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# TREATMENT OF ALLERGIC RHINITIS BY TRADITIONAL MEDICINE AND EVALUATION OF ITS EFFECTIVENESS

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**Abstract**

Allergic rhinitis is a very common condition, predominantly in developed and developing countries. It is estimated that 10 to 30% of the world's population suffers from this condition. Allergic diseases represent a serious medical and social problem, affecting a significant portion of the world's population. In recent decades, there has been growing interest in herbal remedies as an alternative to synthetic medications. The aim of this article is to evaluate the effectiveness of using a decoction of the Safflower flower for the treatment of allergic rhinitis in folk medicine.

**Keywords**

Allergic rhinitis, safflower flower, folk medicine

# АЛЛЕРГИК РИНИТ КАСАЛЛИГИНИ ХАЛҚ ТАБОБАТИ УСУЛИДА ДАВОЛАШ ВА САМОРАДОРЛИГИНИ БАҲОЛАШ

**Исмоилова М.Ю.**

**Аннотация**

Аллергик ринит,асосан,ривожланган ва ривожланаетган мамлакатларда жуда кенг тарқалган касаллик бўлиб,жаҳон бўйича тахминан 10-30% аҳоли бу ҳолатдан азият чекади.Аслини олганда,аллергик касалликлар жиддий тиббий ва ижтимоий муаммо бўлиб, бутун дунё аҳолисининг муҳим қисмига таъсир қилаяпти.. Сўнгги ўн йилликларда синтетик дориларга алтернатив сифатида ўсимлик препаратларига қизиқиш ортиб бормоқда. Мақолада аллергик ринитни халқ табобати усулида мансар гули ўсимлигининг дамламасидан даво мақсадида қўллаш ва самарадорлигини баҳолашдан иборат

**Калит сўзлари**

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Аллергик ринит,Махсар гули ўсимлиги,халқ табобати

# ЛЕЧЕНИЕ АЛЛЕРГИЧЕСКОГО РИНИТА МЕТОДОМ НАРОДНОЙ МЕДИЦИНЫ И ОЦЕНЕНОВАТЬ ЕГО ЭФФЕКТИВНОСТИ

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**Аннотация**

Аллергический ринит — очень распространённое заболевание, преимущественно в развитых и развивающихся странах. По оценкам, от 10 до 30% населения мира страдает этим заболеванием. Аллергические заболевания представляют собой серьёзную медицинскую и социальную проблему, затрагивающую значительную часть населения мира. В последние десятилетия наблюдается растущий интерес к фитопрепаратам как альтернативе синтетическим препаратам. Цель статьи — оценить эффективность использования отвара цветка сафлоры для лечения аллергического ринита в народной медицине.

**Ключевые слова**

Аллергический ринит, цветок сафлоры, народная медицина

**Relevance.** Allergic diseases are a serious medical and social problem affecting a significant portion of the world's population. According to the World Health Organization, the number of patients with allergic pathologies is constantly growing, due to changes in the environment, industrialization, lifestyle, and diet. The most common allergic diseases, such as allergic rhinitis, bronchial asthma, atopic dermatitis, and urticaria, significantly reduce patients' quality of life and require ongoing treatment.

The most common allergic diseases, such as allergic rhinitis, bronchial asthma, atopic dermatitis, and urticaria, significantly reduce patients' quality of life and require ongoing treatment. Allergic rhinitis occurs primarily in children and adolescents, but is also common among adults. The prevalence of allergic rhinitis in children may increase with age. There are gender differences in the prevalence of allergic rhinitis. In childhood, allergic rhinitis is more common in men, while in adults, it is more common in women. Allergic rhinitis is more common in developed countries, especially in urban areas. This is primarily due to environmental changes, pollution, and increased allergens. However, the prevalence of allergic rhinitis is also increasing in developing countries. The

incidence of allergic rhinitis increases in the summer, when pollen levels are high. (This is called "summer rhinitis." However, even in winter, "winter" allergic rhinitis is more common due to exposure to year-round allergens, such as house dust or animal dander.

Currently, pharmacotherapy for allergies includes antihistamines, corticosteroids, immunomodulators, and other medications. However, their use is often accompanied by side effects, decreased sensitivity to therapy with long-term use, and limitations due to the age or health status of patients. Therefore, the search for new herbal preparations with pronounced antiallergic activity and a favorable safety profile is a relevant area of scientific research.

