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## YOGASANA REDUCE THE BLOOD PRESSURE

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### **What is Blood Pressure??**

*Every living animal on the planet has blood pressure; there is no exception to this rule. The blood flows through the body with certain pressure, but if the pressure is higher than the normal range then it is a disease, which is called High Blood Pressure or sometimes the blood pressure drops below the normal range, then it is called Low Blood Pressure. For the blood to reach all parts of the body, it has certain pressure. This pressure is created because of contraction of heart. Sometimes for various reasons these blood pressure increases, for example fearful situation, anger, anxiety, excessive thinking, mental tensions or even for physical exertion. During these situations the heart comes under extra workload. But when the situation changes and comes to normal, so also the blood pressure. This temporary change in Blood Pressure is not disease but when this Blood pressure remains high always, it becomes a disease.*

### **Measuring BP**

The BP is not same everywhere; it is maximum close to heart from where the blood comes out and lowest where blood comes in to the heart. So always the BP is measured on the hands. There are 2 types of pressures, systolic and diastolic. Systolic Pressure is higher and indicates the contraction of heart and diastolic is when heart expands. The BP in healthy person is 120 mm / 80 mm, that is systolic 120mm and diastolic is 80mm. If the BP is greater or less by 15 mm to 20 mm than the normal range, it is considered as disease. There are various reasons for this high BP. Sometimes because of improper functioning of kidneys, heart related problems or diabetes BP can go high, so if these diseases are treated then BP also comes to normal. But in 80 % of the cases there is no apparent reason, then it is called "Essential Hypertension". The reason for this High BP is cannot be found on physical plane but can be traced to mental activities. High mental strain results in high BP. Modern medical science treats the BP but not the underlying reason that is mental strain. When you take medicines, the BP comes to normal for sometime but when the effect of the medicines is over, the BP again rises. So the best remedy is to remove all underlying reasons for mental stress and strain. Yoga certainly helps achieve the stress free mind. There is no solution except removing all the strains on mind and control the mental activities. Yogasanas (Yoga Positions and Postures), Pranayama, Meditation, definitely help achieve the mental peace.

**Yoga Positions or Postures:** Yoga Guru Patanjali has defined Yoga as 'Steady and

comfortable state of Body and Mind means Asana'. || Sthirsukham Asanam During any exercise the strain on muscles increases, the requirement for blood and oxygen increases but in Yogasanas the requirement goes down as there are no strains and every muscle is relaxed, the requirement for blood and oxygen goes down. This also reduces the strain on mind, the mind also becomes stable and focused. Also because of twists and stretched postures, the functioning of endocrine glands, digestive organs, heart and other organs improves. To achieve this even simple Yogasanas are helpful, one can easily practice these yogasanas and get the best for himself.

### **Pranayama -**

Pranayama is control of breath, breathing & blood circulation system, heart have close relation between them. Also these are dependant on mental activities. If mental strain increases the breathing rate is affected. In Pranayama the breathing is controlled and the rate is reduced, which reduces the strain on heart and also the rate. This increases the stability of mind and mental activities are also controlled. Even simple breathing exercises like

### **Deep Breathing :-**

Since we want to control the breathing after studying the process or system of respiration, it is better to try deep breathing as the first state in that direction. We do not control the process of quiet breathing. But the control is to be exercised while practicing deep breathing. For this, two things are to be considered chiefly: First, the movements concerned with

inhaling and exhaling are to be controlled in order to further slow down the breathing, at the same time the need of oxygen for the body is to be lessened, so that the speed of breathing can further, slowdown. The constitution of the body is such that if the need or use of oxygen is not reduced, it becomes difficult or rather impossible to control the process of breathing. The easy way to reduce the need of oxygen is to stop the movements of the body and try to relax all the muscles. Obviously, while practicing deep breathing, it is necessary to keep the body in the stable and relaxed position. And this is possible in any sitting position of meditation. However, Padmasana is the best Asana position. The other preferable Asanas in sitting position are Vajrasana and Swastikasana. But once the Asana is taken up, it should be blissfully stabilized until the study of breathing is over. Any strain anywhere will cause distraction in breathing. Therefore the Asana position should be stable and pleasant, while doing meditation. The hands should be in Dhyana Mudra. The straight upright position of the neck, the spine and closed eyes help in attaining concentration without making any movements. Relax the muscles and concentrate fully on breathing. This will slow down the breathing and bring it to a particular point of speed and will get stabilized at that point. This is the ideal state of smooth breathing. This is free from any control. No movement is seen on the chest. It is confined to the movement of the muscles of the abdomen and the lungs. After having such smooth breathing for some time, the movements of the abdomen and the lungs should be brought under the control of the mind, and the movement should further be slowed.

