



Herbal Treatment for Constipation in Traditional Iranian Medicine: A Review

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Abstract

Introduction: This study aimed to identify the most significant medicinal plants used in the treatment of constipation in traditional Iranian medicine and to compare traditional evidence with modern research findings.

Methods: This study employed a documentary review. The sources included credible texts of traditional Iranian medicine, reference books on herbal therapy, and online scientific databases. After collecting the data, the therapeutic properties reported in traditional texts were compared with results from recent preclinical and experimental studies.

Findings: Based on a review of the sources, plants such as *Foeniculum vulgare* Mill., *Cuminum cyminum* L., *Matricaria chamomilla* L., *Taraxacum officinale* F.H. Wigg., *Descurainia sophia* (L.) Webb ex Prantl, *Ricinus communis* L., *Linum usitatissimum* L., *Cinnamomum verum* J. Presl, *Camellia sinensis* (L.) Kuntze, *Olea europaea* L., *Cassia fistula* L., *Senna alexandrina* Mill., *Glycyrrhiza glabra* L., *Sesamum indicum* L., *Ficus carica* L., *Rosa damascena* Mill., *Prunus persica* (L.) Batsch, *Prunus dulcis* (Mill.) D.A. Webb, *Cotoneaster nummularia* Fisch. & C.A. Mey., *Salvia hispanica* L., *Mentha × piperita* L., *Ocimum basilicum* L., *Thymus vulgaris* L., *Borago officinalis* L., *Urtica dioica* L., *Solanum nigrum* L., *Zingiber officinale* Roscoe are among the plants used in the treatment of constipation in traditional Iranian medicine and herbal therapy.

Conclusion: The existing evidence indicates that the medicinal plants used in traditional Iranian medicine can be considered as natural alternatives or supplementary options to conventional treatments for managing and treating constipation.

Keywords: Constipation, Digestion, Herbal Treatments, Intestines, Medicinal Plants, Traditional Iranian Medicine

Introduction

Constipation is a common gastrointestinal disorder that affects a large proportion of the global population (1). It is usually characterized by infrequent bowel movements, difficulty

passing stool, and a feeling of incomplete evacuation (2). Several factors contribute to the development of constipation, including insufficient dietary fiber intake, a sedentary lifestyle, psychological stress, medication use,



hormonal imbalance, and certain underlying medical conditions (2).

From a physiological perspective, constipation occurs due to reduced intestinal movement, increased water absorption from the stool, or problems with the neuromuscular systems involved in defecation (1,2). Standard management strategies generally include dietary modification, increased physical activity, and pharmacological interventions, such as laxatives (3).

If left untreated, constipation may lead to various complications, including abdominal pain, bloating, hemorrhoids, and, in severe cases, intestinal obstruction (4). Moreover, chronic constipation can negatively affect quality of life and is frequently associated with psychological consequences, such as anxiety and depression. Therefore, early and appropriate interventions play a crucial role in preventing these complications (5).

Traditional Iranian medicine (TIM), one of the oldest and most comprehensive medical systems, has long focused on managing constipation through lifestyle modification and herbal therapy (6,7). In this system, medicinal plants constitute a central therapeutic approach and are widely used to enhance digestive function and promote regular bowel movements (8,10). These remedies are commonly administered in dried form or as herbal preparations and are frequently employed as supplementary or alternative treatments alongside conventional methods and medications.

The therapeutic framework of TIM focuses on restoring humoral balance, enhancing digestive function, and facilitating intestinal motility (9,10). Numerous medicinal plants with laxative, anti-inflammatory, and motility-stimulating properties are recommended for this purpose (11). Well-known plants, such as *Khakshir* and *Esfereza*, are traditionally used to facilitate stool

passing and relieve constipation by improving gastrointestinal transit (12).

In recent years, advances in pharmacological and herbal research have led to growing scientific interest in evaluating the efficacy of medicinal plants used in traditional medicine. Both preclinical and clinical studies have confirmed the therapeutic potential of several of these plants, often supporting traditional claims (13). With the growing demand for natural therapies, medicinal plants are increasingly recognized as safe and effective options for managing constipation.

