

A Narrative Review on Effectiveness of Green Tea on Reduction of Body Weight among Obese Young Adult Girls

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Abstract:- Several developed and developing countries around the world view obesity as a medical issue. Numerous experts are striving to reduce obesity since it boosts the risk of numerous serious illnesses, such as osteoarthritis, coronary cardiovascular disease, hypertension, diabetes that does not depend on insulin, and particular types of cancer.

The prevalence of obesity continues to rise worldwide, but it is especially severe in India, which is now the third-most obese country in the world, only behind the US and China. In such a context, the rise in obesity and disorders associated with obesity centers on the growing impact of lifestyle changes, particularly eating patterns, such as the consumption of junk food. A healthy lifestyle, which includes both exercise and good nutrition, is the answer to this issue. It is advantageous for obese people to lose weight since it lowers their risk of mortality and morbidity.

➤ Aim-

The narrative review's goal is to learn how effective green tea is at helping obese young adult girls lose weight.

Keywords:- BMI, Green Tea, being Obese, and Assessment Adolescents and Young Adults.

I. INTRODUCTION

In many both a millionaire and developing countries around the world, obesity is seen as a medical issue. And because obesity increases the risk of several serious illnesses, including osteoarthritis, coronary cardiovascular disease, high blood pressure, non-insulin dependent diabetes, and some different kinds of cancer, researchers are working to reduce obesity.

One of the main causes of obesity is having less physical activity and consuming more calories, or, to put it another way, more carbohydrates. Reduced physical activity and increased energy consumption, or in other words, increased carbohydrate intake, are two primary variables that contribute to obesity.

The second most popular beverage in the world after water is tea. The *Camellia sinensis* plant is the source of all three varieties of real tea: oolong, green, and black. Tea leaves are rich in catechins, a specific type of polyphenol, during the time of harvest. Following harvest, catechins may be quickly transformed by enzymatic oxidation creating a complex combination of additional derivatives, thearubigins and theaflavins, which are in charge of giving oolong and black tea its distinctive color. However, green tea (GT) is made by boiling leaves shortly after gathering, preserving the catechins from oxidation.

The benefits of treating obesity include a decrease in the risk of death and disease due to weight loss. Even a small amount of weight loss, such as a 5% to 10% reduction in beginning body fat, has noticeable positive effects on one's health. Many people can achieve realistic goals by losing only a small amount of weight.

However, long-term weight loss maintenance is extremely challenging and frequently fails. The majority of studies show that maintaining weight reduction results in unwanted weight rebound because respondents did not sufficiently alter their eating habit.

Organic herbal products for weight loss are a fast expanding therapy option as an alternative to the standard treatment for obesity. One of these that has a significant therapeutic impact on weight loss is green tea.

Obesity in children and young people is a public health emergency, based to a study. According to the research, 10% of school-age children globally are thought to be overweight, which increases their risk of developing chronic diseases. A quarter of these overweight children are obese, and it is likely that a few of them may develop diabetes, cardiovascular disease, and a number of other comorbidities before or during early adulthood. Although it is substantially more common in economically developed areas, the majority of the world's population is growing significantly over weight.

II. REVIEWS

A systematic review was done on Continuation of childhood overweight into adulthood. Overweight and obesity in young people are serious public health issues, and they are of special relevance due to potential long-term relationships with adult weight status and morbidity. A computerized bibliography search limited to studies with prospective and retrospective longitudinal data that included studies consistently report an increased risk of overweight and obese youth becoming overweight adults, indicating that the likelihood of persistence of overweight into adulthood is moderate for overweight and obese youth. Predictive values did, however, vary widely.

A survey was conducted in 2014 the prevalence rates of childhood obesity in wealthy countries have stabilized or decreased during the last 10 to 15 years, while this trend is still unclear. The predicted steady rise in obesity prevalence over the coming decades doesn't appear to be happening right now. Evidently, saturation has occurred, which may be tied to societal changes.

In this study, the effects of green tea on obese persons were examined because green tea has been recommended as a weight-loss and weight-maintenance strategy. According to research gathered, 69.2% of the participants believe that drinking green tea can help with weight loss and maintenance. The metabolism is boosted and fat is burned by green tea extract. Caffeine and green tea together help overweight and slightly obese people lose weight and keep it off. According to the research, more than half of the population believes green tea is good for their health and is aware of its benefits. To shed light on the positive effects of green tea on health and disease, more research is needed.

