



# A systematic review: On efficacy of Herbal Remedies targeting weight loss

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## Abstract

Obesity is a significant nutritional health problem in the modern world. In fact, both industrialised and developing nations are experiencing an increase in this issue. Even if we live and survive in a nation where we are unaware of these health-related problems. But this problem affects a sizable section of our population. Obesity is a condition when there has been an accumulation of extra fat to the point, or extent, where it has affected the health of the person or individual. This unusual disease also has an impact on BMI (Body Mass Index). Obesity is a dangerous condition that raises the chance of numerous deadly illnesses, including diabetes, heart disease, and cancer that is life-threatening. This review focuses on the various herbal remedies used to aid weight loss.

## Keywords

Obesity

Herbal remedies

Weight loss

BMI (Body Mass Index)

Health issues

## Introduction

Long-term effects of an individual's excess body weight can be unpleasant and even dangerous to the staff. Obesity is a dangerous problem since it can lead to a variety of prenatal disorders and serious health concerns like heart problems, diabetes, colon and breast cancer (most commonly after menopause), endometrial

cancer (the lining of the uterus), and even esophageal cancer. Some investigations [1,2] came to the conclusion that there is a connection between obesity and malignancies of the ovaries, pancreas, and gall bladder. If a person is overweight, gall bladder disease and gallstones are the most prevalent ailments.

Everyone wants to look beautiful and feel good, but being overweight or obese can hurt your self-esteem and general health. Also, I would like to point out that it may have a negative effect on mental health and may heighten feelings of stress and despair in the individual. Many health concerns, including insulin resistance, hypertension, increased cholesterol, hormonal imbalance, etc., can be brought on by people who are overweight or have excess fat around their midsection [3]. People are leading unhealthy lifestyles these days. They are not eating healthfully and are not paying attention to the nutrition the body needs. consuming processed, greasy, and unhealthy meals. not exercising, working out, or doing yoga. People no longer eat their meals at the proper times and instead dine late. All of these variables have an impact on obesity and weight gain, both of which are exceedingly challenging to lose [4]. Obesity is a lifestyle condition that can be treated by making adjustments to food and lifestyle. Establishing a better lifestyle that includes sufficient exercise, a nutritious food, and stress management techniques will improve your physical health and help you regain your ideal weight.



Fig .1: Obese people



Fig. 2: Child eating junk food

## Ayurveda's take on obesity

The focus of Ayurveda is on preserving the body's dosha equilibrium. The body's functioning and metabolic processes are at their best and the human body is free from sickness when the balances of the doshas are preserved. We place a lot of emphasis on dietary and lifestyle modifications in Ayurveda medicine in order to keep the body in balance.



Fig. 3: Herbal remedies for weight loss

According to ayurveda, some dietary groups and lifestyle choices should be avoided, such as the following: The key to managing obesity is to avoid sleeping during the day; in contrast, sleeping late at night and rising early in the morning are very beneficial. While barley, millets, oats, and maize are also beneficial for managing obesity, wheat and rice are thought to be the best cereal for doing so.



Fig.4: Pulses used for weight loss

It is very beneficial to eat bitter vegetables, such as bitter melon or bitter kinds of drumstick, broccoli, radishes, sprouts, and cabbage.



Fig.5: bitter vegetable like bitter melon for weight loss

Tea and coffee in reasonable or equitable proportions are permitted.



Fig.6: proper amount of tea and coffee for maintenance of proper weight.

Exercise both mentally and physically should be planned carefully and included in daily routine. The largest muscles in our body are those in the legs, so it makes sense that the majority of calories are burned here through activities like walking, jogging, and cycling, which are among the best types of exercise for losing body fat [5].



Fig. 7: Proper exercise like cycling walking, jogging for weight loss.



Fig.8: Proper workouts like weight loss.

## Few Ayurveda guidelines for weight loss

- ❖ Do not miss your mealtimes, and eat frequently while leaving a few hours between each meal.
- ❖ You should cook your own meals and eat in accordance with your prakriti to keep your doshas in harmony.
- ❖ Refrain from drinking water right before and right after meals.
- ❖ Avoid taking refrigerated food, stale food, processed food, aerated drinks, etc.
- ❖ It can help to consume good fats like ghee and cut out bad fats from your diet.
- ❖ Prepare a homemade drink that you can take first thing in the morning composed of coriander seeds, cumin, and fennel.