Therefore, this study aims to provide a comprehensive review of the most important medicinal plants used in traditional Iranian medicine for the treatment of constipation and to compare traditional knowledge with modern scientific evidence.

Methodology

Study Design

This study was conducted as a comprehensive review aimed at identifying and evaluating medicinal plants effective in the treatment of constipation, integrating evidence from both Traditional Iranian Medicine (TIM) sources and modern scientific research.

In the first phase, classical texts and authoritative references on TIM were systematically reviewed to identify medicinal plants traditionally recommended for the treatment of constipation. Sources included foundational TIM books, peer-reviewed research articles, and reputable encyclopedias addressing gastrointestinal disorders (13–22). All plants reported as effective for constipation were documented, along with their botanical names, parts used, and traditional formulations.

To obtain modern scientific evidence, electronic databases, including PubMed, Scopus, Web of Science, and Google Scholar, were searched. Search terms included “constipation,” “laxative effect,” and related keywords, combined with

the medicinal plants identified from TIM sources. Only studies published in English or Persian were considered. Both preclinical studies (including *in vitro* and animal models) and clinical trials were considered. The search period extended to 2025.

Inclusion and Exclusion Criteria

Inclusion Criteria:

Studies evaluating the effect of medicinal plants on constipation, bowel motility, or stool features. Preclinical and clinical studies with well-defined methodology and measurable outcomes. Plants previously documented in TIM sources as traditional treatments for constipation.

Exclusion Criteria:

Studies without full text or adequate data. Non-peer-reviewed articles, letters, and conference abstracts. Studies on synthetic drugs or herbal formulations not directly associated with the identified TIM plants. Relevant data were extracted using a standardized form, including plant species, part used, preparation method, study type, dosage, outcomes, and key findings. The quality of each study was assessed based on study design, sample size, methodology, and reproducibility of results. Plants identified in TIM sources were then compared with current scientific evidence to evaluate their efficacy and validate traditional claims. The findings were synthesized to provide a comprehensive overview of medicinal plants effective for treating constipation. Plants were categorized by mechanism of action (e.g., bulk-forming laxatives, stimulant purgatives, lubricants) and the level of scientific evidence. Recommendations for potential clinical applications were outlined, along with suggestions for further research to validate and optimize traditional remedies.

Since this study was solely a literature review, no human or animal subjects were involved; therefore, formal ethical approval was not necessary.

This methodology provides a systematic, reproducible, and transparent approach to reviewing both traditional knowledge and modern scientific evidence. It establishes a reliable foundation for the practical application of medicinal plants in the management of constipation and for guiding future research.

Results

Based on the review of sources from traditional Iranian medicine, several medicinal plants have been identified as effective treatments for constipation. These plants include *Foeniculum vulgare* Mill., *Cuminum cyminum* L., *Matricaria chamomilla* L., *Taraxacum officinale* F.H. Wigg., *Descurainia sophia* (L.) Webb ex Prantl, *Ricinus communis* L., *Linum usitatissimum* L., *Cinnamomum verum* J. Presl, *Camellia sinensis* (L.) Kuntze, *Olea europaea* L., *Cassia fistula* L., *Senna alexandrina* Mill., *Glycyrrhiza glabra* L., *Sesamum indicum* L., *Ficus carica* L., *Rosa damascena* Mill., *Prunus persica* (L.) Batsch, *Prunus dulcis* (Mill.) D.A. Webb, *Cotoneaster nummularia* Fisch. & C.A. Mey., *Salvia hispanica* L., *Mentha piperita* L., *Ocimum basilicum* L., *Thymus vulgaris* L., *Borago officinalis* L., *Urtica dioica* L., *Solanum nigrum* L., *Zingiber officinale* Roscoe. These plants are commonly cited in traditional Iranian medicine and herbal therapy as remedies for constipation.

In Table 2, the medicinal plants used in traditional medicine to treat constipation are listed by laxative effect type.

