

## ALTERNATIVE EXERCISE IN FIGHTING OBESITY

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### Abstract

*This paper wants to change the vision of the possibilities for improving associated symptoms present in obesity. At the same time it wants to offer the possibility for overweight or obese people to lead an active and healthy life throw practicing the prophylactic exercise in the water and on land. Practicing daily exercise increases the quality of life recording lower values of blood pressure, an increasing the effort capacity and a good mental state.*

**Keywords:** obesity, student, physicaltherapy, physical exercise

### INTRODUCTION

More and more people in the world suffer from a disease that threatens society with its economic and psychological impact: obesity.

Romanians people that weigh 100 to 200 Kg are struggling to get rid of the fat or excess weight by diet, but rarely with physical exercise, which is a much healthier way.

Maintaining optimal body weight is an issue for noadays people in which the stress and strain dominates everyday life.

People facing with this disease are frightened; this thing is affecting their social, couple or family life. Because it is a global health problem we hope to attract more followers to engage in physical exercise both on land and in water with prophylactic character and when necessary to strengthen the body. Beyond aesthetic and psychological dimension, medically obesity presents numerous diseases according to body fat distribution.

There are four types of constitutional obesity: android obesity, obesity ginoidă, combined obesity and cellulite obesity.

To combat obesity, physical exercises are recommended as primary prophylactic applications, and in turn exercise programs can be divided into: Static exercise programs using isometric contractions;  
Dynamic exercise programs using isometric contractions;  
Programs that include combinations of static and dynamic exercises.

### MATERIALS AND METHODS

Knowing that physical inactivity and improper diet are the root causes of obesity we intend to follow:

- If using methodical and systematic prophylactic resources results can be achieved in terms of weight loss for overweight people;

- If physical therapists programs can improve mental tonus;

- The resources and the associated physical therapy can help prevent relapses occurred and to improve the health.

Given that obesity is one of the major problems for people, that we feel in the Romanian country increasingly more, we thought it best to solid analyze, organize and create a recovery program.

Physical therapy has the necessary resources and links to other related fields to treat obesity.

To determine the degree and the type of obesity we have used several methods of functional evaluation and exploration. The application of the most appropriate methods of measurement provides a solid theoretical knowledge base, allowing not only diagnosis but also measuring the evolution intervention.

It was intended that through exercise programs patient should significantly reduce weight. The aim of the study was to provide a quality of life and learning to form a healthy lifestyle.

All research was carried out between January 2012 and July 2012 in the Swimming and Physical Therapy Complex in Suceava in the Physical Therapy room and in the swimming pool.

The study was conducted on a patient, the present with a second degrade obesity, ginoid type. The patient tests were applied initial and final for comparison.

The therapist program was conducted over six months. In the first month we worked exercises as simple as possible, but effective in the physical therapy room to increase the body's ability to exercise. In the next two months we have worked in the aerobics room, and outdoor and in recent months the program was held at the swimming pool. At the end of each session the patient has been applied cellulite massage completed with a relaxing massage.

Below we present recovery program that includes three stages:

Stage I - recovery program in the Kineoterapie room,

PHASE I – lipolytic

1. Head and neck exercises from standing position with hands on hips: bending and extension of the head, lateral left / right bending, left / right turns, large circles in both directions.

2. Superioare limbs exercises from standing position: extension of the arms with palms at chest level and then extensions with stretched arm in the sagittal plane (with one arm up and one down), the arm circles forward and backwards, side and front shear.

3. From standing position, with a straight back, lift both arms at your sides that hold two dumbbells with small weights. Descends slightly raised arms straight backwards as much as possible and then return (keeping them parallel) to a 90 degree angle with the trunk. It will do 10 repetitions in 3 sets.

4. In the same position it will be lifting the arms that hold dumbbells, but these times not on your side, but as you want to draw a circle in the frontal plane (plane parallel to the shoulders). It will do 10 repetitions of 3 sets.

5. Exercises for trunk from standing position: trunk flexion with the fingers touching the ground, extensions with carrying arms up, bending the side with arched arm carrying to the opposite hip.

6. Exercises for lower limbs: forward lunges with carrying palms on knees, side lunge with hands on hips, shoulders pulled backward and look forward, 10 jumps like the ball, jumping with hands on hips 10, 10-15 squats with arms outstretched.

7. Lying down leg carrying to the chest. It will perform 10 repetitions.

8. Lying on his back, arms along the body, raising and lowering his left leg, the same with the right foot, lifting both feet, and lowering both legs. The exercise will run of 10 repetitions for leg, and then alternate.

