



# Comprehensive Review Of Bhagna Chikitsa In Ayurveda Principles And Clinical Practice

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## Abstract

Fractures, referred to as Bhagna in Ayurveda, are prevalent musculoskeletal injuries that compromise the integrity of bones and joints, resulting in pain, swelling, immobility, and potential disability if not adequately treated. Classical Ayurvedic texts, particularly the Sushruta Samhita, offer an extensive and nuanced understanding of various types of fractures, their clinical manifestations, and therapeutic approaches within the Shalya Tantra framework. The Ayurvedic treatment strategy for Bhagna Chikitsa is comprehensive and multifaceted, involving structural realignment (Bhagna Sthapana), immobilization (Sthirakarana), internal healing (Sandhana), and rejuvenation (Rasayana). This review seeks to deliver an in-depth overview of the foundational principles, techniques, and clinical applications related to Bhagna Chikitsa in Ayurveda. It examines external therapeutic methods such as Kusha Bandhana, Upanaha Sweda, and the use of medicated oils, alongside internal treatments that include bone-strengthening herbs, Rasayana substances, and Panchakarma therapies like Basti. These treatment modalities are discussed with reference to classical texts and are supported by emerging clinical evidence. Additionally, the article provides a comparative evaluation of Ayurvedic and contemporary orthopedic methodologies, underlining their complementary roles in fracture management. Ayurvedic treatment not only aids in bone healing but also addresses related dosha imbalances, enhances systemic strength, minimizes inflammation, and improves recovery after fractures. The blending of traditional Ayurvedic knowledge with modern diagnostic and surgical practices presents significant potential for clinical applications. By integrating classical principles, pharmacological insights, and modern clinical findings, this review establishes a solid framework for the advancement of Ayurvedic orthopedics and advocates for further exploration of integrative approaches to fracture treatment.

**Keywords:** Bhagna Chikitsa, Ayurvedic Orthopedics, Sushruta Samhita, Fracture Management, Asthi Bhagna, Lakshadi Guggulu, Kusha Bandhana, Panchakarma in Fractures, Bone Healing, Rasayana Therapy, Vata Dosha, Integrative Orthopedics

## Introduction

Injuries to bones and joints, which can range from minor hairline fractures to severe dislocations and intricate fractures, present considerable health concerns for individuals of all ages. If these injuries are not treated or managed correctly, they can result in long-term disabilities, persistent pain, or a decrease in functionality. Despite the advancements in modern orthopedic practices, including improved diagnostic imaging, surgical interventions, and biomechanical corrections, there is still a notable deficiency in areas related to post-treatment recovery, bone nourishment, and long-term rehabilitation. Ayurveda, the ancient discipline of life and medicine, offers a comprehensive and reliable approach for addressing these issues within the framework of Bhagna Chikitsa. <sup>1</sup>

The term "Bhagna," as discussed in classical Ayurvedic literature, encompasses both fractures (Asthibhagna) and dislocations (Sandhimukta/Sandhibhagna). Acharya Sushruta, a foundational figure in Ayurvedic surgery, offers detailed accounts of various fracture types, their causes, symptoms, and treatment methods in his work, the Sushruta Samhita, particularly in the Nidana, Chikitsa, and Kalpa Sthanas sections. These ancient descriptions maintain a striking similarity to modern medical classifications of fractures, including oblique, transverse, comminuted, greenstick, and impacted fractures.<sup>2</sup>

In contrast to contemporary orthopedics, which primarily emphasizes the mechanical components of treatment such as reduction, fixation, and immobilization, Ayurvedic Bhagna Chikitsa adopts a comprehensive approach. This method combines structural realignment with the balancing of doshas, regeneration of tissues, and overall systemic rejuvenation. The traditional treatment protocol incorporates external techniques such as Kusha Bandhana (splinting using herbal materials), Upanaha Sweda (application of poultices), Seka (the process of pouring medicated decoctions), and the use of herbal oils. Additionally, it includes internal therapies utilizing formulations like Lakshadi Guggulu, Ashwagandha, and Dashamoola, which are designed to stimulate bone healing and promote osteogenesis.<sup>3</sup>

