fabrics to it.

It is one more closed vicious circle in patogenez 2 types of a diabetes. Hyperglycemia not only the main symptom, but also the factor of progressing of a diabetes 2 types owing to phenomenon action glucose toxicity.

At long hyperglycemia in reply to loading glucose observes fall of secretion of insulin. During too time sercet the answer to stimulations Arginin's long remains on the contrary strengthened. Listed malfunctions of development of insulin all above are corrected at maintenance of normal concentration of sugar in blood. It proves, that the phenomenon glucose toxicity plays the important role in patogenez's defect of secretion of insulin at a diabetes 2 types.

Also glucose toxicity leads to reduction of sensitivity of fabrics to insulin. Thus, achievement and maintenance of normal indicators of glucose in blood will promote increase in sensitivity of peripheral fabrics to a hormone to insulin.

Patogenez is the basic symptom - Hyperglycemia's - a marker of a diabetes 2 types.

It is broken secretion of insulin by beta cages of a pancreas and mastering of glucose by fabrics that puts the purpose to correct in-

fringement of a carbohydrate exchange at 2 types sick of a diabetes to indicators Normaglicemia's.

Sugar increase on an empty stomach - an early symptom of a diabetes 2 types. It is caused by the raised secretion of sugar by a liver. Expressiveness of infringements of secretion of insulin has  $\pi$ mo proportional dependence from hyperglycemia on an empty stomach at night!

Insulin resistance of hepatocytes is not primary breakage, it appears as a result of influence of metabolic and hormonal infringements, including production increase glucagon's.

At chronic hyperglycemia beta-cells lose ability to answer growth of level of glucose in blood secretion decrease glucagon's. Thereof increases hepatic glycogenoliz and gluconeogenesis. It is one of factors relative deficiency insulin in portal blood circulation.

The additional reason of development insulin resistance at liver level considers inhibitor action of fat acids on capture and internalization hepatocytes insulin. Superfluous receipt in a liver of free fat acids sharply stimulates gluconeogenesis for increase in cycle Krebs's of production Acetyl-KoA.

Besides, Acetyl-KoA, in turn, reduces activity of enzyme piruvat-dehidrogenaza's. Result of it is superfluous secretion lactat in the Measles cycle (lactat - one of the main products for gluconeogenesis). Also fat acids suppress activity of enzyme glicogensintaza's.

### Role in patogeneza diabetes 2 types Amilin and Leptin

Last time to substances amilin's and leptin's is taken away a considerable role in the mechanism of development of a diabetes 2 types. The role amilin's has been established only 15 years ago. Amilin is islet amiloid polypeptide, which takes places in secret granules beta-cells and in norm it is developed together with insulin in the ratio approximately 1:100. The maintenance of the given substance elevated at patients with insulin resistance and tolerance infringement to carbohydrates (prediabetes).

At a diabetes 2 types amilin collect in islets Langergans's in a kind amiloid's. He participates in regulation of an exchange of carbohydrates, correcting speed suction glucose from intestines, and braking insulin development in reply to irritation glucose.

Last 10 years the role leptin's in a pathology of an exchange of fats and development of a diabetes 2 types is studied. Leptin is polypeptide, which is developed by cells of a white fatty fabric and operates on kernels gipotalamus, namely on ventro-lateralnye the kernels which are responsible for food behaviour.

Secretion leptin's decreases in time starvation and increases at adiposity, in other words it is regulated by the most fatty fabric.

The plus the power balance is interfaced to production increase leptin's and insulin.

The last conduct interaction with gipotalamic the centres, most likely, through secretion gipotalamic neuropeptid's Y. All process the system knows gipotalamo-gipofizar.

Starvation leads to reduction of quantity of a fatty fabric and concentration decrease leptin's and insulin that stimulates secretion gipotalamus gipotalamic neuropeptid's Y. Data neuropeptid's supervises food behaviour, namely tempts strong appetite, a weight increase, accumulation of fatty adjournment, braking of sympathetic nervous system.

Both relative and absolute insufficiency leptin's conducts to secretion increase neuropeptid's Y, so to adiposity development. At absolute insufficiency leptin's it exogenic introduction in parallel about appetite and weight reduction reduces the maintenance mRNA which codes neuropeptid's Y. Exogenic introduction leptin's at its relative insufficiency (as a result of a mutation of a gene which codes its receptor) does not influence in any way weight.

Absolute or relative deficiency leptin's leads to loss inhibitory the control over secretion hypotalamic neuropeptid's Y. It is accompanied vegetative and neuroendocrine by pathologies which take participation in adiposity development.

Patogeneza diabetes 2 types very difficult process. In it the leading role is played insulin resistance, by infringement of production of insulin and the chronic raised secretion of glucose by a liver. At selection of treatment for achievement of indemnification of a diabetes of 2 type and preventive maintenance of complications it should be considered.

