

ASHWAGANDHA-BASED POLYHERBAL FORMULATION FOR HEALTHY WEIGHT GAIN: A COMPREHENSIVE REVIEW OF PHARMACOLOGICAL AND NUTRITIONAL ASPECTS

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DOI: [https://doi.org/10.63001/tbs.2026.v21.i02.S.I\(2\).pp632-644](https://doi.org/10.63001/tbs.2026.v21.i02.S.I(2).pp632-644)

Keywords:

*Ashwagandha,
Polyherbal Formulations,
Healthy Weight Gain,
Nutritional Status,
Adaptogenic Herbs*

Received on:

11-03-2026

Accepted on:

10-04-2026

Published on:

08-05-2026

Abstract

Polyherbal preparations based on ashwagandha have been considered an effective natural remedy towards healthy weight gain especially in people who experience undernutrition, lack of appetite and metabolic disorders. The aim of the review is to review the pharmacological properties of Ashwagandha (*Withania somnifera*), the nutritional content of polyherbal preparations, and to assess their effects on the overall nutritional status. Ashwagandha, a well-known adaptogen, possesses multiple therapeutic properties such as stress reduction, anabolic, immunomodulation, and antioxidant effects that all result in improved appetite, improved digestion and muscle building. These preparations are combined with other herbs like Shatavari, Vidarikand and Gokshura, in a synergistic effect, enhancing nutrient absorption, efficiency in metabolism and energy production. These recipes are nutritionally balanced and include the key macronutrients and micronutrients, bioactive compounds (alkaloids, flavonoids, and saponins) to promote gradual and sustainable weight gain. They do not result in excessive fat gain as the traditional synthetic supplements, they also lead to the gaining of lean body mass besides being safer and holistic with minimal side effects. The paper uses secondary data and quality scholarly and scientific literature to indicate the efficacy and safety of these formulations. Collectively, polyherbal formulations of Ashwagandha provide a natural, holistic and sustainable solution to healthy weight gain and well-being.

Introduction

Polyherbal formulations that contain ashwagandha have received considerable focus over the past few years as a natural and holistic remedy in enhancing healthy weight gain. In the contemporary hectic life, majority of the population undergoes under nutrition,

stress, loss of appetite and metabolic disorders, which result in unhealthy weight loss and weaknesses. The old-fashioned weight gain systems are inclined to utilize fake supplements that may cause the side effects. On the other

hand, the more sustainable solution is the traditional herbal preparation using systems like Ayurveda. Ashwagandha (*Withania somnifera*) is a well-known adaptogenic herb that is used as the primary constituent of these preparations since it modifies stress, boosts energy, enhances appetite, and boosts muscle growth¹.

Polyherbal preparations are a mixture of the Ashwagandha and other beneficial herbs such as Shatavari, Vidarikand and Gokshura, which when combined will assist in improving digestion, nutrient and vitality absorption into the body. These herbs have bioactive compounds including alkaloids, flavonoids, saponins among others which contribute to their pharmacological actions. These formulations are nutritionally beneficial in boosting the metabolism, body functions and providing the required nutrients that are required to gain healthy body weight without excessive fat accumulation².

The present review attempts to discuss the pharmacological characteristics and the nutritional advantages of the Ashwagandha-based polyherbal preparations. It also points out their contribution in strengthening the body, protection and the general health. With an amalgamation of traditional knowledge and the most recent scientific knowledge, these

formulations are a great solution capable of giving hope to every person who is willing to gain weight in a safe and efficient manner³.

Problem of Statement

Unhealthy weight loss and undernutrition have become significant health problems in the modern world due to the stress, unhealthy food and lack of exercise. Others experience poor body weight, decrease in immunity and energy deficiency, which negatively impact on their general health. Conventional weight gain supplements tend to utilize synthetics that have side effects such as hormonal imbalance, stomach problems and unhealthy fat buildup. On the other hand, the traditional regime of herbs like Ayurveda proposes the use of natural preparations to deliver safe and sustainable weight gain. Nonetheless, scientific evidence and extensive studies that evaluate the pharmacological and nutrition properties of the polyherbal preparations of Ashwagandha are lacking. Therefore, it is necessary to critically evaluate the effectiveness, mechanism of operation and safety of them in order to provide a reliable and holistic approach to healthy weight gain.

Research Objectives

- To analyse the pharmacological properties of Ashwagandha in promoting healthy weight gain.
- To evaluate the nutritional composition of Ashwagandha-based polyherbal formulations.
- To assess the role and effectiveness of these formulations in improving overall nutritional status.

Research Questions

- What are the key pharmacological properties of Ashwagandha that support weight gain?
- What nutritional components are present in Ashwagandha-based polyherbal formulations?
- How do these formulations enhance nutritional status and promote healthy weight gain?

