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**WAYS TO REDUCE THE BODY WEIGHT FOR OVERWEIGHT
AND OBESE PERSONS**

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Abstract

The purpose of this study was to identify several weight loss diets used by overweight and obese persons to lose weight and to develop a weekly nutritional program to help reducing body weight in order to improve, mainly, their health. The method used in the research was specialty literature review. The conclusions of the research are the following : the most effective way to lose weight is reducing the number of calories ingested simultaneously with increasing the number of calories consumed through physical activity; severe diets containing less than 800 calories per day should be avoided as the consequences can be serious health problems; the three main meals of the day should be respected; breakfast should not be skipped; the shorter the time taken to lose weight, the harder it will be to maintain the new body weight. Lasting success in reducing body weight is ensured by a calorie-balanced diet combined with systematic exercise such as walking, jogging, swimming, cycling, aerobics, kangoo jumps, zumba, etc.

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1. Introduction

Why do overweight and obese persons want or need to lose weight? The answers to these question could be many: improved health; increased energy and physical stamina; improved immunity; reduced spinal and joint pain; increased self-esteem; improved quality of life; increased life expectancy; optimised aesthetic appearance, etc.

Considering the above answers and after studying the specialty literature, it seems that most people who want to lose weight are doing this primarily to improve their health, to reduce the risk of various diseases such as diabetes, hypertension, coronary heart disease, atherosclerosis, angina pectoris, ischaemic heart disease, heart failure, hepatic steatosis, infertility, pancreatitis, obstructive apnoea, asthma, lithiasis, arthrosis, etc.

Health is a complex process that includes emotional, intellectual, physical, social and spiritual aspects. When one side is affected, the others will feel it as well because they are interrelated.

Up to a certain age, health is considered something natural, normal, without paying to much attention tot it. Young people do not usually think about how many things they can do for or against their health and they do not consider the consequences that will occur at some point. We often realise how important health is, only at those times when we are in pain, when we are not feeling well, when we are in a poor general condition.

In general, people should pay more attention to their lifestyle elements as key factors that can influence health. These elements are the following:

- i. balanced nutrition that prevents both overeating and underfeeding;
- ii. avoiding excessive consumption of salt, sugar and saturated food fats;
- iii. drinking an optimal amount of water every day;
- iv. maintaining body weight within normal limits;
- v. optimal work/rest ratio;
- vi. the judicious allocation of free time;
- vii. systematic exercise in various forms;
- viii. personal hygiene, collective hygiene, home hygiene, food hygiene, lifestyle hygiene;
- ix. environmental factors;
- x. managing stressful situations as well as possible;
- xi. avoiding abuse of any kind;
- xii. avoiding smoking and alcohol consumption.

2. Problem Statement

Campbell and Campbell (2004) note that:

The public's desire for nutrition-related information never ceases to amaze me, even after devoting my entire life to experimental research on the link between diet and health. Nutrition books are always bestsellers. Nearly all popular magazines feature nutrition advice, newspapers always include articles on this subject, and radio and TV programmes frequently discuss nutrition and health. (p. 1)

Moss (2022) states that:

Few things we do in life are repeated more often than eating. We eat every day, at least several times, ever since we are born. But when we talk about addiction the way we eat repeatedly is important. Most processed foods are made in such a way that people do not think about eating them while watching TV, playing video games or driving. (p. 54)

Marcean (2019) consider that:

Obesity is a condition in which body mass is increased by 20% of the body's ideal mass. Apart from the physical problems it induces, obesity can also be a psychological problem in modern life where cultural factors on body weight are crucial. (p. 223)

Baghiu (2020) note that:

Obesity is a disease with local, national and global epidemic aspects that encompasses people of all ages, religions, social conditions and of both sexes...Treatment considers three main directions:

1. weight maintenance and control measures:

- diet, which must be individualised (e.g. a deficit of 1000 calories per day may result in a loss of 1 kg per week);

- exercise;

- psychotherapy;

2. medication;

3. surgery. (p. 340)

Ludington and Deihl (2002) state that:

Overweight people need to radically revise their thinking and attitudes. The scenario repeated in millions and millions of lives unfolds as follows: the overweight person submits for a few weeks to the latest miracle recipe for weight loss, puts a "zipper" over his mouth, takes a series of pills or tablets and - hocus-pocus...the weight starts to drop. Victory! Celebration! New clothes! But a few days after finishing the weight loss diet, these persons resume their eating habits and lifestyle. In a few weeks or months, the lost pounds are regained, usually with a surplus. Weight control programmes often fail because they are only temporary solutions to long-term problems. It is time to face reality and accept that obesity is a serious, life-threatening disease. (p.73)

Wu et al. (2020), as cited in Shizhao, et al. (2022), believes that "obesity research often focuses on obesity in childhood and adolescence. Nutrigenetics, epigenomics and metabolomics gather patient information to estimate individualized optimal nutritional decisions".