### Irina

Already at the age of 30 years to me this illness has clung. At mum the second type, and in hospital have told, that it to me was descended. Always conducted an active way of life, went in for sports, ate correctly. And now, sitting on tablets, excess weight began to appear. Now it is very terrible, that will be transferred to my children. It for 5 years and they twins.

### The reasons of a diabetes 2 types

The first and the basic from them is a stress. After all at stress such hormones, as adrenaline and tiroxin, promoting active consumption of oxygen in an organism are developed. The mentioned hormones »are burnt« by the most active work of muscles of finiteness's. Thus, actively working bodies of breath completely restored oxygen requirements of an organism.

Today, when the modern person receives the negative information from mass media, to a mobile phone or from other sources, at it stressful hormones too are developed. Only any of set forth

above protective and compensator; unfortunately, any more does not work reactions. As a result in an organism develops fabric hypoxia (decrease in level of oxygen).

The second reason hypoxia are chronic slow inflammatory processes in lungs. These are not infectious – apnoea a dream, an asthma (can be and infectious). At many patients at inspection defeats of bodies of breath mycoplasmal or chlamydial aetiologies come to light, and as consequence - there is a deficiency of oxygen. For this reason on a diabetes - it is necessary to carry out the complex researches directed on revealing of risk potential infection of lungs (the note of the author) in diagnostics standards. Traditional herbal medicine and vegetative antioxidants (note the author), that is why help.

Constantly receiving surplus of glucose, at simultaneous deficiency of oxygen, during any moment the cage starts to “protest”. Unproductive and ineffective work, absence of receipt of energy, decrease in level of a metabolism, actually force a cage to «appeal» to a brain - as to highest authority - with «request» to interfere and normalise a glucose and oxygen parity. At deficiency of oxygen in an organism, unique way though somehow to fill it is it to force lungs to work even more intensively, adequate physical activity (run, skis, walks on fresh air and other adequate physical activity) therefore is necessary. It is primary preventive maintenance of disease by a diabetes - 2 types.

Unfortunately, for a variety of causes, it is not obviously possible for realising. For this reason the brain is compelled to “go” on other way. Considering, that a glucose carrier in an organism is the insulin, the self-regulating system reduces sensitivity of receptors of insulin to interfere with glucose delivery in a cage.

Not having possibility to raise oxygen level in an organism, the self-regulating system itself reduces sensitivity of receptors of insulin. But after all the diabetes of the second type is and there is a defeat insulin receptors...

After all at times, it is enough patient to give physical activity - to increase quantity of oxygen in an organism, and glucose level in blood comes to norm (the note of the author).

### Treatment of a diabetes 2 types includes three components

First, time at these patients occurs glucose increase in blood it is necessary for them to adhere strict low-carb to a diet.

Secondly, it is necessary to increase quantity of oxygen in an organism, having finished it to normal level under the control of the modern medical equipment.

Thirdly, it is necessary to restore sensitivity insulin receptors!

Attention to the Doctor and the Pharmacist! C-peptid is an indirect indicator of quantity of the insulin developed by b-cages of a pancreas.

Glycated (become candied) haemoglobin - an average indicator of fluctuations of sugar in blood for last 3 months, directly specifying in weight of a current of disease.

By the international criteria, ideal indemnification of a carbohydrate exchange considers an indicator of 25%, and good - 50%. Decrease glycated haemoglobin at patients - about 3% for three months. Normalisation of indicator C-peptid’s at patients with a diabetes of the second type, this indicator, as a rule, at them considerably is raised, for 6 months.

Individual approach to a problem of each patient, use possibility in practice of the most effective and safe means of pharmacotherapy, active application not medicamentous methods of treatment, such as: laser, magnetic, cryotherapy, herbal medicine as a whole, all it also promotes achievement of worthy results (the note of the author).

Possibility of application of round-the-clock monitoring of level glycemia’s, allows depending on the received data, to build the individual therapeutic program and to correct a mode of dispensing of medical products so that at each patient indicators of a carbohydrate exchange were optimised, the body weight has decreased, the vitality has raised and, accordingly, quality of a life has improved.

Attention! At much share of patients with again diagnosed diabetes, microalbuminuria’s (fiber in urine) finds out within the first year that can testify to considerable duration earlier not diagnosed diabetes.

### Other Risk factors of a diabetes 2 types

#### Risk factors

- Women after 40 years
- Rubella
- Epidemic a parotitis
- Illnesses, connected with infection with virus Koksaki
- Epidemic a hepatitis
- Passive smoking (passive smokers), therefore an adoption of law about prohibition of smoking of the house and in public places pertinently!
- Obesity - it is necessary to define the maintenance leptin’s (the fiber which are responsible for saturation of an organism by food) and adiponectin’s (substance under which action fatty cages - adipocyt collapse). It is important to know also, how it to correct, increase development leptin’s, which makes active development of insulin

by a pancreas, that the organism did not signal about constant hunger and how to increase concentration adiponectin's, to destroy fatty cages, to clean adiposity.