Additionally, the implementation of Panchakarma therapies, particularly Basti (medicated enemas) and Snehana (oil massage), promotes significant tissue healing and helps avert issues such as avascular necrosis, fibrosis, or chronic vata disorders. The focus on Rasayana therapy (rejuvenation) illustrates Ayurveda's dedication to not only repairing anatomical structures but also reestablishing the physiological balance of the individual. In the current context, marked by increasing fracture incidents due to road traffic accidents, workplace injuries, sports-related traumas, and osteoporosis, there is a rising demand for safe, non-invasive, and regenerative treatment alternatives. Ayurveda shows promise in addressing these therapeutic needs, especially regarding conservative fracture management, post-operative rehabilitation, and bone health in the elderly population.<sup>4</sup>

This review aims to comprehensively explore the Ayurvedic understanding of Bhagna, its classical treatment principles, clinical applications, and relevance in modern integrative medicine. By bridging the gap between ancient wisdom and current clinical needs, this article advocates for the responsible inclusion of Ayurvedic Bhagna Chikitsa in mainstream fracture care.

## Aims and Objectives

- To review the classical Ayurvedic principles and classification of Bhagna.
- To explore various Ayurvedic treatment modalities including external and internal therapies for fracture management.
- To discuss the role of Panchakarma procedures and Rasayana therapy in bone healing.
- To compare the Ayurvedic approach with modern orthopedic principles and highlight integrative opportunities.
- To present clinical observations, published reports, and supportive evidence for Ayurvedic Bhagna Chikitsa.

## Materials and Methods

This is a narrative review article based on classical Ayurvedic texts, published peer-reviewed journals, and relevant clinical reports.

**Classical Literature:** Core Ayurvedic treatises including Sushruta Samhita, Ashtanga Hridaya, Charaka Samhita, and relevant commentaries were reviewed.

**Databases Searched:** PubMed, Google Scholar, AYUSH Research Portal, and DHARA (Digital Helpline for Ayurveda Research Articles) were used to identify studies and clinical trials related to fracture healing and Ayurvedic treatments.

## Classical Concept of Bhagna

### Definition and Classification<sup>5</sup>

As per Sushruta Samhita, Bhagna refers to the discontinuity or dislocation in asthi (bone) or sandhi (joint), caused by abhigata (trauma) or dosha vitiation.

Sushruta classifies Bhagna into:

- Asthibhagna (Fracture)
- Sandhimukta/Sandhibhagna (Dislocation)

Further subtypes:

- Karkataka (comminuted)
- Chinnabhagna (complete fracture)
- Asthichurna (bone crushed to powder)
- Patita (impacted)
- Atipatita (overriding)

### Nidana (Etiology) <sup>5</sup>

- Abhighata (external trauma)
- Vyayama (excessive exercise)
- Bhojana dosha
- Fall or accident

### Lakshana (Signs and Symptoms) <sup>5</sup>

- Shoola (pain)
- Sphurana (throbbing)
- Shotha (swelling)
- Akshepana (immobility)
- Deformity

### Diagnostic Approaches <sup>6</sup>

Darshana, Sparshana, Prashna Pareeksha

Functional tests to assess joint and muscle integrity

Palpation for crepitus, tenderness, and displacement

Integration with X-ray/CT/MRI for modern validation

### Chikitsa Sutra (Principles of Management) <sup>7</sup>

Sushruta outlines Ashta Bhagna Chikitsa Anga (eightfold treatment of fractures):

- Bhagna Sthapana – Realignment
- Pida Hara – Analgesia
- Shotha Hara – Anti-inflammatory
- Sandhana – Union promotion
- Sthirakarana – Immobilization
- Dhatu Poshana – Nutrition
- Agni Deepana & Ama Pachana
- Rasayana Prayoga

### External Treatments

#### Kusha Bandhana (Herbal splinting)

Application of bamboo sticks or bark using herbal pastes (Lepa)

Laksha, Rasna, Eranda, and Ashwagandha are used externally

#### Upanaha Sweda

Warm poultices of medicinal paste tied over fracture to reduce swelling and enhance healing

## Pichu and Lepa

Medicated cotton swabs soaked in oil for anti-inflammatory and analgesic purposes.

