

Yoga and high blood pressure

~How yoga can work for hypertension~

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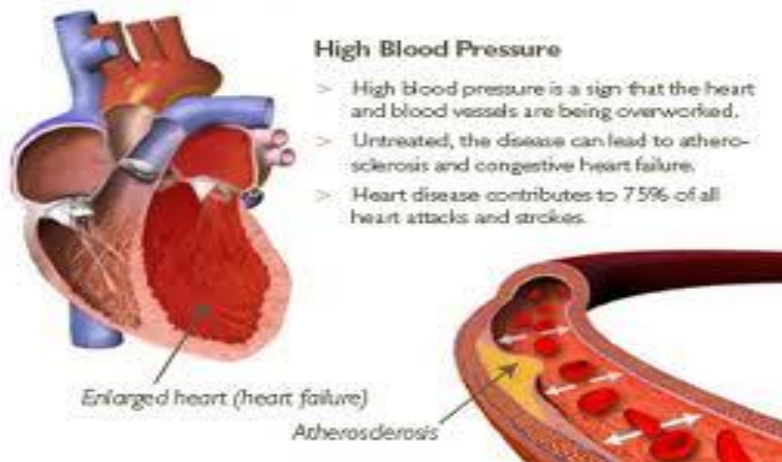
Minami kamiyama



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1) Introduction (what is high blood pressure)



High blood pressure, also known as HBP or hypertension, is a widely misunderstood medical condition. Some people think that those with hypertension are tense, nervous or hyperactive, but hypertension has nothing to do with personality traits. The truth is, you can be a calm, relaxed person and still have HBP.

Let's look at the facts about blood pressure so you can better understand how your body works and why it is smart to start protecting yourself now, no matter what your blood pressure numbers are.

By keeping your blood pressure in the healthy range, you are:

- Reducing your risk of the walls of your blood vessels walls becoming overstretched and injured
- Reducing your risk of having a heart attack or stroke; and developing heart failure, kidney failure and peripheral vascular disease.
- Protecting your entire body so that your tissue receives regular supplies of blood that is rich in the oxygen it needs

Blood pressure measures the force pushing outwards on your arterial walls.

The organs in your body need oxygen to survive. Oxygen is carried through the body by the blood. When the heart beats, it creates pressure that pushes blood through a

network of tube-shaped arteries and veins, also known as blood vessels and capillaries. The pressure --- blood pressure --- is the result of two forces. The first force occurs as blood pumps out of the heart and into the arteries that are part of the circulatory system. The second force is created as the heart rests between heart beats. (These two forces are each represented by numbers in a blood pressure reading.)

The problems from too much force.

Healthy arteries are made of muscle and a semi-flexible tissue that stretches like elastic when the heart pumps blood through them. The more forcefully that blood pumps, the more the arteries stretch to allow blood to easily flow. Over time, if the force of the blood flow is often high, the tissue that makes up the walls of arteries gets stretched beyond its healthy limit. This creates problems in several ways.

- **Vascular weaknesses**

First, the overstretching creates weak places in the blood vessels, making them more prone to rupture. Problems such as strokes and aneurysms are caused by ruptures in the blood vessels.

- **Vascular scarring**

Second, the overstretching can cause tiny tears in the blood vessels that leave scar tissue on the walls of arteries and veins. These tears and the scar tissue are like nets, and can catch debris such as cholesterol, plaque or blood cells traveling in the bloodstream.

- **Increased risk of blood clots**

Trapped blood can form clots that can narrow (and sometimes block) the arteries. These clots sometimes break off and block vessels and the blood supply to different parts of the body. When this happens, heart attacks or strokes are often the result.

- **Increased plaque build-up**

The same principle applies to our blood flow. Cholesterol and plaque build-up in the arteries cause the blood flow to become limited or even cut off altogether. As this happens, pressure is increased on the rest of the system, forcing the heart to work harder to deliver blood to your body. Additionally, if pieces of plaque break off and travel to other parts of the body, or if the build-up completely blocks the vessel, then heart attacks and strokes occur.

- **Tissue and organ damage from narrowed and blocked arteries**

Ultimately, the arteries on the other side of the blockage do not receive enough freshly oxygenated blood, which results in tissue damage.

- **Increased workload on the circulatory system**

Think of it this way: In a home where several faucets are open and running, the water pressure flowing out of any one faucet is lower. But when pipes get clogged and therefore narrow, the pressure is much greater. And if all the household water is flowing through only one faucet, the pressure is higher still.

