

# Values of Obese Male Patients Performed With Acupuncture

Hayriye Alp

Necmettin Erbakan University, GETAT CENTER, Konya, Turkey.

**Corresponding Author:** Hayriye Alp, Necmettin Erbakan University, GETAT CENTER, Konya, Turkey.

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## Abstract

Obesity is a disease defined by excessive fat storage in the body. It is an energy balance problem; the increase in body fat is caused by an imbalance between energy intake and energy expenditure. The practice of acupuncture views the body as a combination of the soul and the body, not merely as a physical structure. This interpretation can lead to a successful therapy for the treatment of chronic pain. One of the factors for its success is the concept of the functional evaluation of the organ. According to acupuncture, the organs are alive and vitality is provided by the energy of life called "qi". Pathogens that interrupt and obstruct the flow of qi form diseases. Acupuncture needles are inserted at specific points on the Bonghan channels and the qi stream is regulated by electron transfer. The present study was a cross-sectional study conducted in 2019 in xxx University's GETAT Center. Patients aged between 18–65 years with a BMI > 25 were included in the study. Acupuncture was shown to be effective not only in the obese groups but also in the control groups. Therefore, it could be beneficial in preventing weight gain. Both ear and body acupuncture points were used effectively in obesity patients. Therefore, acupuncture may be recommended as an effective adjunct in the treatment of obesity. Acupuncture can reduce the stress of patients on diets and increase patient compliance.

**Key Words;** acupuncture; obesity,male;

## Introduction

Obesity is a disease defined by excessive fat storage in the body. It is an energy balance problem; the increase in body fat is caused by an imbalance between energy intake and energy expenditure [1]. A high intake of pleasurable and high-calorie foods as well as decrease in physical activity are thought to play a role in the high obesity rate in industrialized countries [4, 5]. The body fat percentage of men of ideal weight should be 12–18%, and it should be 20–30% in women of ideal weight. In contrast, obesity is characterized by 22–25% body fat in men and 32–35% in women [2]. In the USA, 25% of women are obese, while 20% of men are obese. In Europe, the rate of obesity is 22% in women and 15% in men. In a study conducted in the USA, the prevalence of obesity was found to increase from 22.9% in 1984–1994 to 30% in 1999–2000 [2]. In Turkey, a study conducted by the State Planning Organization in 2000 stated that 52% of adult women were overweight or obese (33% overweight, 19% fat), while 10% of men were overweight or obese. Obesity also predisposes people to many diseases, and the treatment of obesity and related diseases in the United States plays an important role in overall health care costs [3]. Obesity increases the risk of diabetes mellitus, hypertension, ischemic heart disease, gallbladder diseases, and certain types of carcinomas. Therefore, obesity threatens public health as a chronic disease.

The practice of acupuncture views the body as a combination of the soul and the body, not merely as a physical structure. This interpretation can lead to a successful therapy for the treatment of chronic pain. One of the factors for its success is the concept of the functional evaluation of the organ. According to acupuncture, the organs are alive and vitality is provided by the energy of life called "qi". Pathogens that interrupt and obstruct the flow of qi form diseases. Acupuncture needles are inserted at specific points on the Bonghan channels and the qi stream is regulated by electron transfer[4]. In the meta-analysis that examined 64 studies, 7,104 people participated in the studies of acupuncture, compared to other conventional and pharmacological treatments. In the study, it was shown that both manual and electroacupuncture could moderate the severity of depression [5]. Acupuncture is a needling method that can be used in the treatment of many medical conditions, such as chronic pain, and its effects are explained in neurophysiological studies. These effects are not only local, but also involve the central nervous system. The acupuncture needle is inserted through the viscerocutaneous, cutaneous-visceral, and cutaneous-muscular reflexes from the local needles, providing a dermatomal effect. The acupuncture stimulus then reaches the upper centers via the medulla spinalis at the end of the periaqueductal neurons at the mesencephalon;  $\beta$ -endorphin, enkephalin, and serotonin are released. Acupuncture points are closely related to the lymphatic system and vascular structures [6].

