Journal of Neonatal Surgery
ISSN(Online): 2226-0439
Vol. 14, Issue 18s (2025)
https://www.jneonatalsurg.com

OPEN ACCESS

An Ayurvedic Drug Review of Yashtimadhu (Glycyrrhiza glabra L.)

Dr. Sudeep Menon[1]*, Dr. Pooja Lavagale[2], Dr. Shyam Maru[3], Dr. Kashinath Bari4
Dr. Ashutosh Dasmohapatra[5]

[1]Associate professor, Dept. of Swasthavritta and Yoga, Bharati Vidyapeeth (Deemed to be University), College of Ayurved, Pune, Maharashtra 411 043

[2]PG scholar, Dept. of Swasthavritta and Yoga, Bharati Vidyapeeth (Deemed to be University), College of Ayurved, Pune, Maharashtra 411 043

[3]PG scholar, Dept. of Swasthavritta and Yoga, Bharati Vidyapeeth (Deemed to be University), College of Ayurved, Pune, Maharashtra 411 043

[4]PG scholar, Dept. of Swasthavritta and Yoga, Bharati Vidyapeeth (Deemed to be University), College of Ayurved, Pune, Maharashtra 411 043

[5]PG scholar, Dept. of Agadatantra, Bharati Vidyapeeth (Deemed to be University) College of Ayurved, Pune, Maharashtra 411 043

***Corresponding Author: -** Dr. Sudeep Menon

E-mail: sudeep.menon@bharatividyapeeth.edu

pooja.lavagale-ayurved@bvp.edu.in

Cite this paper as: Dr. Sudeep Menon*, Dr. Pooja Lavagale, Dr. Shyam Maru, Dr. Kashinath Bari, Dr. Ashutosh Dasmohapatra, (2025) An Ayurvedic Drug Review of Yashtimadhu (Glycyrrhiza glabra L.). *Journal of Neonatal Surgery*, 14 (18s), 742-746.

ABSTRACT

Yashtimadhu, scientifically known as Glycyrrhiza glabra L., is a revered herb in Ayurveda, recognized for its diverse therapeutic properties. This paper presents a comprehensive review of Yashtimadhu, exploring its classical Ayurvedic attributes, chemical composition, pharmacological actions, traditional uses, clinical applications, and safety considerations. Through a synthesis of traditional Ayurvedic knowledge and contemporary scientific research, this review aims to provide a holistic understanding of Yashtimadhu's potential as a valuable medicinal agent.

Keywords: Touch DNA, DNA profiling, Polymerase Chain reaction, forensic science.

1. INTRODUCTION

Yashtimadhu is explained as one of the Medhya rasayan .Yashtimadhu also have good memory enhancer, antioxidant, tranquilizer, anabolic activity, wound healing and rejuvenating properties so it acts as Rasayan. It is also considered Chakshushya, Balya, Vranahara, Shukrala and Keshya. It provides strength to Indriyas (sense organs) including Manas.
Ayurveda, the ancient Indian system of medicine, utilizes a vast array of natural resources for healing. Among them, Yashtimadhu (Licorice) stands out as a highly esteemed herb. Globally valued for its sweet taste and therapeutic properties, Yashtimadhu's use in traditional medicine dates back thousands of years. This revi endeavors to explore the multifaceted dimensions of Yashtimadhu, integrating insights from both classical Ayurvedic texts and contemporary scientific research.
Scientific research supports the use of Yashtimadhu (Glycyrrhiza glabra) in managing mental stress[2] (ICD-10-CM Diagnosis Code Z73.3)[3] and enhancing cognitive functions.

Description:

Table no. 1 vernacular names:[2]

English	Licorice, Liquorice, Sweet wood
Sanskrit	Yashtimadhu

Gujarat	Jethimadh
Hindi	Jethi-madhu, Mulahatti
Kanada	Yastimadhuka, atimaddhura Jeshtamadhu
Telugu	Ausareha mahaka
Malyalam	Irattimadhuram
Marathi	Jesthamadha

Table no. 2 taxonomical classification:[2]

Scientific Name	Glycyrrhiza glabra L
Common Name	Licorice, Liquorice
Kingdom	Plantae
Division	Angiospermae
Class	Dicotyledoneae
Family	Fabaceae (Legume family)
Order	Rosales
Genus	Glycyrrhiza
Species	glabra Linn

2. BOTANICAL DESCRIPTION AND DISTRIBUTION:

- **Scientific Name:** *Glycyrrhiza glabra* L.
- **Family:** Fabaceae (Legume family)
- **Description:** Yashtimadhu is a perennial herb with a slender, branched rhizome. It has pinnate leaves and pale violet to blue flowers. The rhizome and roots are the parts used medicinally and are known for their characteristic sweet flavor.
- **Distribution:** It is native to Southern Europe, the Middle East, and parts of Asia, especially India. It is also cultivated in many other regions.