In traditional Iranian medicine, various medicinal plants have been recommended for alleviating constipation through mechanisms such as improving intestinal motility, softening stool, and regulating gastrointestinal function. The medicinal plants identified as effective for

constipation treatment are summarized in Table 1 (13–22).

Table 1. Complete list of medicinal plants identified as effective in treating constipation in traditional Iranian medicine (13-22).

Common Name	Scientific Name	Plant Family	Used Part	Traditional Use	Ref.
Fennel	<i>Foeniculum vulgare</i> Mill.	Apiaceae	Semen	Infusion: carminative, digestive stimulant, and promoter of intestinal motility	13
Cumin	<i>Cuminum cyminum</i> L.	Apiaceae	Semen	Infusion: anti-flatulent and facilitator of gastrointestinal elimination	13
Chamomile	<i>Matricaria chamomilla</i> L.	Asteraceae	Flos	Infusion: antispasmodic, mild laxative, and bowel-regulating agent	14
Dandelion	<i>Taraxacum officinale</i> F.H. Wigg.	Asteraceae	Radix et Folium	Infusion: choleric and bile secretion enhancer	13,14
Flixweed	<i>Descurainia sophia</i> (L.) Webb ex Prantl	Brassicaceae	Semen	Soaked seeds; mild laxative and stool-softening agent	15
Castor	<i>Ricinus communis</i> L.	Euphorbiaceae	Oleum Seminis	Potent stimulant laxative (castor oil)	14,15
Flaxseed	<i>Linum usitatissimum</i> L.	Linaceae	Semen	Bulk-forming laxative due to high mucilage and fiber content	16
Cinnamon	<i>Cinnamomum verum</i> J. Presl	Lauraceae	Cortex	Infusion: digestive stimulant and carminative	15,16
Green Tea	<i>Camellia sinensis</i> (L.) Kuntze	Theaceae	Folium	Supports digestion and promotes bowel regularity	16,17
Olive	<i>Olea europaea</i> L.	Oleaceae	Oleum Fructus	Mild lubricating laxative	17
Golden Shower	<i>Cassia fistula</i> L.	Fabaceae	Pulpa Fructus	Strong natural laxative	15,17
Senna	<i>Senna alexandrina</i> Mill.	Fabaceae	Folium et Fructus	Stimulant laxative containing anthraquinone glycosides (sennosides)	12,17
Licorice	<i>Glycyrrhiza glabra</i> L.	Fabaceae	Radix	Decoction: gastroprotective, mild laxative, and bowel-soothing agent	18
Sesame	<i>Sesamum indicum</i> L.	Pedaliaceae	Semen / Oleum	Lubricating laxative; softens stool	14-18
Fig	<i>Ficus carica</i> L.	Moraceae	Fructus	Fresh or soaked fruit; fiber-rich natural laxative	17-19
Damask Rose	<i>Rosa damascena</i> Mill.	Rosaceae	Petala	Infusion or traditional jam: mild laxative and bowel regulator	19
Peach	<i>Prunus persica</i> (L.) Batsch	Rosaceae	Fructus / Folium	Mild laxative; fresh fruit or leaf infusion	20
Sweet Almond	<i>Prunus dulcis</i> (Mill.) D.A. Webb	Rosaceae	Oleum Seminis	Natural emollient laxative	18-20
Manna	<i>Cotoneaster nummularia</i> Fisch. & C.A. Mey.	Rosaceae	Gummi	Dissolved in water; a gentle osmotic laxative	20
Chia Seed	<i>Salvia hispanica</i> L.	Lamiaceae	Semen	Soaked seeds; gel-forming bulk laxative	20,21
Peppermint	<i>Mentha × piperita</i> L.	Lamiaceae	Folium	Antispasmodic, carminative, and bowel-soothing agent	21
Basil	<i>Ocimum basilicum</i> L.	Lamiaceae	Folium	Infusion: anti-flatulent and mild	21,22

