

AYURVEDIC UNDERSTANDING OF ESSENTIAL HYPERTENSION: A SYSTEMATIC REVIEW

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ABSTRACT

Background: High blood pressure, or hypertension, is one of today's most common and dangerous health concerns, silently contributing to heart disease, stroke, and other serious complications. In Ayurveda, an age-old concept known as *Shonita dushti* describes a similar disturbance in the blood (*Rakta dhatu*). Ancient physicians linked this to a mix of factors such as the food we eat, the way we live, our emotional state, the seasons, and even our *prakruti*. Interestingly, many of these ancient observations aligns with what modern medicine recognizes as risk factors for hypertension. **Objective:** This review is set out to bridge two worlds exploring how classical Ayurvedic descriptions of *Shonita dushti* connects with modern biomedical understanding of essential hypertension, with a focus on causes (*nidana*), disease progression (*samprapti*), and clinical signs (*rupa*). **Methods:** Following PRISMA guidelines,

a systematically searched review of both Ayurvedic classics and peer-reviewed medical research is done. The sources included Pubmed, Google scholar and renowned ayurveda and modern textbooks. **Results:** Ayurveda identifies six major categories of causes for *Shonita Dushti*: dietary habits, lifestyle patterns, psychological stress, seasonal influences, physiological changes, and environmental factors. These match closely with today's recognized hypertension risks - such as high salt consumption, alcohol intake, inactivity, emotional strain, overwork, and climate extremes. Both systems describe similar underlying processes, including increased vascular resistance, imbalance in autonomic regulation, and

fluid retention. Symptoms like headaches (*shirashoola*), dizziness (*bhrama*), fatigue (*klama*), palpitations (*hr̥tspandana*), excessive sweating (*svedadhikya*), and poor sleep (*nidranasha*) appear in both traditions. **Conclusion:** Ayurveda's perspective on *Shonita Duṣṭi* not only aligns with modern views on hypertension but also offers a rich framework for prevention. By integrating Ayurvedic lifestyle guidance with contemporary medical care, we may be able to offer patients a more complete and holistic approach to manage blood pressure and protecting heart health.

KEYWORDS: Ayurveda, *Shonita Dushti*, Hypertension, *Nidana*, Integrative Medicine.

INTRODUCTION

Hypertension, or persistently elevated blood pressure, is one of the most common chronic health conditions worldwide. A reading above 140/90 mmHg is generally considered hypertensive.^[1] The condition often develops silently, without obvious symptoms, yet it significantly increases the risk of serious problems such as stroke, heart failure, kidney disease, and other cardiovascular disorders. Currently, around 620 million people are affected, and by 2026, this number is expected to rise to 2.1 billion - roughly one in three adults over the age of 20^[2] While modern medicine classifies hypertension based on measurable blood pressure values, Ayurveda takes a broader, functional approach. *Acharya Charaka* reminds us in *Sutrasthana* that not every disease needs to be labelled by name. When diagnosis by name is not possible, the physician should instead understand the *prakṛti* (nature) of the illness and plan treatment according to its presentation^[3] In Ayurvedic physiology, the *hr̥daya* (heart) is described as being formed from the essence of *shonita* and *kapha*^[4] It is the root (*mulasthanā*) of the *rasavaha* and *pranavaha srotas*^[5] and the seat of *vyana vayu*, *sadhaka pitta*, and *avalambaka kapha*. Charaka explains that the heart contracts with the help of *vyana vayu*, propelling *rasa* and *rakta* throughout the body, thereby ensuring continuous nourishment of all *dhatu*s.^[6]

The causative factors of *Shonita dushti* includes *Ati lavana sevana*, *Madya pana*, *Ati snigdha ahara sevana*, *Chinta*, *Shoka* and the lakshanas include *Shirashoola*, *Bhrama*, *Tamodarshana*, *Krodha*, *Santapa*. Similarly, the causative factors of essential hypertension include high sodium intake, physical inactivity, obesity and insulin resistance, excess alcohol consumption, psychological stress and the symptoms are headache, dizziness, palpitations, fatigue, blurred vision, anger which has the close resemblance with *Shonita dushti*.