## Internal Medications:

Drug/Group	Action	Examples
<b>Asthi Dhatu Vardhaka</b>	Bone tissue regeneration	Laksha, Asthisamharaka
<b>Vedanasthapaka</b>	Analgesic	Shallaki, Guggulu, Eranda
<b>Rasayana</b>	Rejuvenative	Ashwagandha, Shatavari, Amalaki
<b>Deepana Pachana</b>	Enhancing metabolism	Trikatu, Chitrak, Pippali

## Common Formulations:

- Lakshadi Guggulu
- Abha Guggulu
- Ashwagandha Churna
- Dashamoola Kwatha
- Trayodashanga Guggulu

## Panchakarma Procedures <sup>8</sup>

Basti Chikitsa: Eranda Taila Basti and Yapan Basti for Vatashamana and tissue healing

Snehana & Swedana: Oil massage and fomentation to prevent stiffness post immobilization

Raktamokshana (if required) in traumatic edema or hematoma

## Modern Orthopedic Correlation <sup>9</sup>

Ayurvedic techniques like Bhagna Sthapana parallel modern reduction techniques

Kusha Bandhana aligns with plaster/splint/cast applications

Basti karma and Rasayana act as post-operative rehabilitation and bone-strengthening measures

Increasing clinical reports show reduction in healing time, pain, and improvement in bone density

## Clinical Practice Insights

In simple fractures, conservative Ayurvedic methods can be primary

In compound or displaced fractures, integrative protocols with surgical stabilization and Ayurvedic internal support yield best results

Post-surgical recovery is significantly improved by Ayurvedic Rasayana therapy

Case reports indicate improved union in fractures with Lakshadi Guggulu and Panchakarma support

## Discussion

The Ayurvedic approach to managing fractures, illustrated in Bhagna Chikitsa, demonstrates a comprehensive integration of anatomy, physiological harmony, and personalized treatment. The clinical methods developed by Ayurvedic experts, notably Acharya Sushruta, indicate an advanced understanding of various fracture types, associated symptoms, potential outcomes, and complications—concepts that closely mirror those found in contemporary orthopedic medicine. <sup>10</sup>

Ayurveda's effectiveness in managing fractures is rooted in its comprehensive approach. In contrast to modern orthopedics, which primarily focuses on the mechanical stabilization of fractures using internal or external fixation methods, Ayurveda goes further by addressing various aspects of care. This includes managing doshas, promoting the regeneration of dhatus, optimizing Agni (digestive fire), and preventing the recurrence of injuries or complications. <sup>11</sup>

Ayurveda categorizes fractures into various types by examining factors such as displacement, fragmentation, angulation, and accompanying symptoms. This classification is quite similar to contemporary systems like Salter-Harris or AO fracture classification. For example, Kanda Bhagna, which refers to a comminuted fracture, and Ashwakarna Bhagna, indicating a spiral or oblique fracture, are described in the Sushruta Samhita and align closely with modern understandings of fracture types.<sup>12</sup>

The Chikitsa Sutra, which outlines a treatment algorithm, includes three main components: Sandhana (realignment), Sthirakarana (immobilization), and Ropana (healing). These elements align closely with the contemporary orthopedic objectives of reduction, fixation, and rehabilitation. Nevertheless, Ayurvedic practices enhance this framework by integrating herbal decoctions, oil treatments, medicated poultices, and systemic Rasayana therapy. These components are crucial for managing inflammation, aiding in collagen production, fostering osteoblast activity, and enhancing mineral deposition within bone tissue.

