A new technique for reducing excess body weight and body shaping

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The problem of the health status of people suffering from overweight is becoming more and more urgent. Socio-economic preconditions of the last decade have led to the fact that the number of obese people has been steadily increasing from year to year, amounting to 60% of the adult population [1].

Obesity is a biological phenomenon characterized by an increase in the mass of adipose tissue throughout the body, with its predominant localization in the subcutaneous tissue. A number of experts believe that obesity is considered already a slight excess of the actual body weight over the ideal, others argue that this excess, to be considered obesity, should be 10-20%, and among females - 30% [1; eight; nine].

The most acute problem of obesity is among the population of economically developed countries, which is determined by the high level of urbanization, the growth of large cities, the development of urban infrastructure, as well as a sufficient level of material security and "civilized living conditions" (availability of food, a decrease in the need for muscle load, etc.) [4]. It has been proven that up to 40% of the population of these countries is overweight with a body mass index (BMI) [1] of 25-29.9 cu, ~~and~~ about 25% of the population is obese with a BMI of 30 cu. and more.

A similar picture is observed in large cities of the Russian Federation. For our country, a feature is the increasing nutritional imbalance of a significant part of the population, which (as a predictor of the development of obesity) is acquiring an ever greater etiological significance.

In particular, the majority of citizens noted the use of products containing significant amounts of rapidly digestible carbohydrates and fats, as well as cholesterol derivatives [15; 17].

A person suffering from overweight, as a rule, cannot achieve a steady decrease in it, since the motivation inherent in his consciousness of excessive consumption of high-calorie foods is constantly reinforced by the macro- and microsocial environment [13]. The internal factors affecting the increase in body weight include the genotype, the constitution of adipose tissue, the state of reactivity in connection with the metabolism of hormones, the structural and functional excitability of the centers of appetite and satiety, the emotional and psychological components of the individual's nutrition, etc. prenatal period and nutritional characteristics of the child during breastfeeding and early childhood, forming "types of unconditioned reflexes associated with nutrition",

Numerous studies have established that an increase in BMI is undoubtedly a risk factor for the development of coronary heart disease, arterial hypertension and a number of cardiovascular diseases [19]. It has been proven, for example, that an increase in blood pressure (BP) is associated with an excess of adipose tissue, and not with an excess of total body weight in general. Convincing evidence is presented that with an increase in the mass of adipose tissue, the total peripheral vascular resistance and the frequency of detecting high blood pressure increase [20].

An increase in blood pressure with abdominal obesity is noted much more often than with gluteofemoral obesity. In men, with age, there is an increase in the relative

the content of intra-abdominal fat from 6-7% of its total amount in 20 years to 20% by 30-50 years and 30-35% by 60-80 years. In women, the mass of visceral fat often increases only after menopause [9; eleven; 15; 16]. It has also been proven that in obese patients, hyperkinetic changes in the state of the cardiovascular system predominate, associated with an increase in the total peripheral vascular resistance without an increase in the stroke and cardiac index [10].

Thus, the problem of weight correction is relevant in the light of the prevention and treatment of the most common and socially significant diseases.

There are many methods and methods for correcting increased body weight. However, most of them (low-calorie diet, use of biologically active food additives, increased physical activity, the use of suggestions and coding, massage, etc.) have certain limitations and do not always bring the results desired for the patient and the doctor. If the effect of their application is achieved, then it is usually very unstable and often reversible.

At the same time, as a rule, such factors as the anamnestic duration of obesity, the type of fat deposition, age and sex characteristics of patients suffering from increased body weight are not taken into account [14]. Recently, high-cost surgical methods for reducing body weight have been increasingly used: plastic surgery and cryogenic lifting. For them (in particular, for liposuction), there are many contraindications due to the existing somatic pathology; their use is often associated with all kinds of complications. In addition, they are inaccessible to patients in most regions of Russia, since the use of these methods requires a specially trained and highly qualified staff of doctors, as well as expensive equipment.

In existing conditions, acupuncture (IRT) is, in our opinion, the optimal method for correcting excess body weight, allowing therapy to be carried out taking into account the patient's individual genotype, the constitution of adipose tissue, the state of reactivity in connection with the metabolism of hormones, structural and functional excitability of the centers of appetite and satiety, as well as types of unconditioned reflexes associated with nutrition.