From this perspective, hypertension is understood as a disorder of the *rakta* dhatu, commonly referred to as *shonita duṣṭi* (vitiating blood). This vitiation can manifest in various forms- *rakta-pitta* (bleeding disorders), *rakta meha* (hematuria), *vata-rakta* (vascular disorders), and *akṣiraga* (redness of the eyes). Common symptoms such as *shiroruja* (headache), *bhrama* (giddiness), and *kampa* (tremors) closely resemble those of hypertension. In more severe cases, progressive *shonita duṣṭi* can lead to *mada* (delirium), *murccha* (loss of consciousness), and *sanyasa* (coma), paralleling the modern medical concepts of essential and malignant hypertension.^[7] Several Ayurvedic scholars have used various terms to describe hypertension, including *dhamani-pratichaya*, *raktagata vata*, *siragata vata*, *raktapradoṣaja vyadhi*, and *raktachapa-adhikya*.^[8] Understanding the causes (*nidana*), disease process (*samprapti*), chronicity, complications, and symptomatology in both systems allows for more effective and holistic management - integrating measurable parameters from modern medicine with the constitutional and functional insights of Ayurveda.

AIMS AND OBJECTIVES

AIM

- To study the etiological factors of essential hypertension.
- To explore preventive measures for essential hypertension.

OBJECTIVES

- To review available literature on the etiology and pathogenesis of essential hypertension (EHT).
- To study Ayurvedic approaches for the management of EHT.

MATERIALS AND METHODS

Hypertension - Definition and Overview^[10]

Hypertension is a persistent elevation of blood pressure and represents a major hemodynamic disturbance. According to **JNC-VIII** and **WHO**, in adults aged 18 years or older, hypertension is defined as

- **Systolic blood pressure ≥ 140 mmHg** and/or
- **Diastolic blood pressure ≥ 90 mmHg** in individuals not taking antihypertensive medication.

SBP	DBP	STAGE
<120	<80	NORMAL
120-	80-	PRE-

139	89	HYPERTENSION
140-159	90-99	STAGE 1
>160	>100	STAGE 2

Types of Hypertension^[11]

1. Primary (Essential/Idiopathic) Hypertension

- No identifiable cause, though genetics and lifestyle play major roles.
- Accounts for 90–95% of hypertension cases.

2. Secondary Hypertension

- Caused by an underlying medical condition or disease.
- Less common (approximately 10% of cases) but often more severe (*malignant hypertension*).

Etiological Factors^[12]

Primary Hypertension

- **Genetics:** 20–60% hereditary component.
- **Age & Sex:** BP rises with age in both men and women.
- **Weight:** Every 1.25 kg gained → approximately 1 mmHg rise in systolic BP.
- **Salt:** Intake >3 g/day linked to higher BP, ≤3 g/day helps keep BP lower.
- **Alcohol:** Raises BP independently.
- **Physical inactivity:** Sedentary lifestyle increases risk by 20–50%.
- **Smoking:** Tobacco elevates BP and damages vessels.

Secondary Hypertension

- **Drugs:** Oral contraceptives, steroids.
- **Renal causes:** Acute/chronic nephritis, polycystic kidney disease.
- **Metabolic causes:** Diabetes, atherosclerosis, chronic gout.
- **Endocrine causes:** Thyrotoxicosis, myxoedema, acromegaly.

Ayurvedic Perspective

A. Dietary Causes (Aharaja Hetu)

- Excessive *lavana, pippali, kshara* → *rakta dushti* due to their heavy, heating, and obstructive qualities.^[13]

- Unwholesome diet (*gramya ahara*), *diwaswapna*, and alcohol impair *medovaha srotas*.^[14]

B. Lifestyle Causes (Viharaja Hetu)

- Day sleep after meals → *kapha* aggravation → *ama* formation → obesity → hypertension.^[15]
- Suppression of natural urges (*vegadharana*).^[16]
 - Suppressing *mutra/pureesha* → *apana vayu* obstruction → strain on heart.
 - Suppressing *ashru/shwasa* → heart disease.
- Lack of exercise (*avyayama*)^[17] → sedentary lifestyle → *medovaha srotodushti*.