López-Hernández et al. (2020), as cited in Michele et al. (2022), mention that "interventions to improve the population's knowledge of proper nutrition and lifestyle are necessary to reduce the risk of developing obesity and its consequences".

"Evidence shows that an energy deficit is the most important factor for weight loss, but metabolic adaptations to decrease energy intake can also lead to reduced energy expenditure" (Ju Young, 2020, p. 22).

Moodie et al. as cited in Ella et al. (2022), believes that whilst some food companies and retailers have taken steps to address unhealthy diets and obesity, food industry policies and actions have generally been weak and fall far short of global recommendations.

Ene (2019) note that:

Nutrition researchers estimate that 95% of diets fail because of emotional eating or other problematic eating patterns. Most of the time, diets fail because they offer logical nutritional advice that only works if you are already aware of your eating habits. But they lose their power when emotions intervene in the process, demanding an immediate reward, often high-calorie, low nitrites foods. (p. 24)

Gadde et al., as cited in Li (2021), says that: excess body weight remains one of the top health concerns due to its association with several chronic diseases, such as a higher risk of cardiovascular disease, insulin resistance, and hypertension.

Avazeh et al., as cited in Ali et al. (2022), mention that: to the results of most studies that showed obesity and overweight were more common among women than men and a small number of women had a healthy lifestyle, changes in their lifestyle may not only improve their own health status, but can also play an effective role in improving the lifestyle of other family members.

Tatu (2004) presents the ten main rules for losing weight in a healthy way:

- i. Never eat animal protein and foods rich in carbohydrates at the same time.
- ii. Avoid refined flour and flour products as much as possible.
- iii. Avoid refined industrial fats, such as margarine and oils.
- iv. Do not use salt, as far as possible.
- v. Any kind of crudites, so vegetables, fruits and salads, will speed up weight loss, while also being important sources of vitamins.
- vi. Chew your food well and you will have a fast digestion.
- vii. Do not starve yourself, eat when you are hungry, without excesses.
- viii. Five or six small meals in a day are much more effective than three large meals.
- ix. In the evening you should give up high-protid foods as they are hard to digest, especially after 5pm.

- x. If you want to eat sweets, choose foods high in carbohydrates, so no chocolate and no protid.
(pp. 48-49)

Freyberger and Struwe, quoted by Buiac and Suciu (2007) consider that:

We must also take into account the "nutrition habits" of the obese people. They classify them as follows:

- i. the greedy consumer, who is suddenly overwhelmed by an uncontrollable appetite, he consumes enormous quantities until he is finally saturated;
- ii. the consumer without stopping, in this case the appetite appears in the morning and persists all day long. Personally he feels quite well in this state;
- iii. the night-time eater is hungry only at night, often gets up to eat and suffers from lack of appetite in the morning. (p. 117)

3. Research questions

The research aims to answer the following questions:

- i. How do we correctly assess body weight?
- ii. What measures do we take when our body weight is higher than ideal?
- iii. Where should we look for info about the weight loss diet we are going to try?

4. Purpose of the Study

Purpose of the study weight loss diets used by overweight and obese persons to lose weight and, on the other hand, to develop a weekly nutritional programme to help reducing body weight in order to improve, mainly, their health.

5. Research Methods

The method used in the research was the specialty literature review. In this regard, we analysed several documents related to proper nutrition, maintaining health, different weight loss diets that can be used by people who find that they are overweight or obese, the advantages and disadvantages of these diets, the importance of physical activity in supplementing the diet. Numerous documentaries related to the topic of this paper were also viewed.

6. Findings

Body weight assessment can be done by several methods: body mass index; Lorentz's formula; measurement of abdominal circumference; string test, etc.

- i. Body mass index is a scientific indicator that can be used to calculate whether a person's weight is within normal limits depending on the height. This index can be applied to men and

women aged between 18 and 65. It is not a relevant method for children, pregnant women or athletes with well-developed muscle mass.

Body mass index is calculated by the ratio of the person's weight in kilograms to the height square in meters.

Body mass index interpretation: ≤ 18.49 = underweight; between 18.50 and 24.99 = normal weight; between 25 and 29.99 = overweight; between 30 and 34.99 = grade I obesity; between 35 and 39.99 = grade II obesity; ≤ 40 = morbid obesity.

