

## Complementary and alternative therapy for hypertension

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International Journal of Science and Research Archive, 2023, 08(01), 298–303

Publication history: Received on 02 December 2022; revised on 12 January 2023; accepted on 15 January 2023

Article DOI: <https://doi.org/10.30574/ijrsra.2023.8.1.0025>

### Abstract

Hypertension is pronounced as silent killer and it is a first in account of death due to non communicable diseases all over the world. The researcher aimed to configurate the complementary and alternative treatment modalities for hypertension in a view. With help of various research studies carried out recently, the present article researcher designed the article.

**Keywords:** Hypertension; Complementary; Alternative; Therapy

### 1. Introduction

Hypertension - the modern lifestyle disorder, which is on the top list causing morbidity and mortality among all other cardiovascular disorders. Hypertension also called as silent killer which cause asymptomatic damage to the vital organs. It is estimated that one in four adults in India has hypertension but only 12% among them have their blood pressure under control (WHO). Studies revealed that long queue, invasive & strange diagnostic procedures, mistrust towards allopathic management are factors of poor health seeking behavior which divert them from conventional medicine.

### 2. Definition

Complementary and alternative therapy is a group of diverse medical and health care system, practice and products that are not generally considered part of conventional medicine.

### 3. Alternative medical system

#### 3.1. Ayurveda

In Ayurveda, hypertension is known as *Raktagata Vata*. The preventive ayurvedha insisted to stop addictions like smoking, alcohol, reduce non-veg diet and eat more greens and vegetables, management of routine and be physically active and do regular yoga or some relaxing exercise. Planning a diet with fruits, whole grains, low-fat dairy, nuts, beans, celery, carrot, garlic, flaxseed, flaxseed oil, turnips, tulsi tea, green tea, ginger tea, cardamom tea, orange juice, tender coconut water, water melon, black plum, banana, almond, walnut, olive oil, etc.

Ayurvedic Cure is starts with *Ayurvedic Detox (Panchakarma) in ways* Virechana (therapeutic purgation, Vasti (medicated enemas), Shirodhara (oil treatment on the forehead). Sarpagandha, Allium sativum, Ashwagandha, Amalaki, Brahmi, Arjuna, Shankapushpi, Jatamansi, Gotu kola – Mandukaparni, Giloy – Guduchiare some effective Ayurvedic herbs used for the management of Hypertension. Ayurvedic preparation used for managing Hypertension is named as Arjunaristham, Sarpagandhachurna, Sarpagandhaghanavati, Arjunachurna, Brahmivati, Saraswataristham<sup>(1)</sup>.

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### 3.2. Siddha

Hypertension is named as pithaathikkam / kuruthiazhalnoi. According to siddha principles pitham is increased or pithanoi (disease) occurs due to excessive intake of sour, spicy and salty food, mental stress, excessive exposure to heat and sunlight, sleeplessness, uncontrolled anger etc. Hence, diet and lifestyle are the main influences to susceptibility of the disease. The management of hypertension with some medicinal herbs namely, Indian snake (Rauwolfiaserpentina), Garlic, the Bishops weed, Hibiscus, Radis, Pomegranate, Sacred basil, Cardamom. Some preparations in siddha Musumusukkai decoction, Malliyathi choornam, Thalishapathiri chooranam, Jeeraka choornam, Venthamarai choornam, Drakshathi chooranam, Elathy chooranam, Sarpagantha mathirai. Additionally, to this lifestyle changes and proper yoga is also advised<sup>(2)</sup>.

#### 3.2.1. Simple management of Hypertension in Siddha(3)

- Take fried cumin seeds powder 1 teaspoon twice a day with hot water.
- Coarse powder of coriander seeds with palm jaggery made as a decoction and can be taken in the morning.
- Take 5 drops of basil leave juice and lemon juice along with green tea.
- Take cooked Indian sorrel leaves.
- Take much amount of onion.
- Take 500 mg of powdered sarpagantha at morning.
- Soak cuscus grass in the water and then drink the cuscus-soaked water daily.
- Take lemon juice daily.
- Take 10 drops adhatoda leaves juice with 10 drops of honey.

### 3.3. Homeopathy

This therapy works on the concepts of practitioners' claim can cause the body to heal itself by use of highly diluted substances. It is extremely effective and trustworthy method. The medication named as Aconitum, Argentum Nitricum, Natrum Muriaticum are used for reduce stress, anxiety and fear. Natural Supplements like Co enzyme, Hawthorne, Omega-3, Vitamin E for remedying blood pressure concerns. Belladonna used in emergency treatment<sup>(4)</sup>.