Recent pharmacological research on significant Ayurvedic formulations, including Lakshadi Guggulu, Abha Guggulu, Ashwagandha, and Shallaki (*Boswellia serrata*), has yielded encouraging outcomes regarding improvements in bone mineral density, reductions in fracture healing time, and enhanced anti-inflammatory effects. These results provide scientific support for traditional practices, facilitating the evidence-based incorporation of Ayurvedic medications in fracture management. The importance of Panchakarma, especially Basti Karma, is crucial in this context. Since Vata Dosha plays a central role in maintaining the structural and functional health of bones (Asthi Dhatu), any disturbance caused by trauma can result in delayed healing, persistent pain, and deformities. The use of medicated oil and decoction enemas aids in soothing Vata and promotes regenerative processes at the tissue level. Moreover, Snehana and Swedana therapies contribute to alleviating stiffness and revitalizing mobility throughout the recovery process.<sup>12,13</sup>

From a clinical practice perspective, Ayurveda demonstrates particular strength in:<sup>14</sup>

- Conservative management of simple fractures
- Rehabilitation after surgical fixation
- Geriatric fracture care, where bone turnover is reduced
- Pain management in cases of non-union or malunion
- Soft-tissue injury adjunct care, such as ligament tears and dislocations

Case studies and observational data suggest that Ayurvedic interventions may reduce analgesic dependency, enhance functional recovery, and improve quality of life. Patients often report fewer gastrointestinal and systemic side effects when managed with Ayurvedic medications compared to long-term NSAID or corticosteroid use.<sup>15</sup>

Nevertheless, challenges persist in the widespread application of Ayurvedic Bhagna Chikitsa:<sup>16</sup>

- Lack of standardized protocols and dosage guidelines
- Need for clinical trials with radiological and functional endpoints
- Integration barriers in trauma care settings due to limited emergency applicability
- Requirement for interdisciplinary training to bridge traditional and modern practices

The future of integrative orthopedics lies in developing collaborative care models where Ayurvedic interventions can be incorporated in pre-operative preparation, post-operative care, chronic pain management, and bone health maintenance, especially in osteoporotic patients and athletes. With the growing recognition of traditional medicine by global health authorities and institutions, it is imperative to document, validate, and systematize Bhagna Chikitsa using modern research methodologies.

## Conclusion

The management of fractures, known as Bhagna in Ayurveda, showcases the rich and detailed wisdom of ancient Indian medicine. According to comprehensive accounts found in classical texts like the Sushruta Samhita, Ayurvedic fracture treatment involves much more than simple physical correction. It incorporates a holistic strategy that includes anatomical realignment (Sandhana), physiological stabilization (Sthirakarana), tissue repair (Ropana), and systemic rejuvenation (Rasayana). This approach combines external therapies—such as Kusha Bandhana, Upanaha Sweda, and oil applications—with internal medications and Panchakarma procedures, highlighting a distinctive ability to facilitate comprehensive and uncomplicated healing. In Ayurveda, bone health is closely linked to Vata Dosha and Asthi Dhatu; hence, its treatment protocols target



the re-establishment of doshic balance, reinforcement of the skeletal framework, and improvement of tissue nutrition and regeneration. Recent scientific studies have started to affirm the effectiveness of Ayurvedic remedies like Lakshadi Guggulu, Ashwagandha, Shallaki, and Guduchi, supporting their efficacy in promoting bone mineralization, reducing inflammation, and speeding up the healing of fractures. The Ayurvedic methodology prioritizes personalized treatment, early mobility, and long-term strength recovery—elements that are frequently overlooked in standard orthopedic practices. The low incidence of side effects associated with herbal treatments and the non-invasive nature of many Ayurvedic therapies make this approach a viable and sustainable option for ongoing fracture management. Nevertheless, for broader acceptance in clinical settings and more effective integration, it is vital to establish standardized treatment protocols, validate findings through controlled research, and foster interdisciplinary partnerships. Educational initiatives and policy adaptations should also advance to position Ayurvedic orthopedics as a supportive system within trauma and rehabilitation medicine.

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