9. From standing position, with spread legs, the subject will catch the ball by flexion and extension of the trunk. It will perform 10 repetitions.

10. The same exercise but with trunk rotation. It will perform 10 repetitions.

11. Vigorous walking for 5 minutes followed by jogging 10 minutes.

12. Bicycle ergometer exercise for 15 min.

PHASE II - Muscle Growth

Part I

1. Different types walk: running with knees to chest, heels in a sitting and outstretched legs.

2. Rope exercises jump begins by making usually jumps to about 15-20 repetitions.

3. The same exercise will only arms crossed in front while the rope is in the air. It will be executed for 15-20 jumps.

4. Supine with supported on the seat legs, hands on the neck, will be 5 -10 abs.

5. Back to the trellis to support hands on the third strip down, arms extended and shoulder-width apart, torso straight, legs straight and slightly apart, arms bent runs from the elbow joint until it sat close to the ground, then arms suddenly stretch and return to original position. Run 10 repetitions.

6. On the knee with the palm support runs on hip thigh extension with knee bent at 90 °. Repeat 20 times with each member.

Second part

1. From the trellis hung position, lifting knees at 90 °.

2. Sitting facing the trellis, palms slats attached at the hip, leg abduction and adduction are performed. It will do 20 reps with each member.

3. From sitting on Bobath ball with your feet shoulder-width apart and supported by all foot on the ground, are easy sliding left and right, forward and backward, arms to the side to maintain balance. It will perform 10 repetitions.

4. In the same position, but with the remained horizontal trunk is performed abs with hands behind your head. It will perform 10 repetitions.

5. From lying down with knees bent position, hands behind your head, leave your knees to support the mattress (isoprene), the trunk remains in contact with the ground, there are performed lifting the trunk. It will perform 10 repetitions.

6. Ergometer bicycle exercise for 15 min.

Part III

1. Standing position, shaking the arms and legs.

2. Stretching.

PHASE II - Physical Therapy program was held in the swimming pool

Exercises performed in water have several advantages compared to those performed on land.

- water wave are part of a continuous massage on the skin, which will reduce cellulite faster;

- in the water you can not work certain muscles, but muscles work synergistically which leads to a much higher calorie consumption;

- Exercises in the the water have therapeutic properties, is indicated for mobility and suppleness development.

1. From standing position with legs spread, it will be performed trunk rotation with the volleyball overhead.

2. Palms on the pool, bringing knees to chest, simultaneously 15-20 reps and then alternate it will be executed.

3. In the same position carrying knees to the chest of skew-side simultaneously will be performed. It will perform about 15-20 repetitions.

4. From the same position will be performed shear in the the frontal and lateral plane. It will perform about 15-20 repetitions.

5. From standing position with legs spread, hip flexion will be performed in the vault with a planting stick float. It will perform about 15-20 repetitions for each leg.
6. From standing position with legs spread, with overhead hands will perform flexion and extension with 1 kg dumbbell. It will perform about 15-20 repetitions.
7. From lying down with a stick floating on the shoulders will be made flexion thigh. It will perform 5-10 repetitions each leg.
8. The subject will try to sit bolt upright with a stick floating in the exile running bike. It will run a length of the pool.
9. Back bras will be performed one length of the pool.
10. It will be performed back arms legs butterfly breaststroke. It will run a length of the pool.
11. It will be performed arms breaststroke, butterfly legs. It will run a length of the pool.
12. It will be performed crawl in slip. It will run a length of the pool.

Stage III - The gym was held in the aerobics

1. Step- will be going up and down the bench in front, left and right lateral oblique. It will perform ascents of 8 in 3 sets.
2. In step length will be climbing lifting bench with knees to the chest. It will perform ascents of 8 in 3 sets. After three sets it will perform foot change.
3. The same exercise but with the carrying ankle in a sitting. It will perform ascents of 8 in 3 sets. After three sets it will perform foot change.
4. The same exercise but with the carrying leg stretched backwards. It will perform ascents of 8 in 3 sets. After three series it will perform leg changes.
5. From lying down on hand including step for step middle, runs abs with legs at 90 degrees. 8 abs It will be executed in 3 series, with a break between sets.
6. From lying down on hand including step for step middle, runs duction level-chest legs. It will perform eight movements of 3 sets, with a break between sets.
7. From lying down on hand including step for step middle, runs duction level-chest legs. It will perform eight movements of 3 sets, with a break between sets.

Firming the abdomen - exercises will be done on the mat neoprene.

