

INFLUENCE OF WEIGHT LOSS PROGRAM ON THE PSYCHO EMOTIONAL STATUS OF PATIENTS

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Abstract

The presence of fat accumulation and cellulite, however, is a serious blow to the self-esteem of women and the negative consequences of this are carried on mood, activity, performance, motivation. The optimization of weight and cellulite reduction reflects positively on the overall psycho-emotional status, self-esteem, mood, and performance. The aim of this study is to evaluate the general health and psychological state of clients through questionnaire survey and evaluation of self-esteem, activity and mood (SAM) and to compare the results before and after conducting of our weight loss program. The research evaluate the effect of our weight loss program on overweight and cellulite in 123 women for three month period. The examined patients have cellulitis - second degree and overweight (mean BMI = 27,30), at the age of 29 to 45 years. They are divided into three groups: group A (45 women); group B (37 women) and group C (41 women). The study focused on body performance and psycho-emotional tone. Differences in the monitored indicators show the effectiveness of the three physiotherapy programs.

Key words: overweight, self-esteem, activity, training

Introduction

Overweight and cellulite have a negative impact on the health and the psyche of the affected patients. It is known that any woman, independent of her age wants to look good and feel attractive. The most common complaints in such a pathological condition is that patients feel depressed, sad, unable to work, have little desire to go out, to move, to fall within the company of strangers, and often to be the subject of ridicule. To verify the effectiveness of our combined weight loss program to influence women with overweight and cellulite, we conducted psychological SAN questionnaire (self-esteem, activity, mood) to our patients from the three experimental groups. It was conducted at the beginning and end of the experiment. The aim of the study was to determine to what extent our procedures yield results, not only in terms of body weight and body circumference, but on one of the most important indicators - self-esteem of women.

Research methods

To solve the purpose and objectives of the study, women are subjected to testing twice (at the beginning and end of the three month experiment). Were tested: BMI; body weight; body composition; height and the circumference of the body; type of obesity; type and severity of cellulite; self-esteem, activity and mood (SAM-profile). SAM reveals mental performance. For its evaluation are summed scores of self-esteem, activity and mood (30 pairs of opposite states - ten for each evaluated in the balls from one to nine).

Methodology

All women participating in the study were treated for three months, three times a week (12 treatments per month).

Before starting treatment of all respondents is determined daily consumption of calories and they are given instructions for separate meals. Patients were divided into three groups: **Group A** - control group (45 women), which was subjected to our proposed program of aesthetic physiotherapy and follows the principles of food combining. The treatment with aesthetic physiotherapy includes: *selective ultrasonic cavitation* for mechanical disruption of the membranes of the fat cells of a certain body fat; *pressotherapy* immediately after cavitation to accelerate lymphatic drainage and disposal of metabolic products; *radio frequency* for firming the body by increasing the muscle tone and the elasticity of the tissue, complex exercises of *vibrating platform* in order to achieve a better shape of the body weight reduction. **Group B** - experimental group (37 women), which in addition to separate eating, after additional training program that included a combination of strength and cardio-training, after which they receive anti-cellulite massage with cellulite balsam. Procedure lasted 55-60 min, of which: 5-10 min warm-up 25 min strength training and 25 min - cardio workout. It starts slowly with warming and light aerobic activity. **Group C** - experimental group (41 women), which in addition to separate feeding perform 15 minutes of high intensity interval training (HIIT), then they get cellulite massage with cellulite balsam. High intensity interval training HIIT begins with the usual 3 minute warm-up; Each minute is as follows: 30 seconds sprint for 80-85% of the maximum speed followed by 30 seconds light jogging (generally 8-10 minutes); 2 minutes slowdown and gradual normalization of cardiac activity. *Massage* has a big role in accelerating the metabolism. Its main task is to improve drainage in areas affected by the accumulation of fat and cellulite.

Results

Table. 1 Changes in body composition at the end of the third month

Group	Research Indicator	Positive adjustment			Negative adjustment		
		Initial \bar{X}_1	Terminal \bar{X}_2	Difference $\bar{X}_2 - \bar{X}_1$	Initial \bar{X}_1	Terminal \bar{X}_2	Difference $\bar{X}_2 - \bar{X}_1$
A	self-esteem	42,92	55,81	12,89	51,24	34,95	-16,29
	activity	41,49	53,86	12,37	49,92	36,22	-13,70
	mood	39,95	50,95	11,00	48,49	34,95	-13,54
	Total	124,36	160,62	36,26	149,65	106,12	-43,53
B	self-esteem	42,14	55,14	13,00	51,16	33,24	-17,92
	activity	42,08	56,76	14,68	49,14	34,05	-15,09
	mood	40,05	52,16	12,09	49,22	35,14	-14,08
	Total	124,27	164,06	39,77	149,52	102,43	-47,09
C	self-esteem	43,17	58,05	14,88	53,66	34,14	-19,52
	activity	41,88	59,76	17,88	48,17	31,71	-16,46
	mood	40,73	52,07	11,34	47,93	34,39	-13,54
	total	125,78	169,88	44,10	149,76	100,24	-49,52