C. Mental Causes (Manasika Hetu)

- Excess worry (*ati chintana*) → *rasavaha srotodushti*.
- Emotions like grief, fear, anger, and attachment disturb *sadhaka pitta* in the heart, contributing to raised BP.^[18]

Pathogenesis (Samprapti)

Hypertension develops through physical and psychological pathways, often occurring together.

- Causative factors like excess salt, alcohol, oily food, day sleep, and mental stress disturb *shonita* (blood) along with associated *doṣhas*.
 1. *Praṇa vayu* vitiation affects the heart (*hṛdaya*) and its functional elements like *vyana vayu*, *sadhaka pitta*, *avalambaka kapha*, and *shoṇita*.
 2. *Avalambaka kapha* aggravation → stronger heart contractions.
 3. *Vyana vayu* aggravation → increased heart rate and force.
 4. Vitiated *sadhaka pitta* and *shoṇita* → altered vascular tone.

Results in Forceful ejection of blood through arteries (*dhamanis*) → increased vascular resistance → sustained high blood pressure.^[19]

SAMPRAPTI GHATAKA

Sl. No	Category	Symptoms
1	<i>Dosha</i>	<i>Vata</i> - Shiroruk, Bhrama, Kampa <i>Pitta</i> - Akshiraga, Krodha-prachurata, Ati-sweda, Tikta-amla-udgara, Murcha <i>Kapha</i> - Gurugatrata, Nidra-atiyoga

2	Dushya	Rasa -Ati-daurbalya, Guru-gatrata, Tandra Rakta - Tamasatidarshana, Shiroruk, Akshiraga, Daurbalya, Klama, Krodha-prachurata Majja - Bhrama, Murcha, Tamodarshana
3	Srotas	Rasa-vaha, Rakta-vaha, Medo-vaha, Majja-vaha, Sanjna-vaha
4	Sroto-duṣṭi	Sanga, Vimarga gamana
5	Udbhava-sthana	Ama - Pakwashaya
6	Sanchara-sthana	Sarva-sharira
7	Adhithana	Shiras, Hridaya
8	Vyakta-sthāna	Sarva-sharira
9	Roga-marga	Madhyama
10	Agni	Jatharagni & Dhatwagni Mandya
11	Ama	Rasagata

Ayurvedic Management of Hypertension

1. Nidana Parivarjana (Avoidance of Causes)

The first and most important step is prevention by avoiding the causes and risk factors that disturb *Vata* and *Pitta* doshas. This helps stop the further progression of the disease.

- Dietary care: Reduce excess salt, oily and fatty foods.
- Lifestyle care: Avoid smoking, alcohol, stress, and irregular sleep.
- Drug-induced factors: Long-term use of medicines like NSAIDs and steroids should be avoided, as they can raise blood pressure.

2. Shodhana (Cleansing Therapies)

Cleansing therapies help eliminate the aggravated *doṣhas* through their natural routes:

- **Langhana:** Beneficial in *Kapha*-predominant conditions such as obesity, atherosclerosis, and cardiovascular disorders.
- **Virechana (Purgation):** The best therapy for *Pitta*-related disorders, since *Pitta* and *Rakta*^[20] are closely related. Useful in patients with liver disorders, hyperthyroidism, and lifestyle factors like alcohol and smoking.
 - Common medicines: *Kutki*, *Eranda*, *Haritaki* (for purgation), *Punarnava*, *Gokshura* (for diuretic action).
- **Raktamokshana:** Helps reduce blood pressure by 10-20 mm of Hg
- **Shirodhara:** A rejuvenating therapy that reduces stress, relaxes the nervous system, balances *Prāṇa* and *Vyāna Vāyu*, and improves blood circulation. Medicated milk, buttermilk, or herbal oils are used.