### 3.4. Naturopathy

#### 3.4.1. Nutrition and dietetic

DASH diet is top most advisable one to lower the high blood pressure. DASH stances as Dietary Approaches to Stop Hypertension. People who were on the DASH diet lowered their blood pressure within 2 weeks which was proven in numerous researchers. This diet denotes.

- Eat more fruits, vegetables, whole-grain foods, fish, poultry and nut
- Curb high in saturated fat, cholesterol, low-fat dairy foods and trans fats
- Limit sodium, sweets, sugary drinks, and red meats

Other general diet recommendations which were had proven evidence of lowering blood pressure are as follows;

- Vegetarian and vegan diets
- High-potassium, high magnesium and low-sodium diet. Swiss chard, Spinach, & legumes are low-sodium, high-potassium sources of magnesium.
- Arugula is especially nitrate-rich; cilantro, rhubarb, butter leaf lettuce, and other leafy greens are also excellent sources of antioxidant.
- Hibiscus tea, green tea and black tea.
- 3 servings of whole grains.
- Lowering dietary sodium intake.
- Replacing animal protein with soy and other plant proteins.
- Limiting alcohol.
- Intake of Folic acid.
- Vitamin C diet<sup>(5)</sup>.

### 3.4.2. Fasting

Fasting is not for devotional practice. Our ancestors practice this for various benefits on health. It helps reduce blood pressure, cholesterol, weight and also control diabetes. Deliberately, it leads to electrolytes imbalance and arrhythmias. These require medical supervision and expertise guidance. Medically supervised water-only fasting seems to be a harmless and effective way to normalizing blood pressure and may assist in motivating health-promoting diet of introducing a low-fat, low-sodium, vegan diet<sup>(6)</sup>.

### 3.4.3. Hydrotherapy

Hydrotherapy has been proven to boost cardiovascular function. A therapeutic whirlpool bath is found as an effective technique to promote dilation of blood vessels and have positive impact on cardiovascular function. Similarly, it has a relaxing effect by calming the sympathetic nervous system. A study found that a significant reduction in human blood pressure (systolic and diastolic) for the duration of 30 min of head-out water immersion at 100°F. In 10 minutes of immersion in whirlpools made improve pulse and temperature along with increased feelings of well-being and decreased anxiety<sup>(7)</sup>.

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## 4. Mind – body techniques

### 4.1. Meditation

Meditation techniques seem like simple but it has effect to reduce blood pressure in both as monotherapy or in combination with pharmacotherapy. Transcendental meditation and mindfulness-based stress reduction may exhibit clinically significant reductions in systolic and diastolic blood pressure. Mindfulness meditation involves an attitude of openness, acceptance, and reflection rather than impulse and judgment toward the practitioner's current experiences, as well as the observation of thoughts, feelings, and the external world alike through calm, detached sensory awareness<sup>(8)</sup>.

### 4.2. Relaxation techniques

The most popular progressive muscle relaxation (PMR) is not found effective methods in reduction of high blood pressure. In other hand, stress-management therapies have had some rate in reducing Blood Pressure. Dr. Benson found relaxation response two times a day about 10 to 20 minutes will reduce the pressure in his studies. He recommended patient sit quietly with eyes closed, relax muscles, silently repeat a word, phrase, sound, or short prayer. While stray thoughts interfere (as they will), let them come and go and return to the same word, phrase, or sound<sup>(8)</sup>.

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## 5. Manipulative and body based methods

### 5.1. Yoga

Yoga and Pranayama practice regulate the blood circulation to all parts of the body and oxygenates the blood; Conscious breathing through Pranayama helps lower blood pressure and stabilizes the nervous system. The following are found most effective in controlling blood pressure. They are Savasana – santhiasanam, Makarasanam, Pranayama (vayutharanai)<sup>(2)</sup>.

### 5.2. Chiropractic

Chiropractic adjustments may help to a viable option for hypertension. As an alternative to loading our body with medicines burdened with side effects, we lower blood pressure without dangerous side effects by a simple chiropractic adjustment. This adjustment carried out for eight weeks and during the therapy time, the patients tested for not take any medication, in spite of having high pressure. It help people lower and sustain a lower blood pressure by adjusting the Atlas vertebra<sup>(9)</sup>.

### 5.3. Tai-chai & Qigong

Tai Chi and Qigong exercise is a Chinese exercise which have been practices and developed to optimize energy within the body, mind, and spirit for thousands of years. It require no special equipment and can be practiced almost anytime and anywhere, indoors or outdoors, and either in a group or alone. Moreover, TCQE are a low-cost exercise, and they can be easily implemented in the community. Tai Chi training could lower systolic BP from 172 to 159 mmHg for patients who had a 12-minute walk. The BP decrease is a result of either the mental or physical relaxation aspects of the

exercise is still in investigation. Breathing exercise guided by the BIM (Breathe with Interactive Music) device for 10 min daily is an effective non-pharmacological modality to reduce BP<sup>(10)</sup>.