The practice of deep breathing begins after deliberately having inhaling and exhaling at ease. Initially one should practice prolonged inhaling and prolonged exhaling. The constant practice enables the person in having repetition of such prolonged inhaling and exhaling. After some time it becomes difficult to have more repetitions of prolonged inhaling and exhaling. At such point one should come to natural smooth breathing. After some rest, deep breathing should begin again. Practicing deep breathing in this way for some days, attempt should be made to bring time limit to the period of inhaling and exhaling. Initially one should practice prolonged inhaling and prolonged exhaling. The constant practice enables the person in having repetitions of such prolonged inhaling and exhaling. After some time it becomes difficult to have more repetitions of prolonged inhaling and exhaling.

At such point one should come to natural smooth breathing; after some rest, deep breathing should begin again. Practicing deep breathing in this way for some days, attempt should be made to bring time limit to the period of inhaling and exhaling. Initially equal time should be allotted for inhaling and exhaling. That is, the time given to inhaling, the same amount of time is given to exhaling. This is called deep breathing, with equal time and speed: "Samakal, Samagati, Deergh Shwasan". While practicing deep breathing, the numbers should be counted mentally. For instance, if inhaling takes four counts, the same period should be taken for exhaling. On such occasion normally it is noticed that exhaling completes at the second or the third point. So one should be alert regarding the speed of exhaling right from the beginning and try to maintain the balance. Of course after a few days' practice one successfully adapts this system. To maintain the time record, one can use the second system in a watch. The study of deep breathing with equal time and speed should continue for 10 to 15 minutes without pause. Apparently this system seems easy, but that is not so. One finds oneself out of breathing. But as said earlier constant practice helps in acquiring this system successfully.

After practicing deep breathing with equal time and speed successfully, one should start studying it by increasing the time for exhaling. If inhaling (Puraka) is in four seconds, then exhaling (Rechaka) shall take 5 to 6 seconds instead of four. This needs special efforts. When a person succeeds in doing inhaling and exhaling at the ratio of 1: 1 for 10 to 15 minutes, he should double the time for exhalation. The ideal ratio for inhaling-exhaling is 1: 2. Many times or Pranayama also the same ratio is stated. If the period for inhaling goes up to four seconds, then exhaling should be lengthened up to eight seconds. But both the operations should have the equal speed. That is, the speed of inhaling from the first second to the fourth one and the speed of exhaling from the first second to the eighth one should be the same. Of course it is not possible until one acquires control over the breathing system. One should practice deep breathing in the aforementioned way for 10 to 5 minutes at a stretch. In deep breathing one can further progress by increasing the period of inhaling and proportionately that of exhaling. That is the period of inhaling can be increased gradually from five to fifteen seconds and naturally that of exhaling from ten to thirty seconds. Observing this system carefully one can have as many repetitions as one can. In this system holding of

breath is not included and hence this operational system is written as 1:0:2. The practice of deep breathing not only strengthens the lungs but also greatly helps in increasing the concentration of the mind. Then, there is a tremendous increase in zeal in day-to-day work owing to the good breathing and nice blood circulations, the twin gifts of deep breathing. Besides one starts acquiring control over the process of breathing.

#### **Quiet Breathing :-**

All the inside activities of the body are due to the ever going process of combustion or oxidation in the body. And this process of combustion works with the help of the respiration and the blood circulation. Therefore, the moment there is internal or external movement of the body, it affects the process of blood circulation and respiration. As a result of this increasing the speed of the breathing provides the needed oxygen for the concerned movements. The speed of the breathing is increased in accompaniment to the speed of the movements of the body. Therefore it is noticed that the breathing is smooth or quiet, when there is no bodily movement or when it is in its normal or relaxed state. Such breathing is called Quiet Breathing. No control of any sort is kept on this breathing. Normally after taking up the final position of any Asana and then stabilizing, this position for some time, the quiet breathing of this type becomes natural. And in order to have this type of breathing one should relax the body as much as possible during the period of the stabilized Asana position.

help reduce the mental stresses and strains.