Research Methodology

This study adopts a secondary-based research methodology to comprehensively review the role of Ashwagandha-based polyherbal formulations in healthy weight gain. Data is collected from previously published and credible sources to ensure reliability and validity. The primary sources of data include online academic databases such as PubMed, Research Gate, Scopus, and

Google Scholar, which provide peer-reviewed journal articles and research papers. Moreover, Sodhganga theses and dissertations are used to learn in-depth academic information. Theoretical knowledge is also obtained by referring to relevant books on Ayurveda, pharmacology and nutrition. Government sites, health portals and reports of the national and international organizations are enclosed to aid evidence-based findings. Data obtained is organized to analyze, compare, and synthesize the data to determine important pharmacological properties, nutritional elements, and mechanisms of action. This approach helps in developing a comprehensive and structured review of the topic.

Scope of the Study

The current paper is dedicated to the pharmacological review and nutritional review of Ashwagandha-based polyherbal formula in the context of healthy weight gain. It discusses the analysis of major components of Ashwagandha, Shatavari, Vidarikand, and Gokshura along with their bioactive compounds and therapeutic effects. The paper will examine the mechanisms such as reduction of stress, better digestion, increase in metabolism, and growth of muscles which are associated with weight gain. It also looks at how these

formulations are able to enhance nutritional status and health. Only secondary data in the form of published research articles, books, and reports are limited by the scope. It does not involve experimental or clinical trials that are carried out by the researcher. The results will help to gain a comprehensive perspective of the natural weight gain strategies and will contribute to the further studies of herbal sciences and nutritional sciences.

Limitation of the Study

The research is based on secondary data and is not clinically validated. Causal variability in literature and lack of standard formulations can impact consistency. It also fails to acknowledge individual differences to herbal treatments.

- Secondary data
- No clinical trial
- Limited standardization
- Variable results

Discussion

Pharmacological Profile and Properties of Ashwagandha in Weight Management

Ashwagandha (*Withania somnifera*) is a popular adaptogenic herb with several pharmacological effects that help in management of healthy weight. It

assists in alleviating stress because it decreases cortisol levels which commonly cause weight loss and loss of appetite. It is anabolic, anti-inflammatory, immunomodulatory and antioxidant, enhancing the general body strength and vitality. It increases muscle size and boosts muscle performance, and so it is useful in the case of underweight persons. Also, Ashwagandha helps in improving digestion and absorption of nutrients, which are vital in healthy weight gain. Its Ayurvedic (Rasayana) power rejuvenates the body and enhances metabolism⁴.

Properties of Ashwagandha in Weight Management

- **Adaptogenic Property** - Ashwagandha is an effective adaptogen that is useful in managing physical and mental stress. The chronic stress elevates the level of cortisol causing loss of appetite and weight imbalance. Ashwagandha can stabilize the internal environment by controlling the amount of stress hormones, thus indirectly contributing to healthy weight gain and an improved level of energy.
- **Anabolic and Muscle-Strengthening Effect** - Ashwagandha stimulates muscle

growth and lean body mass. It increases protein synthesis and aids tissue repair, which is essential to those who want to gain healthy weight. This feature is particularly advantageous to individuals who are weak, fatigued, or are losing muscles⁵.

- **Digestive and Appetite-Enhancing Property** - The herb enhances digestive fire (Agni), and increases appetite. It aids in improved digestion and absorption of nutrients, and makes sure that the food consumed produces value to body weight. Nutrient deficiencies are also avoided by improved gut health.
- **Immunomodulatory and Antioxidant Effect** - Ashwagandha enhances immune system and defends the body against oxidative stress. Its antioxidant effects aid in alleviating cellular damage and enhancing the overall vitality. A good immune system ensures good metabolic functioning which is essential in maintaining healthy weight⁴.

Nutritional Composition of Ashwagandha-Based Polyherbal Formulations

Polyherbal preparations of ashwagandha are abundant sources of vital nutrients and bioactive substances that aid in healthy weight gain. The formulations of Ashwagandha are typically combined with other herbs such as Shatavari, Vidarikand and Gokshura that possess distinct nutrition effects. Ashwagandha in itself is also a combination of carbohydrates, proteins, fiber, essential minerals including iron and calcium, which aid in enhancing the nutritional status.

Shatavari also helps in the formulation as it is rich in phytoestrogens, vitamins and antioxidants of natural sources which help in hormonal balance and tissue nutrition. Vidarikand is a high tach starch food that is a great source of energy that enhances weight gain and strength. Gokshura provides the necessary micronutrients and helps in muscle growth and strength⁶.

Other bioactive compounds such as alkaloids, withanolides, saponins and flavonoids can also be found in these formulations. The substances help to enrich metabolism, the absorption of nutrients, and immunity. The natural sugars and complex carbohydrates are there to ensure the continuous availability of energy without accumulation of the harmful fats.