When the arteries are not as elastic because of the build-up of cholesterol or plaque or because of scarring, the heart pumps harder to get blood into the arteries. Over time, this increased work can result in damage to the heart itself. The muscles and valves in the heart can become damaged and heart failure can result.

Damage to the vessels that supply blood to your kidneys and brain may negatively affect these organs.

You may not feel that anything is wrong, but high blood pressure can permanently damage your heart, brain, eyes and kidneys before you feel anything. High blood pressure can often lead to heart attack and heart failure, stroke, kidney failure, and other health consequences.

2) Different types of high blood pressure

What is Pulmonary Hypertension?

The human body has two circulation systems:

- Systemic (delivering oxygen throughout the body)
- Pulmonary (receiving oxygen from the lungs)

Typically "blood pressure," "high blood pressure" and "hypertension" refer to the systemic pressure throughout your body. Systemic blood pressure measures the

pressure in your brachial artery (found in your arm) while the left side of the heart pumps oxygen-rich blood from the lungs into the rest of your body. It's measured with a traditional arm cuff.

Pulmonary hypertension (or PHT) is high blood pressure that occurs in the arteries in the lungs. It is a different measurement altogether from systemic blood pressure. It reflects the pressure the heart must exert to pump blood from the heart through the arteries of the lungs.

Systemic and pulmonary circulation: two separate flow patterns

The blood pressure measured on your arm isn't directly measuring anything related to the blood flow between your heart and lungs. That's a separate "loop" in the circulatory system. Pulmonary blood pressure focuses on the pressure of blood flow in your lungs. The right side of the heart receives the oxygen-emptied blood as it returns from the body and pumps this blood from the right side of the heart into the blood vessels of the lungs, where the blood gathers oxygen again. From there, it leaves the lungs and enters the left side of the heart to carry the oxygen-rich blood to the body again.

The numbers in pulmonary hypertension

Pulmonary blood pressure is normally a lot lower than systemic blood pressure. Normal pulmonary-artery pressure is about 14 mm Hg at rest. If the pressure in the pulmonary artery is greater than 25 mm Hg at rest and 30 mm Hg during exercise, it is abnormally high and is called pulmonary hypertension.

The problem of pulmonary hypertension

The blood vessels that supply the lungs can also constrict and their walls may thicken, so they can't carry as much blood. As with a kinked garden hose, pressure builds up and backs up. The heart works harder, trying to force the blood through. If the pressure is high enough, eventually the heart can't keep up, and less blood can circulate through the lungs to pick up oxygen.

Symptoms

Patients with PHT may experience:

- Fatigue
- Dizziness
- Shortness of breath

Symptoms and diagnosis of primary pulmonary hypertension (PPH) can be tricky.

Early on, you may think you're simply "out of shape" because general fatigue and tiredness are often the first symptoms. It is more noticeable if you experience breathing difficulty, dizziness or even fainting spells that some patients report. As the condition progresses, you may begin to notice swelling in the ankles or legs, bluish discoloration of the lips and skin, and chest pains. These later symptoms indicate your body is not circulating enough oxygen-filled blood from your lungs which is a definite health problem that needs treatment.

Although primary pulmonary hypertension (PPH) is rare, diagnosing and treating PPH is often delayed and can be very complex. Because these symptoms increase gradually, patients may not recognize them. Furthermore, most people do not seek medical help if they mistakenly believe they are simply "out of shape."

With PPH, some patients will have many symptoms while other patients may only have a few clues to the problem. The medical evaluation requires an in-depth understanding of lung and circulation problems because these same symptoms can also signal other types of health problems. For these reasons, patients with symptoms that suggest pulmonary hypertension should be evaluated at a medical center with expertise and experience in pulmonary hypertension.

Primary pulmonary hypertension

When not accompanied by underlying heart and lung disease or other illnesses, it is called primary pulmonary hypertension. This condition is relatively rare, with only **about 500 to 1,000 new cases diagnosed every year** in the United States. The **greatest number of cases is reported in women between ages 21 and 40**. Several cases of primary pulmonary hypertension have been linked to the use of the appetite suppressants fenfluramine and dexfenfluramine.

