

# A Review for Management of Hypertension with Special Reference to Ayurveda and Swasthya

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**Abstract:** Hypertension, commonly known as high blood pressure, is a leading global health concern and a major risk factor for cardiovascular diseases, stroke, and kidney dysfunction. The rising prevalence of hypertension underscores the need for comprehensive and integrative management strategies. This review explores the condition with special reference to the Ayurvedic concept of Swasthya (holistic health), focusing on prevention and personalized care.

In Ayurveda, hypertension is understood as a manifestation of imbalances in the doshas (Vata, Pitta, and Kapha) and is influenced by factors such as stress, improper diet, sedentary lifestyles, and disrupted circadian rhythms. Ayurvedic interventions, including herbal medicines (e.g., Arjuna, Brahmi), dietary recommendations, Panchakarma therapies, and lifestyle practices like yoga and meditation, aim to restore balance and promote systemic harmony.

This review highlights the parallels between contemporary medical approaches and Ayurvedic principles, emphasizing the potential of integrative strategies to enhance hypertension management. While modern medicine focuses on symptom control and pharmacological interventions, Ayurveda provides a complementary framework addressing the root causes through preventive and holistic measures. The integration of these paradigms not only aligns with the goal of achieving optimal health (Swasthya) but also promotes sustainable and personalized care. Further research is needed to validate and incorporate Ayurvedic practices into evidence-based hypertension management protocols.

**Keywords:** Ayurvedic, Swasthya

## I. INTRODUCTION

Hypertension, or high blood pressure, is a significant global health concern affecting millions of individuals across diverse populations. It is characterized by persistently elevated blood pressure levels, often linked to lifestyle, genetic predisposition, and underlying health conditions. Hypertension is chronic and often asymptomatic medical condition in which systemic arterial blood pressure is elevated beyond normal limits i.e. blood pressure more than 140/90 mm of Hg<sup>[1]</sup>. The condition is a major risk factor for cardiovascular diseases, including heart attack, stroke, and kidney failure, contributing significantly to morbidity and mortality worldwide. Despite advancements in modern medicine, the management of hypertension remains challenging due to its multifactorial nature and the increasing prevalence of associated comorbidities.

In Ayurveda, exact description of hypertension is not given. Hence it is difficult to find out exact references of hypertension. But in *CharakaSamhitaSutrasthan*, *AcharyaCharaka* has explained that if it is not possible to make the diagnosis of any disease then physician should try to understand the nature of disease and make the diagnosis and treatment according to disease<sup>[2]</sup>.

In modern era, many Ayurvedic scholars have considered hypertension under the heading of various diseases such as *Dhamani- Prartichaya*, *Raktagatavata*, *Siragatvata*, *Raktapradoshaj-vyadhi* and *Raktachapa-adhikya* etc.<sup>[3]</sup>

This review aims to explore the integrative approach to hypertension by examining its etiology, pathophysiology, and treatment modalities from both contemporary medical science and Ayurvedic perspectives. By analyzing traditional Ayurvedic practices, such as herbal remedies, *Panchakarma* therapies, and lifestyle modifications, alongside modern scientific advancements, this review seeks to provide a comprehensive understanding of hypertension and its

management. The integration of *Swasthya* and Ayurveda in the management of hypertension not only underscores the importance of a personalized and preventive approach but also highlights the potential of traditional medicine to complement modern therapeutic strategies.

### Aim and Objectives

To study the management of Hypertension with special reference to *Ayurveda* and *Swasthya*.

**Material** -The data is primarily collected from various ayurvedic samhitas, modern medical textbooks, national international journals.

## II. METHODOLOGY

### Ayurvedic approach to hypertension-

Blood pressure (BP) is the lateral pressure exerted by the flow of blood on the walls of arteries". The two components of BP are systole and diastole. Hypertension is defined as chronic elevation in the arterial blood pressure  $BP > 140/90$  mmHg with no definable cause".<sup>[4]</sup> The heart pumps out pure blood to the body and takes back impure blood from the body through '*sirah*'. This return of blood towards the heart is controlled by *samanavata*.

