



# Yogic Management of Essential Hypertension

*Rajesh Kumar Manik*

## **Introduction:**

Hypertension is one of many psychosomatic diseases and which has been the silent killer cause seemingly endless suffering, although initially it is relatively symptom free. In hypertension the threat of heart disease and blood pressure is so great that in some countries the very mention of these dreaded illnesses is enough to cause palpitations and a rise in blood pressure.

## **What is hypertension ?**

Hypertension is concerned with blood pressure, (blood pressure is the hydrostatic pressure exerted by blood on the walls of blood vessel i.e systolic pressure and diastolic pressure) when the left ventricle contracts and pushes blood into the aorta the pressure produced with in the arterial system is called systolic blood pressure, in adult it is about 120mmHg. when complete cardiac diastole occurs and the heart is resting following the ejection of blood the pressure produced with in the arteries is called diastolic blood pressure. The normal diastolic pressure is 80 mmHg. so the normal B.P is 120/80 mmHg. when the pressure occurs beyond 120/80 mmHg is called hypertension or high blood pressure.

## **Classifications of hypertension**

Clinically hypertension is divided into mainly 2 types :

1. Primary or essential hypertension of unknown causation
2. Secondary hypertension.

### **(1) Primary or essential hypertension**

This means hypertension of unknown cause. It is defined quite arbitrarily as being present when the causal arterial blood pressure persistently exceeds 150 / 90 or 160/ 100 mmHg.

WHO adopted the following definition of essential hypertension in 1963 which was proposed by Goldring and Classis in 1944.

“Essential hypertension is considered to be a clinical entity in which an unknown pressure mechanism initiates arteriolar vasoconstriction, elevated blood pressure and vascular squeal. Hypertension as such like arteriosclerotic changes is considered to be a sequelae appearing during the progressive development of the disease.”

### **(2) Secondary hypertension**

Hypertension resulting from other diseases accounts for 10 to 15% of all cases. It is a range from structural abnormality to hormonal disturbances. The mechanisms involved are also complex, involving different symptoms. It includes –

- 1) Kidney diseases



- 2) Endocrine disorders
- 3) Heart
- 4) Brain

### Classification of blood pressure

Category	Systolic	Diastolic
Normal	<130	<85
High normal	130-139	85-89
Hypertension		
Stage 1 (mild)	140-159	90-99
Stage 2 (moderate)	160-179	100-109
Stage 3 (severe)	180-209	110-119
Stage 4(very severe)	<sup>3</sup> 210	<sup>3</sup> 120

### Symptoms and sign

Most patients with hypertension have no specific symptoms referable to their blood pressure elevation and are identified only in the course of a physical examination. When symptoms do bring the patient to the physician, they fall into 3 categories. They are related to :

- The elevated pressure itself
- The hypertensive vascular disease
- The underlying disease in the case of secondary hypertension.

Though popularly considered a symptom of elevated arterial pressure, headache is characteristic of severe hypertension. Other complaints that may be related to elevated blood pressure include dizziness, palpitations, easy fatigability and impotence. Complaints referable to vascular disease include epistaxis, hematuria, burning of vision owing to retinal changes, episodes of weakness or dizziness, dyspnoea due to cardiac failure, pain due to dissection of the aorta.

### Concept of Hypertension in related to stress and personality

The basic principle of disease according to yoga is disharmony in Panchakosa.

The first body layer, the solid physical body visible to our eyes made up of a permutation and combination of hydrogen, oxygen, carbon, nitrogen, calcium and potassium is called *Annamaya Kosa* with physical body, the life energy *prâna* that makes each and every cell carry on its functions it called *Prânamaya Kosa*, the mind which carries on the functions of perceptions, memory and emotions is called *Manamaya Kosa*. The fourth aspect of our personality called *Vijnânamaya Kosa*. This is the judge who decides what is right and wrong based on life's experiences. In the fifth which is the subtlest body called *Ânandamaya Kosa*.

The problems of psychosomatic or stress with induced disorders, begins in *Manamaya Kosa* the long standing uncontrolled surges of likes and dislikes which cannot be mended by the directives from *Vijnânamaya Kosa*, percolates in to *Prânamaya Kosa*. The clear lack of *prâGa* now becomes disturbed and violent, resulting in irregularities in supplying of *prâGa* to different part of the *Annamaya Kosa*.

Four distinct stages in development of stress disorders can be recognized :

Physical phase

Psychosomatic phase

Somatic phase; and

Organic phase

In the psychic phase the person experiences most of the psychological changes as a result of excessive psychic trauma. Repeated and excessive psychological onslaughts from the



people around him either at home or at his place of work make his central nervous system overactive. He becomes very irritable and hyperactive and may develop mild tremors in his limbs. Sleep is disturbed and he becomes more anxious than before. He looks worried and anxious and he always thinks of some impending disasters. All these features can be subjectively measured by using the anxiety scales and objectively by estimating the acetylcholine content in the blood, which in such cases are usually much more than normal. Depending upon the type of personality and body constitution and upon the type of stress phenomenon, the person continues to undergo these changes for a period ranging from a few days to a few months.

If the same situation continues, the patient goes to phase two of his phenomenon, namely the psychosomatic phase. At this stage along with the above stated functional disturbances one can also notice certain generalized changes such as hypertension, tremors, palpitation etc.

In the third or a somatic phase one can notice an increased function of all the organs, especially of target organs. Thus, some features of a hyperthyroid state can be seen if the thyroid is the affected organ similarly, tachycardia and hyperchlorhydria can be observed if the heart and the stomach are target respectively. Thus in the stage gradually one can surmise which one of the organs is going to be affected in this process. As ready stated, the stress disease usually settles in an organ depending upon individual hereditary background and also on the ending upon the individuals hereditary background and also on the environmental factors.

