

# Effect of skinny drip method on body mass index and physical appearance of obese population

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## Abstract

**Background** The purpose of this study is to determine the effects of slim drip approach by mixing cartinex 1g/5ml, liponex 300gm/12ml and arginex 5g/10ml with a 500ml of normal saline being administered to patients for twice a week and to determine its effects on Body Mass Index and Physical appearance of patients after one month of intervention.

**Methods** A total number of n=400 participants were recruited. Informed consent was taken prior to induction and initial body mass index in  $\text{kg}/\text{m}^2$  was monitored.

**Results** The findings of this study had revealed that slimming drip had significantly  $p < 0.005$  reduced the body mass index of the participants where the mean values of BMI before the start of treatment were  $38.12 \pm 4.85 \text{kg}/\text{m}^2$  that had been reduced to  $34.49 \pm 5.36$  after one month of treatment.

**Conclusion** The study had concluded that skinny drip treatment had produced a beneficial effect on hormonal levels and patient's appearance.

## Key words

Obesity; Body Mass Index; Lipid metabolism.

## Introduction

Obesity is a combination of health disorders, characterized by an excessive accumulation of body fat that gives rise to significant comorbidities, such as diabetes, hypertension, dyslipidemia, cardiovascular disease, and many cancers.<sup>1-2</sup> According to WHO Obesity is a worldwide epidemic, with an estimated 57.8% of adults worldwide expected to be classified as obese by 2030n.<sup>3</sup> According to the definition of Clinical Association of American Endocrinologist obesity is "Adiposity Based Chronic Disease (ABCD)" and is globally

accepted as a medical condition and hence must be treated as per its severity.<sup>4,5</sup> There has been an exponential growth in the prevalence of obesity over a period of last three decades where incidences are nearly double among adult and childhood population and triple among adolescent.<sup>6,7</sup> The rising risk of obesity has created susceptibility for every individual irrespective of age, gender and demography.<sup>8</sup> Various management options are available to treat obesity that includes life style modification, dietary control, regular exercises, pharmacological therapies and surgical intervention.<sup>9,10</sup> Multiple studies have suggested that life style modification including dietary control and regular exercises are the primary component for managing obesity yet due to its time consuming effects most of the obese individuals gets disappointment and halt to

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adhere with obesity control plan.<sup>11</sup> Moreover receptivity to perform exercises among general population is also poor; mainly due to substantial commitment of time associated in performing these exercises hence it is therefore most of the obesity control programs have pharmacological treatment option embedded so that early response of treatment program can be achieved.<sup>12,13</sup> According to an Australian-based concept of multimodal management, obesity is classified as a disease that threatens the life expectancy, thus making it obligatory to be treated within the standard healthcare system and recommended combination therapeutic strategies to be designed for obese population in order to improve adherence and provide desirable outcome.<sup>14,15</sup> In this context a study was performed to identify the dosage of exercises in which it was observed that exercises alone produced a small volume of weight loss and therefore to improve response fat metabolism boosting therapeutic strategies must be incorporated to achieve desirable goals in quick time.<sup>16,17</sup> Number of studies are available on data search in which different pharmacotherapy are used like phentermine, naltrexone and liraglutide as a second tier treatment approach for obesity<sup>18,19</sup> but researches to determine the effects of slim drip therapy in stimulating fat metabolism among obese population are scarce. Hence in this study the authors are aimed to determine the effects of slip drip approach by mixing cartinex 1g/5ml, liponex 300gm/12ml and arginex 5g/10ml with a 500ml of normal saline being administered to patients for twice a week and to determine its effects on Body Mass Index and Physical appearance of patients after one month of intervention.