- ❖ Your body can be detoxed by drinking warm water with lemon juice in the morning. This revs up the entire digestive system and offers the new day a fresh start.
- ❖ Exercising enough to break a sweat is indicated as a daily morning exercise for healthy weight loss; 45 to 60 minutes is ideal, but even 30 will do. We need to engage in something that will provide us a life-long rest <sup>[6]</sup>.
- ❖ Spend some time in the morning getting your body and mind relaxed. Yoga and meditation are two examples of mind-body exercises that induce calm in the body.
- ❖ Moving your body after each meal, such as by taking a quick stroll, improves digestion.
- ❖ Drink largely the warm water for proper weight management.
- ❖ To get adequate rest so that it won't have an impact on our bodies.
- ❖ Meals should be of three times a day and dinner should be light and breakfast should be proper largely hefty.
- ❖ And for proper digestion, take a brief stroll after eating.
- ❖ Consumption of seasonal foods should be in the diet.
- ❖ All the six taste should be in the diet and meal i.e., sweet, salty, bitter, pungent, sour and astringent.

## Some effective ayurvedic herbs targeted for weight loss

Some ayurvedic medicines and herbal therapies that can promote the weight loss are:

- 1) **TURMERIC**
- 2) **TRIPHALA**
- 3) **GINGER**
- 4) **CINNAMON**
- 5) **ASHWANGANDHA**
- 6) **FENUGREEK**
- 7) **GARLIC**

## 8) HIBISCUS

## 9) BLACK PEPPER

## 10) CARDAMOM

## 11) CUMIN



Fig.9: Some ayurvedic herbs for weight loss

### 1. TURMERIC

Turmeric includes curcumin that helps lowering the amount of bad cholesterol and inflammation to help reducing the weight [7]. Consumption of curcumin in many persons with metabolic syndrome was reported to help lower BMI, body weight, waist circumference, and raised adiponectin (a peptide that activates fatty acid oxidation, insulin sensitivity, and boosts calorie expenditure)[8].



Fig. 10: Turmeric capsule



Fig. 11: Turmeric powder

Direction of turmeric intake for weight loss: Chew half an inch of turmeric root or swallow half to 1 teaspoon of turmeric powder every day.

Weight Loss Recipe of turmeric:

Ingredients: ½ inch turmeric root, 1 cup warm water, ½ lime juice

**Preparation:** The turmeric root should be crushed using a mortar and pestle. Add a cup of warm water to it. Lime juice should be added in an acceptable or necessary amount. Allow proper stirring of all ingredients taken.

**Benefits:** It helps weight loss and enhances the intestinal health. Moreover, it aids in wound healing, the reduction of pain, and the prevention of certain microbial diseases.

## 2. TRIPHALA

Triphala assists in maintaining the stomach, small intestine and large intestine healthy by draining out toxins from the body. It also serves as a colon toner and assists in strengthening and toning the tissues of the colon. This in order assists to manage the weight of a person. This ayurvedic herb is excellent in alleviating the constipation and inflammation of the digestive tract. It greatly aids in lowering cholesterol levels.



Fig.12: Triphala seeds for weight loss

Fig.13: Triphala powder & churna

Triphala powder can be used as a weight-loss supplement by adding two to three teaspoons to a glass of cold water and letting it sit overnight. On an empty stomach, consume the concoction in the morning. With honey and cinnamon- Put a spoonful of Triphala powder and a small piece of cinnamon in a glass of water and leave it overnight. Add a tablespoon of honey to this mixture and drink it on an empty stomach in the morning <sup>[9]</sup>. Tablet of Triphala- Take one tablet with warm water at night before going to sleep.

**Tea of triphala powder:** Tea consisting of triphala powder- Add a tablespoon of Triphala powder in boiling water for a cup. Pour the water in an empty cup and let it cool. Add a teaspoon of lime juice before drinking it

### 3. GINGER

Ginger assists in stimulating the metabolism, enhancing cell breakdown of fats, blockage of fat absorption, and helps in reducing excessive appetite <sup>[10]</sup>. Ginger water is beneficial in lowering body weight, waist-to-hip ratio, fasting glucose, and insulin resistance index <sup>[11]</sup>.