- Work our internal clocks, probably, it is directly connected with risk of occurrence of a diabetes 2 types.

The international group of scientists has carried out research in which result it was found out, that the error in a key gene of internal clocks has been connected with sugar level in blood and occurrence of a diabetes 2 types.

Some scientists and believed earlier, that we circadian rhythms (internal clocks) have some interrelation with predisposition to various diseases. However experts demanded proofs of such assumptions. It was found out, that deviations in such rhythms can partially influence occurrence of a diabetes and on the raised maintenance of sugar in blood. These data could promote creation of the new approach to treatment and diabetes preventive maintenance.

Data from the spent work specify that a part of time the person sleeps, accumulating energy which spends subsequently for an active part of day. Partially it occurs thanks to secretion of hormones. In particular the hormone melatonin, developed pineal gland (epiphysis) in a brain, is responsible for drowsiness and body temperature fall.

The group of scientists has studied genom's several thousand people in search of association between genetic changes and a diabetes 2 types. Experts have found out, that the genetic changes connected with circadian by a rhythm, increase risk of occurrence of a diabetes 2 types by 20%, and also raise sugar level in blood. Scientists assert, that both these diseases have been connected with action of gene MTNR1B which regulates action melatonin's on different bodies and parts of a body of the person.

Associative communication between work of internal clocks and risk of occurrence of a diabetes 2 types, and also the raised level of sugar in blood, close enough.

Diet - A prevalence of products - eggs increase risk of occurrence of a diabetes of the second type.

The regular use for a breakfast even one egg raises risk of occurrence of a diabetes of the second type on the average on 60%. Though, fibers of eggs influence positively if there is no allergy on them.

A schizophrenia - Spent glucose tolerance the test at patients with a schizophrenia prior to the beginning of treatment by antipsychotic preparations which also cause a fast set of weight of a body - one of risk factors of a diabetes of the second type.

An insufficient food of a fruit - hypoxia a fruit.

Small weight of the child at a birth - increase risk of development of this disease.

Operation - the Cesarean section in sorts - is frequent after operations arises - a diabetes 1 and 2 types, an autism, and at women - chronic pains in a back. It is necessary to forbid such operations without medical indications (only a narrow basin, impossibility of normal sorts). In Russia do cesarean in 30% of cases absolutely unreasonably.

Operations - tonsillectomy (removal palatal tonsils) and adenotomy (removal adenoids) - is often formed adiposity and joining of a diabetes 2 types. Growth tonsils in a nose and in a pharynx is often formed after vaccination. Viruses and bacteria are sowed in surrounding space and infect others. It is necessary to check carefully indications to such operations at children. It is necessary to reconsider indications to vaccination at children (the note of the author).

For long-term practice saw such cases of wrecking of doctors at children (the note of the author) much. The community of Clinical Pharmacists should intercede for our children (the note of the author).

#### Aetiologies, characteristic for women

At the women suffering from psoriasis, the risk of occurrence of a diabetes and the raised blood pressure is increased.

The inflammation connected with chronic disease of a skin, can affect risk of occurrence of a diabetes and the raised pressure. In new research experts have united results of the previous researches on psoriasis. Illness mentions 3% of the population and is connected with hyperactivity of immune system. Results of researches give the bases to consider psoriasis as system infringement in an organism, instead of is simple as skin disease. At psoriasis skin cages share too quickly, leading to formation of scaly formations on a skin. At the women suffering psoriasis, the risk of occurrence of a diabetes was on 63% above and on 17% above risk of occurrence of the raised pressure, than at women without psoriasis. This tendency was distinctly shown even after have considered such factors, as age, an index of weight of a body and smoking.

Intensive physical activities on a backbone at children and at women.

An overeating (the food should be energetically valuable) - now at us food high-calorie, but it is poor useful substances. Decisions of the President of Russia and the Government are necessary to reconstruct the food-processing industry on release of a food useful to a human body. It is very important for preventive maintenance of the majority of diseases of the person!

Traumas various

The less people consume omega-3 fat acids, the above concentration of C-jet fiber in blood (a marker of a diabetes 2 types), and the it is more than chances to be ill with a diabetes 2 types. Researchers have divided investigated population on quartiles depending on consumption levels omega-3 polynonsaturated fat acids.

As a result of research presence of return interrelation between levels of S-jet fiber and consumption of polynonsaturated fat acids is shown. So at men with the least quartile’s consumption of polynonsaturated fat acids level of C-jet fiber has made 0, 53 mg/l, and at men with the greatest quartile’s - 0, 46 mg/dl. The most expressed the interrelation between consumption of polynonsaturated fat acids and levels of C-jet fiber has appeared at smokers.