- ii. Lorentz's formula: Ideal weight (Kg) = $I(\text{cm}) - 100 - [I(\text{cm}) - 150] / 4$
- iii. The measurement of the abdominal circumference is made around the waist with a metric band. The interpretation of abdominal circumference values is shown in Table 1.

Table 1. Interpretation of abdominal circumference (AC) values for women and men

Interpretation of abdominal circumference (AC) values	
Women	Men
AC under 80 cm = normal weight	AC under 94 cm = normal weight
AC between 80 and 88 cm = overweight	AC between 94 and 102 cm = overweight
AC over 88 cm = abdominal obesity	AC over 102 cm = abdominal obesity

The string test: take a string that must be the same size as the person's height, fold it in half and then measure the abdominal circumference with the resulting string. If the string covers the whole waist, the person has a normal weight; if the string does not reach so that its two ends are joined around the waist, then the person has a higher weight, directly proportional to the number of centimetres left free between the ends of the string.

Regarding the second question the research aims to answer - "What measures do we take when our body weight is higher than ideal?" we try to answer below.

In general, people are different and we need to understand and respect that. People are different if we take into account their lifestyle, level of education, way of thinking, way of expressing themselves, preferences, desires, customs, culture, traditions, language spoken, etc. There is no situation in which two persons are perfectly alike. From personal experience, I can say that twins also differ in many ways. Therefore, in terms of what we do when our body weight is higher than ideal, we are different also. Some people take action as soon as they notice that they have gained 2-3 kg, while others do nothing, even though they realise that they have a much higher body weight than normal (15, 20 kg or more).

The online environment is assaulted by weight loss diets, each more interesting and promising in terms of the number of kilograms lost in a very short time. It should be known, however, that it is recommended to have a discussion with a nutrition specialist before choosing one of these diets.

Examples of weight loss diets: blood group diet, dissociated diet, Danish diet, Dukan diet, Ketogenic diet, diet on points, Indian diet.

- i. The blood group diet takes into account the uniqueness of each person. So, if they want to lose weight, persons with blood type 0 should eat red meat, seafood, spinach, broccoli and should avoid wheat, beans, lentil, corn, cauliflower, cabbage. Those with blood type A should eat mainly vegetables and vegetable oils, soya, pineapple and avoid dairy, meat, beans and wheat.

People with blood type B, if they want to lose weight, should consume eggs, liver, venison, vegetables, green tea and avoid wheat, corn, buckwheat, lentil, peanuts, seeds. Those in group AB, if they want to lose weight, should consume dairy products, seafood, vegetables, tofu cheese, pineapple and eat a small amount of red meat.

- ii. The dissociated diet is one of the most popular and widely used weight loss diets. There are several variations of this diet: meal-based, day-based or period-based. The basic principle is that foods from different groups are not mixed, water should not be drunk during meals, there are three meals per day without snacks, sweets, alcohol and caffeine.
- iii. The Danish diet or the 13 days diet is very restrictive and consists of reducing carbohydrates and fats in the diet. There are three meals per day, served at the same time, each meal of the 13 days diet having precise recommendations regarding what foods are eaten and the quantity. It is a low-calorie, nutrient-poor diet, that can greatly weaken the body's immunity.
- iv. The Dukan diet, invented by the French doctor Pierre Dukan, is a low-calorie diet in which many protein rich foods are consumed. There are four main phases: attack, cruise, consolidation and stabilisation. In order to maintain the kilograms loss, the stabilisation phase will have to last a lifetime. In this diet, one day a week a person should eat pure protein drink 1.5 litres of water per day and exercise for 20 minutes per day.
- v. The Ketogenic diet is not calorie-restrictive, allowing the consumption of proteins from meat, dairy products and eggs, fats from oils and seeds and carbohydrates from fruits and vegetables. Sweets, cereals and alcohol are not allowed. Having a raised caloric intake, exercise is recommended.

Ionescu-Boeru (1995) presents:

The diet on points requires, in order to lose weight, consuming 40 points and for maintaining weight, no more than 60 points. Research has established a number of points for each food. For example: one boiled potato = 23 points; one teaspoon of sugar = 13 points; 100 grams of peas = 7 points; 100 grams of green beans = 6 points; one portion of roast pork = 0 points; one portion of fish (pike) = 0 points, etc. The diet has been used in the USA, to train cosmonauts and the results were good. (p. 71)

The Indian diet is a vegetarian diet that recommends eating fresh or steamed, grilled or boiled vegetables and fruits. It is also a good way to detoxify the body, encouraging the consumption of water and high-fibre foods.