Fig. 14: Ginger rhizome

Fig. 15: Ginger roots (plants)

Ginger tea : a weight loss therapy

Ingredients: 1 teaspoon honey, 1/2 inch of ginger, and 1 cup of water

Preparation of ginger tea:

Take a cup of water and bring to a boil. Crush the ginger using a mortar and pestle before adding it to the boiling water. Add 2 more minutes to the boil. Turn off the flame and add suitable amount of honey. Strain the water and stir the decoction well before drinking.

Benefits:

Ginger aids in improving the GIT infections or problems and liver health, eliminates out all the toxins, protects the throat infections, and helps in melting the fat <sup>[12]</sup>. Honey regulates and minimises the strong flavour of ginger, provides the sweetness to drink, and builds up the immune system.

### 4. CINNAMON

Cinnamon has been demonstrated to have the highest results in weight loss and the battle against obesity <sup>[13]</sup>. It also helps to increase and accelerate metabolism and maintains the blood sugar level. It performs an efficient part in decreasing LDL cholesterol and triglycerides <sup>[14]</sup>. With those benefits cinnamon becomes an ideal condiment for persons suffering diabetes <sup>[15]</sup>.





Fig.16: Cinnamon powder

Fig.17: Cinnamon sticks &amp; its plant

Cinnamon consumption for weight loss:

Take one to one and a half teaspoons of cinnamon bark or powder that has been steeped in water overnight. Consume cinnamon infused water every day in the morning for four weeks to get the desired results.

Tea therapy of cinnamon Ingredients: One and half teaspoon of cinnamon powder, one water cup; Setting up: Boil a cup of water and add cinnamon powder to it and let it boil for 2-3 minutes.

Benefits of cinnamon:

Cinnamon increases metabolism, decreases bad cholesterol levels, and aids with hunger suppression. Water consumption stimulates healthy and improved bowel movements and aids in the removal of all toxins from the body. It also decreases and prevents bloating.

## 5. ASHWAGANDHA

Ashwagandha is a robust herb used since ancient times. Ashwagandha is utilised to fight against anxiety for improving the immune system after an illness. Additionally, it helps with weight loss.



Fig.18: Ashwagandha powder with its plant and parts

Ashwagandha is advantageous in numerous ways; some of them are enlisted below:

Enhance in the thyroid functioning-The body's ability to burn fat and effectively regulate its metabolic rate are both largely dependent on the thyroid. Low levels of thyroid hormone results in poor regulation of fat, vitamin, minerals and proteins.

Ashwagandha is extremely popular for promoting the production of thyroid hormones and also for T3 & T4 cells. These hormones offer energy to the bodily cell and also boost the metabolism. It increases immunity to facilitate fat burning. Ashwagandha comprises a high quantity of anti oxidants which aids in stimulating the metabolism, lessens the inflammation and helps to burn the fats deposited in the body <sup>[16]</sup>.

Ashwagandha is available in pill form but is more effective in powder form which is manufactured out of dried ground ashwagandha leaves.

## 6. FENUGREEK

*Trigonella foenum graecum* is the name given to fenugreek. In China, it is frequently used to cure many illnesses, including skin disorders. It is now a typical home spice and thickener. Moreover, it is present in cosmetics like shampoo and soap. Due to their nutritious value and mildly sweet and nutty flavour, fenugreek seeds and powder are frequently utilised in many Indian cuisines.



Fig.19 Fenugreek seeds

Fig.20. Fenugreek powder

Fenugreek seeds have a history of providing effective treatment for metabolic disorders. These seeds' extract serves as a supplement and lowers dietary fat consumption <sup>[17]</sup>.

**Fenugreek as a Weight Loss Supplement:**

Every day, combine 1 cup of water with 1 teaspoon of fenugreek seeds. Fenugreek seeds can be ground and kept in a clean container. We can also add it to several dishes, such as curries, dals, soups, and smoothies.

