

## Based on the Long-Term Exercise Training to Delay the Unbalanced Diet of Obese Patients and the Progress Analysis of Their Body Control

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**Abstract:** Obesity not only seriously affects human health, but also has a worldwide trend. That's the world public health problem now. For obese people, choosing the right exercise plan and intensity can reduce the symptoms of obesity.

### 1. Introduction

Obesity is considered a metabolic disorder. Who identified obesity as a disease and published "obesity is the first health problem in the world". According to the survey, the number of obese people in the world ranges from two years to 50000. In the United States, obesity accounts for about 1 / 3 of the total population, and 30000 people die of obesity every year, becoming the second major cause of smoking. Obesity is also very serious in China. According to statistics, 24.4% of obese people, 3.01% of obese people, and the ratio of obesity to obesity is 8:1, with a very fast growth possibility. By improving the risk of obesity, this paper puts forward the sports intervention method for obesity.

### 2. The Risk of Obesity

#### 2.1. Obesity is Closely Related to Some Diseases

Many epidemiological studies have focused on obesity, especially the accumulation of excess abdominal fat (commonly known as "front belly"), which is a significant relationship between concentric obesity, diabetes, hypertension, coronary heart disease, hyperlipidemia and cardiovascular disease. In February 2007, the World Health Organization published a survey report on obesity rate in various countries[1]. According to the report, of today's 65 billion people, 160 billion are obese, or should be called fat. Other diseases, such as obesity, high blood pressure and cardiovascular disease: most obese people have high blood pressure symptoms. This means that the heart has to deliver blood under high pressure to all corners of the body. Moreover, obesity will increase the body's oxygen consumption, and the blood must be transported in large quantities. Obese people have higher frequency of hypertension than normal people. High blood pressure can cause kidney failure, heart and other organ damage. The incidence of vascular diseases in obese people was higher than that in normal people. As the walls of arteries accumulate cholesterol and fat in the blood, the blood vessels become smaller and rupture, leading to stroke and heart disease[2]. Obese people are more likely to have heart disease than normal people. When a person gains weight, his heart must work harder to nourish all organs of the body. A heavy weight puts a heavy load on the heart. As a result, obese people are more likely to have heart disease than normal people.

Table 1 Changes of human morphological indexes in simple obesity patients before and after intervention

Time	Body weight (kg)	BMI
Before intervention	84.12±19.09	30.56±4.12

Intervention for 8 weeks	77.06±17.63	27.74±3.59
16 weeks after intervention	75.76±17.14	27.22±3.46

## 2.2. Obesity Affects Daily Activities

Fat people, large size, affect the appearance and image of people, causing a lot of inconvenience. It is self-evident that adolescence is slow, brain is slow, hands and feet are not flexible, movements are slow and accidents happen frequently.

Table 2 Changes of body composition indexes of simple obesity patients before and after intervention

Time	Body fat	Visceral fat
Before intervention	31.45±8.97	120.10±27.70
Intervention for 8 weeks	26.12±7.16	101.11±25.24
16 weeks after intervention	25.09±6.71	97.64±25.04

## 3. Functions and Methods of Sports Intervention

### 3.1. Function of Exercise Intervention

From a physiological point of view, proper physical exercise can increase the metabolism of obese people, reduce the chance of children suffering from adult heart disease, high blood pressure, diabetes and other diseases; that can reduce the risk of entering the aging stage. So as to carry out timely adjustment and make timely and rapid response[3]. It can adapt to the changes of the internal and external environment of the human body and maintain the normal life activities of the body. Proper physical exercise can adjust people's tense state, recover physical strength and energy. In order to improve self-confidence and value, help social life, improve interpersonal relations, and make personality harmonious in a healthy and harmonious atmosphere.

### 3.2. Exercise Intervention Methods

The treatment of obesity is mainly supplemented by muscle and exercise and long-term aerobic exercise. The choice of exercise therapy is based on the age, interests, hobbies, fitness and obesity of young people. In this study, water exercise is considered to be the most promising weight-loss exercise. In addition to swimming, water sports are also developed into walking, running, jumping and other forms of kicking[4]. In addition, walking, jogging, jumping, cycling, sports, bodybuilding and other sports can also help lose weight. Some studies on exercise intensity have shown that in aerobic exercise, the maximum heart rate is VO<sub>2</sub> max% - 70%, the maximum heart rate is 60%, 80% every 30 ~ 60 minutes, 3 ~ 5 ~ 7 times a week. The traditional exercise plan proposed by American sports medicine (ACSM) is 60-90% maximum heart rate or 50-85% VAO<sub>2</sub>max, every 20-60 minutes, three times a week. In recent years, the Centers for Disease Control and Prevention (CDC) and ACSM have jointly recommended new protocols. The exercise load of traditional program is very large.

Table 3 Changes of waist circumference indexes of simple obesity patients before and after intervention

Time	The waist	Waist hip ratio
Before intervention	100.23 ± 11.24	0.94 ± 0.06
Intervention for 8 weeks	93.74 ± 8.85	0.92 ± 0.06
16 weeks after intervention	92.74 ± 8.71	0.91 ± 0.53

It's better to exercise every afternoon or evening. In order to use fat effectively, you need to make sure you have enough exercise time[5]. In order to achieve the desired effect, aerobic

metabolism needs to be maintained for at least 10 minutes. If you don't over fatigue and exercise for a long time, the effect will be better.