Thyme	<i>Thymus vulgaris</i> L.	Lamiaceae	Herba	laxative Digestive tonic and carminative	17, 22
Borage	<i>Borago officinalis</i> L.	Boraginaceae	Flos	Infusion: mild sedative and digestive regulator	22,23
Nettle	<i>Urtica dioica</i> L.	Urticaceae	Folium	Infusion: supports bowel function and mild detoxification	22,23
Black Nightshade	<i>Solanum nigrum</i> L.	Solanaceae	Folium / Fructus maturus	Decoction: stool-softening and bowel-calming effects	14, 23
Ginger	<i>Zingiber officinale</i> Roscoe	Zingiberaceae	Rhizoma	Digestive stimulant and enhancer of gastrointestinal motility	23

Table 2: Medicinal Plants Used to Treat Constipation in Traditional Iranian Medicine Based on Type of Laxative Effect (13-22).

Laxative Type	Plant Name	Scientific Name	Effect and Short Description
Bulk Laxatives	Khakshir	<i>Descurainia sophia</i>	Forms gel and increases stool volume; natural softener
	Esfereza	<i>Plantago ovata</i>	Source of mucilage; increases bulk and stimulates bowel movements
	Chia Seed	<i>Salvia hispanica</i>	High water absorption and gel formation; mild softener
	Flaxseed Fig	<i>Linum usitatissimum</i> <i>Ficus carica</i>	Contains soluble fiber; increases stool bulk Source of fiber; regulates bowel movements
Lubricant Laxatives	Sweet Almond	<i>Prunus dulcis</i>	Gently stimulates the intestines and lubricates stool
	Sesame	<i>Sesamum indicum</i>	Oily effect and natural softener
	Olive	<i>Olea europaea</i>	Increases stool slipperiness; mild bile stimulant
	Castor	<i>Ricinus communis</i>	Strong laxative; stimulates bowel movements
Purgatives	Senna	<i>Senna alexandrina</i>	Contains senosides; increases peristaltic movements
	Flous	<i>Cassia fistula</i>	Natural purgative with a strong and quick effect
	Shirkhisht	—	Natural purgative and laxative with evacuating effect
Biliary and Digestive Stimulants	Fennel	<i>Foeniculum vulgare</i>	Increases digestive secretions and facilitates elimination
	Dandelion	<i>Taraxacum officinale</i>	Bile stimulant; improves digestion and elimination
	Tribulus	<i>Tribulus terrestris</i>	Regulates bowel movements and digestion
Traditional Mild and Digestive Laxatives and Digestive Regulators	Borage	<i>Borago officinalis</i>	Mild effect on calming and improving digestion
	Damask Rose	<i>Rosa damascena</i>	Mild laxative and anti-constipation properties in traditional sources.
	Peach	<i>Prunus persica</i>	Softening effect and helps with bowel movements

Discussion

Traditional medicine and herbal remedies play an important role in managing gastrointestinal disorders, particularly constipation. These approaches improve digestive function and offer

natural alternatives with fewer side effects than conventional pharmaceutical drugs. Herbs, such as Valerian, Plum, and Fenugreek, have been traditionally used to stimulate bowel movements and enhance digestion. Additionally, traditional

medicine emphasizes dietary and lifestyle modifications, providing a holistic approach to address the underlying causes of constipation (11).

A study on the use of laxative herbs in Iranian Traditional Medicine (ITM) highlights their therapeutic potential for the management of constipation. Notable plants include *Alhagi mannifera*, *Aloe littoralis*, *Althea officinalis*, *Carthamus lanatus*, *Cassia angostifolia*, *Cassia fistula*, *Commiphora mukul*, *Cotoneaster numularioides*, *Dorema ammoniacum*, *Ficus carica*, *Glycyrrhiza glabra*, *Linum usitatissimum*, *Morus alba*, *Olea europaea*, *Rosa damascena*, *Tripleurospermum disciform*, *Vitis vinifera*, *Cordia myxa*, *Malva sylvestris*, *Plantago ovata*, *Prunus domestica*, and *Viola odorata* (23). These findings suggest that further research could yield new plant-based treatments for constipation.