In recent decades, interest in herbal preparations as an alternative to synthetic drugs has grown. Safflower (Carthamus tinctorius L.) is one of the promising medicinal plants traditionally used in folk medicine in various countries, particularly in China and India. Safflower flowers are rich in biologically active compounds such as flavonoids, carotenoids, Safflower acids and other substances with pharmacological properties.

Modern research confirms the anti-inflammatory, antioxidant, hepatoprotective, cardioprotective, and antidiabetic effects of the safflower plant. Due to the rising incidence of cardiovascular diseases, diabetes, and chronic inflammatory conditions, studying the medicinal potential of the safflower plant is becoming especially relevant. Therefore, reviewing the literature on the pharmacological and medicinal properties of safflower flowers is an important step in understanding this plant, allowing us to summarize existing scientific data and identify promising areas for further research.

One promising plant source for the development of new anti-allergy agents is the safflower plant (Carthamus tinctorius L.). Due to its anti-inflammatory, antioxidant, immunomodulatory, and antihistamine properties, this plant has long been used in traditional medicine in various countries. However, the mechanisms of its pharmacological action in allergic diseases have been insufficiently studied, requiring further scientific analysis, experimental research, and confirmation. Therefore, studying the pharmacological properties of safflower flowers and evaluating their effectiveness in allergic diseases is an important area of modern medicine and pharmacology aimed at developing safe and effective herbal preparations.

Today, plants are one of the most important sources of medicinal products used in various fields of medical practice. This is due to the fact that herbal preparations possess a broad spectrum of pharmacological activity and, as a rule, do not cause side effects when used rationally. The combination of biologically

active substances in medicinal raw materials provides a complex and complementary effect. Therefore, the study of new types of medicinal raw materials and their introduction into scientific medicine is one of the main tasks of modern medicine.

Over the past decade, analysis of safflower plant extracts has revealed information about its immunotropic effects. Safflower (Carthamus tinctorius) is cultivated in various countries for its flavonoid compounds. These flavonoids are used in many fields as medicinal agents and dyes. More than 60 flavonoids have been isolated from safflower. These flavonoids can be divided into two groups: specific and general, both of which exhibit activity. Flavonoids and polyphenols in dry extracts of safflower raw materials have been found to have immunomodulatory properties. Polyphenols stimulate humoral immunity and enhance the functional activity of peritoneal macrophages, including during immunosuppression (cyclophosphamide). Safflower flavonoids stimulate humoral and cellular immunity [15; 16; 17]. Safflower (Carthamus tinctorius) has been shown to possess antioxidant, anti-inflammatory, analgesic, antidiabetic, antiallergic, hepatoprotective, and antilipidemic properties. Furthermore, safflower infusion helps prevent cell proliferation.

The substance luteolin in the safflower plant has antiallergic properties. Luteolin is a flavonoid found in some medicinal and aromatic plants and fruits. Luteolin is the most potent xanthine oxidase inhibitor of all flavonoids [1,4]. It is a natural antioxidant with a lower prooxidant potential than the best-studied flavonoid, the flavonol quercetin, but with a safer profile. It has excellent radical scavenging and cytoprotective properties, especially when tested in complex biological systems where it can interact with other antioxidants, such as vitamins. Luteolin has anti-inflammatory activity because it inhibits cyclooxygenase-2. It reduces levels of anti-inflammatory cytokines (IL-1β and TNF-α). Luteolin is a flavonoid with anti-inflammatory, antioxidant, and anti-allergic properties. It can actually reduce levels of pro-inflammatory cytokines such as interleukin-1β (IL-1β), which may be beneficial in allergic diseases. Luteolin may help with allergic conditions such as urticaria, allergic dermatitis, and hay fever (seasonal allergies). Luteolin has the ability to suppress the release of histamine and other inflammatory mediators, reduce mast cell activity (which plays a key role in allergic reactions), and reduce oxidative stress and inflammation. Saffron (Carthamus tinctorius L.) contains luteolin and other beneficial substances that help reduce allergic reactions. Allergic rhinitis is very common, primarily in developed and developing countries.