## **Methodology**

It is a quasi experimental study conducted at Department of Dermatology Clinic of Isra

University Hospital, Hyderabad

Obese Type 1 and Type 2 of BMI 30-50kg/m<sup>2</sup> of aged between 18-68 years including both male and female population are included whereas all those participants whom were diagnosed with any comorbidities like diabetes, dyslipidemia, cardiovascular diseases were excluded from the study

A total number of n=400 participants were recruited for the purpose of this study. Informed consent was taken prior to induction and initial body mass index in kg/m<sup>2</sup> was monitored. Every participants irrespective of any kind of exercise programs and diet plan that were following by them were provided with Cartinex (1g/5ml), Liponex (300mg/12ml) and Arginex (5g/10ml) mixed with 500ml of normal saline twice a week for 30 days. The outcome measure was recorded in the form of patient's pictures taken before the start of the treatment session and after 30 days of treatment by a same person using a (Nikon D3500, 23.5mm x 15.6mm camera) and Body Mass Index (BMI). Quantitative findings were analyzed using a SPSS version 22, and a values less than <0.05 was considered significant (95% of CI).

## **Ethical Considerations**

Study was strictly according to the guidelines of Helsinki declaration of human subject. Consent was taken prior to induction of participants in the study. All the participants were given full opportunity to exit from the study at any time without assigning any reason. The concept of beneficence and non-maleficence for participants had given utmost importance in this study. Moreover all kind of information that were taken from the participants during the course of study were kept confidential and were not disclosed during and after the completion of study with any one and any organization in any

of the form and conditions.

**Results**

Analysis of the findings had revealed that of total number of n=400 participants 380 (95%) were females and 20 (5%) were male (Figure 1). Age wise distribution had revealed that within the age group of 18-28 years the number of male and female participants were 20 and 5 respectively. In the age group of 29-38 years the frequency of participants were male 130 and female 13, participants in between 39-48 years of age were 190 females and 2 males where as in between 49-58 years 30 female participants were present and in between 59-68 years of age 10 female participants were included (Table 1, Figure 1).

Further analysis had revealed that the levels of thyroid profiles (T3 and T4) among females were around 60% increased that had normalized after treatment whereas among males the values were 30% higher that had also been reduced. Similarly improvement in the levels of serum insulin, serum prolactin and HbA1C were also been noticed before and after intervention (Table 2).

Further body mass index of the participants were also analyzed using paired sample-test that provided a significant p<0.001 mean reduction in within the group analyses. The pre BMI was observed 38.12±4.85 that reduced up to 34.49±5.36 with p <0.05 (Table 3, Figure 2).

The physical appearance of patients was also assessed by taking pre post picture showing the effects of intervention on patients (Figure 3).

**Discussion**

The findings of this study had revealed that slimming drip method that had been used for the purpose of improving fat metabolism among type 1 and type 2 obese population had significantly p<0.005 reduced the body mass index of the participants where the mean values of BMI before the start of treatment were 38.12±4.85kg/m<sup>2</sup> that had been reduced to 34.49±5.36 after one month of treatment. Moreover the hormone profile levels of thyroid hormone, insulin and serum prolactin were also improved besides that levels of HbA1C was also positively improved to desire levels. The findings of this study was according to the findings of systematic review in which the authors had revealed that of the total number of 43 Randomized controlled trials that were investigated by the authors BMI of the participants had reduced with an effect size of -0.359kg/m<sup>2</sup> whereas weight of the participant’s had been reduced with an effect size of -1.129kg. Moreover same analysis had also revealed that fat mass had been reduced with an estimated effect size of -1.158kg. Hence it had

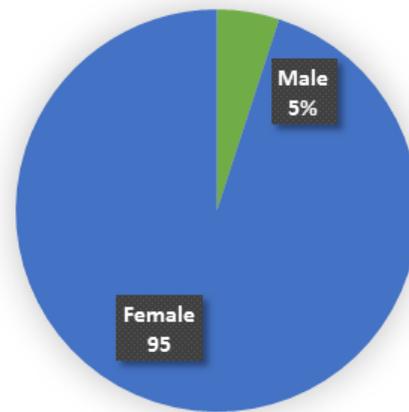


Figure 1 Gender distribution.