*(p<0,05) - statistically significant difference

Table. 2 Self-esteem, activity and mood (SAM)

Values	BMI kg/m ² \bar{x}	Body weigh \bar{x}	Fat mass \bar{x}	Fat free mass \bar{x}	Body water \bar{x}	Active body mass \bar{x}
Group A	-3,71 kg/m ² *	-10,38kg*	-5,97 kg*	-4,41 kg*	-5,46*l	+1,05 kg*
Group. B	-3,22 kg/m ² *	-8,96 kg*	-6,12 kg*	-2,84 kg*	-5,51 l*	+2,67 kg*
Group. C	-3,55kg/m ² *	-9,81 kg*	-6,06 kg*	-3,75 kg*	-5,85 l*	2,10 kg*

The duration of anti-cellulite massage is 20-30 minutes (Topuzov, 2002). Results were statistically processed by variation analysis (statistical confidence p<0.05). Changes in body composition in group A, group B and group C are shown in Tab. 1. Obtained was a statistically significant reduction of: BMI, body weight, fat mass, fat free mass, the amount of body water, and reliably increase the active body mass. By reducing the weight, correlates the ball of 4 body circumference, which also significantly reduced at the end of the third month (p <0.05). Using objective (thermo diagnosis) and subjective measures (inspection and "pressing test") we find that the response of cellulite becomes significant about the third month. At the end of the experiment changes have occurred in the structure of the mental performance of the main mental qualities. The Table. 2 presents the data from the questionnaire SAM. For proper interpretation of the results of the questionnaire, we were taken into consideration the current state of our patients and all momentary negative or positive random circumstances that could affect their answers. The results in Table. 2 clearly show that a positive change in the psycho-emotional tone is observed in the three groups. In women treated with esthetic physiotherapy, mood grew

by 30% with 29.8% self-esteem, and activity with 27.53%. Mental performance increased by 36.26 points and reached a value of 160,62 (S = 26,5). This significant increase in mental performance was statistically significantly as t = 2.7, and P = 99%. *Mood* influenced most preferably in women relating to Group B who were treated with anti-cellulite massage, strength and cardio workouts. It can be seen that the self-esteem and activity reach highs of women from group C, which perform high-intensity interval training (p <0.05).

Conclusions

1) Our weight loss program is efficient and rapid method for the reduction of cellulite and overweight and long-term maintenance of results, including healthy eating, aesthetic physiotherapy and exercise program; 2) Methodology applied by us for the reduction of cellulite and bodyweight in the three experimental groups showed good performance. It has its practical significance and allows for a relatively short period to influence significantly on problem areas in women with overweight and cellulite; 3) Results of psychological profile (SAM test) show that our methods have a positive impact on the general psycho-emotional tone.

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UTJECAJ PROGRAMA GUBITKA TEŽINE NA PSIHO EMOCIONALNI STATUS PACIJENATA

Sažetak

Nazočnost akumulirane masti i celulita, svakako je ozbiljan udarac samopoštovanju žena i njegove negativne konzekvence odražavaju se na raspoloženje, aktivnost, izvedbe, motivaciju. Optimizacija težine i redukcija celulita pozitivno se odražavaju na opći psiho-emocionalni status, samopoštovanje, raspoloženje i izvedbu. Cilj ovog istraživanja je evaluacija općeg stanja zdravlja i psihološkog stanja klijenata kroz upitnik i pregled kao i procjenu samopoštovanja, aktivnosti i raspoloženja (SAM) kao i usporedba rezultata prije i nakon provedbe programa gubitka težine. Istraživanje evaluira učinke programa gubitka težine kod prekomjerne težine i celulita kod 123 žene u tromjesečnom razdoblju. Istraživani pacijenti su imali celulit drugog stupnja i prekomjernu težinu (prosječni BMI = 27.30), uz uzrast od 29 do 45 godina. Podijeljeni su u tri skupine: A (45 žena), B (37 žena) i C (41 žena). Studija se fokusira na tjelesnu izvedbu i psiho-emocionalni ton. Razlike u praćenim indikatorima pokazuju efikasnost tri psihoterapijska programa.

Ključne riječi: prekomjerna težina, samopoštovanje, aktivnost, trening

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