Approximately 10 to 30% of the world's population suffers from this disease. Allergic diseases are a serious medical and social problem affecting a significant

portion of the world's population. In recent decades, there has been growing interest in herbal remedies as an alternative to synthetic medications. The aim of this article is to evaluate the effectiveness of folk remedies for the treatment of allergic rhinitis using a decoction of safflower flowers.

**Objective:** To evaluate the effectiveness of safflower decoction for the treatment and prevention of allergic rhinitis and allergic dermatitis.

**Materials and Methods:** The study was conducted in the allergy department of the Bukhara Regional Multidisciplinary Medical Center. Participants included middle-aged patients (women and men) aged 24 to 31 years (±4.5 years) hospitalized with allergic diseases diagnosed with autumn fever and allergic dermatitis. A total of 103 patients participated in the study: 55 men and 42 women. Patients were referred for a series of examinations by an allergist. Based on complaints from 103 patients with allergic diseases (itchy eyes, lacrimation, nasal congestion, runny nose (rhinorrhea), weakness, itchy skin, redness, and signs of blisters), medical history (hereditary predisposition), laboratory (eosinophils in a complete blood count, ESR), instrumental (rhinoscopy, nasal swab, X-ray), and ELISA tests, test results were compared before and after treatment with a safflower decoction. Results were compared between patients who took the decoction and those who did not take the decoction during treatment.

**Results and discussion:**Patients with allergic diseases (specifically, hay fever and allergic dermatitis) were recruited from a group of middle-aged women and men, approximately 24-31 years old (±4.5 years). The study involved 103 patients: 58 men and 55 women. Patients with allergic diseases were diagnosed based on anamnestic data, characteristic clinical signs, laboratory parameters, and instrumental examination methods. The analysis results showed a decrease in subjective complaints, a decrease in the number of eosinophils, leukocytes, and monocytes in a complete blood count and nasal swabs, and a normalization of the ESR. The results of the subjective analysis of patients with hay fever show that nasal discharge (rhinorrhea) decreased in 81% of patients, eye redness decreased in 78% of patients, lacrimation decreased by 86%, runny nose decreased by 89%, and nasal discharge decreased by 95%. A comparison of blood tests shows that the number of eosinophils decreased by 65% compared to before treatment, and the ESR decreased by 75%. Instrumental examinations, when rhinoscopy was performed before treatment, revealed that the nasal mucosa was red, swollen, edematous, and hypersecretory. After treatment, the redness and swelling of the nasal mucosa decreased, and patients no longer complained of hypersecretion. A

nasal swab showed a normalized eosinophil count, and an X-ray showed that nasal hypertrophy had disappeared, and the nasal structure was normal. Comparing the stages of allergic dermatitis before and after treatment showed that patient complaints, namely skin redness, decreased by 87%, itching by 92%, and the appearance of blisters by 96%. Laboratory tests for allergic dermatitis revealed the following changes: a comparison of blood tests showed that the eosinophil count decreased by 89% compared to before treatment, and the ESR by 77%. In the ELISA test, the IgE level dropped below normal.

**Conclusion:** During a study of patients with allergic diseases (specifically, hay fever and allergic dermatitis) in the Allergology Department of the Bukhara Multidisciplinary Medical Center, subjective, objective, laboratory, and instrumental analyses were compared before and after treatment with safflower infusion. The following conclusions were reached. Among the patients examined, hay fever was cured by 95% after taking safflower infusion, and allergic dermatitis decreased by 86% of patient complaints. Luteolin, present in safflower, plays a key role in suppressing allergic reactions, making it a promising treatment for the following conditions: in hay fever (seasonal allergic rhinitis), it reduces histamine release, reduces swelling of the nasal mucosa, itching, sneezing, and tearing. It suppresses inflammatory mediators, thereby alleviating the symptoms of hay fever allergy. In allergic dermatitis, it reduces inflammation and itching of the skin. It reduces mast cell activation, preventing redness and cracking. It improves microcirculation and promotes faster skin recovery. The anti-allergic action of luteolin, found in safflower, is as follows: it inhibits COX-2 and LOX-5, reducing inflammation. It reduces allergic symptoms by suppressing the release of histamine. It stabilizes fat cells and prevents the development of allergic reactions. Thus, calendula tincture is highly effective and safe for the treatment and prevention of allergic diseases.

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