Studies:

Effects of electroacupuncture and Chinese kidney-nourishing medicine on polycystic ovary syndrome in obese patients.

Effects of body electroacupuncture on plasma leptin concentrations in obese and overweight people in Iran: a randomized controlled trial.

Weight reduction effects of acupuncture for obese women with or without perimenopausal syndrome: a pilot observational study.


Effects of electroacupuncture Zusanli (ST36) on food intake and expression of POMC and TRPV1 through afferents-medulla pathway in obese prone rats.

Effect of electroacupuncture on leptin resistance in rats with diet-induced obesity.

Influence of acupuncture on leptin, ghrelin, insulin and cholecystokinin in obese women: a randomised, sham-controlled preliminary trial.

The effects of body acupuncture on obesity: anthropometric parameters, lipid profile, and inflammatory and immunologic markers.


Effects of electroacupuncture and Chinese kidney-nourishing medicine on polycystic ovary syndrome in obese patients.


Author information

Abstract

OBJECTIVE:
To explore the effect of electroacupuncture and Chinese kidney-nourishing medicine on insulin (INS), adiponectin (APN), leptin (LEP), and glucolipid metabolism of obese patients with polycystic ovary syndrome (PCOS).

METHODS:
Sixty-seven obese PCOS patients were randomly divided into two groups. Thirty-three patients in
the acupuncture-medicine group were treated three times a week with electroacupuncture at the Tianshu (ST 25), Zhongwan (CV 12), Qi-hai (CV 6), Sanyinjiao (SP 6), Geshu (BL 17), and Ciliao (BL 32) acupoints. They also took the Chinese drug, Tiankui capsule, for 3 months as a course of treatment. Point-taking and treatment in the electroacupuncture group of 34 patients was the same as those in the acupuncture-medicine group. We observed and compared the changes in obesity-related indexes of body weight (BW), body mass index (BMI), and waist-hip ratio (WHR), as well as fasting plasma glucose (FPG), fasting insulin (FINS), APN, and LEP.

RESULTS:
BW, BMI, WHR, and FINS decreased and insulin sensitivity index (ISI) and APN were higher in the acupuncture-medicine group than in the electroacupuncture group (P < 0.01). There was no obvious difference in LEP between the two groups (P > 0.05).

CONCLUSION:
Acupuncture combined with medicine is better than just electroacupuncture for obese PCOS patients by improving obesity-related indexes, insulin sensitivity, and APN level. This indicates that acupuncture-medicine therapy is worth clinical popularization.

Effects of body electroacupuncture on plasma leptin concentrations in obese and overweight people in Iran: a randomized controlled trial.

http://www.ncbi.nlm.nih.gov/pubmed/?term=Effects+of+body+electroacupuncture+on+plasma+leptin+concentrations+in+obese+and+overweight+people+in+Iran%3A+a+randomized+controlled+trial.


Author information

Abstract

BACKGROUND:
The prevalence of obesity, a major public health problem, is increasing in many countries, including Iran. Leptin, a peptide hormone that is released from adipocytes, is a major factor in appetite regulation. Levels of plasma leptin increase with increased body fat mass (BFM). Research has found acupuncture to be effective both in weight loss and suppression of appetite. Although a few studies have reported the effect of body and ear acupuncture on leptin levels, researchers have performed few studies on the effect of body electroacupuncture in humans.

OBJECTIVE:
The research team examined the effects of body electroacupuncture and a low-calorie diet on plasma leptin in obese and overweight individuals with an excess (phlegm-dampness or phlegm-heat) or deficiency (spleen/stomach qi deficiency or primary qi deficiency) pattern according to Chinese medicine.
DESIGN:
The research team randomly assigned participants to one of two groups, intervention or control.

SETTING:
This study occurred in the nutritional clinic at Ghaem Hospital in Mashhad, Iran.

PARTICIPANTS:
Participants were individuals (N = 86) between 18 and 65 years of age with body mass indexes (BMI) between 25 and 45 kg/m2.

INTERVENTION:
The intervention group (n = 47) received actual electroacupuncture, and the control group (n = 47) received sham acupuncture. Both groups consumed a low-calorie diet for 6 weeks.

OUTCOME MEASURES:
The research team measured plasma leptin, BFM, body weight (BW), and BMI before and after treatment.