3. YASTIMADHU IN PHARMACOLOGICAL CLASSIFICATION OF CHARAKA

No.	Name of the group
1.	Jivaneeya (Invigorator)
2.	Sandhaneeya(Wound healer)
3.	Varnya (Complexion promoter)
4.	Kanthya(Voice promoter)
5.	Kandughna (Itching reliever)
6.	Snehopag(Adjuvant of unctuous)
7.	Vamanopag(Adjuvant for emesis)
8.	Chhardinigrahan(Antiemetic)
9.	Mutravirajniya (Urinary antiseptic)
10.	Angamardaprasaman (cures malaise)
11.	Sonitsthapana (Hemostatics and blood purifier)

Macroscopic Characters:

Colour - Unpeeled - yellowish brown or dark brown externally and yellowish internally while the peeled liquorice is pale yellow in colour.

Odour - Faint and characteristic.

Taste - Sweet Size - 20 to 50 cm and 2 cm in diameter.

Shape - Cylindrical pieces which are straight may be peeled or unpeeled. Peeled liquorice is angular.

Fracture - It is fibrous in the bark and splintery in wood.

Extra feature - Unpeeled pieces show the presence of small buds encircling scaly leaves and longitudinally the drug is wrinkled, while the peeled drug is fibrous without wrinkles.

Microscopic Character: The important histological diagnostic characters of liquorice are given below:

- Unpeeled drugs show the presence of polyhedral tubular brownish cork cells.
- Fibres are thick. lignified or partially lignified in the groups of 10- 15 in phloem and Xylem. Vessels are large and closely arranged with bordered pits. Starch and calcium Oxalate crystals are present in parenchyma. In the case of stolon's, the pith is present and is parenchymatous. The root is characterized by the presence of tetrach xylem and absence of pith.

4. AYURVEDIC PERSPECTIVE

- **Classical Properties (Guna, Rasa, Vipaka, Virya):**
  - **Rasa (Taste):** Madhura (Sweet)
  - **Guna (Qualities):** Guru (Heavy), Snigdha (Unctuous)
  - **Vipaka (post-digestive effect):** Madhura (Sweet)
  - **Virya (Potency):** Sheeta (Cooling)
  - **Effects on Doshas:** Balances Vata and Pitta Doshas; may aggravate Kapha in excess.
- **Karma (Actions):**
  - **Varnya:** Improves complexion.
  - **Balya:** Promotes strength and immunity.
  - **Vrushya:** Aphrodisiac.
  - **Medhya:** Improves intellect and memory.
  - **Raktapitta Shamaka:** Alleviates bleeding disorders.
  - **Shwasahara:** Relieves respiratory ailments.
  - **Vrana Ropana:** Promotes wound healing.
  - **Rasayana:** Rejuvenative.

- **Traditional Uses:**
  - **Respiratory Ailments:** Cough, cold, bronchitis, asthma.
  - **Digestive Disorders:** Peptic ulcers, gastritis, acidity.
  - **Skin Diseases:** Eczema, psoriasis, and other inflammatory skin conditions.
  - **General Weakness:** Post-illness recovery, debility.
  - **Hair health:** Traditionally used to promote hair growth and health.

5. CHEMICAL COMPOSITION

The primary bioactive compounds of Yashtimadhu are:

- **Glycyrrhizin:** A triterpenoid saponin that gives the herb its sweet taste and is responsible for many of its pharmacological actions.
- **Glycyrrhetinic Acid:** A metabolite of glycyrrhizin, also possessing anti-inflammatory properties.
- **Flavonoids:** Including liquiritigenin, isoliquiritigenin, and glabridin, which have antioxidant and estrogenic effects.
- **Polysaccharides:** Contribute to its mucosal protective effects and immune-modulating properties.
- **Other Constituents:** Coumarins, amino acids, and various volatile oils.