Secondary pulmonary hypertension

If a pre-existing disease triggered the PHT, doctors call it secondary PHT. That's because it's secondary to another problem, such as a heart or lung disorder like:

- [Congenital heart defects](#)

It's important to repair congenital heart problems (when possible) before permanent pulmonary hypertensive changes develop.

- **Intracardiac left-to-right shunts**

A ventricular or atrial septal defect or a hole in the wall between the two ventricles or atria can cause too much blood flow through the lungs. This situation is sometimes called Eisenmenger complex.

- [Heart valve conditions](#)

These include mitral stenosis, a narrowing of the mitral valve. Fixing the valve usually reverses the PHT.

How is pulmonary hypertension treated?

Once PHT has been diagnosed, medical therapy is often needed. Regularly follow up with a cardiologist or pulmonologist trained in caring for patients with PHT.

For those diagnosed with secondary PHT

As long as the underlying disease exists, it will keep causing PHT. So, for example, if you have a congenital heart defect causing your pulmonary hypertension, your PHT will not go away unless your congenital defect can be fixed.

However, once you have PHT, even if the initial defect is cured, it may not make the pulmonary hypertension go away, especially if you have had PHT for quite some time. PHT is a serious illness and it will usually require separate treatment, which may include oxygen, agents to help your heart pump better, diuretics, anticoagulants (blood thinners) and medications to lower PHT. Sometimes lung transplants also are performed.

If you've begun medical treatment for PHT, follow your medical treatment plan very strictly. Never assume you can alter the dose or frequency of any of your medicines without your physician's approval. Not following your healthcare team's instructions can be extremely dangerous. Medical therapy has significantly improved the outlook for most PHT patients, but it doesn't "cure" PHT.

Special precautions for those with PHT

You can have a diagnosis of PHT and live an active, fulfilling life. Still, you should consider certain measures and precautions. PHT is a lifelong illness that can be made worse by a variety of factors, such as:

- **Smoking**

- **Going to high altitude**

Avoid conditions where the ambient oxygen concentration may be decreased, such as high altitude and travel in airplane cabins that are not pressurized. Supplemental oxygen is often recommended during air travel.

- **Engaging in exercise and physically demanding activities**

Seek your healthcare professional's advice about physical activity. If you have PHT, you should be as active as physically possible. Physical activity can be associated with marked increases in pulmonary artery pressure. Thus, don't do activities that produce dangerous symptoms, such as chest pain or dizziness. A supervised cardiopulmonary rehabilitation program may help promote appropriate physical conditioning. Before starting an exercise program, ask your physician what activities are safe and healthy for you. Many patients with PHT report having "good and bad days." If you need to rest, do so.

- **Taking medications**

Most medications for colds, flus and other medical conditions are safe for people with PHT. Still, caution should be taken both in prescription medications and over-the-counter drugs. Any anesthetics or sedatives can be very hazardous. Ask your physician which medications are safe.

- **Pregnancy and childbirth**

Pregnancy and delivery produce dramatic changes that can seriously endanger your life. Thus, avoid pregnancy by practicing a safe and effective method of contraception. Avoid oral contraceptives as they can aggravate PHT. The most effective form of contraception for people with significant PHT is surgical sterilization.

- **Contracting respiratory tract infections, pneumonia and the flu**

Antibiotic therapy is recommended for significant respiratory tract infections. Those with PHT should also consider getting a pneumococcal pneumonia vaccine and yearly flu vaccines since these illnesses can be very serious with PHT patients.

3) Symptom

Many people have high blood pressure, also called hypertension, for years without knowing it. Most of the time, there are no symptoms, but when high blood pressure goes untreated, it damages arteries and vital organs throughout the body. That's why high blood pressure is often called the "silent killer."

But still there are some symptoms.

The myth of symptoms

There's a common misconception that people with high blood pressure, also called hypertension, will experience symptoms such as nervousness, sweating, difficulty sleeping or facial flushing. The truth is that HBP is largely a symptomless condition. If you ignore your blood pressure because you think symptoms will alert you to the problem, you are taking a dangerous chance with your life. Everybody needs to know their blood pressure numbers, and everyone needs to prevent high blood pressure from developing.

The myth of symptomatic headaches

The best evidence indicates that high blood pressure does not cause headaches except perhaps in the case of hypertensive crisis (systolic/top number higher than 180 OR diastolic/bottom number higher than 110).

In the early 1900s, it was assumed that headaches were more common among people with high blood pressure. However, research into the subject doesn't support this view. According to one study, people with high blood pressure seem to have significantly fewer headaches than the general population.

