

CASE STUDY

Dietary Interventions for Chronic Wound Care: A Systematic Review of *Pathya Apathya* in *Dushta Vrana*

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ABSTRACT

In current surgical practice, wound management poses a significant challenge. Faulty dietary habits hinder wound healing, leading to numerous complications. The primary objective of surgeons is to minimize wound-related complications and facilitate prompt healing. In *Ayurvedic* literature there is wide explanation regarding *Pathya* and *Apathya* for all diseases. *Aahara* and *Vihara* have equal importance as the treatment. The *Aahara Vihara* which is beneficial, nutritious and conducive to the body as well as mind is known as *Pathya* and vice versa as *Apathya*. *Acharya Sushruta* has dedicated the text to *Vrana* with detailed description of *Nidan Panchak*, *Aahara*, *Vihara* and sixty treatment modalities are mentioned for *Vrana* in separate chapters. *Acharya Sushruta* has mentioned about *pathya Apathya* in the chapter *Vranitoupasniya Adhaya*. Here an attempt is made to restate the importance of *Pathya Apathya* in contemporary significance.

Key Words *Vrana*, Wound Healing, *Pathya*, *Apathya*, *Aahara*, *Vihara*

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INTRODUCTION

Chronic wounds, or *Dushta Vrana*, pose a significant challenge to modern healthcare, affecting millions worldwide. The complex interplay of physiological, psychological, and environmental factors hinders the wound healing process, leading to prolonged suffering, decreased quality of life, and increased healthcare costs. Conventional treatments often focus on topical therapies, neglecting the crucial role of dietary interventions in wound management.

Ayurveda, India's ancient system of medicine, offers a unique approach to wound management through the concept of *Pathya Apathya*. This holistic framework emphasizes the importance of dietary regimen in maintaining optimal health and promoting wound healing. *Pathya* (wholesome) and *Apathya* (unwholesome) diets are carefully tailored to address the individual's unique constitutional requirements, *dosha* balance, and wound-specific needs.

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The *Ayurvedic* understanding of wound healing is rooted in the concept of *Dhatu* (tissue) repair and *Rasayana* (rejuvenation). According to *Ayurvedic* texts, wounds are classified into various types based on their etiology, severity, and *dosha* involvement. *Dushta Vrana*, or chronic wounds, are characterized by impaired tissue repair, inflammation, and *dosha* imbalance. Traditional *Ayurvedic* texts, such as *Charaka Samhita* and *Sushruta Samhita*, describe various dietary interventions for wound management. These interventions aim to:

1. Balance the three *doshas* (*Vata*, *Pitta*, and *Kapha*)
2. Enhance tissue repair and regeneration
3. Reduce inflammation and oxidative stress
4. Promote collagen synthesis and wound contraction

The *Pathya Apathya* concept is grounded in *Ayurvedic* pharmacology and toxicology, recognizing the potential of dietary substances to either promote or hinder wound healing. A balanced *Pathya* diet provides essential nutrients, antioxidants, and phytochemicals that support tissue repair, while an *Apathya* diet can exacerbate inflammation, delay wound closure, and compromise overall health. Despite the growing interest in integrative medicine, the role of *Pathya Apathya* in wound management remains poorly understood. This systematic review aims to bridge this knowledge gap by examining the *Ayurvedic* principles of *Pathya Apathya*, their correlation with wound healing,

and the clinical evidence supporting their efficacy in *Dushta Vrana* management^{1,2,6}

OBJECTIVE

Wound healing is an intricate, sequential process culminating in the formation of a healthy scar. Various factors, including age, nutritional deficiencies, chronic conditions (diabetes, HIV, immunosuppressive diseases), poor circulation, recurring trauma, and infections, can impede this natural process. In *Ayurvedic* medicine, *Pathya* (wholesome regimen) plays a pivotal role in disease prevention and treatment.

Ancient physician *Acharya Sushruta* emphasized the significance of *Pathya* and *Apathya* (unwholesome regimen) in his seminal work, specifically in Chapter 19 (*Sutra Sthana*) of *Vranitopasaniya Adhaya*. *Aahara*, or diet, is *Ayurveda's* cornerstone for disease management and prevention, earning the designation "*Mahabhaishajya*" (super medicine) in *Kashyapa Samhita*. *Harita* underscored the importance of adhering to personalized *Pathya*, tailored to individual physical and pathological conditions, to achieve healing without reliance on medication.