6. PHARMACOLOGICAL ACTIONS

Modern scientific research has validated many of the traditional uses of Yashtimadhu, revealing the following key pharmacological properties:

- **Anti-inflammatory:** Glycyrrhizin and glycyrrhetinic acid inhibit inflammatory pathways, making it useful for conditions with underlying inflammation. Glycyrrhetinic acid in liquorice extract has been shown to have anti-inflammatory properties similar to glucocorticoidsand mineralocorticoids.
  Carbenoxolone (Biogastron), a glycyrrhetinic acid analogue, has been shown to inhibit two enzymes involved in prostaglandin synthesis, 15-hydroxyprostaglandin dehydrogenase and 13 prostaglandin, resulting in increased prostaglandin amounts. Mucous secretion and cell proliferation are stimulated by prostaglandins. As a consequence, ulcer recovery is helped.
- **Antioxidant:** Flavonoids in Yashtimadhu scavenge free radicals, thereby protecting cells from oxidative damage.

- **Anti-ulcerogenic:** It promotes the healing of gastric and duodenal ulcers by increasing mucus production and reducing acid secretion.
- **Anti-microbial:** Possesses activity against various bacteria, fungi, and viruses, including Helicobacter pylori.
- **Anti-viral:** Demonstrates activity against several viruses, including influenza and herpes simplex.
- **Expectorant:** It helps to loosen mucus, making it easier to cough up, which is why it's used for respiratory issues.
- **Immuno-modulatory:** It is shown to have impact on the immune system, which can be beneficial in situations where immunity needs modulation.
- **Estrogenic:** Certain flavonoids exhibit weak estrogenic activity, which can be beneficial for managing menopausal symptoms.

7. CLINICAL APPLICATIONS

- **Peptic Ulcers and Gastritis:** Yashtimadhu is well-established for the treatment of peptic ulcers and gastritis due to its anti-inflammatory and mucosal protective properties.
- **Respiratory Infections:** It is helpful in alleviating symptoms of cough, cold, sore throat, and chronic bronchitis.
- **Skin Disorders:** It is used in the management of eczema, psoriasis, and other inflammatory skin conditions, both internally and externally.
- **Liver Disorders:** Studies suggest its potential in protecting the liver against damage and aiding in liver regeneration.
- **Hormonal Imbalances:** Its mild estrogenic effects may have a role in managing menopausal symptoms and menstrual irregularities.
- **Adrenal Support:** Some research suggests it can have a beneficial effect for adrenal fatigue.
- **Memory Boosting** In mice, the effects of Glycyrrhiza glabra on learning and memory were studied. Learning and memory were tested using an elevated plus-maze and a passive avoidance paradigm. The aqueous extract of liquorice was given in three doses [75, 150, and 300 mg/kg p.o]. The experiment was carried out in different groups of animals for seven days in a row. At a dosage of 150 mg/kg, mice showed significant improvements in learning and memory. However, the precise mechanism of action is unclear, and further research is require

8. DOSAGE AND FORMS OF ADMINISTRATION

- **Powder (Churna):** The dried root powder can be taken with water, milk, or honey, generally in doses of 1-3 grams per day.
- **Decoction (Kwatha):** Boiling the root in water and reducing the liquid to one-quarter. The dosage usually ranges from 2-4 tablespoons per day.
- **Infusion (Phanta):** Steeping the root in hot water.
- **Capsules:** A convenient form for consumption.
- **Extracts:** Available as liquid extracts or tinctures.
- **Ointments:** For external use in skin problems.

9. SAFETY AND SIDE EFFECTS

- **Generally Safe:** Yashtimadhu is considered safe when used in recommended doses and for short durations.
- **Potential Side Effects:** Prolonged or excessive intake can lead to:
    - **Pseudo aldosteronism:** Due to glycyrrhizin, which promotes sodium and water retention, this can result in high blood pressure, edema, and hypokalemia (low potassium levels).
    - **Hormonal Imbalances:** The estrogenic effects may have adverse effects in certain individuals.
- **Contraindications:**
    - Hypertension
    - Hypokalemia
    - Pregnancy (use with caution and under medical supervision)
    - Severe liver or kidney disorders
- **Drug Interactions:** Can interact with certain medications, including diuretics and corticosteroids.