Following the presentation of these weight loss diets, it can be seen that most of them reduce or eliminate carbohydrates from the alimentation. Drastically reducing them can lead to health problems such as apathy, fatigue, lack of concentration, low energy, etc. As a result, in order to lose weight, the wisest thing to do would be to eat foods containing protein, carbohydrates, fats, vitamins and minerals, but reducing the portions we had before.

The weekly nutritional programme I have developed for weight loss has less than 1200 kcal daily and is detailed in Table 2. If it is respected, it should reduce 3 kg of body weight in a month. A gradual weight loss will be achieved without starvation, which will not endanger the health.

Table 2. Weekly nutritional programme for weight loss

Monday	- Breakfast: 200 gr fresh cheese with cream Făgăraş - 290 kcal
	2 medium slices of dark bread - 120 kcal
	- Snack 1: 200 ml fresh orange juice - 93 kcal
	- Lunch: 400 gr Vegetable soup - 80 kcal
	100 gr roast beef + green salad -135Kcal + 50 Kcal = 185 kcal
Tuesday	- Dinner: baked cauliflower with broccoli in cheese sauce - 251 kcal
	Total: 1124 kcal
	- Breakfast: 2 hard-boiled eggs - 155 kcal
	2 medium slices of dark bread - 120 kcal
	- Lunch: „Caprese” chicken breast with tomatoes, basil and mozzarella - 403 kcal
Wednesday	- Dinner: Pie with zucchini and cottage cheese - 130 kcal
	Total: 1021 kcal
	- Breakfast: 2 slices of dark bread with butter (20 gr) - 120 kcal + 80 kcal = 200 kcal
	- Lunch: Tofu with cheese, couscous and tuna - 480 kcal
	- Dinner: 200 gr grilled carp with 100 gr boiled potatoes - 200 kcal + 102 kcal = 302 kcal
Thursday	Total: 1127 kcal
	- Breakfast: omelette with two eggs - 190 kcal
	2 medium slices of white bread - 160 kcal
	- Lunch: 400gr beef soup - 215 kcal
	- Dinner: 100 gr cow's milk cheese + 200 gr. polenta - 230 Kcal + 140 kcal = 370 kcal
Friday	Total: 1184 Kcal
	- Breakfast: Smoothie of 200 ml unsweetened coconut milk + 20 g sunflower seeds + 20 g pumpkin seeds + 30 g dried dates - 40 kcal + 120 kcal + 110 kcal + 80 kcal = 350 kcal
	- Lunch: Pasta, vegetable and tuna salad - 449 kcal
	- Dinner: 100 gr roast beef + green salad -135 kcal + 50 kcal = 185 kcal
	Total: 1151 kcal
Saturday	- Breakfast: 25 gr pressed ham + 25 gr cheddar - 75 kcal + 95 kcal = 170 kcal
	2 medium slices of dark bread - 120 kcal
	- Lunch: 400 gr vegetable cream soup - 200 kcal
	100 gr grilled turkey breast + green salad = 135 kcal +50 kcal = 185 kcal
	- Dinner: simple Greek salad - 180 kcal
Sunday	Total: 1199 kcal
	- Breakfast: 100 gr. wholegrain cereals with 200 ml milk with 3.5% fat - 265 kcal + 124 = 389 kcal
	- Lunch: 400 g turkey soup - 228 kcal
	- Dinner: Green bean soup - 174 kcal
	Total: 1176 kcal

As regards the third question that the research aims to answer, "Where should we look for information about the weight loss diet we are going to try?" the answer is that, when we want to reduce body weight, we always should discuss with our family doctor, diabetes, nutrition and metabolic diseases doctor or a nutrition technician. Information found on the internet is not always reliable and neither the information from a friend, work colleague or neighbour.

7. Conclusions

- i. A person's state of health is closely related to the weight. If a normal body weight (body mass index between 18.50 and 24.99) can be maintained, the risk of various diseases decreases.
- ii. An increase in body mass index above 30 increases the risk of lung disease, cardiovascular disease (hypertension, coronary heart disease, atherosclerosis, angina pectoris, ischaemic heart disease, heart failure, atrial fibrillation, etc.), diabetes, hepatic steatosis, infertility, pancreatitis, obstructive apnoea, asthma, gallstones, arthrosis, etc.
- iii. The most effective way to lose weight is to reduce the number of calories ingested and to increase the number of calories burned during physical activities. To lose 500g of your weight, you need to burn 3500 calories.
- iv. When people want a harmonious body and an optimal weight for their height and age, the key word is balance. A harmonious body is achieved with a rational diet, systematic physical activity and, last but not least, a lot of will and perseverance.
- v. The nutritional programme developed for body weight reduction does not exceed 1200 kcal per day, but is very balanced in terms of macronutrients and micronutrients content, providing the body with all necessary nutrients.

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