Also the Pranic force in the body is balanced with the regular practice of Pranayama, which restores the physical and mental balance. Some Pranayama techniques affect the functioning of nervous system, which again help restore the balance. Pranayama reduces the need of oxygen, so also the production of carbon dioxide. So the respiration rate reduces. In various Pranayama techniques

#### **Ujjayi Pranayam:-**

##### **Introduction :**

The word Ujjayi is divided as Ut + Jayi. However, it does not indicate declaration of any type of Jay i e winning. In this type of Pranayama, while performing Pooraka, due to the friction of air in the throat, a typical sound is created. (The sound is different from the sound emitted from the larynx) Hence, the Pranayama is termed as Ujjayi Pranayama. The meaning of the name has not been described anywhere. Instead of wasting time on finding out the

meaning, it is beneficial to view the description of the performance.

#### **To perform the Pranayama :**

While studying Nadi Shuddhi Pranayama, we have reviewed in detail how the Pooraka, Kumbhaka and Rechaka should be performed and the conditions or certain things to be remembered while performing Pranayama. All these are necessarily observed while performing this type of Pranayama too. Wherever any change is expected, that only is outlined without reiterating the earlier descriptions.

#### **Pooraka :**

Poorak performed in a typical manner is the characteristics of this type of Pranayama. The Pooraka is to be performed with both the nostrils. While performing Pooraka, a sound is generated when the air passes through the throat due to its friction. This sound should be consistent from the beginning of the Pooraka till its end. The chest should expand while performing the Pooraka. The stomach should not be contracted while expanding the chest. A control over the muscles of the stomach is to be exercised, so as to achieve only a little bit of contraction, focusing the entire attention on the expansion of the chest. However, attention should be paid to the fact that while expanding the chest, the stomach also is not expanded. The Pooraka should be done at a constant pace and the sound generated should be low and pleasing to the ear. There should not be any ups and downs in the sound. The sound should come out of the upper part of the throat and not from the upper or front part of the nose. If it is generated through these parts, it may prove to be harmful for the nervous system. While performing Pooraka, the facial muscles should not be stretched. The start and the ending of the Pooraka has to be natural. At the end of the Pooraka, one should not strive to inhale further air by using more strength

#### **.Kumbhaka :**

The Kumbhaka is to be performed as described earlier. After Pooraka, both the nostrils should be closed, Jalandhar Bandh should be fixed and the Kumbhaka should be performed. During Kumbhaka, the other two bandhas, Uddiyan Bandh and the Mul Bandh should be fixed. The Kumbhaka should be performed till such time as not to have any strain on the breathing system. Then the bandhas should be released and Rechaka should be performed. The units for which Kumbhaka is to be performed cannot be defined, but it should be performed with ease and capability. If the units for which the Kumbhaka is performed are less, then

accordingly the Pooraka and Rechaka can also be adjusted.

**Rechaka :**

In this type, Rechaka is to be performed by left nostril. After completing Kumbhaka, the three bandhas should be released and the left nostril should be opened. Then the chest should be contracted and the Rechaka performed at a constant pace. The pace should be gradual and the Rechaka should be performed without any hurry. During Rechaka too, glottis is to be pressed upwards and a sound should be generated as was stated in Pooraka. Rechaka should be double the time allotted for Pooraka. However, while performing such deep Rechaka, it should be limited to the time, so as to perform the subsequent Pooraka in a neat and controlled manner.

**Duration :**

The duration for which Pooraka, Kumbhaka and Rechaka are performed, will change according to the capability of the Sadhaka. Hence, the time or the units are not specified. The duration should be such as can be easily performed. There should be seven continuous cycles in one rotation of Pranayama and thereafter each week, three more cycles should be added. However, according to the capacity of each sadhaka, the duration or the number of cycles may be changed and as such no hard and fast rule can be laid down.

a balances the Pranic flow of energy in the body. Ujjayi also affects carotid sinus, which help reduce BP.

**Nadishodhan Pranayama:-**

**Introduction :**

This is one of the fundamental types of Pranayam. However, while describing the other eight types of Kumbhakas, this has not been included by the Hathapradeepikakars. But this has been described independently under a Nadishuddhi procedure known as " Samanu ". It is necessary to have Nadi Shuddhi before performing Pranayam. Nadi Shuddhi is done with two methods. " Samanu" is performed with Nadi Shuddhi Pranayam with Beej Mantra. Nirmanu is performed through the medium of Dhouti Kriyas.