RESULTS:
For participants in the intervention group with both the excess and the deficiency patterns, the research team found a significant reduction in plasma leptin (24.96%, P = .001) and BFM (8.29%, P = .001). In the control group, the team found a less significant reduction in leptin and BFM. The difference between the two groups was significant for leptin (P = .03) but not for BFM (P = .8).

CONCLUSIONS:
While body electroacupuncture with a low-calorie diet can reduce plasma leptin concentration, the mechanism will require further clarification.


Weight reduction effects of acupuncture for obese women with or without perimenopausal syndrome: a pilot observational study.


Wang Q, Li WH, Zhou QH, Tang XD, Zhang XX, Shu S.

Author information

Abstract
This study was designed to compare the weight reduction effects of acupuncture for obese women with or without perimenopausal syndrome. We observed 60 women with either simple obesity or perimenopausal obesity (obesity complicated with perimenopausal syndrome) treated by five acupuncture treatments given in the first week of three successive four-week treatment courses, and obesity indexes including body weight, body mass index, obesity degree and waist/hip ratio were evaluated. Versus baseline, the obesity indexes decreased at the end of each treatment course in women with simple obesity (p < 0.05 or p < 0.01), while women with perimenopausal obesity showed no decrease at the end of the first course of treatment, and these indexes decreased at the end of the second and the third courses of treatment (p < 0.05). There was no difference when comparing obesity indexes recorded at
the end of three courses of treatment and at the end of three-month follow-up between women with simple obesity and those with perimenopausal obesity. The results suggest that acupuncture reduced body weight in the obese women, and the weight loss occurred earlier in the treatment process for simple obesity than perimenopausal obesity.


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Author information

Abstract

Obesity is one of the leading health risk factors worldwide and is associated with several other risk factors and health problems including type 2 diabetes mellitus, cardiovascular disease and malignancies. Current conventional therapeutic strategies for obesity cannot achieve adequate weight control in all patients, so complementary types of treatment are also performed. Acupuncture, one of the oldest healing practices, represents the most rapidly growing complementary therapy which is recognised by both the National Institutes of Health and the WHO. A previous review concluded that acupuncture was superior to lifestyle advice, to sham acupuncture and to conventional medication. In this narrative review, the possible mechanisms of actions and the results of recent experimental and clinical studies with different forms of acupuncture (eg, body, auricular, manual and electroacupuncture) are presented. In particular, the effects of acupuncture on anorexigenic and orexigenic peptides, insulin resistance, lipid metabolism and inflammatory markers are discussed. Both experimental and clinical current data suggest that acupuncture exerts beneficial effects on the mechanisms of obesity. Some data suggest that electroacupuncture may be more effective than manual acupuncture; however, the most effective frequency remains controversial. Combination of different forms of acupuncture with diet and exercise seems to be necessary for achieving and maintaining weight loss. Further prospective clinical trials are needed to establish the effectiveness of this complementary method for obesity treatment.


Effects of electroacupuncture Zusanli (ST36) on food intake and expression of POMC and TRPV1 through afferents-medulla pathway in obese prone rats.


Ji B, Hu J, Ma S.
OBJECTIVE:
The purpose of this study was to determine the effects of electroacupuncture (EA) ST36 on food intake and body weight in obese prone (OP) rats compared to obese resistant (OR) strain on a high fat diet. The influences of EA on mRNA levels of pro-opiomelanocortin (POMC), transient receptor potential vanilloid type-1 (TRPV1), and neuronal nitric oxide synthase (nNOS) were also examined in the medulla regions and ST36 skin tissue.

METHODS:
Advanced EA ST36 was conducted in two sessions of 20 min separated by an 80 min interval for 7 days. Food intake and body weight were recorded in conscious rats every day. Real time PCR was conducted in the micropunches of the medulla regions and skin tissues at the end of the treatment.

RESULTS:
Food intake and body weight were significantly reduced by advanced EA ST36 in OP rats, but slightly decreased in OR strain and sham-EA rats. Advanced EA ST36 produced a marked increase in POMC mRNA level in the nucleus tractus solitarius (NTS) and hypoglossal nucleus (HN) regions. TRPV1 and nNOS mRNAs were simultaneously increased in the NTS/gracile nucleus regions and in the ST36 skin regions by the EA treatment in OP rats.