Clerics are risk group on development, both a diabetes, and diabetic retinopatia’s, as they cannot keep to a diet, (owing to that eat the meal brought in monasteries) and at them access to qualitative medical aid is limited, therefore, high probability of considerable distribution at them both a diabetes 2 types, and diabetic retinopatia’s.

The fat food gives a diabetes 2 types at women, than reception of sugars is more often.

Long-term practice obliges to reconsider diets of fat food, after all visceral adiposity is fraught with emission of a pool of fat acids in blood that is fraught with development of a chronic inflammation in a human body, development of a diabetes 2 types and start aterogenez’s with transition in an atherosclerosis (the note of the author). Fat or chylous blood name when in it contain trio-acylglycerids in the concentration much more exceeding admissible norm. In that case blood plasma after its branch with the help centrifugation has dense enough consistence and whitish colour. The diet is necessary contralipidemic. Normal values trio-acylglycerids blood fluctuate depending on a floor and age of the person. Average norm of level trio-acylglycerids blood, by data the CART, concentration to 1, 17 mmol/l is considered. Excess of their admissible norm leads to infringement lipid balance of an organism. This condition is called dislipidemia or hyperlipidemia. In a number of scientific researches it has been shown, that increase in the maintenance of free fat acids in blood association with increase of risk of sudden death. The conclusion has been made, that increase of the maintenance of free fat acids in blood plasma is an independent risk factor of sudden death. Levels (free fatty acids in the blood (FFA) raised on an empty stomach - a risk factor of a diabetes of 2 type (Table 1).

Age	Content mg/100 ml	Content mg/100 ml
Adults	8-25 x 0, 354	0, 28-0, 89
Children and fat patients	< 31	<1,10

**Table 1:** Reference values.

Free fatty acids in the blood (FFA) mmol/l 0, 33 + 0, 02 – Healthy 0, 79 + 0, 16\* - at patients with diabet 2 type.

In some cases fat occurrence in blood is promoted by reception of certain medical products (poisonings a pathology).

- Glucocorticosteroids
- High doses of an estrogen
- The diuretic
- Blocators beta-adrenoreceptors.

For stabilisation of a diabetes 2 types and pressure - are better to accept beer pollen in December, January and March - 3 courses. A medicine accept three times a day on 1 part. Shortly before a meal. It is better to accept a dry product, resolving in a mouth of 20 minutes. To drink it is possible in 30 minutes after reception of a dry product. Course of treatment spend to 21 days then it is necessary to make a break on a half-month and to repeat procedure.

The prediabetes and a diabetes promote development dementia and to its progressing in heavier forms!

The people, suffering a diabetes, are more subject to development of depression and disturbing frustration, than the people having other diseases at whom too it is necessary to observe a certain diet and introductions of medicines.

Stability to insulin is connected with decrease in level key neuromediator Dofamin’s in the areas of a brain connected with depression and alarm.

**The onions extract can improve a state of health of diabetics**

The combination Metformin’s and onions extract is capable to lower levels of the general cholesterol and glucose in blood. Well reduces level of glucose boiled onions. It for diabetics is a gourmet doubly.

**The wood bilberry facilitates consequences of consumption of food with the high maintenance of fats**

The use in food of a wood bilberry can reduce some of harmful effects of a diet with the high maintenance of fats. The positive answer on an indicator of arterial pressure and level of various inflammatory markers was observed.

Within three months scientists from fed group of mice with food with the high maintenance of fats. Some animals received food with addition of five percent by the dried up sublimation of a bilberry, and others - with addition of 10%. Researchers estimated influence of a diet on inflammatory cages and levels cytocynes, systolic arterial pressure, tolerance to glucose, sensitivity to insulin and a weight set.

At mice from the control group, not receiving a bilberry, weight substantial growth, and also adverse changes of a metabolism of

glucose and lipids, markers of an inflammation and arterial pressure was observed. The bilberry reduced proinflammatory effects of food with the high maintenance of fats to what change of profiles cytokines testified, and also decrease in T-cages supporting an inflammation in blood. Besides, it was not observed pressure increases.

Researchers explain such influence on health the high maintenance of polyphenols in a wood bilberry. Their levels considerably exceed those in industrially grown up bilberry.

### Jatropatchesky pathology (poisoning with medicines)

1. Energizers - It is necessary to spend Differential Diagnostics Poisonings as it is a pathology going from poisonings by medicines. In it Clinical Pharmacists (the note of the author) should be engaged.
2. Tiazid diuretics (Hypotiazid).
3. Attention to the doctor and the pharmacist! Indapamid (Arifon) increases risk of occurrence of a diabetes 2 types! It is described even in the summary for patients (the note of the author).