In contemporary times, the prevalence of wound cases has surged, often resisting conventional treatments like antibiotics and local wound management. This highlights the need to revisit the relevance of *Pathya Apathya* in modern healthcare.

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Table 1 Pathya Apathya Aahar according to classical textbook^{1,2,3}

<i>Samhita</i>	<i>Pathya</i>	<i>Apathya</i>
<i>SUSHRUTA SAMHITA</i> (su.s.19)	<ol style="list-style-type: none"> 1. <i>Amlaki</i> (<i>Embllica officinalis</i>) 2. <i>Bal-Mulak</i> (Country mallow) 3. <i>Dadima</i> (Pomegranate) 4. <i>JangalaMamsa</i> (Wild game meat) 5. <i>JeernaShaalyodana</i> (Old rice) 6. <i>Jivanti</i> (<i>Leptadenia reticulata</i>) 7. <i>Karvellak</i> (Bitter gourd) 8. <i>Kulmasha</i> (A type of grain) 9. <i>MudagaRasa</i> (<i>Phaseolus aureus</i>) 10. <i>Patol</i> (<i>Tricosanthes dioica</i>) 11. <i>Saindhav</i> (Rock salt) 12. <i>Saktu</i> (Barley flour) 13. <i>Shritjala</i> (Water) 14. <i>Sunishannak</i> (A type of grass) 15. <i>Tanduliyaka</i> (Rice grains) 16. <i>Vartak</i> (A type of vegetable) 17. <i>Vastuk</i> (A type of herb) 18. <i>Vilepi</i> (A type of pastry or bread) 	<ol style="list-style-type: none"> 1. <i>Aanupa</i> (Water-based) 2. <i>Aja</i> (Goat) 3. <i>Amla</i> (<i>Embllica officinalis</i>) 4. <i>Avi</i> (Egg) 5. <i>Dadhi</i> (Yogurt) 6. <i>Dugdha</i> (Milk) 7. <i>GudaPishtaVikruti</i> (Jaggery-based preparation) 8. <i>Haritaka</i> (<i>Terminalia chebula</i>) 9. <i>Kalaya</i> (Black gram) 10. <i>KatuRasa PradhanaDravyas</i> (Pungent-tasting substances) 11. <i>Krushaara</i> (Sharp or pungent substances) 12. <i>Kulatta</i> (Horse gram) 13. <i>Lavana</i> (Salt) 14. <i>Masha</i> (Black gram or Urad dal) 15. <i>Navadanya</i> (Nine grains) 16. <i>Nishpava</i> (Fermented grains) 17. <i>OudakaMamsa</i> (Aquatic animals) 18. <i>Shitodaka</i> (Cold water) 19. <i>ShushkaShaka</i> (Dry vegetables) 20. <i>Takra</i> (Buttermilk) 21. <i>Tilaa</i> (Sesame seeds) 22. <i>Vallura</i> (A type of fish)
<i>CHARAK SAMHITA</i> (ch.c.25)	<p><i>Na Ati Sheet, Na Ati Guru, Na Ati snigdha , Avidhahi.</i></p> <ol style="list-style-type: none"> 1. Diet: Avoid extreme temperatures (cold/hot) and qualities (unctuous/oily). 2. Lifestyle: Maintain balance in daily routines and habits. 3. Medicine: Avoid excessive dosage or potency. 	<p><i>Lavan, Amla, Katu, Ushna, Vidhahi, Guru, Viruddhanna, Adhyasan,</i></p> <ol style="list-style-type: none"> 1. Lavan (Salt): Excessive salt intake 2. Amla (Sour): Overconsumption of sour tastes 3. Katu (Pungent): Excessive spicy or pungent foods 4. Ushna (Hot): Consuming extremely hot foods/drinks 5. Guru (Heavy): Eating heavy, difficult-to-digest foods 6. Vidhahi (Contrary diet): Incompatible food combinations 7. Adhyasan (Overeating): Consuming excessive quantities
<i>ASTANG HRIDYA</i> (AH.S.29)	<p>Grains:</p> <ol style="list-style-type: none"> 1. <i>Godhuma</i> (Wheat) 2. <i>Sashatikashali</i> (Sixteen-types of rice) 3. <i>Tanduliyak</i> (Rice grains) 4. <i>Yava</i> (Barley) <p>Legumes:</p> <ol style="list-style-type: none"> 1. <i>Masura</i> (Lentils) 2. <i>Mudaga</i> (<i>Phaseolus aureus</i>) 3. <i>Tuvari</i> (Toor dal) <p>Herbs:</p> <ol style="list-style-type: none"> 1. <i>Bal-Mulaka</i> (Country mallow) 2. <i>Jivanti</i> (<i>Leptadenia reticulata</i>) 3. <i>Karvellak</i> (Bitter gourd) 4. <i>Karkota</i> (<i>Bryonopsis laciniosa</i>) 	<ol style="list-style-type: none"> 1. <i>Nava Dhanya</i> (Nine grains) 2. <i>Tila</i> (Sesame seeds) 3. <i>Masha</i> (Black gram or Urad dal) 4. <i>Mansa</i> (Meat) 5. <i>Ksheera</i> (Milk) 6. <i>Ikshu-Vikrati</i> (Sugar cane derivatives) 7. <i>Amla</i> (Sour taste) 8. <i>Katu</i> (Pungent taste) 9. <i>Visthambi</i> (Heavy or dense substances) 10. <i>Vidahi</i> (Fiery or hot substances) 11. <i>Guru</i> (Heavy or dense qualities) 12. <i>Sheetal</i> (Cold substances) 13. <i>Madhya</i> (Moderate or balanced qualities)