## Fenugreek Seeds Recipe for Weight Loss <sup>[18]</sup>.

1 cup of water and a teaspoon of fenugreek seeds. Fenugreek weight loss therapy preparation. One teaspoon of fenugreek seeds should soak in a cup of water all night. Eat the seeds and the water both on an empty stomach <sup>[19]</sup>.

## 7. GARLIC

Allicin, garlic's active component, aids in the treatment of high blood sugar, metabolic problems, and cardiovascular diseases. Moreover, it aids in boosting immunity and has anti-tumor capabilities <sup>[20]</sup>. Garlic increases metabolism, decreases fat storage, and may aid in weight loss, according to a scientific study <sup>[21]</sup>.



Fig .21: Garlic used as herb

### Recipe for Garlic Weight Loss

Components: 1 cup of water, 1 clove of garlic, and 12 a lime's juice

Preparation Use a mortar and pestle to mash the garlic clove. It should go in a cup of water. Add lime juice, thoroughly whisk, and sip all at once.

### Benefits

The lime juice helps cut the intense scent and taste of the garlic. Limes are also rich in vitamin C <sup>[22]</sup>. Vitamin C may also promote weight loss, though more research is needed in this regard. Garlic aids weight loss by reducing hunger cravings, lowers cholesterol, enhances heart health, and has anti-cancer properties.

## 8. HIBISCUS

Hibiscus flower extract, which is the vermilion hue of hibiscus tea, aids in weight loss. According to several research, hibiscus extract helps lower blood pressure, ghrelin, the hunger hormone, adipogenesis, non-alcoholic fatty liver risk, and abdominal obesity [23] [24].



Fig. 22: Hibiscus in the form of tea for weight loss

Hibiscus tea's weight loss treatment:

Ingredients and method of preparation: One teaspoon of dried hibiscus flowers, Water, two cups, 1 teaspoon of honey.

Making: Fill a teapot with one spoon of dried hibiscus blossoms. Fill the teapot with 2 cups of boiling water. Let it steep for 5-6 mins. Filter some hibiscus tea. Add 1 teaspoon honey and thoroughly stir.

Benefits

Hibiscus tea has diuretic effects, may decrease cholesterol, and improves bowel movements in addition to preventing stomach irritation [25]. Honey possesses antibacterial, antioxidant, anti-inflammatory, immune-boosting, and anti-tumor properties, making it effective against throat infections [26]. To prove that excessive hibiscus tea consumption per day has no negative effects on blood pressure, more research is required.

## 9. BLACK PEPPER

Piperine is prevalent in black pepper. Black pepper's distinctive flavour is attributed to piperine, which also aids in preventing the production of fat cells (adipogenesis) [27]. Consuming black pepper hence aids in weight loss. In addition, pepper has antidepressant, anti-inflammatory, anti-microbial, antioxidant, and gut-function-improving effects [28].



Fig.23: Powder and seeds of black pepper

Black pepper consumption for weight loss: You can either chew 5 black peppercorns daily or use them in recipes for drink or meals.

Ingredients for a Black Pepper Weight Loss Recipe:

One-fourth teaspoon of freshly ground black pepper, 1/2 tsp. honey, 1 cup of hot water

Preparation: 1. To a cup of warm water, add 1 teaspoon honey and 1/4 teaspoon black pepper.

2. Before consuming, thoroughly stir.

Benefits:

Honey helps enhance immunity and maintain a healthy gut while black pepper promotes weight loss by blocking the creation of fat cells. This beverage with honey and black pepper aids in the removal of toxins from your body.

## 10. CARDAMOM

In overweight and obese women with prediabetes, cardamom's antioxidant and anti-inflammatory characteristics may improve insulin sensitivity and lower total cholesterol <sup>[29]</sup>. Moreover, it might aid in reducing the severity of fatty liver in those who suffer from non-alcoholic fatty liver disease <sup>[30]</sup>. Use either black or green cardamom.



Fig.24: Cardamom seeds

Consuming Cardamom to Lose Weight A half-teaspoon of black cardamom powder can be taken once per day.

Cardamom Weight Loss Therapy: Ingredients 12 teaspoon powdered black cardamom Green tea leaves with a cup of water.