Attention to the Doctor and the Pharmacist! Selenium preparations it is necessary to clean 2 types from standards of treatment of a diabetes, selenium provokes development of this disease!

Attention to the doctor and the pharmacist! NIFEDIPINE and CAPTOPRIL INCREASE SODIUM DEDUCING! At natriemias it can break a sodium/kalija parity that will aggravate a hypertension and work health and vessels, especially at a diabetes 2 types! Appointment of these preparations probably after definition of biochemistry of blood - concentration of sodium and calium to look their parity. These researches need to be included in diagnostics standards on a diabetes 2 types (the note of the author).

Attention to the doctor and the pharmacist! Indapamid increases sodium deducing, that too can aggravate heart work! There can be an increase kaliun (potassium) in blood!

The frequent use of a potato raises risk of development of a diabetes of 2nd type at women.

Scientists (Thomas L. Halton) have counted up, that at the women consuming a potato most often, the risk of development of a diabetes of 2 type within 20 years increased on 14% in comparison with those who used a potato seldom. At lovers of a potato-fri the risk of a diabetes has appeared still above and has made 21%. The strongest interrelation was traced at the women, suffering by the adiposity, which in itself increases risk of a diabetes. The potato is rich with mineral substances, basically kalium's, and is especially useful to people with diseases of heart and kidneys, but at a po-

tato high glicemic an index (GI), that is its consumption leads to fast and strong increase of level of sugar in blood. In a consequence, in the presence of predisposition, this phenomenon can promote development of a diabetes 2 types at which mastering of glucose by fabrics is broken.

Authors of research recommended to the women inclined to excess weight, to limit the use of a potato and to add in a diet grater quantity of products with low glicemic an index: wholegrain products, bean, and also the fruit rich cellulose's.

Attention! It is revealed 14 new biomarkers closely connected with development of a diabetes of the second type. Them it is necessary to include 2 types (the note of the author) in standards of diagnostics of a diabetes.

People at whom quantity of fiber under name SFRP4 in blood above an average, are endangered developments of a diabetes of the second type five times more (Anders Rozengren, 2012).

It is first time when connection between fiber SFRP4 which plays the important role in inflammatory processes in an organism, and risk of development of a diabetes of the second type has been established.

Patients a diabetes have higher quantity of fiber SFRP4 promoting occurrence of inflammatory processes. Chronic inflammations negatively operate on beta cages, weakening them, that they cannot develop insulin enough.

Each three years scientists made gauging of level SFRP4 in blood of the people, not suffering a diabetes. During research the diabetes has developed at 37% of participants. At them the raised concentration of fibers in the beginning of carrying out of research work was observed. Among at whom level SFRP4 was below an average, with a diabetes 9% of participants were ill only.

### Experts named fiber SFRP4 "a risk biomarker".

Experts assume, that fiber blocking in the beta cages producing insulin that will reduce inflammations becomes one of ways of such treatment and will protect cages.

Results show, that the module biomarker is enriched connected with T2DM ways, such, as a diabetes 2 types ( $p < 10^{-3}$ ), an alarm way of a receptor of B-cages ( $p < 0,003$ ), a way of signalling of insulin ( $p < 0, 013$ ), the alarm alarm system of type Toll like ( $p < 0,006$ ) and biosynthesis of nonsaturated fat acid ( $p < 0, 036$ ).

### The organisms living in a gastroenteric path can provoke a diabetes

In intestines lives 1, 5 kgs of bacteria. If balance is broken, there are serious problems with health. It has appeared, that diabetics

had more aggressive bacterial environment which could raise resistance to medicines.

It is revealed considerable disbalance in work and structure of bacteria at diabetics. Under the analysis of bacterial flora (presence of nonspecific flora) it is possible to define risk of development of a diabetes at the person. They need to be included in standards of diagnostics sugar diabetes 2 types (the note of the author).

The compelled migration - risk for health of the poor population increases after moving to a city.

As has shown recent research of health of inhabitants of the India which have got over on a constant residence in cities, the more time passes from moving from a countryside, the indicators of the general state of health and risk of a diabetes become worse.

Such indicators as arterial pressure, the weight of fat and insulin level on an empty stomach, raise in 10 years after moving to a city, and for the next decades the pressure and insulin level continue to grow in comparison with those at the Indians still living in a countryside.

The obtained data cause alarm as, the further, the more people become city dwellers though, in comparison with the USA where the urban population reaches 82%, for India this indicator does not exceed 30%. Meanwhile urban population growth in India makes 1, 1% a year whereas the agricultural population share decreases on 0, 37% a year.

For example, the pressure grows as the experience of a city life increases. So, at the men living in a city more of 30 years, systolic the pressure averages 126 mm hg, at those who has spent in a city of 10-20 years, - 124 mm hg, and at inhabitants of rural areas - 123 mm hg (Dr. Sanjay Kinra, 2011).