The heart has its pacemaker SA node that generates electrical impulses which makes the heart contract on its own during the systole. This self excitation of heart is due to *vata* dosha mainly *vyana* (seated in the heart, responsible for blood circulation). The *vyana* pumps the blood out of the heart and distributes it.

The rate of impulse generation is controlled by autonomic nervous system (ANS) via sympathetic and parasympathetic nerve fibres merging from brain. So *prana* situated in *moordha* (brain) controls the heart rate and does *dhamanidharana* (arterial perpetuation).

The auto rhythmicity of the heart is due to the action potential created by rapid influx of  $Na^+$  and  $Ca^{++}$  ions and efflux of  $K^+$  ions across the membrane of SA node. This involvement of chemical ions is *pitta* mainly *sadhak pitta* situated in heart due to its *tikshna* (rapidness), *drava* (fluidity) and *sara* (diffusion/dispersion) gunas. The diastolic BP is attained by the blood flowing through the narrow structure of the arteries in the heart and no any active push by the heart. Thus, it is *kaphadosha* (maintains the diameter and elasticity of blood vessels) mainly the *avalambakkapha* which offers the peripheral resistance faced by the blood in the blood vessels and determines the diastolic BP.

The viscosity and blood volume can be determined by the quality and quantity of *rasa* and *raktadhatus* which determines the cardiac output. The basal metabolic rate is regulated by action of *agni* and *pitta* [mainly *pachakpitta* which causes changes in the pulse rate and then the BP (Read's and Gale's formulae). According to Ayurveda *VyanVayu* responsible for blood circulation, Hence Vitiated *VyanVayu* is mainly responsible for high blood pressure<sup>[5]</sup>. In hypertension there is predominance of *Vata*, *Pitta*, *Kapha* Doshas.

**Table 1: Types and classification<sup>[6]</sup>:**

Category	SystolicBP	DiastolicBP
Optimal	< 120	<80
Normal	< 130	< 85
High normal	130-139	85-89

**Table 2: Hypertension Grade:<sup>[7]</sup>**

Category	Systolic BP	DiastolicBP
Grade (Mild)	140-159	90-99
Grade (Moderate)	160-179	100-109
Grade (Severe)	>180	>110

### Hetu/Causative factors of hypertension<sup>[8]</sup>:

Hypertension is not described in any Samhitas. But causes of hypertension are described in modern medicine; hence it can be analyzed according to Ayurveda.

1. Genetic factors (*Beejdoshas*)
2. Environment factors
3. Age: Old age-( predominance of *VataDosha* )
4. Excessive intake of salt
5. Obesity
6. Alcohol intake
7. Physical activity
8. Psychological factor's (*ManasicBhav*).

### Pathology -

For any increase in BP there is a classical increase in cardiac output or peripheral resistance. Extra cellular fluid volume is the key factor for long term control of BP.

Defect in the renal homeostasis causes decreased Na excretion leading to increase salt and water retention". This increases the plasma and extra cellular fluid causing increase in cardiac output - vitiation of *pitta* and *rakta* (due to *atikatu* and *lavanarasasevana*) .

Arteriosclerosis- a vascular disease where the arteries become damaged by the factors like hyperlipidemia, diabetes etc. Atherosclerosis- thickening and hardening of arteries caused by buildup of plaque in the inner lining of artery leading to both conditions the blood vessels lose their normal tone which vasoconstriction caused by high cholesterol, obesity etc. It increases the peripheral resistance and causes hypertension - vitiation of *kaphadosha* and *medadhatu*.

Hemodilution increases cardiac output and *vata* being *ruksha* (dry) and *sheeta* (cold) in nature may cause stiffness of vessels which increase peripheral vascular resistance - *vataushittrakta*.