The goal of the study was to determine whether green tea can help Malaysian obese students lose weight. Among female university students, only a single blinded intervention research was done. A random sample of the students who volunteered to take part in this intervention trial, which included 30 obese female participants, was taken. They were weighed and had measurements taken of their bodies. Two groups of subjects—15 cases and 15 controls—were created. Cases and controls were compared using age and weight. Each participant is required to consume 1.5 liters of green tea daily. A daily dose of 1.5 liters of placebo was provided to the control group. The participants' ages varied from 20 to 25. Before and after green tea drinking, there were significant variations in the case group's body weight, BMI, and waist ($p < 0.001$). However, there were no appreciable differences in the control group. Researchers discovered that drinking 1.5 liters of green tea every day for up to 25 days straight is an effective strategy to lose weight.

To evaluate the impact of high-dose green tea on BMI and waist circumference, a randomized, double-blind trial study was carried out under the auspices of clinical trials.gov. Out of 102 women, 115 were found to have central obesity, with a body mass index (BMI) of 27 kg/m² and a waist circumference (WC) of 80 cm. The high-dose green tea group or the placebo group was chosen at random for these ladies. 12 weeks were allotted for the intervention. Anthropometric assessments, lipid profiles, and hormone peptides associated with obesity, such as leptin, adiponectin, ghrelin, and insulin, were the key outcome measures. After 12 weeks of receiving high-dose EGCG treatment, the treatment group experienced a significant weight loss from 76.811.3 kg to 75.7 (p/4 0.025), as well as reductions in BMI (p/4 0.018) and waist circumference (p/4 0.023). This study also shows a persistent trend of declining total cholesterol, reaching 5.33%, and declining LDL plasma levels. In women with central obesity, high-dose green tea extract caused significant weight loss, a smaller waist circumference, and a steady decline in total cholesterol and LDL plasma levels without causing any side effects or negative impacts.

A 24-week period of beverage consumption, a 4-week lead-in, and a 12-week follow-up were all included in a double-blind, randomized, controlled trial. Over the course of 24 weeks, subjects drank green tea with 576 mg of catechins or 75 mg of catechins (the control group). Age, gender, age, and BMI all had different strata in the randomization process. Throughout the research time, subjects were instructed to continue living as usual. 40 patients (21 from the catechin group and 19 from the control group) provided samples for the analysis of the data. Between the catechin and the control groups, there were no appreciable variations in the key outcome variables such as body fat mass. The reduction in waist circumference, systolic blood pressure, and low-density lipoprotein cholesterol in the catechin group at week 24 for the above median category was, however, significantly greater in the catechin group when the analysis was stratified using the median of the week -0 values. There were no negative effects attributed to drinking the beverage high in catechins. This study has demonstrated the significant contribution of catechin to the reduction of body fat.