- **Basti:** Considered the best therapy for *Vata*. Useful when *Kapha* and *Medas* obstruct *Vyana Vayu* in hypertension. *Lekhana Basti* and *Pitta-Rakta* pacifying *Bastis* help normalize blood flow and pressure.^[21]

3. Shamana (Palliative Therapies)

The goal of *shamana* is to restore balance of all *doṣhas* and maintain stability.

- Use of medicines and diet that calm *Vata* and *Pitta* without increasing *Kapha*.
- Stress management through meditation, yoga, and pranayama.
- *Pathya ahara* (wholesome, easily digestible food).
- Herbs with calming, cardiac, and *Rasayana* (rejuvenative) effects are often used, such as *Arjuna*, *Sarpagandha*, *Jatamansi*, *Brahmi*, and *Shankhapushpi*.

4. Pathya apathy^[22]

Pathya (Do's)	Apathya (Don'ts)
Diet (Ahara): - Whole grains, fresh fruits and vegetables - Fixed meal timings - <i>Mudga, Godhuma, Madhu, Saindhava, Takra, Shunthi, Ardraka, Rasonaa, Meethi, Jeeraka, Atasi, Dalchini</i> etc. - Fruits: Indian gooseberry, grape, watermelon, lemon, papaya - Diet should be light, low fat, preferably vegetarian	Diet (Ahara): - Avoid <i>Mamsahara</i> (meat), egg, excessive protein, oily food - Avoid excessive spicy food and salt (should not be >2000 mg/day) - Avoid overeating - Avoid smoking and alcohol - Avoid <i>Adhyashan, Viruddhashan, Pishtanna</i> - Avoid excessive intake of <i>Lavana rasa, Amla rasa</i>
Vihara (Lifestyle): - Daily exercise – <i>Langhana</i>	Vihara (Lifestyle): - <i>Vegdharana</i> (suppression of urges) - <i>Alasya, Divashayan</i> (day sleep) - <i>Sukha-shayana</i> (luxurious/excessive sleep)
Yoga & Pranayama: ^[23] - <i>uryanamaskara</i> - <i>Asanas: Vajrasana, Pawanmuktasana, Shavasana, Pranayama: Bhastrika, Kapalabhati, Anulom-vilom, Nadishodhana, Bhramari, Shavasan</i> (<i>Chandogya Upanishad</i>)	

DISCUSSION AND CONCLUSION

One of the most powerful principles of Ayurveda is “*Swasthasya Swasthya Rakshanam*” preserving the health of the healthy. This preventive aspect of Ayurveda makes it highly relevant in addressing lifestyle disorders such as hypertension. In this review, we have explored the etiological factors of hypertension and discussed its management from an Ayurvedic perspective. It is important to recognize that the causes of hypertension may differ from person to person. Ayurveda describes it as a *Tridoṣaja Vyādhi*, with a predominance of *Vata* and *Rakta Doṣha*. The chief *Duṣyas* involved are *Rasa, Rakta, and Manas*, and the

disease primarily affects the *Raktavaha Srotas*. Essential hypertension can be correlated with *Shonita Vikara*. The review highlights that unhealthy dietary habits, sedentary lifestyle, and stress are the leading contributors to essential hypertension. Thus, lifestyle modification and dietary regulation (*Pathya–Apathya*) play a central role in prevention and management. From a therapeutic perspective, several Ayurvedic herbs and formulations demonstrate antihypertensive activity. These include drugs from the *Hrudya Gana*, *Arjuna*, *Brahmi*, and *Sarpagandha*. Most of these medicines are characterized by

- *Tikta Rasa* (bitter taste)
- *Katu Vipaka*
- *Laghu and Ruksha Guna*
- *Ushṇa Virya*

These properties help in *Sroto-Shodhana* and *Sroto-Vivarana* (dilatation of channels), thereby breaking the pathogenesis (*Samprapti*) of hypertension. Consequently, Ayurvedic management not only aids in controlling blood pressure but also helps prevent its long-term complications.

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