Changes of weight of fat were most significant in the first 10 years of a life in a city, and then decreased. So, at the men who have lived in a city of 10 years, the weight of fat made 24%, and at countrymen - 21% (Under the recommendation of National institutes of health, optimum it is necessary to consider weight of fat from 13 to 17%).

Research does not open neither the reasons of these distinctions, nor their influence on disease. At the same time similar communication is shown and in other works, developing countries concerning to population shift from a countryside in cities. Whereas in the USA the urban population, on the contrary, is more healthy rural and even than those who lives in suburbs.

Important! According to Management on researches and quality in public health services, the Americans living in a countryside, suffer chronic illnesses is more often and die of heart diseases.

According to authors of research, the tendency to deterioration of health of the Indians who have moved to cities, speaks that they start - to eat less healthy food and to conduct less active way of life that promotes a fast set of weight. And help with it special programs on preventive maintenance of adiposity at recent migrants in the cities constructed with the account of needs of persons with the low social and economic status can.

#### **Risk factors on the diabetes 2 types**

Attention! 14 new DNA of breakages which will open all secrets of occurrence of a diabetes are found.

#### **Attention! Statines in a high dose increase risk of a diabetes**

Thus, the risk of cardiovascular outcomes at treatment by high doses Statines has decreased on 16%. The number of patients with which it is necessary to treat with high doses Statines for preventive maintenance of one cardiovascular outcome, has made 155, and number of patients with which it is necessary to treat for development of one case of a diabetes - 498. The risk of a diabetes was comparable at treatment Atorvastatine 80 mg and Simvastatine 80 mg, however in efficiency in preventive maintenance of cardiovascular outcomes Atorvastatine surpassed Simvastatine (decrease in risk of cardiovascular outcomes on 22% and 5%, accordingly). The mechanism of development of a diabetes remains to unknown persons (Preiss D, Seshasai SR, Welsh P, *et al.* 2011).

Attention! The preparations lowering cholesterol, raise risk of occurrence of a diabetes (Statines, Fibrats).

Important! Reception of preparations for cholesterol fall in high doses can raise risk of occurrence of a diabetes of the second type.

Scientists have carried out research in which have analysed five previous researches with total of participants more than 32 thousand persons. Patients regularly accepted the preparations blocking cholesterol, and have been divided by researchers on two conditional groups depending on a daily dose - from 20 to 40 mg and 80 mg. It was found out, that reception of the big doses of preparations raised risk of occurrence of a diabetes of 2 type on 12%.

Experts have informed, that only to the Great Britain, which population makes 62 million inhabitants, preparations for cholesterol fall accept more than 7 million the persons, every third adult at the age from 40 years and is more senior. It is necessary not to abuse preparations lowering cholesterol as it is negatively can affect on health (the note of the author).

Insulin resistance against application Statines also can arise at the expense of influence on formation process membran glucose fiber-conveyor - SLC2A4 (GFC-4).

The given assumption proves to be true effect elimination статинов under the influence of the predecessor isoprenoid's - Mevalonat's.

Synthesis suppression Ubichinon's (CoQ10), essential the factor providing transport electrones in mitochondrions, can lead to slowed down formation adenosine trio-fosfat's (ATF) in pancreatic  $\beta$ -cages, and, hence, to a delay of liberation of insulin from cages.

Cages of a fatty fabric influence a metabolism of glucose and a current of a diabetes by means of emission adipocytocynes therefore insulin action can change.

Water-soluble Statines, such as Rozuvastatin or Pravastatine, are hepatospecific and consequently not so easily get into cages of a pancreas and adipocytes. They form weak communications with GmK-KoA reductaza's and possess the limited ability to block a way Mevalonat's out of liver cages.

Fat-soluble Statines, such as Simvastatine and Atorvastatine, with ease get in extrahepatic cages, inhibiting synthesis isoprenoid's, reducing level of secretion of insulin, strengthening insulin resistance. Lipofil inhibitors GmK-KoA reductaza's (Simvastatine) it dozo-is dependent interfere with the increase of endocellular maintenance Ca 2 induced by glucose + in pancreatic b-cages by means of blockade Ca 2 of +-channels of L-type, leading to decrease in secretion of insulin. At the same time Rozuvastatin and Pravastatine (water-soluble Statines) do not render similar action even in high concentration - 100 mkg/ml.

Attention! Presence at one of members of a family of a diabetes 2 types increases risk of occurrence of disease at representatives of a female twice.

Certainly, excess weight and preferences in meal are the important risk factors of occurrence of a diabetes 2 types, however experts have decided to find out, what role is played by the hereditary factor. Within 20 years scientists observed of 73227 women. Excess weight and a way of life were considered. For this period 2 types were ill with a diabetes of 5102 women. Having analysed all data, experts have found out, that if in a family one of near relations was ill with a diabetes, the risk increased more, than twice. Also it was possible to establish, that the women having family history of a diabetes, on 20% have been more subject to excess weight occurrence.