III. METERIAL AND METHOD

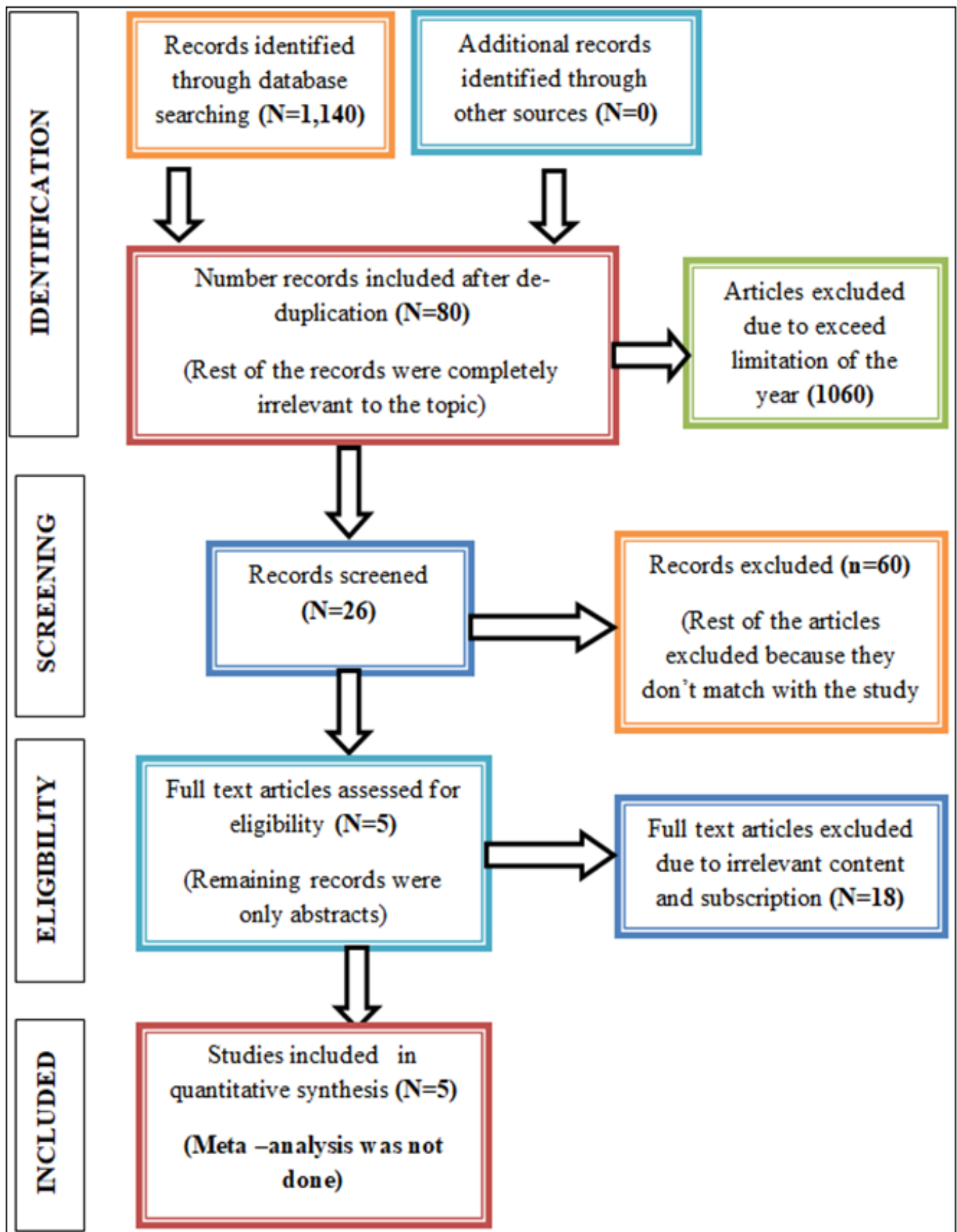


Fig 1 Prisma Flow Diagram of Narrative Review

IV. FINDINGS

The terms "green tea effects on obesity" in connection to "integrative" and all of its synonyms, as well as "search database," were used to conduct the systematic review search. Through the Google search engine, manual Google Scholar as well as PubMed searches were conducted. In the database, 5 more articles were discovered. 1140 articles were found in the initial search, 1060 of which were eliminated for being irrelevant. 50 articles were eliminated due to database replication after being carefully chosen from 80. Replication was eliminated, and the acceptability of 26 articles was examined. 18 further papers were disqualified because the complete text was unavailable. Therefore, 5 articles, including an experimental investigation, were screened.

V. DISCUSSION

This narrative review was supported by a randomized placebo controlled double blind trial on body weight reduction and weight maintenance in connection to habitual caffeine intake and green tea supplementation by Westerterp -PM S, Lejeunem P.G.M, and Kovacs E M. R. High caffeine consumption has been linked to leptin suppression in women and weight reduction through fat oxidation and thermogenesis. The combination of green tea and caffeine increased WM in regular low caffeine users, in part via promoting thermogenesis and fat oxidation.

VI. CONCLUSION

Between the pre-test and post-test weight levels in the experimental group, there was a significant change. The green tea approach is efficient in reducing the weight/obesity symptoms in the adult population and can be used as a main treatment or adjuvant for medical treatment of obesity diseases.

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