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## **6. Energy therapies**

### **6.1. Massage therapy**

It is a safe, non-invasive, and soothing management for hypertension, principally people with frequent report of stress. If treated regularly, massage patients demonstrate long term improvement in stress levels and heart rate. Swedish Massage Therapy (SMT) is also called for its therapeutic relaxation effects. It is found effective in reduction of systolic and diastolic blood pressure in an experimental study. Myofascial trigger-point massage therapy has evidence that decreases in muscular tension and heart rate as a result of massage therapy<sup>(11)</sup>.

### **6.2. Hand mediated bio-field therapies**

Biofeedback is a technique which can use to learn to control some of our own body's functions, such as your heart rate. During biofeedback, client connected to electrical sensors that help to receive information about his/her body. This feedback helps make subtle changes, such as relaxing certain muscles, to achieve the results, such as reducing pain. In essence, biofeedback gives the ability to practice new ways to control body, often to improve a health condition or physical performance.

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## **7. Other therapies**

### **7.1. Aromatherapy**

Some believe taking essential oils can lower blood pressure that's consistently high. A blend of lavender, ylang-ylang, marjoram, and neroli essential oils is effective. The few essential oil, that are recommended for the treatment of high blood pressure as follows; Bergamot, Cedarwood, Citronella, Clary sage, Frankincense, Jasmine, Helichrysum, Lavender, Lemon, Lemon balm, Lime, Neroli, Rose, Sage, Sweet marjoram, and Yarrow. Valerian essential oil may have powerful calming effects on the nervous system, which can lower blood pressure, ease heart palpitations, ease insomnia, calm hyperactivity, reduce nervous tension<sup>(12)</sup>.

### **7.2. Music therapy**

Music therapy has been investigated in many studies to reduce the blood pressure in the hypertensive population and it is found effective in respond to mild and calm music<sup>(13)</sup>.

### **7.3. Humor and laughter**

A significant reduction in systolic blood pressure and heart rate can be achieved by laughter therapy. It increase in plasma concentration of serotonin and a significant reduction in salivary concentration of chromogranin A. Surveys of Short Form-8, Geriatric Depression Scale-15, and Vitality Index proved elimination of depression and enhancement of sociability and activity in older people<sup>(14)</sup>.

### **7.4. Animal guided therapy**

A study attempted to investigate whether repetitive visit by a therapy dog to nursing homes may have impact on systolic blood pressure and heart rate of the older residents' and they prove it. The attachment with the pet animals, the patient who were in loneliness and higher stress can control the blood pressure by the love, affection of the therapy dog. Petting can secrete the happy hormones in human<sup>(15)</sup>.

### **7.5. Horticulture**

There are many gardening beneficial in mental and physical health, and so it obviously lower pressure. Encourage the patients to make use of green space and to work in gardens, and should force authorities to increase open spaces and the number of trees, thus also aiding to counteract air pollution and climate change. Studies found that higher proportions of green space, especially bio diverse habitats, are associated with less depression, anxiety and stress. Therapeutic gardens/horticulture has been used in hospitals for thousands of years, and was strongly supported by Florence Nightingale. It combines physical activity with social interaction and exposure to nature and sunlight. Sunlight lowers blood pressure as well as increasing vitamin D levels in the summer, digging, raking and mowing are particularly calorie intense<sup>(16)</sup>.

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## 8. Prevention of hypertension

In family history with hypertension, it is time to reduce salt intake at an early stage. This helps prolong the onset of high blood pressure, Herbs like garlic, pepper, ginger, and lemon are helpful in controlling blood pressure, Herbal teas including hibiscus and green tea are proven to help control blood pressure as opposed to a cup of coffee, Dark chocolate with more than 70 percent of cocoa is beneficial for the heart, Needless to say, regular exercise including brisk walking which can improve the heart's health, Deep breathing which improves oxygen consumption across arteries, Reduce consumption of alcohol, Quit or cut down on smoking<sup>(17,18)</sup>.

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## 9. Conclusion

Hypertension is a systematic disease. As of It involves the various causative factors, the causes must be eliminated in the treatment plan. Most of the therapy insist in diet and stress management. The researcher recommended the scholars to conduct interventional studies to find effectiveness of various therapies.

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## Compliance with ethical standards

### *Acknowledgments*

The author like to acknowledge her guide.

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