Scientists consider, that the hereditary factor plays the important role, but the healthy way of life and eutrophy can render protective effect, therefore it is not necessary to neglect it.

Attention! A risk factor on occurrence of a diabetes 2 types - the big use of milk.

Attention! Surplus of iron in an organism - a diabetes risk factor! Such patients with hemochromatosis and a diabetes the author met.

Attention! According to research FIELD, at patients with a diabetes 2 types traditional parities lipids have appeared same exact concerning forecasting of risk of cardiovascular diseases, as well as the relation apoB/apoA-1. Thus, there is no necessity to replace traditional indicators of levels lipids and their parities on indicators apo-B, apo-A-1 and their parity.

Attention! Even the small increase in weight leads to dysfunction development endothelium's at persons with normal weight of a body and normal pressure (Virend Somers, 2010). Have carried out research with participation of 43 healthy volunteers with initial normal weight of a body. Then from randomization in groups of increase in weight of a body and stable weight of a body. The group of increase in weight of a body within 8 weeks received on 1000 calories more than it is necessary, and then the period of observance of a diet for normalization of weight of a body followed. In group of a set of weight of a body the weight has increased by 4, 1 kg that was accompanied by decrease a stream-dependent dilatation vessels from 9, 1% to 7, 8%.

Attention! The women actively using autosunburn and a hair-spray, are subject to the raised risk of development of a diabetes.

Scientists have analysed given more than 2 thousand women at the age from 20 till 80 years. There was, that a high level phtalats, getting to an organism with cosmetic means, increased risk of development of a diabetes by 200%. Also it was marked insulin resistance. If concentration was concerning moderated the risk raised approximately on 70%.

Experts have explained, that phtalats it is possible to meet practically everywhere (in nail polish, shampoo, soap, plastic packings). On properties they are similar to the hormones developed in a body of the person. Most likely, connections interfere with a metabolism of a fatty fabric and lead to infringements.

The British researchers managed to identify a unique gene with a mutation, causing a hypersensibility to insulin. They consider, that this opening will allow to create a medicine for a diabetes.

Insulin resistance is a principal cause of development of a diabetes of the second type. The mutation in gene PTEN is capable to increase sensitivity to a hormone playing a key role in disease. Cages pancreatic can develop a lot of insulin, but the organism does not react to it. Having revealed the genetic feature leading to opposite effect, quite really to create a medicine from insulin resistance (the note of the author).

On the given opening of researchers medical data of patients with syndrome Kouden's have pushed. At these patients the hyper sensibility to insulin was marked. However it turned out, the mutation in gene PTEN gave not only sensitivity, but also bore with itself certain risks for health (high risk of a cancer and adiposity). These diagnostic researches it is necessary to include in diagnostic standards of a diabetes 2 types, researches on c-r (the note of the author).

### Positive factors

Essential positive the factor on a diabetes 2 types - starvation. Risk of the raised level of glucose in blood above, than at those who was born several years before hunger or later.

Attention! Are studied predictors adherences to reception Duloxetine's and its association with expenses of system of public health services among patients with diabetic neuropathic a pain - a preparation appoint at a diabetes with complications in the form of diabetic neuropatia's!

Attention! At patients with a diabetes 2 types and insulin resistance above risk of occurrence amyloid plaques, characteristic for an Alzheimer's disease.

The careful control of a diabetes in the middle of a life can benefit also in respect of Alzheimer's disease preventive maintenance (Kensuke Sasaki, 2010).

Amyloid plaques also have been found in a brain of 72% of participants with insulin resistance and 62 those% at whom signs insulin resistance it was not marked. Insulin promotes growth of plaques.

The present research has the longest for today the supervision period that allows to assume what exactly sugar diabetes 2 types lead to an Alzheimer's disease, rather the reverse.

The sufficient maintenance of magnesium in food reduces risk of a diabetes.

As has shown recent research, maintenance of sufficient level of magnesium in food can help to prevent a diabetes.

On supervision (Ka He, 2010) at the people receiving the greatest quantity of magnesium, the risk of development of a diabetes within the next 20 years was almost twice more low, than at at whom the magnesium maintenance in food was the least.

These data can explain partly why the risk of a diabetes decreases at the active use wholegrain products: in them a lot of magnesium contains.

Magnesium is a part of some the enzymes participating in processing of glucose. At the same time the previous researches of in-

terrelation between level of magnesium and risk of a diabetes have yielded inconsistent results.