In a study published in the journal *Neurology*, people with higher systolic blood pressure (the top number in blood pressure readings) were up to 40 percent *less* likely to have headaches compared to those with healthier blood pressure readings. The researchers also looked at another measurement called the pulse pressure, which is the change in blood pressure when the heart contracts. Pulse pressure is calculated by subtracting the bottom number (diastolic reading) from the top number (systolic reading). Those with higher pulse pressure had up to 50 percent fewer headaches. The researchers think that the higher the pulse pressure, the stiffer the blood vessels. The stiffer the blood vessel, the less likely the nerve endings are working properly. If the nerve endings aren't functioning correctly, the less likely a person will feel pain.

Therefore, headaches or the lack of headaches are not reliable indicators of your blood pressure. Instead, work with your doctor and know your numbers.

The myth of symptomatic nosebleeds

Except with hypertensive crisis, nosebleeds are not a reliable indicator for HBP. In one study, 17 percent of people treated for high blood pressure emergencies at the hospital had nosebleeds. However, 83 percent reported no such symptom. Although it's also been noted that some people in the early stages of high blood pressure may have more nosebleeds than usual, there are other possible explanations. If your nosebleeds are frequent (more than once a week) or if they are heavy or hard to stop, you should talk to your healthcare professional.

Keep in mind that nosebleeds can be caused by a variety of factors, with the most common one being dry air. The lining of the nose contains many tiny blood vessels that can bleed easily. In a hot climate like the desert Southwest or with heated indoor air, the nasal membranes can dry out and make the nose more susceptible to bleeding. Other causes include vigorously blowing your nose; medical conditions like allergies, colds, sinusitis or a deviated septum; and side effects from some anticoagulant drugs like warfarin (Coumadin®) or aspirin.

Other inconclusively related symptoms

You should not try to evaluate your symptoms in an attempt to self-diagnose high blood pressure. Diagnosis should only be made by a healthcare professional. A variety of symptoms may be indirectly related to HBP but are not always caused by HBP, such as:

- **Blood spots in the eyes**

Yes, blood spots in the eyes, are more common in people with diabetes or high blood pressure, but neither condition causes the blood spots. Floaters in the eyes are not related to high blood pressure. However, an ophthalmologist may be able to detect damage to the optic nerve caused by untreated HBP.

- **Facial flushing**

facial flushing occurs when blood vessels in the face dilate. The red, burning face can occur unpredictably or in response to certain triggers such as sun exposure, cold weather, spicy foods, wind, hot drinks and skin-care products. Facial flushing can also occur with emotional stress, exposure to heat or hot water, alcohol consumption and exercise, all of which can raise blood pressure temporarily. While facial flushing may occur while your blood pressure is higher than usual, HBP is not the cause of facial flushing.

- **Dizziness**

Although it is not caused by HBP, dizziness can be a side effect of some high

blood pressure medications. Nonetheless, dizziness should not be ignored, especially if you notice a sudden onset. Sudden dizziness, loss of balance or coordination and trouble walking are all warning signs of a stroke. HBP is one of the leading risk factors for stroke.

As mentioned above, only when blood pressure readings soar to dangerously high levels (systolic of 180 or higher OR diastolic of 110 or higher) may obvious symptoms occur. Blood pressure this high is known as hypertensive crisis, and emergency medical treatment is needed.

In addition to extreme readings, a person in hypertensive crisis may experience

- Severe headaches
- Severe anxiety
- Shortness of breath
- Nosebleeds

4) How HBP is diagnosed

Although the only way to tell if you have HBP is to have it checked, the test can be done easily, quickly and painlessly. Upon diagnosis by a healthcare professional, HBP can usually be managed through lifestyle changes and, when prescribed, medication.

Home Monitoring & Recording

Because blood pressure can fluctuate, **home monitoring** and **recording** of blood pressure readings can provide your healthcare provider with valuable information to determine whether you really have high blood pressure and, if you do, whether your **treatment** plan is working.

5) Complication

I would say there is a complication to manage this HBP because so many factors are effect our medical health.