1. From lying down position on the neoprene mattress hands under the seat it will perform shear with lifting legs as above as possible. Shear will be made eight series with break between each sets.
2. Same position, achieving bike in the air. Shear will be made eight series with break between each set.
3. Same position, it will perform abs achieving the opposite leg. It will do eight sets with a break between sets.
4. Support the elbows, buttocks lift off the mat will be executed. It will make eight lifts of 3 series with a break between sets.
5. From seating position rotations of the trunk will be made, legs motionless remain.
6. From lying down position, bridge will be performed. Maintain 30 seconds.
7. From lying down position, it will be performed candle. Maintain 30 seconds.
8. From lying down position it will be performed turn leg. Maintain 30 seconds.
9. From lying down position it will be performed turn knee. Maintain 30 seconds.
10. From standing position hands grab the ankles. Maintain 30 seconds.

Kangoo Jumps - consists of simple legs movements as short as possible. You can perform exercises with small hand weights.

## RESULTS AND CONCLUSION

Patient R.A. was 106 kg when she came to start exercise program. The patient attended three programs undertaken in stages: the first stage being the easiest to accommodate the body during exercise, the second stage took place in the pool where she worked all muscle groups, and the third step being the most difficult has conducted in a aerobics room, where she worked hard all muscle groups through various programs.

In the first stage the patient R.A. has lost 7 kg reaching to 99 kg.

In the second stage the patient loss 3 kg reaching to 96 kg.

And in the third stage the patient has lost 13 kg reaching to 83 kg.

Table nr. 1 – The variation between weight and BMI

	Initial testing	January	February	March	April	May	June	Final testing
Weight	108 kg	106kg	103 kg	99 kg	96 kg	91 kg	86 kg	83kg
BMI	36.7	35.8	34.8	33.5	32.4	30.8	29.1	28.2

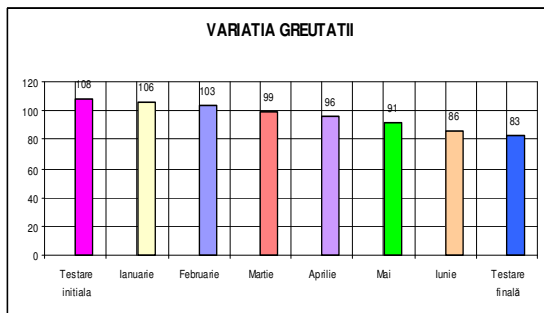


Diagram nr.1

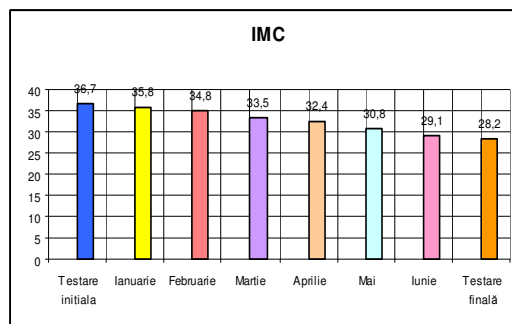


Diagram nr.2

As can be seen, the patient R.A. went from obese to overweight of second degree, it must continue its recovery program to reach normal weight.

Table nr. 3 – Anthropometrical measurements

Mesurements	Initial measurements	Middle measurements	Final measurements
Left arm circumference	39 cm	33 cm	27 cm
Right arm circumference	41 cm	32 cm	30 cm
Left fore circumference	31 cm	27 cm	22 cm
Right forearm circumference	32 cm	24 cm	21 cm
waist circumference	103 cm	93 cm	83 cm
hip circumference	131 cm	105 cm	93 cm
Left thigh circumference	74cm	67cm	64 cm
Right thigh circumference	74cm	67 cm	64 cm