Preparation: Start by boiling a cup of water. Add cardamom powder and continue to boil for an additional 2 minutes. Extinguish the flame and stir in the green tea leaves. Give them five minutes to steep. Before sipping, strain the tea and give it a good stir.

Benefits:

Green tea increases metabolism and aids in toxin removal. Cardamom raises body temperature internally, which might aid in burning off extra body fat.

## 11. CUMIN

Another common spice that is used in many different cuisines around the world is cumin, or jeera. Cumin seeds aid in better digestion and have immune-boosting, anti-cancer, anti-inflammatory, anti-microbial, anti-hypertensive, antihistamine, and antioxidant effects [31]. According to a study, cumin powder may help lower body fat percentage, serum triglycerides, bad cholesterol, and BMI [32].



Fig. 25: Cumin seeds and powder

Fig.26: Cumin plant

Cumin Intake for Weight Loss: Add 12 teaspoon of cumin seed powder to juices or food preparations, or take 1 teaspoon of cumin seeds and soak them in water.

Cumin Weight Loss Therapy: Around one teaspoon of cumin seeds, 1 cup of water, 1/2 teaspoon powdered honey

Preparation: Overnight soak the cumin seeds in water. Warm the water till it is comfortable. After filtering the water, add honey. Before consuming, thoroughly stir.

## Benefits

The gut's overall health can be greatly improved by consuming cumin seeds. Moreover, it improves sleep quality and lowers the risk of skin problems, anaemia, and respiratory and common colds. Honey has antimicrobial properties and aids in detoxification.

## FITNESS ACTIVITY TO LOSE WEIGHT

Frequent physical activity is crucial for overall health, and it's even more crucial if you're attempting to lose weight or keep it off. More exercise increases the quantity of calories your body "burns off" or uses as energy when trying to lose weight. A "calorie deficit" that leads in weight loss is produced when you burn calories through physical exercise while also eating less calories overall. The main cause of weight reduction is reduced calorie consumption. But, research demonstrates that regular physical activity is the only method to maintain weight loss. Most critically, exercise lowers risk of diabetes and cardiovascular disease beyond what is achieved by weight loss alone <sup>[33]</sup>.



Fig. 27: Physical activity for weight loss

Physical activity also helps to—

- Maintain weight and helps to reduce symptoms of depression and anxiety.
- Reduce high blood pressure.
- Reduce risk for type 2 diabetes, heart attack, stroke, and several forms of cancer.
- Reduce arthritis pain and associated disability.
- Reduce risk for osteoporosis and falls.

## MANAGEMENT OF STRESS FOR WEIGHT LOSS

You may find it difficult to maintain a healthy weight while you are under stress. Also, it may stop you from losing weight. The connection between stress and weight increase is obvious, whether it's due to high amounts of the stress hormone cortisol, unhealthy stress-induced behaviours, or a combination of the two <sup>[34]</sup>.

You may combat stress and the unfavourable impact it can have on your eating patterns by practising self-care techniques like mindfulness, journaling, and exercise.

Healthy habits, such as eating well and exercising frequently, are likely to be neglected while you're under stress. Making these healthy habits a habit and preventing stress-related weight changes both benefit from routine maintenance. Here are a few tactics to assist you end the vicious cycle of stress-induced weight gain: Make it a point to exercise, eat better comfort foods, practise mindful eating, keep a food journal, drink more water, and include stress-relieving techniques into your daily routine.

### A SAFE WAY TO USE HERBS

Since ancient times, herbal treatments have been a part of healing customs in both Western and Eastern civilizations. Herbal treatment is intended to treat illness, prevent the development of acute and chronic disease processes, and improve general health and wellbeing. The idea that nature creates powerful medicines that over time have evolved alongside the human body to meet both short-term and long-term demands is the foundation of this natural healing approach.

The therapeutic properties of plants: Botanical medicine is another name for herbal therapy. It treats patients with herbal treatments. Herbal treatments can be made using the root, leaf, stem, flower, or pollen. One formula may contain a number of herbs. Combining the herbs may boost the mixture and help to lessen or even eliminate any potential negative effects.



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