To date, a number of IRT techniques for BMI correction have been described in the scientific literature. In particular, the known method of G. Luvsan [12], which provides, against the background of a reduced diet and increased physical activity, conducting a session of corporal reflexotherapy, when long needles are inserted horizontally in the area of active points from F13 to VB25 on both sides and at point E25 and RPnine also on both sides. The duration of each session is 20-30 minutes, the course of treatment is up to 10 sessions. Unfortunately, this technique does not meet the requirements of a complex effect on the pathogenetic mechanisms of obesity: it does not contribute to a decrease in appetite, pronounced stimulation of metabolism, activation of lipolysis, since it does not provide for the use of auriculotherapy, the effectiveness of which is generally recognized [5]. In addition to the lack of influence on the general mechanisms of weight loss, the method does not take into account the leading syndrome of influencing the actual symptoms. The number of sessions is limited to ten, which makes it impossible to observe and reliably control the process and the result of weight loss in patients [14].

There is also an acupuncture technique proposed by M.V. Vogralik and V.G. Vogralik [3]. It provides for daily treatment sessions in the morning from 7 to 11 o'clock. The complex of points of influence is selected taking into account the genesis of obesity, severity, complaints of patients, concomitant pathology. The method of exposure (sedative, stimulating) is selected based on the data of acupuncture diagnostics. The impact is carried out on the auricular points (AT): E36.45, MC6! RP4, V20-22, R7, P6, TR5, Tfourteen, J17.21 and points: 17.16.19.22.26.26a, 45.51.84.87. As a result of treatment, the decrease in body weight is on average 6-13 kg for 10-15 sessions. The duration of exposure to auricular needles is from 40 minutes to 4-5 days.

With all the positive aspects, this method has certain disadvantages. According to our data, insufficient duration of acupuncture exposure does not provide adequate inhibition of the hunger center. A somewhat chaotic and haphazard selection of points results in excessive reflex load, as a result of which exacerbations of concomitant diseases, deterioration of general well-being, aggravation of hypothalamic disorders, and, ultimately, the progression of the disease may occur. The use of exercise therapy according to this method in the mode of increasing physical activity enhances appetite due to an increase in energy costs. In addition, physical activity can stimulate the appearance of overload muscle and joint pain, which is a trigger mechanism for "stress seizure".

It should also be noted that none of the previously proposed techniques take into account the problem of cosmetic defects in the form of sagging skin folds remaining after weight loss, which aggravate the chronically existing frustration (patient dissatisfaction with their appearance).

We have been using a new technique for quite a long time, which allows not only to treat obesity, but also to adequately correct the figure.

The technique consists in correcting the psychoemotional and physiological state of persons suffering from overweight, using auricular and corporal reflexotherapy in combination with a reduction diet (against the background of leveling the motivational and behavioral characteristics of a person's eating behavior). It allows you to create psychologically concretized motives of a stable food command of a person suffering from increased body weight.

In comparison with the previously existing analogues, the technique provides an increase in the effectiveness of obesity treatment and body shaping by reducing its traumatism while increasing the duration of the preservation of the results obtained. It does not cause complications, does not require special equipment and large material costs, as well as medicines or food additives.

The features of this technique are:

- using one microneedle at the same time for two auricular points and leaving it for a long time;
- implementation of not only weight loss, but also body shaping;
- using finger massage of fat depot areas to improve local blood flow, optimization of lymph flow, reduction of swelling and soreness of tissues, as well as general relaxation and stress relief in patients;
- the use of an acupuncture needle when acting on fat depots, which increases the effectiveness of the course of treatment, allows you to correct the figure, while reducing the number of IRT sessions in areas of excessive fat deposition;
- timely treatment of concomitant diseases, which makes it possible to increase the effectiveness of obesity treatment.

With the help of this technique, a decrease in the patient's appetite, a decrease in the caloric content of the food they eat, and, as a result, a decrease in body weight and volume, accompanied by an improvement in the psychoemotional state of patients and individual physiological parameters of the body, are achieved. There is also the formation of eating behavior adequate to the body's energy costs, contributing to the prolonged consolidation of the therapeutic effect, leading to an improvement in the quality of life of patients as a whole.

The technique includes five sequential stages.

The first stage aims to influence the general mechanisms of weight loss and includes a doctor's conversation about the dangers of overweight to ensure an active attitude of patients to treatment, familiarizing them with the content of a reduction diet, as well as fixation

individual psychological and physiological characteristics of patients. This is followed by the first session of auricular IRT microneedle in AT 17,18 with the aim of influencing the centers of the brain, allowing to reduce appetite, reduce gastric secretion. Depending on the stage of obesity, the patient's condition, the dynamics of weight loss, the needle is left for up to 60 days. The results of this stage are the formed psychological readiness of patients for treatment, as well as a pronounced decrease in appetite, a decrease in gastric secretion, stimulation of metabolism, and activation of lipolysis.