Risk factors for developing high blood pressure, also called hypertension:

- **Family history**

Height, hair and eye color runs in families --- so can high blood pressure. If your parents or close blood relatives have had HBP, you are more likely to develop it,

too. You might also pass that risk factor on to your children. That's why it's important for children as well as adults to have regular blood pressure checks. You can't control heredity, but you can take steps to live a healthy life and lower your other risk factors. Lifestyle choices have allowed many people with a strong family history of HBP to avoid it themselves. Learn about lifestyle changes you can make to prevent HBP.

- **Advanced age**

As we age, we all develop higher risk for high blood pressure and cardiovascular disease. Blood vessels lose flexibility with age which can contribute to increasing pressure throughout the system.

- **Gender-related risk patterns**

A higher percentage of men than women have HBP until 45 years of age. From ages 45 to 54 and 55 to 64, the percentages of men and women with HBP are similar. After that, a much higher percentage of women have HBP than men.

- **Lack of physical activity**

Physical activity is good for your heart and circulatory system. An inactive lifestyle increases the chance of high blood pressure, heart disease, blood vessel disease and stroke. Inactivity also makes it easier to become overweight or obese. Give yourself the gift of improved health and lower blood pressure with regular, moderate-to-vigorous physical activity.

- **Poor diet, especially one that includes too much salt**

To care for our bodies, we all need good nutrition from a variety of food sources. A diet that's high in calories, fats and sugars and low in essential nutrients contributes directly to poor health as well as to obesity. In addition, there are some problems that can happen from eating too much salt. Some people are "salt sensitive," meaning a high-salt (sodium) diet raises their high blood pressure. Salt keeps excess fluid in the body that can add to the burden on the heart. While too much salt can be dangerous, healthy food choices can actually lower blood pressure. Learn about enjoying a heart-healthy diet.

- **Overweight and obesity**

Being overweight increases your chances of developing high blood pressure. A body mass index between 25 and 30 is considered overweight. A body mass index over 30 is considered obese. Over two-thirds (67.3%) of U.S. adults are overweight or obese (over 149 million adults). Nearly one in three (31.8%) U.S.

children (23,900,000) ages 2 to 19 are overweight or obese. Excess weight increases the strain on the heart, raises blood cholesterol and triglyceride levels, and lowers HDL (good) cholesterol levels. It can also make diabetes more likely to develop. Losing as little as 10 to 20 pounds can help lower your blood pressure and your heart disease risk. To successfully and healthfully lose weight—and keep it off—most people need to subtract about 500 calories per day from their diet to lose about 1 pound per week. Calculate your body mass index and learn how to manage your weight.

- **Drinking too much alcohol**

Heavy and regular use of alcohol can increase blood pressure dramatically. It can also cause heart failure, lead to stroke and produce irregular heartbeats. Too much alcohol can contribute to high triglycerides, cancer and other diseases, obesity, alcoholism, suicide and accidents. If you drink alcohol, do so in moderation. If you drink, limit your alcohol consumption to no more than two drinks per day for men and one drink per day for women. One drink equals a 12-ounce beer, a 4-ounce glass of wine, 1.5 ounces of 80-proof liquor, or one ounce of hard liquor (100-proof). If you drink in excess, find out about curbing alcohol intake.

Possible contributing factors

There is some connection between blood pressure and these factors but science has not proven that they actually cause high blood pressure.

Stress

Being in a stressful situation can temporarily increase your blood pressure, but science has not proven that stress causes high blood pressure. Some scientists have noted a relationship between coronary heart disease risk and stress in a person's life, health behaviors and socioeconomic status. How you deal with stress may affect other, established risk factors for high blood pressure or heart disease. For example, people under stress may overeat or eat a less healthy diet, put off physical activity, drink, smoke or misuse drugs. Find ways to reduce stress.

Smoking and second-hand smoke

Smoking temporarily raises blood pressure and increases your risk of damaged arteries. The use of tobacco can be devastating to your health, especially if you're already at risk for high blood pressure. Secondhand smoke --- exposure to other people's smoke --- increases the risk of heart disease for nonsmokers. Learn how to kick the habit.

Sleep Apnea

Some 12 million Americans have sleep apnea, according to National Heart, Lung, and Blood Institute estimates. Sleep Apnea is a potentially life-threatening sleep disorder in which tissues in the throat collapse and block the airway. The brain forces the sleeper awake enough to cough or gulp air and open the trachea up again. But then, the whole cycle starts all over again. Pauses in breathing can contribute to severe fatigue during the day, increase your safety risks, and make it difficult to perform tasks that require alertness. Sleep apnea is also a risk factor for such medical problems as high blood pressure, heart failure, diabetes and stroke. Learn more about sleep apnea.