Please select the appropriate intensity exercise (average consumption of about 170 calories per hour). Walking is the best choice[6]. You can choose morning exercise, swimming, cycling, Taijiquan, mountaineering and other sports. You can choose to exercise alternately. Exercise for 30 minutes after 1-2 hours.

Reducing the amount of exercise reducing the amount of exercise is not only exercise, but also more effective than weight loss. Exercise promotes strong metabolism, consumes heat energy and promotes appetite. If you don't control your weight loss, you'll lose time for exercise[7]. In order to limit the amount of fat, special attention should be paid to the combination of sugar, fat, protein and other nutrients. Control diet, to prevent malnutrition, metabolic disorders and other side effects. Proper sugar supplement helps to complete the burning of fat. All obese patients maintained their initial weight loss a week before the start of the trial. Daily calorie limit in May 2014. Recipe: 1 cup of boiled soybean milk and 1 cup of sugar (1200 meters) for breakfast, 1 total calorie for lunch and dinner, and 50 grams of meat protein for every 444 nutrition bars and non starch vegetable (200 g) based lunch and dinner. Please drink more than 1.8 liters of water every day.

#### **4. Preventive Measure**

According to age, gender, physical condition and living environment, it is necessary to choose appropriate sports. Walking, walking and Taijiquan are all carried around in the mountains, and the people who carry the height carry the weight. Almost everyone has a common characteristic. For example, lack of sleep and physical activity. The initial exercise intensity is not high, but the function and softness of bone and joint gradually increase and improve. Long term exercise will be affected by weight loss[8]. After the exercise, according to the exercise, in order to reduce the acute cholesterol and other fats, the process of increasing cholesterol super nutrition cells begins, and then in order to eliminate the effect of weight loss, exercise continues to lose weight. Most of the losses from short-term extreme diets are water and muscle, which can affect fat. The body composition analysis method used in this study can correctly determine the body fat amount and fat distribution, and clarify the reasons for weight loss. The results showed that the body fat decreased after 8 times of exercise: exercise can greatly improve the body fat and visceral fat, but the weight loss is mainly due to the loss of body fat. The study also found that body fat, BMI, waist age, body fat, visceral fat, body fat rate, loss of important body fat may be related. In particular, the loss of visceral fat is related to the patient's ability to maintain a balanced diet and exercise.

#### **5. Conclusion**

The cause of obesity is still unclear. The current research results believe that the imbalance of energy intake and consumption is the root cause of obesity. Excess carbohydrate intake is believed to be associated with obesity. In order to lose weight, the mechanism of VLCD is to limit the intake of carbohydrate (20-50g / D), and increase the intake of protein and fat appropriately[9]. When the daily intake of carbohydrates is not enough to provide the energy needed by the body, the body will mobilize fat to generate ketone body, so as to suppress appetite, burn fat, and achieve the purpose of reducing body fat. Based on the metadata analysis of 23 studies of Hu et al, we conclude that VLCD intervention can reduce the volume and waist area. A low carb diet and a Mediterranean diet are more effective by reducing body mass than a low-fat diet such as SII. The result of this study is that the body mass of obese and obese patients is 8.40% lower than the basic value. VLCD intervention can significantly improve the body mass, waist circumference and other morphological indicators of the body mass and body mass of obese people in southern China. Please note that the higher ratio of Myint to other BMI and waist circumference is associated with increased mortality and increased cardiovascular disease. This study showed that VMI intervention and hip circumference ratio were significantly reduced within 8 weeks of VLCD intervention, and VLCD intervention could reduce the risk of cardiovascular events. [9] Most of the short-term extreme weight loss is water and

muscle. The body composition analysis method used in this study can correctly measure the body fat amount and fat distribution, and explore the reasons for weight loss. The results showed that after 8 weeks of VLCD intervention, the body fat was reduced to  $(5.33 \pm 1.81)$  kg, the visceral fat area was reduced to  $(18.99 \pm 2.46)$  cm<sup>2</sup>, the body fat rate was reduced to  $(3.27 \pm 0.18)\%$  and the hip fat ratio was reduced to  $(0.05 \pm 0.01)$ . It was confirmed that VLCD can significantly improve the body fat and visceral fat, and the weight loss is mainly due to the loss of body fat[10]. Two months after the intervention, the patients' weight, BMI, waist circumference, body fat, visceral fat area, body fat rate and waist fat decreased significantly after the intervention. This may be related to the loss of body fat, especially visceral fat, and the patient's ability to maintain a balanced diet and proper exercise. Generally speaking, exercise intervention can significantly reduce weight, visceral fat, improve abdominal obesity, and it is difficult to rebound. The occurrence of cardiovascular events has important preventive significance. That applies to overweight and mass weight loss treatments in China. However, due to the small specimen size, large proportion of men and women, short time and improper control, there are some shortcomings that need to be studied in the future.

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