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A Systematic Review of Herbal Approaches to Weight Management

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ABSTRACT

Obesity is a pathological condition with excess body fat. It is a chronic disorder with a complex interaction between genetic and environmental factors. It is characterized by high cholesterol, fatty acid levels, Insulin desensitization; high blood pressure; and excessive adipose mass accumulation. It is a major public health problem that is not only confined to developed countries but has now become an important public health problem in developing countries also. Obesity hurts health, leading to reduced life expectancy and/or increased health problems. Herbal medicine has been used for the treatment of disease for more than 2000 years, and it has proven efficacy. Many studies have confirmed that herbal medicine is effective in the treatment of obesity. People seemed to be more inclined to use herbal medicines for reducing their weight which is an easy approach in busy lifestyles. Therefore, the present study was designed to investigate the hyperphagic, antiobesity, and antihyperlipidemic effects of the widely used medicinal herbs. This article will focus on the various herbal medicine used for obesity that has been reported in the past decade.



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INTRODUCTION

Maintaining a healthy weight is an essential part of lifelong well-being, however, it could be difficult to discover the proper stability and navigate all the myths and fake guarantees accessible approximately eating regimens and weight loss.

Table no. 1. BMI Classification.

BMI	Classification
< 18.5	Underweight
18.5–24.9	Normal weight
25.0–29.9	Overweight
30.0–34.9	Class I obesity
35.0–39.9	Class II obesity
≥ 40.0	Class III obesity

Obesity is growing at an alarming price globally and is still a primary public fitness concern. Obesity is a primary threat aspect withinside the etiopathology of numerous fitness issues such as cardiovascular diseases, hypertension, hyperlipidemia, diabetes mellitus, and numerous sorts of cancers.

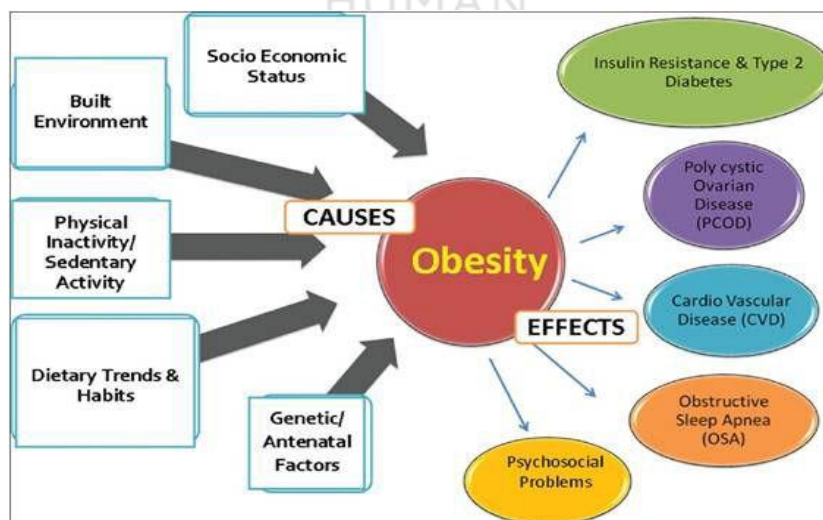


Fig No. 1: Fig. Causes and effects of Obesity

Obesity constitutes a main global health problem and its prevalence has increased considerably in children and adults in both developed and developing countries. Several factors such as increased consumption of sugars, sweetened beverages, highly saturated fats,

and physical inactivity contribute to increased incidence of overweight and obesity. Obesity is characterized by excessive weight gain and adiposity resulting from an imbalance between energy consumption and expenditure. In addition to regular exercise, changes in lifestyle and dietary habits are vital in the management of obesity. Even though anti-obesity drugs are effective in suppressing weight gain, these drugs have a low benefit-to-risk ratio. So there is an urgent need for the discovery of additional agents which are more therapeutic and useful for obesity. There has been an increased interest in the use of complementary and/or alternative medicine (CAM) for the treatment of various ailments including obesity in the past decade. Obesity has been called the “disease of diseases” because of the diversity of complications it produces; insulin resistance, diabetes, hypertension, and dyslipidemia that ultimately increase the risk of cardiovascular disease. Since obesity is a risk factor leading to several chronic and fatal diseases, many people employ different methods to combat obesity and its associated adverse effects. Although exercise is regarded as one of the effective tools for weight reduction and maintenance, its compliance is very low.