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5. *Patol* (*Tricosanthes dioica*)
 6. *Sunissnika* (A type of grass)
 7. *Vartaka* (A type of vegetable)
 Fruits:
 1. *Dadima* (Pomegranate)
 2. *Dhatri* (*Amla/Emblica officinalis*)
 Substances:
 1. *Ghrita* (Ghee/Clarified butter)
 2. *Jala* (Water)
 3. *JangalaMansa Rasa* (Wild game meat extract)
 4. *Katukaphala* (*Capsicum/Cayenne pepper*)
 5. *Saindhava* (Rock salt)
 6. *Vastuka* (A type of herb)

Life style modifications :-

Table 2 *Pathya Apathya vihar* according to classical textbook^{1,2,3}

<i>Samhita</i>	<i>Pathya</i>	<i>Apathya</i>
<i>Sushruta samhita</i>	1. <i>Nichanakhaand Roma</i> (Nail-cut) 2. <i>Shuchi</i> (Clean or pure substances) 3. <i>Shuklavaasina</i> (White or pure items) 4. <i>Dhoopawith Sarshapa</i> (Mustard seeds with incense) 5. <i>Nimbaleaves</i> (Neem leaves) 6. <i>Lavana</i> (Salt) 7. <i>Ghee</i> (Clarified butter)	1. <i>Chankramana</i> (Walking excessively) 2. <i>Asana</i> (Excessive sitting) 3. <i>Streenaamdarshana</i> (Excessive gaze at women) 4. <i>Sambhasana</i> (Excessive talking) 5. <i>Samsparsha</i> (Excessive physical contact) 6. <i>Vaata</i> (Excessive wind/exposure) 7. <i>Atapa</i> (Excessive sun exposure) 8. <i>Rajo</i> (Excessive dust/pollution) 9. <i>Dhooma</i> (Smoking) 10. <i>Irshya</i> (Jealousy) 11. <i>Bhaya</i> (Fear) 12. <i>Shoka</i> (Grief) 13. <i>Raatrijagara</i> (Staying awake at night) 14. <i>Vishamaaashana</i> (Irregular eating habits) 15. <i>Shayana</i> (Excessive sleeping) 16. <i>Upavasa</i> (Fasting/extreme dieting) 17. <i>Vyayama</i> (Excessive exercise)
<i>Charak samhita</i>	<i>Aswapanamdiva</i>	<i>Maithuna</i>
<i>Astang hridaya</i>	<i>Aswapanamdiva</i>	<i>Maithuna</i>

DISCUSSION

1. DIET MODIFICATION :

Patient is advised to take

- Sweet (*Madhura*) foods: Promote wound healing (e.g., ghee, honey)
- Sour (*Amla*) foods: Enhance collagen synthesis (e.g., citrus fruits)
- Saline (*Lavana*) foods: Support tissue repair (e.g., sea salt)

- Warm and nourishing foods: Support immune function (e.g., soup, porridge)
- Old rice with ghee-rich in carbohydrates and vitamins A,D,E&K which helps in wound healing.
- Non vegetarian food –rich in protein promotes wound healing.
- Fruits and vegetables –rich in vitamins and fibers promotes wound healing.

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-Use of *sattu*, *vilepi*-rich in carbohydrate and protein provide energy and wound healing.