The second stage is aimed at enhancing the impact on the mechanisms of weight loss. To do this, first, a selected area, including biologically active points (BAP), is subjected to deep finger massage using techniques such as vibration, kneading, and pressure.

Then the fat depots are affected by the introduction of acupuncture needles. As a result, at this stage, there is a decrease in body weight and volume and the improvement in the psychoemotional state of patients determined by this process, which is assessed by the abbreviated method of personality examination (SMOL) [6; 7] and according to the method of psychological diagnostics of the types of attitudes towards the disease [2].

The third stage provides for the complex impact of IRT according to a similar recipe with an interval of 10 to 60 days,

As a result, not only is the general harmonization of energy points in the meridians of the gallbladder, liver, stomach, spleen, pancreas and urinary bladder, but also increased lipolysis. At this stage of treatment, corporate IRT also provides the necessary cosmetic effect, which helps to consolidate the motivation of new eating behavior in patients.

The basis of the fourth stage is a concentrated effect on the mechanisms of weight loss. If the patient has concomitant diseases, microneedles are additionally inserted into the AT, selected taking into account these diseases.

The entire period of treatment for the patient is carried out corpometric control, and with the development of adaptation, that is, in the absence of further weight loss, but with an excess of it, the microneedle is removed from the auricle, and it is inserted in the same way into the other auricle.

At this stage, a significant reduction in body weight and volume is achieved with a good cosmetic effect, an improvement in the psychoemotional and individual physiological parameters of the patient's body.

The fifth stage fixes nutritional behavior adequate to the body's energy expenditures. At this stage, in the process of interviewing patients and analyzing the objective dynamics of weight loss, the auricle is identified, the impact on which was more effective. In her AT 17.18, puncture with a microneedle is carried out for a period of 30-50 days. The main result of the stage is the consolidation of the achieved positive changes (improvement of the physiological parameters of the body against the background of a consistent decrease in the patient's body weight), as well as the formation of eating behavior adequate to the body's energy costs, contributing to the prolonged consolidation of the therapeutic effect.

Before the end of the treatment, a conversation is held, orienting the patient to further proper nutrition and an independent assessment of the calorie content of the food consumed.

At the end of each stage of treatment, body weight is monitored, the circumference of the waist, hips, chest, and shoulder is measured. The results obtained by the method of caliperometry objectively show that there is a significant decrease in the thickness of the fat folds, their tightening. Treatment is completed when the patient reaches the desired or ideal body weight, calculated by BMI. In this case, they mean that the BMI is less than 18.5 cu. - this is insufficient body weight, 18.5-24.9 USD - normal, $ 25.0-29.9 - obesity of the 1st degree, 30.0-39.9 c.u. - obesity of the 2nd degree, more than 40.0 c.u. - obesity of the 3rd degree.

Thus, the technique includes the implementation of five successive stages, each of which has its own purpose and solves certain problems on the way to achieving a common goal - to reduce the excess body weight of patients in order to improve their quality of life.

Indications for the use of the technique are alimentary-constitutional and hypothalamic obesity.

The use of the technique is contraindicated in case of individual intolerance to RTI, bulimia, pregnancy and lactation, malignant neoplasms, convulsive syndrome of any etiology, anemia of the 2nd degree or more, chronic cardiovascular, renal, hepatic failure, hypothyroidism in the stage of decompensation, diabetes mellitus 1 and 2 type.

The developed method was used to treat 850 people with grade 1-3 obesity. The dynamics of the decrease in body weight averaged over the course from 3-4 kg to 90 kg, depending on the degree of obesity. The reduction in obesity was assessed by the method of caliperometry (Expert assessment of the physical development of citizens ...: Methodical instructions. - Tver, 1998) of the thickness of the fat fold and body circumferences. In the event of a “breakdown” of the alimentary reflex and re-gain in body weight, one IRT session with an active auricle was enough to restore the lost motivation of adequate appetite.

The duration of follow-up observations for 142 patients was three years or more. In 95% of patients within 3 years, the body weight corresponded to BMI 18.5-24.9 a.u., which indicates the effectiveness of the treatment of patients using this method. In the study group of 142 people (60 men and 82 women), 33 had the 1st degree of obesity, 81 - the second and 28 - the third. Of these, men and women up to 40 years old were treated 38 and 32, respectively, from 40 to 50 years old - 20 and 26, over 50 years old - 12 and 24 people, respectively. The duration of the disease was in 24 people - up to 5 years (10 men and 14 women), in 68 - from 6 to 15 years (29 men and 39 women) and in 50 - more than 15 years (21 men and 29 women).