Some medicinal herbs used for weight management:

1. KALONJI

Kalonji or *Nigella Sativa* is an Ayurvedic herb that has many health benefits which are known to have several health benefits and one of them is weight loss. The seed is also helpful in diabetes and people with high cholesterol levels; kalonji is a well-known remedy for weight loss. The seed has numerous protective and healing powers and is well known to cure many ailments. It is packed with nutrients like trace elements, vitamins, aromatic oils, and enzymes. Kalonji also has compounds like crystalline nigellone, amino acids, saponin, crude fiber, proteins, fatty acids like linolenic and oleic acids, volatile oils, alkaloids, iron, sodium, potassium, and calcium. Kalonji is full of fibers. The seed contains nigellone, an antioxidant enzyme, which helps in maintaining obesity and thus, also inhibits the symptoms that can lead to cancer. As per a study published in the *Indonesian Journal of Internal Medicine*, kalonji helps reduce central fat (or fat around the belly). According to the study, the men who were given these seeds as a form of weight loss treatment lost belly fat within a week and showed a considerable drop in total weight, blood pressure (systolic), and waist circumference. And all of this without any side effects. They believe that the reason the seeds worked wonders is because of their high fiber content and presence of nigellone.



Fig. No. 2: Kalonji seeds and oil

2. BOTTLE GOURD

Bottle Gourd (*Lagenaria siceraria*) is a strenuous vine having big leaves and belongs to the Cucurbitaceae family and is distinguished as Calabash, Doodhi, and Lauki in various regions in India (Deore et al., 2009). The administration of the aqueous extract of bottle gourd orally reduced the elevated levels of triglycerides, cholesterol, and low-density lipoprotein while enhancing the high-density lipoprotein levels. The dietary fiber present in the fruit lowers the cholesterol level. Saponins in this fruit increase lipoprotein activity and rapidly remove fatty acids in the blood (Aslam & Nijam, 2013). It contains about 92% water, keeps the body hydrated, and it is also a rich source of vitamins C, A, and K and some essential minerals like sodium, calcium, iron, zinc, and magnesium. It brings down the bad cholesterol levels and thus promotes a healthy heart. It is rich in both soluble as well as insoluble fibers, it facilitates smoother digestion, and also helps in curing stomach problems like constipation, piles, and flatulence. Bottle gourd juice is now a day's gaining fast popularity in the fitness world. It has been widely popular for weight loss in Ayurveda also. It is packed with dietary fibers so the bottle gourd helps keep you full for longer. Pressing the feeling of fullness also controls the appetite.



Fig. No. 3: Bottle gourd

3. OLIVE OIL

Many types of research have shown that obesity is the least among people who prefer to consume the Mediterranean diet, which consists of a lot of olive oil. It has been noted that a diet rich in olive oil is a more durable weight loss method than a low-fat diet. Olive oil is one of the genuine forms of fat that can be consumed. Extra virgin olive oil, which is unprocessed and unfiltered, is considered to be the healthiest variety which makes it a great substitute for highly processed oils, which contain an unhealthy number of fat. Since the oil is unprocessed, it contains many nutrients and antioxidants, intact, unlike any other processed oil. It contains monosaturated fatty acids, which not only help in weight loss but also help to keep the heart healthy and may reduce the risk of diabetes. Olive oil also helps to make you feel fuller, which helps in reducing cravings and helps in cutting off unhealthy trans fats and sugar from the diet. The nutritional regime of Mediterranean countries includes olive oil as one of the healthiest components. Olive oils are considered nutritious as it contains phenolic compounds whose health benefits are now widely established and documented. Olive oil is also a rich source of medium-chain triglycerides (MCTs) that break down quickly and get absorbed by your liver, which uses them for energy. A research review study showed that MCTs play an important part in helping people to maintain a healthy weight. In some studies, it is also found that MCTs helped produce higher levels of appetite-regulating hormones like peptide YY than long-chain triglycerides, helping participants feel fuller longer.