**Table 1** Age wise distribution of participants.

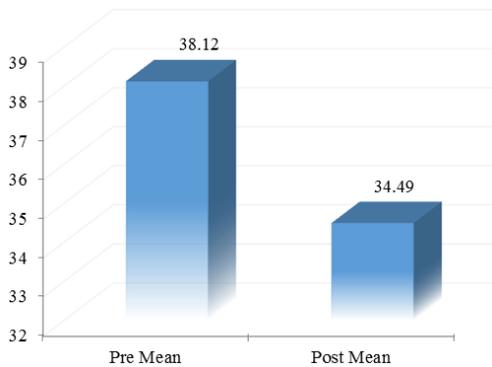
Variables	18-28 years	29-38 years	39-48 years	49-58 years	59-68 years
Male (n)	20	130	190	30	10
Females (n)	5	13	2		

**Table 2** Hormone profile.

Variables	Female (Before)	Female (After)	Male (Before)	Male (After)
Thyroid Profile	T 3, T4 Inc (60%)	T3, T4 (56%) normalized	T3, T4 Inc (30%)	T3,T4 (24%) normalized
Serum Insulin levels	Inc Serum Insulin Levels (15.2+6.82ulU/ml)	Serum Insulin Levels (3-10 ulU/ml)	Inc Serum Insulin Levels (19- 30ulU/ml)	Serum Insulin Levels (3-12ulU/ml)
Serum Prolactin	Inc Serum Prolactin Levels (17.75ug/L)	Serum Prolactin Levels (9ug/L)	Inc Serum Prolactin levels (19.3ug/L)	Serum Prolactin Levels (13ug/L)
HbA1C	6.4	4.8	6.2	5.4

**Table 1** Pre and post mean difference within the group on BMI.

Paired sample t-test	BMI (kg/m <sup>2</sup> )	n	Mean ± SD	95% of CI Median	MD ± SD	p-value 9<0.05)
Pre		50	38.12±4.85	36.80 to 39.56	-3.68±1.65	<0.0001
Post			34.49±5.36	32.97 to 36.02		



**Figure 2** Pre and post difference of BMI.

been concluded in the analysis that l-carnitine supplement therapy had a significant effect in reducing the weight and BMI of overweight and obese population.<sup>20</sup> Similarly in another study l-carnitine therapy had found to be effective in reducing the weight, BMI, triglyceride levels and systolic and diastolic blood pressure among obese population.<sup>21</sup> Similarly in another study the effects of thiotic acid was determined on weight loss of participants and it was concluded by the authors that thiotic treatment had shown a significant  $p<0.001$  mean reduction in participant’s weight 1.27kg as compared to placebo group. Moreover the same study had also observed a reduction in BMI of  $-0.43\text{kg/m}^2$  hence it was concluded by the authors that thiotic had shown small yet significant reduction in weight of obese and overweight population.<sup>22</sup> In a randomized controlled trial

that was conducted to determine the effects 1200 and 1800mg/day of thiotic acid on obesity, it was found by the authors that the effects of 1800mg/day of thiotic acid was turned out to be significantly better than 1200mg/day group and hence it was concluded by the author that the same dose can be used as an effective adjunctive therapy for obesity.<sup>23</sup>



**Figure 3** Representing weight loss n patients graded as per BMI

In another study antioxidant and metabolic effects of a combine effects l-carnitine therapy and alpha lipoic acid (Thicotic acid) were determined by the authors and it was found that combine therapy had significantly  $p < 0.001$  improved the metabolic activity of mitochondria and that no adverse effects of combine therapy had been noticed by the authors of that study.<sup>23</sup> An animal based study conducted to determine the effects of thicotic acid on lipid metabolism it was estimated by the authors that thicotic acid supplements included in the diet of crabs had improved the fatty acid, amino acid and carnitine metabolism.<sup>24</sup> A study that was conducted to determine the synergistic effects of integrative administration of l-carnitine, l-arginine and N-acetyl cysteine on metabolic dynamics and on hepatic insulin extraction in overweight and obese poly cystic ovary patients it was observed by the authors that after 24 weeks of intervention all subjects had shown significant reduction  $p < 0.001$  in plasma insulin levels and improvement in metabolic functions of participants and hence it was concluded that combination therapies are effective in providing beneficial results in overweight and obese population.<sup>25</sup>

## Conclusion

The study had concluded that skinny drip treatment based on cartinex 1g/5ml, liponex 300gm/12ml and arginex 5g/10ml mixed with a 500ml of normal saline being administered to patients for twice a week for 30 days had produced a beneficial effects on hormonal levels and patient's appearance. Besides that the treatment had also shown a significant reduction  $p < 0.001$  in body mass index of the participants.

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