Impaired hormonal action causes increase in vasoconstriction and increase the peripheral resistance - *pitta dushti* due to endocrinal defect. The above pathologies come under the concept of *anyadosha* avrana given by the acharyas.

Symptoms-Most hypertensive people do not show any specific symptoms. Sudden or severe hypertension produces symptoms like headache, giddiness, palpitation, excessive sweating, fatigue, exertional dyspnoea, insomnia, nosebleeds etc.

Long term hypertension may lead to cardiovascular events such as heart disease, stroke, kidney failure, disability, vision loss, metabolic syndrome(low HDL, high triglycerides etc) memory problems(ability to think remember and learn), premature mortality. Risk factors-High intake of salt and spicy food, Alcohol consumption, Use of tobacco, Low calcium and potassium intake.

Psychological stress vitiates *pitta*, *rakta* and *vata*. Intake of fatty food causing obesity and hyperlipidemia leading to atherosclerosis and physical inactivity. These are *kapha* and *medovardhak nidanas* .

Heredity is due to *beeja doshas* (genetic defect). Co-existing diseases like diabetes, kidney disease etc.

Most of the above nidanas are mentioned as *rakta dushtikara* and in *pittaja hridayaroga*.

### Management-

Ayurvedic management has two approach one is preventive (*swasthya rakshanam*) and other is curative (*vikarprashamanam*). In Ayurvedic medicine there are various *Shodhan* and *ShamanChikitsa* available for hypertension.<sup>[9]</sup> They are used popularly and effectively for the management of hypertension.

### Shodhan Chikitsa:

*Bahya-Snehan*, *Sarvang Swedan*, *Shirodhara*, *Vaman*, *Virechan*, *Basti*, *Nasya*, *Raktmokshan*, *Hrudbasti*, which is effectively used in hypertension.

*Bahya-Snehan-Sarvang* - *Sahachar tail*, *Dhanvanatar Tail*. *Sarvang Swedan*- *Avagaah Swed*, *Mrudu Bashpa Swed*.

Thin people *Shashtisalipindaswedan*. *Vaman*- *Madan Phalyog*. *Virechan*-*Erand Tail*+*Shunthi Kwath* daily Early Morning. *Basti*-*Dhanvantar Tail*, *Dhashmool*, *Yashti*, *Pimpali*, *Punaranava*, *Gokshur*, *Haritaki*, *Sarpagandha*, *Bramhi*, *Jatamansi Kwath* of all these Drugs + *Matsyadi Tail*.

*Nasya*- *Shaman Nasya-Bala Tail*, *Bramhi Ghrut*, *Anu Tail*. *Raktamokshan*-It reduces blood pressure by 10 to 20 mm of Hg.

### Shaman chikitsa<sup>[10]</sup>:

In *Charak Samhita*, *Acharya Charak* has explained *Hrudya Gana*, which is effective in Cardiac disorders, which plays important role for the management of hypertension.

### Stress Management<sup>[11]</sup>:

Hypertension is often worsened by the experience of continuous stress. Hence stress management plays an important role for the management of hypertension.

Meditation, *Yoga*, *Pranayama* is an important part of Ayurveda. These reduce the anxiety and stress factor.

### Meditation:

Meditation is the best therapy for relaxation which reduces anxiety and stress which allow the body to heal.

Daily 10-20 minutes of meditation twice a day for the healthy well being of life.

### Yoga and Pranayama:

Various *Yoga* and *Pranayama* gives benefit in stress management. It relaxes body mind and soul which is helpful in reduction of hypertension.

Avoid heavy exercise. Take adequate sleep. Sleep is important factor for reducing stress.

### Lifestyle Management:

*Dinacharya* (Daily Regimen), *Ritucharyapalan* (Seasonal Regimen), *Rasayana* (Rejuvenations Therapies), *AcharRasayana* (Ethics and code of conduct), which plays an important role for the management of hypertension.