During the present research from 4497 examinees of both sexes at the age of 18-30 years which did not have a diabetes at the moment of the beginning of research, in 20 years disease has developed at 330 persons. And, at the persons receiving the greatest quantity of magnesium, about 200 mg on each 1000 kcals of a diet, risk of development of a diabetes within 20 years was on 47% more low, than at those participants who received the least quantity of magnesium - about 100 mg on 1000 kcals.

With growth of level of magnesium the quantity of some markers of an inflammation and stability to insulin decreases. The increase in the maintenance of magnesium in food can raise sensitivity to insulin and reduce a system inflammation, risk of a diabetes. The further large-scale researches will allow to clear the mechanism of this communication.

Attention! Rye products reduce risk factors of occurrence a diabetes 2 of types. Products from integral grain of a rye it is much better, than the mix of wheat flour and bran, support an insulin and sugar optimum level in blood.

The people, having breakfast products from integral rye grains, for a long time kept sensation of satiety. Besides, their dinner has appeared on 16% less high-calorie, than at those who has had breakfast a white loaf with bran.

Rye products are capable to reduce development of insulin and thus to protect an organism from occurrence insulin resistance, preventing thereby occurrence of a diabetes of the second type and cardiovascular diseases.

### Higher levels of vitamin D associate with decrease in risk of a diabetes

Higher levels of vitamin D in blood, apparently, are connected with decrease in risk of a diabetes among people with high risk of illness.

Anastassios G. Pittas, (2011) and colleagues have presented results of the carried out research on 71 scientific sessions of the American Association of the Diabetes.

Vitamin D improves secretion of insulin and sensitivity to insulin. The majority of certificates concentrates on favorable effect on pancreatic beta cages.

To define the relation between the status of vitamin D and risk of cases of a diabetes, researchers have analysed data "Diabetes Prevention Program" (DPP), researches with 3 groups, compared intensive updating of a way of life or Metformin with placebo for prevention of a diabetes at patients with a prediabetes.

The average period of supervision of a cohort has made of 2039 subjects 3, 2 years. Plasma levels of vitamin D have been measured with annual intervals, and participants have been estimated concerning a diabetes. For this analysis estimated only participants of groups of updating of a way of life and placebo "Diabetes Prevention Program".

Patients with levels of vitamin D from the highest tertile's (average concentration 30, 1 nanogram/ml) had a relation of risks 0, 74 for diabetes development, in comparison with levels of vitamin D from the lowest tertile's (average concentration, 12, 8 nanogram/ml).

Results also have allowed to assume effect dependent on a dose for vitamin D levels; the relation of risks for a diabetes case was the lowest (0, 46) at people with the highest levels of vitamin D (50 nanogram/ml or above), in comparison with the lowest levels (below 12 nanogram/ml).

In the analysis of subgroups tertiles vitamin D the association was similar in group placebo (0, 72) and group of updating of a way of life (0, 80).

#### Treatment includes three components

First, time at these patients occurs glucose increase in blood it is necessary for them to adhere strict low-carb to a diet. Secondly, it is necessary to increase quantity of oxygen in an organism, having finished it to normal level under the control of the modern medical equipment. Thirdly, it is necessary to restore sensitivity insulin receptors!

Attention to the Doctor and the Pharmacist! C-peptid is an indirect indicator of quantity of the insulin developed by b-cages of a pancreas.

Glycated ("become candied") haemoglobin - an average indicator of fluctuations of sugar in blood for last 3 months, directly specifying in weight of a current of disease.

By the international criteria, ideal indemnification of a carbohydrate exchange considers an indicator of 25%, and good - 50%. Decrease glycated haemoglobin at patients - about 3% for three months.

Normalisation of indicator C-peptid's at patients with a diabetes of the second type, this indicator, as a rule, at them considerably is raised, for 6 months.

Individual approach to a problem of each patient, use possibility in practice of the most effective and safe means of pharmacotherapy, active application not medicamentous methods of treatment, such as: laser, magnetic, cryo- therapy, herbal medicine as a whole, all it also promotes achievement of worthy results.

Possibility of application of round-the-clock monitoring of level glycemia's, allows depending on the received data, to build the individual therapeutic program and to correct a mode of dispensing of medical products so that at each patient indicators of a carbohydrate exchange were optimized, the body weight has decreased, the vitality has raised and, accordingly, quality of a life has improved.

Attention! At much share of patients with again diagnosed diabetes, microalbuminuria's find out within the first year that can testify to considerable duration earlier not diagnosed diabetes [1-29].

#### Conclusions

1. For Normoglycemia's are necessary - Magnesium, Vitamin D, group Vitamins B, colloid vitamins and microcells, containing in herbs.
2. It is necessary exception poisonings - the list of medicines is given above (in the text).
3. The offered therapy is Etiotropic, which cures a diabetes 2 types.
4. For reason occurrence in genes - it is necessary to develop Pharmacogenetic medicines.

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