In pregnancy, certain ITM-recommended laxatives are considered safe and effective. For example, *Cassia fistula* (Folus), *Cotoneaster numularia* (Shir-Khesht), *Tamarindus indica* (Tamarind), *Alhagi camelorum* (Taranjabin), *Rosa damascena* (Damask Rose), and almond oil are commonly used to relieve constipation during gestation (24).

Ethnobotanical surveys in Iran reveal that ITM encompasses a diverse range of purgative and laxative plants, including *Beta vulgaris* L., *Sambucus ebulus*, *Cichorium intybus*, *Ribes orientale*, *Rumex acetosa*, *Prunus spinosa* L., *Sorbus boissieri* C., *Urtica dioica* L., *Artemisia scoparia*, *Plantago psyllium*, *Senna alexandrina* Mill., and *Ferula ovina* Boiss, among others (25). These plants are primarily used for their bulk-forming, lubricating, and stimulant effects on the gastrointestinal system.

In Iranian-Islamic Traditional Medicine, constipation is regarded as a sign of bodily imbalance that may lead to the accumulation of harmful humors and chronic diseases. Contributing factors include poor nutrition,

certain medications, weakened bowel muscles, and environmental influences. Traditional treatments focus on restoring balance and improving bowel function through dietary modifications, abdominal massage with warming oils, and herbal laxatives tailored to the individual's constitution and the underlying cause of constipation (26).

From a modern scientific perspective, evidence supports the use of pharmacological treatments, such as polyethylene glycol (PEG), tegaserod, lactulose, and psyllium. However, data on the effectiveness of many commonly used drugs remain limited, highlighting the need for careful evaluation when comparing pharmaceutical and traditional remedies (8).

Overall, constipation not only affects quality of life but can also increase the risk of developing chronic gastrointestinal disorders. Iranian Traditional Medicine offers a comprehensive approach to management by combining herbal remedies, lifestyle adjustments, and manual therapies. Many medicinal plants documented in ITM, particularly those with laxative and purgative properties, show promising results in relieving constipation and may serve as safe alternatives or adjuncts to conventional treatments. Nonetheless, further scientific research is needed to confirm their effectiveness, determine optimal dosages, and incorporate these therapies properly into modern clinical practice. Preventing gastrointestinal and liver diseases is crucial because it maintains quality of life and helps avoid serious complications and high treatment costs (27-30). The use of natural herbal remedies for the treatment of gastrointestinal diseases is an effective, low-risk approach to improving digestive function and alleviating related symptoms (31-33).

Conclusion

Constipation is a common gastrointestinal disorder that can significantly impair quality of life. Iranian Traditional Medicine (ITM),

particularly through herbal remedies, such as *Khakshir*, *Esfereza*, *Senna*, and *Ficus carica* (fig), provides effective management by stimulating bowel movements, softening stools, and enhancing digestion. These medicinal plants are generally considered safe, with few side effects, and emerging studies support their therapeutic efficacy. Nevertheless, further research is needed to confirm their clinical benefits and improve their use in modern healthcare.

Ethics Approval

This study was conducted in accordance with the principles of the Declaration of Helsinki.

Consent to Participate

Consent was obtained from all individual participants involved in the study.

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Author Contributions

HA: Conceptualization, original draft writing, investigation, reviewing, editing, and formal analysis; AH: Conceptualization, supervision, and project administration; AH and HA: Conceptualization, original draft writing, investigation, reviewing, and editing.

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Conflict of Interest

The authors declare they have no conflicts of interest relevant to this article.

Data Availability Statement

The data used in this review are available from the corresponding references cited within the manuscript. No new datasets were generated or analyzed during this study.

Artificial Intelligence Statement

Artificial intelligence (AI)-based tools were used only for language editing, improving readability, and correcting grammatical errors during the preparation of this manuscript. The authors reviewed and verified all content, scientific interpretations, and references, and take full responsibility for the accuracy and integrity of the manuscript.

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