Of course, the study of Pranayam must start with such basic procedures, so that it becomes easier to study the different types of Pranayams. With this in mind, we will study this Nadi Shuddhi Pranayam first.

It is necessary to sit in Padmasan for practice of Pranayam. The pose should be " Samkayshirogrevam" that means, the spinal cord must be absolutely erect, neck straight, gaze should be firmly centered in front and then the

eyes should be closed. Without affecting the straight posture of the cord, loosen the body, by reducing the strain in the muscles. Pay attention to the breath.

The mind should be concentrated on the air that gradually moves in and out of the nostrils. The tip of the nose will start feeling the touch of the air. The mind should be concentrated on that touch. Do not try to control the breathing, it should be completely natural. The breathing will become gradual on its own, then try to control it gradually. Pooraka and Rechaka should be prolonged and gradual. Try to count the time measure for Pooraka and Rechaka and try to have them in the ratio of 1 : 2. In that pose, continue deep breathing in the same ratio ( 1 : 2 ) Then gradually try deep Pooraka with only the left nostril. After the deep Pooraka, keeping both the nostrils closed, fix Jalandhar Bandh, Mul Bandh and Uddiyan Bandh. Kumbhaka should be of the same duration as that of Pooraka. Then release Uddiyan Bandh, Mul Bandh and Jalandhar Bandh in that order and keeping the left nostril closed, perform Rechaka with the right nostril for exactly double period. This completes half the duration of Nadi Shuddhi Pranayam. Immediately with the same right nostril, perform deep Pooraka. Keeping both the nostrils closed, perform Kumbhaka and fix all the three bandhas. When the Kumbhaka is of the same duration as that of Pooraka, releasing all the three bandhas, perform Rechaka gradually with the left nostril. This completes the rest half of one cycle of Nadi Shuddhi Pranayam. Immediately, start Pooraka with the left nostril and begin the second cycle of Pranayam. In the initial stages, the ratio of 1 : 1 : 2 ( i e Pooraka 1, Kumbhaka 1 and Rechaka 2 ) is useful. We have learnt deep breathing in the ratio 1 : 0 : 2 , hence here only 1 measure of Kumbhaka ( pranayam ) is introduced. The measure is to be gradually increased to the ideal ratio of 1 : 4 : 2.

**Duration :**

If one second is regarded as a unit, then the Pooraka should be for 4 units, Kumbhaka for 16 and Rechaka for 8. This means total 28 seconds for half a cycle. One complete rotation will take 56 seconds i e approximately 1 minute. However, this does not mean that the duration of a minute is fixed for Nadi Shuddhi Pranayam. It should be possible to go through a number of rotations at the rate of one per minute. When the rotations continue, the time measure can go on changing. Sometimes, the control over the breathing is lost, sometimes it is continued on its own. At times, it may turn out to be suffocating and the practice may have to be discontinued for

breathing in a natural manner. These are the hindrances in the study of Pranayama. The study of Pranayama means the ability to practice without encountering such hindrances. However, it is advisable to stop the practice when such hindrances occur. There should be no unnecessary strain on the breathing which proves harmful to the body. The duration for which the pranayama is to be practised is the time for which it can be practised easily without encountering any disturbances.

Considering the gamut of the syllabus of Yoga Parichay and the abilities of the Sadhaka, it is stated that he should be able to practise pranayam with ease for a period of ten minutes without facing any disturbances in the proportion of 1 : 1 : 2. The progress should be with this aim.

#### **Physical Effects :**

The physical effects of pranayam is a subject involving research, as it has not been researched thoroughly. There are not many sadhakas who study pranayam for a considerable period and hence there are no researchers too. However, this will be discussed in detail in the syllabus of Yoga Praveen. So we will discuss only the effects which are felt outwardly and are reflected visibly.

The first important point is, while practising pranayam in this manner, the Rechaka is completely performed due to the higher time period. Most of the air in the lungs is thrown out and hence, the Pooraka performed afterwards is also complete. While breathing normally, in any cycle of inhalation and exhalation, we take inside approximately 500 cc air and same amount is also exhaled. The study of Pranayama increases the capacity to 4500 cc and with continued studies it may reach up to 5500 cc.