Additionally, polyherbal blends often include supportive ingredients like ghee or honey, which enhance bioavailability and provide additional calories. Overall, a balanced proportion of macronutrients and micronutrients in such recipes helps to increase healthy and sustainable weight gain and strengthen the entire body in general⁶.

Role of Polyherbal Formulations in Enhancing Nutritional Status

Polyherbal preparations have a major role to play in enhancing nutritional status by taking care of several health issues at a go. Unlike the single herb preparations, the preparations are a blend of various herbs which are synergistic in enhancing digestion, metabolism and nutrient absorption. This is a holistic approach that makes sure that the body obtains and makes good use of nutrients.

Some of the most significant roles of such formulations are to promote appetite and digestion. Ashwagandha and Vidarikand are herbs that contribute to the activation of the digestive system (enzymes) and the strengthening of the digestive tract to facilitate the better digestion and absorption of food. It has increased digestion leading to better absorption of important nutrients such as

proteins, vitamins and minerals needed to increase weight gain and health in general⁷.

In addition, metabolic imbalance is also treated with polyherbal preparations. They help the liver to work, manage hormones, and boost energy metabolism. This assists in making sure that the nutrients are utilized well in developing and healing tissues rather than going to waste.

The formulations also boost immunity and lessen fatigue, which allows people to live a healthy lifestyle. Polyherbal formulations are useful in supplementing nutritional deficiencies and enhancing the overall health of the body by supplying the essential nutrients and therapeutic effects. They are formulated in a natural manner and can hence be utilized over an extended period with few side effects⁸.

Mechanisms of Action in Healthy Weight Gain and Metabolic Regulation

The polyherbal preparations containing ashwagandha have a beneficial effect on healthy weight gain, and this effect is influenced by various mechanisms. Reduction of stress is one of the major mechanisms. Chronic stress has some adverse effects on appetite and metabolism, raising cortisol levels. Ashwagandha aids in

regulating the cortisol levels, thus, enhancing appetite and inhibiting undesired weight loss.

The other significant process is an improved digestion and absorption of nutrients. These compounds trigger digestive enzymes and enhance gut health, which helps to effectively absorb all the nutrients in food and use them. This results in enhanced energy and slow weight gain.

They aid in anabolic body processes as well. Ashwagandha and other herbs enhance protein synthesis and muscle development and result in lean body mass instead of fat build-up. This guarantees a healthy and balanced weight gain⁹.

The other major factor is hormonal regulation. Polyherbal preparations serve to keep the hormones in a balance so much-needed in metabolism, appetite, and tissue growth. Herbs such as Shatavari help in endocrine functioning, which helps in better body composition.

Moreover, these formulations enhance the performance of mitochondria and energy generation. Bioactive compounds increase the metabolism of the cells and enable the body to effectively transform nutrients to energy and tissue mass. Their antioxidant effect also prevents

the damage of cells and helps to maintain the general metabolic well-being⁹.

Nutritional Composition and Bioactive Compounds of Key Ingredients

The Ashwagandha-based polyherbal formulations containing the key ingredients of Ashwagandha present a good source of nutrients and bioactive compounds. Ashwagandha has withanolides, alkaloids and iron, which aid strength and immunity. Shatavari contains saponins and antioxidants which encourage nourishment and hormonal balance. Vidarikand is a source of carbohydrates and starch, which gives energy to gain weight. Gokshura has flavonoids and vital minerals which boost vitality and muscle health. Combined, these components are sources of proteins, vitamins, and micronutrients that help to improve nutritional status. The combination of their effect is beneficial in terms of digestion, metabolism and tissue development and as such, they are very effective in terms of healthy and sustainable weight gain¹⁰.

- **Ashwagandha (Withania somnifera)** - Ashwagandha is abundant in withanolides, alkaloids and flavonoids. These compounds have adaptogenic, anti-

inflammatory, and anabolic effects.

It is also rich in iron and amino acids that aid in muscle development and strength.

- **Shatavari (*Asparagus racemosus*)** - Shatavari has steroidal saponins, vitamins and antioxidants. It aids in sustaining body tissues, balancing hormones, and boosting reproductive and overall health, which indirectly promotes weight gain.
- **Vidarikand (*Pueraria tuberosa*)** - Vidarikand is a good source of carbohydrates, starch and natural sugars. It is a natural energy booster and weight gain as it supplies sustained energy and enhances body mass.
- **Gokshura (*Tribulus terrestris*)** - Gokshura is rich in saponins, flavonoids and essential minerals. It enhances bodily power, assists in developing muscles and improves the overall healthiness, which contributes to its use in individuals of low body weight ¹¹.