-Instead of taking normal salt take *Saindhava Lavana* because of its mineral contents.^[7]

Foods to be Avoided :-

- Pungent (*Katu*) foods: Delay wound healing (e.g., chili peppers)

- Bitter (*Tikta*) foods: Impede tissue repair (e.g., bitter melon)

- Astringent (*Kashaya*) foods: Reduce wound contraction (e.g., astringent fruits)

- Cold and dry foods: Impede immune function (e.g., cold drinks, dry meats)

-Dried vegetables or meat this can referred as preserved food and vegetables, fast food and junk food .

-Over sweet items like jaggery & Cold food, dairy products.

-Intake of alcohol.

Above all can provide improper nutrition and increase glucose level which gives favorable atmosphere for bacteria to grow which leads to more infection.

"A well-balanced diet rich in essential nutrients significantly enhances wound healing, as supported by scientific evidence. This concept aligns with the ancient wisdom of *Ayurvedic* classics, such as *Charaka*, *Sushruta*, and *Vagbhata*, which emphasize the importance of a wholesome lifestyle in promoting uncomplicated healing. By adopting proper dietary habits and lifestyle management, individuals can optimize their recovery process."^[7]

2. Lifestyle Modifications for Optimal Wound Healing :-

To facilitate uninterrupted recovery, consider the following adjustments:

Daytime Activities:

- Avoid daytime sleeping, as it exacerbates wound itching, body heaviness, swelling, pain, redness, and exudation.

Environmental Factors to Limit:

- Breeze

- Direct sunlight

- Dust

- Smoke

- Extreme temperatures (especially cold wind)

Dietary Considerations:

- Refrain from excessive food consumption

- Avoid disliked or unhealthy foods

- Steer clear of foods combining wholesome and unwholesome ingredients

- Prevent indigestion and minimize disturbance from flies

Emotional Well-being:

- Manage stress: avoid jealousy, anger, fear, grief, and worry

- Maintain regular sleep patterns; avoid nighttime wakefulness

- Practice moderation in physical exercise and speech

Additional Precautions:

- Avoid roaming in restricted areas

- Refrain from fasting or irregular eating habits

Non-compliance with these guidelines may aggravate *Vata*, leading to:

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- Swelling
- Pain
- Exudation
- Burning sensations
- Pus formation

Consequently, these factors impede physiological recovery processes, delaying wound healing. By adhering to these lifestyle modifications, patients can facilitate early wound healing and maintain optimal overall health.

Correlation with Wound Management :-

1. Inflammation: *Pathya* diet reduces inflammation, promoting wound healing.

- Reduces inflammatory mediators (TNF- α , IL-6)
- Enhances anti-inflammatory cytokines (IL-10, TGF- β)
- Promotes wound debridement and cleansing

2. Collagen Synthesis: *Apathya* diet impedes collagen production, delaying wound closure

- Impedes collagen production
- Disrupts collagen fiber formation
- Delays wound closure

3. Tissue Repair: Balanced *Pathya* diet :

- Supports tissue regeneration
- Enhances angiogenesis (blood vessel formation)
- Promotes wound remodeling

CONCLUSION

The integration of nutritional planning and tailored nutrition support emerges as a pivotal factor in expediting wound healing. The ancient *Ayurvedic* concept of *Vranitopasaniya*, literally translating to "care of the wounded,"

encapsulates a profound understanding of wound management. This holistic approach reveals that optimal care of the wounded individual inherently fosters self-healing.

In contrast to the limited emphasis on nutrition in modern surgical wound care, *Ayurvedic* principles offer a valuable adjunct to conventional treatments. By harnessing the science of *Vranitopasaniya*, healthcare practitioners can achieve remarkable outcomes.

Future research directions include large-scale studies to investigate the efficacy of *Ayurvedic* wound healing propositions in diverse populations and non-healing ulcers. Such investigations will provide critical insights into the scientific validation of *Ayurvedic* wound care, bridging the gap between traditional wisdom and modern medicine.

- Integrated nutritional planning accelerates wound healing.
- *Vranitopasaniya* offers a comprehensive, holistic approach to wound care.
- *Ayurvedic* principles complement modern surgical practices.

- Further research is warranted to validate *Ayurvedic* wound healing propositions.

By embracing the timeless wisdom of *Ayurveda*, we may uncover innovative solutions to enhance wound healing outcomes, redefining the frontier of modern healthcare.

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