When so much pure air is inhaled into the lungs each cycle, the purification of the blood should be more effective. The movement of the breathing organs is minimised with multifold effects. This process is the interaction between the oxygen and the carbon di oxide. When there is a Kumbhaka after complete Pooraka, the resultant air pressure makes the interaction process more effective. This type of complete breathing process purifies blood in an effective manner. When such purified blood is supplied to all the organs, their efficiency increases in turn increasing the total efficiency of the sadhaka.

This type of Pranayam creates positive and negative air pressures in the lungs and the stomach cavity. This also causes good effects on the internal organs. This is a good subject for further research. All the three processes in Pranayam i e Pooraka, Kumbhaka and Rechaka

have good effects on the nervous system and the brain. We have seen above that one primary cycle of Nadi Shuddhi Pranayam is of one minute duration. If we count the period of normal breathing, there are 16 to 18 cycles per minute. That means to live for a minute, we have to undertake 16 to 18 cycles. With Pranayam, we live for a minute with only one cycle. This means that we live with minimum efforts. If pranayam is practised continuously, it can be said that we will be in the habit to live with minimum efforts thereby increasing our life span.

#### **Precaution :**

The effect of the strain and pressure caused by the asanas reaches the internal organs only after considerable practice. However, pranayam affects the internal organs directly. To face the effects, the internal organs should have the required capability. This capability is generated through the right practice of asanas. Hence, it is advisable to practise pranayam only after a proper study of asanas for a considerable time period. Also, certain points as under should be observed carefully :

1. The period of Pooraka should be half of that for Rechaka.
2. Pooraka and Rechaka should be of equal speed. This means the rate of the air which was at the beginning of Pooraka or Rechaka should be constant till the end. However, during Rechaka, it should be half of that in Pooraka.
3. Pooraka to be performed after Rechaka should be controlled. The air should not be breathed in suddenly. If it is observed that it is breathed in suddenly, then it is necessary to reduce the units of the Rechaka and Pooraka.

Even if Pranayam is described in such detail over here, to study it practically, the presence of the Guru is a must. When the practice is started, there are different types of difficulties or doubts. The types differ as per the health of each sadhaka. Only the Guru can solve such problems. Also, the reasons why the different problems arise should be researched so as to eliminate them. Such a guidance is beyond the purview of the book and can be given properly only by the guru.

controls the Pranic flow. But people suffering from BP should not practice Kumbhaka (retention of breath) but only inhalation and exhalation.

#### **Meditation**

Meditation is study of concentration. One should try to keep mind focused on one point or object, this concentration of mind has very effects on body and mind. Lot of research is going on around the world about the meditation and its

effects. Some of the observed facts are listed below.

1. Balance is achieved in the functioning of nervous system.
2. Complete body is relaxed, which gives enough rest to the muscles and various organs.
3. Concentration, grasping power, memory increases and so also the will power.
4. One can handle stressful situations in efficient ways.
5. Balance is achieved in the functioning of Body Mind complex.
6. Brain functioning is improved.

The basic meditations help achieve these results, it includes Omkar Meditation, Omkar chanting, Prana Meditation. Especially for High BP patients, Omkar chanting for 15 minutes everyday shows miraculous results.

**List of Poses or Asana in Sitting Position only to see.**

1. Swastikasana (Auspicious pose)
2. Padmasana (Lotus pose)
3. Padmasana (Baddha) (Tied lotus)
4. Padmasana (Utthit) (Lifted lotus)
5. Parvatasana (Mountain pose)
6. Akarna Dhanurasana (Type 1) (Bow pose in sitting)
7. Akarna Dhanurasana (Type 2) (Bow pose in sitting)
8. Padmasana Yogamudra (Type 1)
9. Padmasana Yogamudra (Type 2)
10. Vakrasana (Type 1) (Twisted pose)
11. Vakrasana (Type 2) (Twisted pose)
12. Ardhamatsyendrasana (Half Spinal Twist)
13. Sharanagata Mudra (Forward Bending)
14. Vajrasana (Thunderbolt pose)
15. Vajrasana Yogamudra (Type 1)
16. Vajrasana Yogamudra (Type 2)
17. Paschimottanasana (Half) (Half Forward Bend)
18. Paschimottanasana (Full) (Forward Bend)
19. Januhastasana
20. Ekpadsahajhastha Bhujangasana (Cobra pose)
21. Dwipadsahajhastha Bhujangasana (Cobra pose)

**Advice:**

Be sure to get advice from a trained teacher. When you have a backache, you should not do any yoga postures without expert guidance. This is especially true if your pain comes from a slipped disk.