Clinical Evidence Supporting Ashwagandha-Based Weight Gain Therapies

Ashwagandha has been clinically shown to have promising results on the effectiveness of promoting healthy weight gain and overall health. Studies have shown that Ashwagandha supplementation is capable of greatly lowering stress and cortisol levels, which are commonly related to weight loss and lack of appetite. Less stress results in increased appetite and increased food consumption.

A number of clinical trials have proved that Ashwagandha enhances muscle strength, endurance and lean body mass. Users of Ashwagandha extract gained weight but this was largely due to muscle, rather than fat, development. This underscores its contribution towards healthy and balanced weight gain ¹².

Studies also show that Ashwagandha enhances nutritional status by enhancing the digestive activities and uptake of nutrients. Its immunomodulatory also aids in recovery and general well-being, particularly in weak or chronically ill people.

Despite the fact that larger-scale studies are required, there is current evidence that suggests Ashwagandha-based polyherbal formulations as a safe and effective method of weight gain. The therapies are especially effective when used

in conjunction with healthy lifestyle and balanced diet¹³.

Safety, Efficacy, and Toxicological Evaluation of Polyherbal Formulations

Safety - Polyherbal formulations with Ashwagandha are usually safe as long as they are taken in recommended doses. As they are natural, they have very few side effects as opposed to synthetic supplements. They are safe in the long-term with traditional use in Ayurveda. Nevertheless, when the dosage is not taken properly or when the products are of low quality, the side effects are mild, and they include digestive discomfort. Healthcare professionals should be consulted by pregnant women, as well as people with certain medical conditions, before use¹⁴.

Efficacy - Multiple herbs act synergistically leading to the effectiveness of these formulations. They treat the underlying factors of underweight status, including bad digestion, stress, and imbalance of metabolism. Their capacity to increase muscle mass, improve appetite and overall vitality is supported by clinical and traditional evidence. Their gradual and natural action ensures sustainable results.

Toxicological Assessment - Toxicological evaluation of Ashwagandha and other related herbs indicates that they are not that toxic. Most of the formulations when administered in the doses are well tolerated when administered in the recommended dosages. Standardization and quality control are needed to give safety. Long-term toxicity is rare, but contamination or adulteration can be hazardous and there is a need to control the manufacturing practice¹⁵.

Comparative Analysis with Conventional Weight Gain Supplements

Ashwagandha polyherbal preparations are healthier alternatives to the conventional weight gain supplements, which typically include artificial flavor, synthetic ingredients and are rich in sugar. The main purpose of traditional supplements is to put on weight within a short period, which can be through becoming fat as opposed to building healthy body muscle. Polyherbal formulations, in their turn, help to gain weight gradually and proportionately, promoting the digestion process, metabolism, and nutrient absorption.

Some of the most significant ones include safety and side effects. Bloating,

hormonal imbalance and long-term health risks are some of the issues related to the overuse of synthetic supplements. Herbal preparations on the other hand are safer and can be used on the long term due to natural constituents¹⁶.

Moreover, traditional supplements usually do not have holistic benefits. They are mainly a source of calories and proteins without dwelling on the root causes of underlying problems such as stress or bad digestion. Nevertheless, polyherbal preparations work at various levels, namely, stress reduction, immune support and metabolic regulation.

Price and availability are also a factor. Although there are quality supplements which may be costly, there is a plethora of inexpensive herbal preparations, particularly found in such countries as India.

Overall, polyherbal preparations with Ashwagandha provide a safer, more holistic and sustainable way of adding weight compared to the conventional supplements, thus making them a more preferable choice when it comes to weight gain in individuals who want to experience long-term health benefits.¹⁷.

Conclusion

In conclusion, this review achieves its aims by thoroughly analyzing the pharmacological and nutritional properties of Ashwagandha-containing polyherbal preparations in healthy weight gain. The article observes that Ashwagandha is at the forefront of controlling some of the most crucial factors that cause underweight disorders like stress, loss of appetite and metabolic balance due to its adaptogenic, anabolic and immunomodulatory properties. These formulations have been further enhanced by the synergistic effect of adding complementary herbs such as Shatavari, Vidarikand and Gokshura to enhance the overall efficacy.

The review also establishes the fact that these formulations are nutritionally balanced and have acquired the required macronutrients, micronutrients and bioactive compounds that aid in the enhanced digestion and uptake of nutrients and energy metabolism. This is by encouraging lean muscle development as opposed to unhealthy fat buildup which guarantees them of balanced and sustainable weight gain. Also, the fact that they can control hormonal activity and enhance their general well-being leads to the long-term health gains.

Compared to the weight gain supplements that are conventional, polyherbal preparations are a safer, holistic and cost-effective alternative and have few side effects. Overall, the findings suggest that polyherbal preparations containing Ashwagandha can be an effective and safe remedy to achieve the desirable weight gain and well-being, and need to be studied in more clinical trials and over longer time periods.

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