10. CONCLUSION

Yashtimadhu a cherished herb in Ayurveda, has stood the test of time as a potent therapeutic agent. Its diverse pharmacological actions, validated by contemporary research, make it valuable for a range of health conditions. While it offers significant benefits, the importance of adhering to appropriate dosages and medical supervision, especially with prolonged use, cannot be overstated. Further research is required to deepen our understanding of its complex interactions and fully realize its therapeutic potential within modern healthcare contexts. This holistic review highlights the synergistic integration of traditional wisdom and scientific investigation in the ongoing exploration of Yashtimadhu's potential.

Yashtimadhu (Glycyrrhiza glabra L.) remains a cornerstone of Ayurvedic pharmacopeia, celebrated for its multifaceted therapeutic actions. Traditional texts classify it as a Rasayana and Medhya herb, attributing to it rejuvenative, cognitive-enhancing, and adaptogenic properties. This review highlights its extensive pharmacological profile, validated by contemporary research that supports its anti-inflammatory, antioxidant, anti-ulcerogenic, immunomodulatory, and hepatoprotective activities.

The herb's primary bioactive constituents—glycyrrhizin, glycyrrhetinic acid, and various flavonoids—play crucial roles in its therapeutic efficacy. These compounds demonstrate significant biological activities, including mucosal protection, anti-microbial effects, immune modulation, and mild estrogenic influence. Such pharmacological versatility supports its clinical utility in managing conditions such as respiratory infections, peptic ulcers, skin disorders, hormonal imbalances, and hepatic dysfunction.

Despite its wide safety margin under standard therapeutic doses, Yashtimadhu's long-term or high-dose use demands caution. Documented adverse effects, such as pseudoaldosteronism and hypokalemia, underscore the need for clinical oversight, especially in individuals with cardiovascular, renal, or endocrine comorbidities. Additionally, the herb's potential for herb-drug interactions necessitates careful integration into conventional therapeutic regimens.

In conclusion, Yashtimadhu represents a compelling example of a traditionally used botanical whose relevance persists in contemporary integrative medicine. Its dual validation through classical Ayurvedic understanding and modern pharmacological research highlights the potential for harmonizing traditional systems with evidence-based approaches. To further support its safe and effective use, future studies should focus on dose standardization, long-term safety evaluation, and controlled clinical trials assessing its efficacy across various health conditions. With such advancements, Yashtimadhu may continue to serve as a valuable, evidence-informed phytotherapeutic agent within the global health care landscape.

REFERENCES

[1] H, Nishteswar K, AnilKumar D. Review of Glycyrrhiza Glabra (Yastimadhu) -A Broad Spectrum Herbal Drug. Pharma Science Monitor. 2012; 3(4); 3171-3195

[2] MENON, SUDEEP S Jatamansi Taila Nardostachys Jatamansi Shiro Abhyanga on Mental Stress with Special Reference to Male Individuals http://hdl.handle.net/10603/393370

[3] https://www.aapc.com/codes/icd-10-codes-range

[4] Anil K, Jyotsna D. Innovation S. Review on Glycyrrhiza Glabra (Liquorice). Journal of Pharmaceutical and Scientific Innovation. 2012;1(2);

[5] Shashikant, P., Harish C.R, Bhupesh P. 2015. Pharmacognosticalevalution of Glycyrrhiza glabra L. stem-A Preliminary study. International Journal of Phytopharmacy Research. 6:21-24

[6] Brahmanand Tripathi. Charaka Samhita: Sutra Sthana 1-3/30, Rasayana Adhaya, Karprachitiyam pada. Varanasi: Chaukhamba Surbharti Prakashan; reprint 2011

[7] Brahmanand Tripathi. Charaka Samhita: Chikitsa Sthana 25/85, Dwivraneeya Adhaya. Varanasi: Chaukhamba Surbharti Prakashan; reprint 2011.

[8] Ambikadutt Shastri. Sushrut Samhita: Uttar tantra Sthana 53/13, Swarbhedapratishedha Adhaya. Varanasi: Chaukhamba Sanskrit samsthan; reprint 2009.

[9] Ravidutta tripathi. Ashtanga Samgraha: Sutra Sthana 15, Mahakashaya Samgraha Adhaya. Varanasi: Chaukhamba Sanskrit pratishthan; reprint 2006.

[10] Brahmanand Tripathi. Charaka Samhita: Chikitsa Sthana 8/85, Vatavyadhichikitsa Adhaya. Varanasi: Chaukhamba Surbharti Prakashan; reprint 2011.