## Method

The present study was a cross-sectional study conducted in 2019 in xxx University's GETAT Center. Patients aged between 18–65 years with a BMI > 25 were included in the study. susceptible demographics (acute coronary insufficiency, immunodeficiency, severe psychotic disorder, liver and kidney failure), and those who could not give consent were not included in the study. First, weight, BMI, and metabolic age values were measured with a Tanita device; the same diagnostic device was used for all patients. The Tanita Body Fat Monitor works with the bioelectrical impedance analysis technique, which analyzes the composition of the

body. In this method, a weak and safe electrical current flows through the interstitial fluid between the muscle fibers. When the flow meets the oil layer, it encounters resistance, and the resistive layers are evaluated by the device and measured by weight and height [6]. The results of the measurement include weight, BMI, body fat percentage and weight, body fluid percentage and weight, and these percentage distribution as arms, legs, and body.

## Findings

### Descriptives

	AGE	LONG	KG	bmi	sistolik1	diastolik1	sistolik2	diastolik2	hgb
N	16	16	16	15	13	13	13	13	16
Missing	1	1	1	2	4	4	4	4	1
Mean	44.63	1.779	102.0	32.06	115.4	72.31	109.2	71.54	16.00
Median	45.00	1.770	97.15	30.90	110.0	70.00	110.0	70.00	16.25
Standard deviation	4.617	0.06475	19.35	4.491	9.674	5.991	10.38	5.547	0.7780
Minimum	35.00	1.660	76.90	27.90	110.0	70.00	100.0	70.00	14.00
Maximum	51.00	1.870	156.0	44.80	140.0	90.00	140.0	90.00	16.80

## Discussion

Experimental studies aiming to understand the effect of acupuncture on obesity have provided important information. For example, a study investigating the effect of acupuncture on leptin levels was performed in rats. Every day 30 min 100 Hz warming given to St 36 the point of acupuncture. In the acupuncture group, food intake and body weight decreased, and serum leptin levels increased. Meanwhile, stress hormones epinephrine, norepinephrine, and corticosterone did not increase statistically significantly [7]. The appetizing effect of acupuncture application, specifically the effects of ghrelin and NPY hormones, was also investigated in an experimental study. Rats were allowed to eat for one hour a day. In an 18-day experiment, one group received electroacupuncture; ST 36 and SP 6 points were selected, and 2-Hz electroacupuncture was applied for 30 minutes each day. The other immobilized group was the control group. Ghrelin and neuropeptide levels, food intake, and body weight were found to be statistically significantly reduced in the acupuncture group [8]. The effects of electroacupuncture on the release of CART peptides that reduce appetite were determined in an experimental study in rats [9]. Acupuncture has been shown to be effective in reducing body weight in both human and animal studies. There are many published controlled and uncontrolled articles on the effectiveness of acupuncture in obesity that have given different results. In these studies, LU 6, ST 40, ST 21, K 4, ST 36 and 25, and LI 11 body points were used, while hunger, stomach, and shen-men points were commonly used as ear points. One study showed that ear acupuncture was effective in reducing BMI and decreasing depression scores in obese women [10]. A randomized controlled trial showed that abdominal acupuncture significantly reduced BMI, adiponectin, leptin, total cholesterol, and triglyceride levels (11). In another study, the effectiveness of ear acupuncture points was investigated; the ear acupuncture points stomach and hungry were shown to be effective in weight loss compared to placebo points [12].

## Conclusion and Recommendations

Acupuncture was shown to be effective not only in the obese groups but also in the control groups. Therefore, it could be beneficial in preventing weight gain. Both ear and body acupuncture points were used effectively in obesity patients. Therefore, acupuncture may be recommended as an effective adjunct in the treatment of obesity. Acupuncture can reduce the

stress of patients on diets and increase patient compliance. Furthermore, it may provide long-term lifestyle changes. Thus, it can be used as a complementary method without side effects in obesity, which is currently a major public health problem.

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