The fourth phase is known as organic phase results in manifestation of various diseases like peptic ulcer, heart ailments, diabetes, bronchial asthma, arthritis etc.

### Effects of Yoga on Essential Hypertension

Yoga is an excellent means of treating high blood pressure. As essential hypertension begins in the mind, *yoga* is of prime value. However, weight loss is essential for *yogic* management to be used, and only dynamic exercises can reduce weight. Yoga can be practised side by side with weight-reducing exercises, as *yoga* alone can prevent vascular complications due to its massaging effect on the arteries. Asanas make the arteries and capillaries, which are influenced by the mind, elastic allowing more blood to flow into various areas, resulting in better relaxation of those tissues.

The dilating and constricting capacity of the arteries is restored. This capacity is lost as one grows older due to the process of atherosclerosis. Yoga works both on the nervous and the circulatory systems in essential hypertension. Once the nervous system is kept relaxed, the blood pressure is kept under control. The right approach would be to change the attitude of the patient in day-to-day life, and learn how to relax the neuro-physiological system (which happens in Yoga) and thus control the high blood pressure. Considering other exercises like jogging and cycling, the blood pressure initially rises and in the post exercises period reduces to below the level for the subject. This reduction is more evident in borderline hypertensive's than in normotensives. This only proves that the correct initial management of essential hypertension ought to be regular exercise. The alterations in such cases are thought to be due to changes in the sympathetic nervous system.

The sympathetic nervous system is always set on a higher level of charge in hypertensive. By the practice of *yoga* the tone of sympathetic discharge is brought down. Even in a normal person, blood pressure varies from the standing



to sitting to lying down positions and with the state of the nerves; it can therefore be seen how asanas alter blood pressure. Yoga is like sleep. It is a conscious sleep. In sleep the nervous system recoups itself; the same happens in *yoga*. There is yet another difference. In sleep the subconscious mind is still active and the nerves are still tense. In *yoga* every part of the nervous system is kept passive and the relaxation of the nerves are far better. The state of nerves in a hypertensive is one of overuse and decreased excitability. Excitability means the ability to transmit an impulse. In a hypertensive, the nerves

are exhausted and over-strained. As the excitability of the nerve is inversely proportional to the degree of activity, *yoga* restores the elasticity of the nervous system. A proper sleep pattern is essential for all, particularly for a HT patient. Hypertensive should go to sleep by 9.30 pm and rise by 5.30 am. The delicate biorhythm in the body which influences the neuro-endocrine circuit should never be upset. It is not only the number of hours one sleeps, but also when one sleeps that matters. If the biological clock in our body is upset, the damage is very difficult to reverse.

### Yoga protocol for Essential hypertension

Name of the Practices	Frequency	Duration	Total Time	
Asana	Pawanamuktasana series			
	1. Toes bending	3 weeks	10 rounds	15 mins
	2. Ankle Bending		each	
	3. Ankle Crank			
	4. Knee Bending			
	5. Purnatitali Asana.			
	6. Mustikabandhana			
	7. Wrist Bending			
	8. Elbow Bending			
	9. shoulder rotation			
	10. Neck rotation			
Standing Group	1. Tadasana	3 weeks	10 rounds each	10 mins
	2. Tiriyaka Tadasana			
	3. Katicakrasana			
Vajrasana Group	1. Vajrasana			
	2. Sasankasana	3 weeks	2.5 mins each	5 mins
Relaxation Group	Savasana	3 weeks	1 min	3 mins
Pranayama	1. Nadisodhana			
	2. Sitali			
	3. Bhramari	3 weeks	3.5 mins each	10 mins
Relaxation	Yoganidra	3 weeks	20 mins	20 mins
Mantra	Mahamrtyunjaya	3 weeks	27 rounds	10 mins



## Conclusion

According to *yogic* concept mind is the important component on the cause of hypertension. We have seen in psychosomatic disorder how mind plays an important role, which is the subtle aspect of body. So all *yogic* techniques are to control the mind and keep the body balanced and harmony. All Asana, Pranayama and other *yogic* practices supply

adequate amount of *prana* which brings the body to healthy condition. By tranquilizing the mind, one can promote balance between sympathetic and parasympathetic nervous system and useful for hypertension by restoring internal homeostasis.

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Rajesh Manik, C/o-Dr. Debasis Mishra, Department of E.T.C., VSSUT, Burla, Sambalpur.

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## Waves

*Sonril Mohanty*

The waves, dancing upon each other,  
Crying out aloud,  
To be let out onto the land and walk there and about.

But to be pulled back by the giant sea,  
To be trapped in one old house,  
Pains the dear, dear waves,  
And does feelings arouse,  
To travel across the continents,  
On rail, by road, through air,  
To be full of liberty and joy and power,  
And a free life of this earth to share.

The waves struggling to reach out to the clouds,  
Or to grab the soft, sandy beach,  
But the tormenting sea, thundering along,  
Drags the waves out of everything's reach.

The waves painfully sob,  
The waves, quite distinctly call out,  
The waves audibly plead out to us,  
The waves, literally shout,  
But we, the self-absorbed people,  
Too busy with all our OWN chores,  
Have no time, from a demanding schedule,  
To carefully glance at the shores,  
And pull the waves with all our strength,  
Out with our able hands,  
So that the waves, on a very fine day,  
May stride with confident steps over the land.

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Sonril Mohanty, Buxibazaar, Cuttack.