The obtained treatment results were statistically processed and published by us. [fourteen]. In particular, published statistically reliable data on the dynamics of BMI in persons with different degrees of obesity under the influence of RTI; detailing the dynamics of BMI indicators depending on the gender of patients, the degree and duration of obesity. The BMI indicators before and after treatment, as well as the absolute decrease in BMI, the rate of increase in the decrease in percentage and the indicator of the visibility of the decrease in percentage by gender, age groups and duration of the disease were calculated [14].

Objectification of the effectiveness and safety of the developed method was carried out by analyzing the dynamics of the state of the cardiovascular system, central and cerebral circulation, the lipid spectrum of blood and autonomic regulation. age; dynamics of changes in the lipid spectrum of blood depending on the degree and duration of obesity; changes in indicators of central hemodynamics and in different variants of blood circulation (eukinetic, hyperkinetic, hypokinetic) and indicators of ultrasound examination of the heart (depending on the degree of obesity) under the influence of IRT. In all cases, there was a significant positive dynamics of indicators against the background of treatment using the developed method. We also published the actual data illustrating the effectiveness of treatment [14]. The final results of treatment are summarized in table. 1, and the dynamics of changes in BMI in persons with obesity without concomitant pathology and with pathology from the cardiovascular system and diabetes mellitus under the influence of IRT is presented in Table. 2.

In March 2004, the technique was reviewed and approved by the Section on Traditional Methods of Treatment of the Academic Council of the Ministry of Health of the Russian Federation.

Table 1

Dynamics of BMI depending on gender and age in obese persons under the influence of RTI

according to the method of M.M. Mukhina

The timing	Men [n = 60]				Women [n = 82]			
	All group	Up to 40 years old (n = 38)	40-50 years old (n = 20)	Older 50 years (n = 12)	All group	Up to 40 years old (n = 32)	40-50 years old (n = 26)	Older 50 years (n = 24)
Initially	33.6-2.6	32.9-2.9	34.5-3.1	34.4-3.9	36.5-2.3	31.5-2.8	36.7-3.1	36.2-3.8
after 2.5 week	28.2-2.5	25.3-3.0	28.6-3.3	30.7-3.5	33.1-2.4	30.3-2.4	35.7-3.2	34.0-3.6
across 1 month w%> v /.	29.5-2.8	23.4-2.9	25.5-3.3	28.7-3.5	28.0-2.3	27.3-2.6	28.4-3.1	28.3 ± 3.6
across 2.5 months	24.2-2.7	22.8-2.9	25.1-3.2	25.2-3.7	25.5-2.2	24.9-2.4	24.9-3.0	27.2-3.7
across 6 months	24.1-2.7	22.3-2.8	25.0-3.2	25.2-3.8	25.3-2.3	24.8-2.7	24.7-3.0	28.0-3.8
	P <0.01	P <0.01	P <0.05		P <0.01	P <0.01	P <0.01	

table 2

Dynamics of BMI changes in an obese face without concomitant pathology and with pathology of the cardiovascular system and diabetes mellitus under the influence of RT according to the method of M.M. Mukhina

The timing	Whole group	Subgroups			
		Without accompanying. patol. (n = 47)	Ischemic heart disease (n = 39)	Hypertonic. b-n (n = 45)	Sugar diabetes (n = 11)
Initially	35.0 ± 2.9	32.3 ± 2.4	35.2 ± 2.6	34.6 ± 2.3	38.1 ± 4.1
Across 2.5 weeks	30.6 ± 2.7	26.1 ± 2.2	29.6 ± 2.5	29.5 ± 2.4	37.0 ± 4.0
Across 1 month	26.9 ± 2.8	24.0 ± 2.1	26.8 ± 2.6	26.4 ± 2.5	31.2 ± 4.2
Across 2.5 months	24.8 ± 2.8	22.4 ± 2.1	25.0 ± 2.5	24.6 ± 2.5	27.2 ± 4.0
After 6 months	24.7 ± 2.8	22.4 ± 2.3	24.7 ± 2.5	24.6 ± 2.4	27.3 ± 4.0
	P <0.01	P <0.01	P <0.01	P <0.01	

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[1] The Quetelet index (in Russian literature - body mass index (BMI)) was proposed by the World Health Organization (WHO) in 1997 to assess the degree of obesity in patients. BMI is calculated using the formula: BMI = weight (kg) / square of body length (m).

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