That means healthy diet, exercise, avoids smoking and alcohol etc. will maintain blood pressure.

### Preventive measures-

*Nidana parivarjana* i.e. avoidance of etiological factors causing the disease(mainly *raktadushtijanya hetu*) is a first line treatment .

### Pathya-Apathya<sup>[12]</sup>

#### Chart-

	Pathya	Apathya
<b>Ahara</b>	Whole grainse grainse grains,moong,rason etc Intake of balanced diet. diet should be light, low fat diet and preferably vegetarian foods. Include following diet- Whole grains, fresh fruits and vegetables, fix meal timing <i>Mung, Jav, Madhu, Anar, Saindhav namak, Takra, Shunthi, Ardrak, Rason, Dalchini</i> etc. Fruits- Indian Gooseberry, Grape, Watermelon, Lemon	<i>Adhyashan</i> (over eating) <i>Viruddhashan</i> (unhealthy diet).Ecessive intake of salt, <i>amla rasa</i> ,spicy and oily food daily. Avoid <i>Mansahar</i> (Meat), Egg, excessive protein, oil, Avoid excessive spicy food and salt (Should not be <2000mg) in daily diet and avoid overeating. Avoid smoking and alcohol. Weight control. <i>Adhyashan, Viruddhashan, Pishtaana</i> . Excessive intake of <i>Lawan ras, Amla ras</i> .
<b>Vihara</b>	Daily Exercise, <i>Langhan</i> a) <i>YOGA: Balasana,Vajrasana, Pawanmuktasana</i> -wind removing pose, <i>Shavasana</i> . b) <i>Pranayama: Bhastrika, Kapalbhati, Anulom-Vilom and Nadishodhan, Bhramari, Shavasan</i> .	<i>Vegdharan, Aalasya, Divashyan</i> (Day Sleeping), <i>Sukhshayan</i> .

### Curative measures –

Many single drugs like *chhedya* (*bibhitaki, marich*), *raktaprasadak* (*sariva, manjistha*), *mutral* (*gokshura, punarnava*) and *Medhya* (*sarpagandha, shankhapushpi*) *dravyas*.

Compound drugs like *mukta bhasma, himsagar taila, brahmi rasayana* etc are used as a *shamana chikitsa* in hypertension.

*Shodhana chikitsa* (*panchakarma*) is a specialized therapy in which vitiated *doshas* are eliminated from the body.

Through *virechana* (medicated purgation), *basti* (medicated enema) and *siravedha* (bloodletting) hypertension can be controlled as it is *vata-pittapradhan raktapradoshajvikara*. *Shodhana* can be contraindicated in critical conditions.

### III. DISCUSSION

Modern science considers hypertension as a lifestyle disease but the ayurveda says it should be understood a *prasaravastha* of all the doshas along with *rakta* which circulates all over body and get lodged at a site of *kha-vaigunya*.

This decides the organ of impact of disease (brain, heart, kidney etc). With the help of recent advancements, diagnosis of the condition at the early stage has been made possible. So effective management can be offered at this stage itself to avoid risk of damage to vital organs.

Hypertension can be understood as a psycho-somatic hemodynamic condition where *vata Pradhan tridoshas* are vitiated affecting the *rasa raktadhatus* as *dhooshyas* with *sarvashareera* (body) and *manas* (mind) as *adhishtan*(site).

### IV. CONCLUSION

Leading a healthy and active life within the premises drawn in ayurveda is a key factor to avoid the hazards of hypertension. *Swasthyachatushka* is a unique holistic approach and plays an important role in development of body, its complexion, behaviour, immunity, health status, personal hygiene, *yoga*, naturopathy etc. This makes it easy to maintain the positive health by following the *pathyas* and avoiding the *apathyas*. Thus, Ayurveda has an upper edge in treating the hypertension with emphasis on its root cause and without any hazardous side-effects.

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