Fig. No. 4: Olive oil

4. BEETROOT

Red beetroot is one of the richest foods from the vegetal kingdom, containing essential components like Vitamins, minerals, phenols, carotenoids, nitrate, ascorbic acids, and betalains. Beetroot is full of healthy minerals and vitamins. This vegetable consists of lots of fiber, which may help to keep you fuller for a longer time. Therefore, it is an ideal veggie for people who are worried about their weight. Moreover, beetroot has very less calories. Beets help in weight loss and detoxification as they are low in fat and high in dietary fiber, both soluble and insoluble. These two forms aid in fat loss by promoting proper bowel function and lowering cholesterol levels. Beets are high in magnesium, which promotes healthy nerve and muscle function and can help in weight loss. Muscle burns more calories than fat, so retaining or adding muscle will help to lose weight. Beets also contain phytonutrients such as betanin and violaxanthin, which helps to reduce inflammation and provide antioxidants to the body.



Fig. No. 5: Beetroot

5. TURMERIC

Current proof has shown that some dietary components such as spices may play a key role in the protection against the treatment of obesity and related metabolic disorders. Among these spices, turmeric has received considerable research interest because of its active ingredient, curcumin. Turmeric is extracted from the rhizomes of *Curcuma longa* L. It is a popular spice in Asian cuisine and has been known to be helpful for health. Numerous animal studies have shown that curcumin may not only promote weight loss, but it may help to impede regaining weight, reduce the growth of fat tissue, and boost the sensitivity to insulin when it is used in high doses. Curcumin's also known for its anti-inflammatory activity and test-tube studies suggest that this may help to hold off certain inflammatory markers that may result in obesity. These same markers are present in those who have excess weight, showing that curcumin may be beneficial in curbing their weight gain.



Fig. No. 6 Turmeric

6. HONEY:

Honey is a natural sweetening agent that makes it a wonderful substitute for calorie-dense sugar. From per nutritional point of view, one tablespoon of honey contains 64 calories and 17 grams of sugar, including fructose, glucose, maltose, and sucrose, but no fiber, fat, or protein. One of the important benefits of replacing sugar with honey is that the latter has a lower GI value which means it does not increase blood sugar levels as quickly as sugar does. Honey is also sweeter than sugar which means even a little amount goes a long way in fulfilling sweet cravings. Honey is a rich source of antioxidants, including organic compounds and phenolic compounds like flavonoids. As it is rich in antioxidants, the nutritional value of honey can helps to prevent heart disease, as well as improve eye health.

Studies have also shown that using honey for weight loss can help in controlling and maintaining blood pressure levels and managing cholesterol. Research has shown that athletes who ate foods that are rich in fructose, such as honey, burnt more fat and had increased stamina levels too. Honey acts as a fuel to make the liver produce glucose. This glucose keeps the brain's sugar levels high and forces it to release fat-burning hormones.



Fig. No. 7: Honey

CONCLUSION

In India, the obesity epidemic has led to exploring a high-priority hunt for Indian herbal therapies that may work effectively. Many Indian and other herbs have been fiercely marketed and used for weight loss, but only a few products have been evaluated in severe trials. Although there is no magical herb available among Indian herbs that can melt kilograms of fat in a short period, there is a need to create awareness about the proof for use of natural products in the form of raw materials, crude extracts, or isolated compounds to promote weight loss and thus control obesity. Numerous plants are described in Ayurveda for weight management. But till now, no systematic and well-designed screening study is attempted to come up with an effective herbal weight loss product. A better understanding of the existing data-based science on herbs will further guide and motivate qualitative research in obesity management that will attract the end users by the effective health benefits.

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