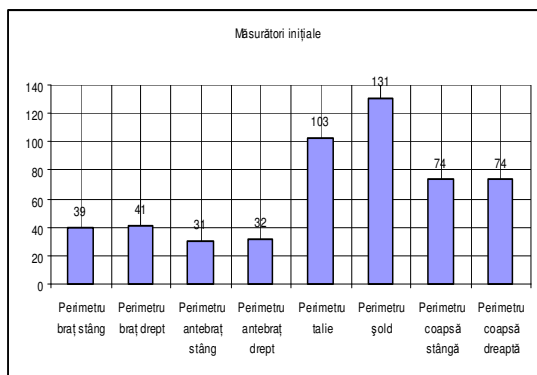


Diagram nr.3

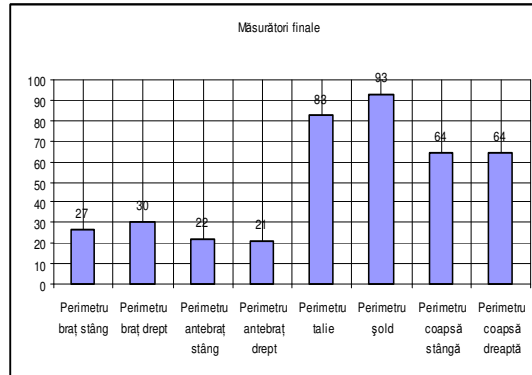


Diagram nr.4

Table nr. 4 – Spalsh measurements

Mesurements	Initial measurements	Middle measurements	Final measurements
Pectoral S.	22 mm	18,4 mm	16,1 mm
Abdominal S.	41,5 mm	38,4 mm	33,5 mm
Anterior and posterior S.	Ant: 48,5 mm	Ant: 46,4 mm	Ant: 42,5 mm
	Post: 46,7 mm	Post: 43,3 mm	Post: 40 mm
Triceps S.	34,3 mm	32,5 mm	29,3 mm
Suprailiac S.	30,3 mm	28,7 mm	26,5 mm
Subscapulară S.	32,4 mm	28,6 mm	26 mm
Total	257,42 mm	236,3 mm	214 mm

Table nr.5 - Variations in glucose and cholesterol

	Initial	Middle	Final
Cholesterol	240 mg/dl	230mg/dl	220 mg/dl
Glucose	135 mg/dl	130 mg/dl	120 mg/dl

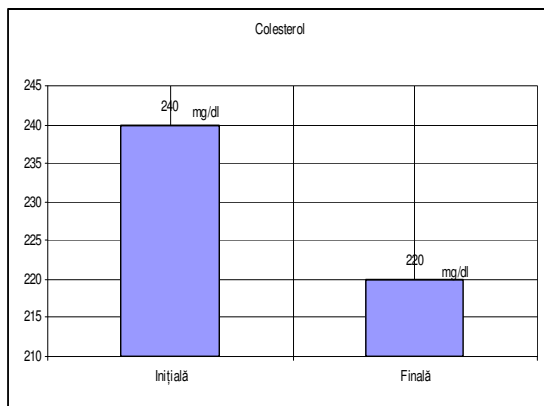


Diagram nr.5

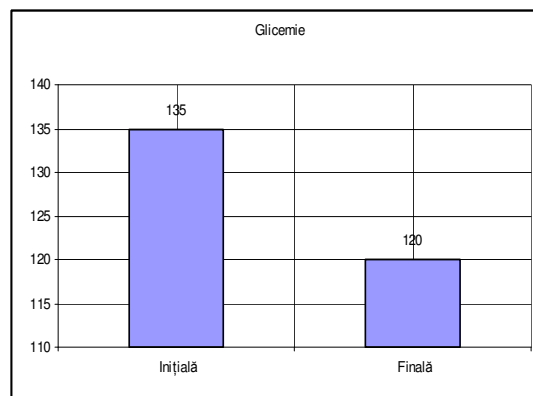


Diagram nr.6

### CONCLUSION

The combination and therapist methods resources with a proper diet determine weight loss, self-confidence and control over their lives. Another important aspect is to improve exercise capacity without causing side effects fatigue, the mental effort and confidence in performing other physical activities.

Performing daily exercise are released hormones, endorphins, leading to a general feeling of well-being by reducing tension and anxiety so have been combatants (stress, overeating and inactivity), those who favor the emergence of the major issues of twenty-first century: obesity.

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## BILATERAL COORDINATION TRAINING IN THE CHEERLEADING TEAM OF THE UNIVERSITY SUCEAVA

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### Abstract

*This paper focuses on the training of cheerleaders in developing agility and various other skills, through a significant muscular demand that involves both general and specific coordination skills.*

*Among the objectives there were: training a group of cheerleaders the ability to handle various objects with both hands, in different directions, plans and speeds, developing the individual and group coordination in the execution of various rhythmic movements, selecting operational models and using auxiliary equipment (batons, balls, small circles) for bilateral coordination training.*

**Key words:** bilateral coordination, cheerleaders, rhythm, movement, dance.

### INTRODUCTION

“The coordinative abilities are largely genetically determined, and their expression is conditioned by the processes of maturation of the nervous system and the number of motor skills the subject masters.” DRAGNEA A., MATE TEODORESCU S. (2002).

Motor coordination is a fundamental element for the performance of complex, precise, fast and under various conditions body movements.

A structured training process - systematical and direct - is necessary in order to facilitate the maximum development of motor coordination.