CONCLUSIONS:
We conclude that advanced EA ST36 produces an up-regulation of anorexigenic factor POMC production in the NTS/HN, which inhibits food intake and reduces body weight. EA-induced expression of TRPV1-nNOS in the ST36 and the NTS/gracile nucleus is involved in the signal transduction of EA stimuli via somatosensory afferents-medulla pathways.

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Effect of electroacupuncture on leptin resistance in rats with diet-induced obesity.


Gong M, Wang X, Mao Z, Shao Q, Xiang X, Xu B.

Abstract
In the present study, the effects of electroacupuncture (EA) on body weight and sensitivity of leptin in diet-induced obese rats were examined and the underlying mechanisms were explored. After feeding with high-fat (HIF) diet for 12 weeks, the diet-induced obese rats received electroacupuncture stimulation three times per week for four weeks. The expression of the leptin receptor in the hypothalamus was measured
using immunohistochemistry. The plasma leptin was detected with ELISA. The leptin and leptin receptor mRNA was examined with real-time PCR. Results showed that electroacupuncture treatment led to a reduction of body weight, decrease in the plasma leptin levels, and an increase in leptin receptor expression in the hypothalamus. 

**Our results suggested that regulating the expression of leptin and the leptin receptor might be one of the molecular mechanisms underlying the reduction of body weight in diet-induced obese rats by electroacupuncture treatment.**


**Influence of acupuncture on leptin, ghrelin, insulin and cholecystokinin in obese women: a randomised, sham-controlled preliminary trial.**


Güçel F, Bahar B, Demirtas C, Mit S, Cevik C.

Author information

Abstract

**BACKGROUND:**

Obesity is an energy balance problem caused by overeating. Obesity treatment includes diet, exercise, behaviour treatment, pharmacotherapy and surgery; in addition, acupuncture is also an option.

**OBJECTIVE:**

To investigate the effect of acupuncture on weight loss and whether a brief acupuncture treatment of 5 weeks can change circulating levels of leptin, ghrelin, insulin and cholecystokinin (CCK) in obese women.

**METHODS:**

40 women with a body mass index (BMI)>30 kg/m(2) were equally randomised to either an acupuncture group or a sham (non-penetrating) acupuncture group and received treatment at LI4, HT7, ST36, ST44 and SP6 bilaterally. Both groups had two sessions of 20 min/week for a total of 10 sessions. Serum insulin, leptin, plasma ghrelin and CCK levels were measured by ELISA.

**RESULTS:**

Acupuncture treatment decreased insulin and leptin levels and induced weight loss, together with a decrease in BMI compared with sham acupuncture. Furthermore, between-group analyses demonstrated increases in plasma ghrelin and CCK levels in subjects who received acupuncture treatment.

**CONCLUSION:**

These findings suggest that acupuncture may help to regulate weight owing to its beneficial effects on hormones such as insulin, leptin, ghrelin and CCK in obese subjects even after a few weeks of treatment.
The effects of body acupuncture on obesity: anthropometric parameters, lipid profile, and inflammatory and immunologic markers.


Author information

Abstract
A randomized controlled clinical trial in 196 obese subjects was performed to examine the effectiveness of body acupuncture on body weight loss, lipid profile and immunogenic and inflammatory markers. Subjects received authentic (cases) or sham (controls) acupuncture for 6 weeks in combination with a low-calorie diet. In the following 6 weeks, they received the low-calorie diet alone. Subjects were assessed at the beginning, 6 and 12 weeks later. Heat shock protein (Hsps)-27, 60, 65, 70 antibody titers and high sensitivity C-reactive protein (hs-CRP) levels were also assessed. A significant reduction in measures of adiposity and improvement in lipid profile were observed in both groups, but the levels of anti-Hsp-antibodies decreased in cases only. A reduction in anthropometric and lipid profile in cases were sustained in the second period, however, only changes in lipid profile were observed in the control group. Anti-Hsp-antibodies and hs-CRP levels continued to be reduced in cases but in controls only the reduction in hs-CRP remained. Changes in anthropometric parameters, lipid profile, and anti-Hsp-antibodies were more evident in cases. Body acupuncture in combination with diet restriction was effective in enhancing weight loss and improving dyslipidemia.