Secondary hypertension: HBP caused by a pre-existing problem

In 5-10 percent of high blood pressure cases, the HBP is caused by a pre-existing problem. This type of HBP is called secondary hypertension because another problem was present first.

Factors that may lead to secondary hypertension include:

Kidney abnormality, including a tumor on the adrenal gland, which is located on top of the kidneys

A structural abnormality of the aorta (the large blood vessel leaving the heart) that has existed since birth

Narrowing of certain arteries

The good news is that these pre-existing problems can usually be fixed. For example, doctors can repair a narrowed artery that supplies blood to a kidney. Once the root cause of secondary hypertension is corrected, blood pressure typically returns to normal. For those with HBP, a physical exam and some tests

can help your doctor determine whether your high blood pressure is primary or secondary hypertension.

6) Management and Treatment with Yoga

There are eight main ways you can control your blood pressure.

They are:

- Eat a better diet, which may include reducing salt
- Enjoy regular physical activity
- Maintain a healthy weight
- Manage stress
- Avoid tobacco smoke
- Comply with medication prescriptions
- If you drink, limit alcohol
- Understand hot tub safety

Yoga can approach activity part and managing stress. Even if we follows yogic way of Diet ,tobacco, alcohol, and eating too much salt can be naturally become better.

•ASANA

Generally speaking, asanas that do not invert the body are beneficial for people with high blood pressure.

Calming restorative yoga asanas are particularly useful for reducing stress and lowering blood pressure naturally, as are intensive stretching poses like leg stretches and hip openers.

Here with the program for the beginners.

- Ankle stretching breathing(improves lung capacity, Increases nerve strength)9times
- Hand in and out stretching(Improves lung capacity)9times
- Hands stretching breathing 9times
- Tiger Breathing 9-12times
- Bujangasana (Cobra) breathing (Keeps the abdomen strong and strengthen th spine) 6-9 times

- Shalabasana (Locust)Breathing (alternative in the leg) helpful for circulation of the spinal cord and legs) 6-9times
- Urdhva prasarita padasana breathing(leg raising) alternative-it helps heart and head circulation 9 times each side
- Setubandasana Breathing-good for weak back muscles 9times
- Pavanamuktasana kriya breathing-massages the spine and back muscles 6-9times

And gradually can be introduced some asana as well.

Be Favor yoga asanas that put the spine in a horizontal position, which allows the heart to slow down, as it takes less effort to pump the blood to the brain. Sitting positions and lying asanas like Baddhakonasana, Virasana, and Upavista Konasana are very useful for people with high blood pressure.

Mild inversions can be introduced gradually: supported Setu Bandha asana (Bridge Pose) done. Setu Bandha asana is energizing for the kidneys and hence soothes the system, lowering high blood pressure. While the head is slightly below the heart in this pose, supported Setu Bhandha asana is generally considered to be acceptable for students with high blood pressure. Similarly, Adho Mukha Svanasana (Downward-Facing Dog) is a mildly inverted posture, which is considered acceptable; it lifts the heart only a little above the head and does not elevate the legs, increasing pressure in the head very little.

- Vrikshasana series (tadasana,prvatasana,vrikshasana,ardha kati chakrasana,ardha chakrasana)
- Trikonasana series (utthita hasta padasana,prsva hasta padasana,trikonasana classical,trikonasana variation,parshvakonasana,prshvottanasana,virabhadrasanaA)
- Chakrasana series (Bhujangaasana,Salabhasana,Vajrasana,Virasana,Parighansana,Setubandhasana)

what about managing stress, for that as you knows several breathing practice can be work.

Especially Sheetali which is well known as cooling pramayama will help.

The word "sheetali" means cooling in Sanskrit, it is taken from the original word "Sheetal" which is soothing or cold. The practice of sheetali breathing calms the mind,

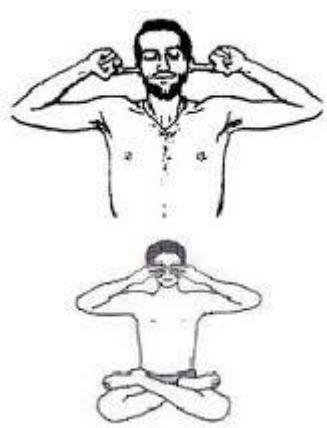
reduces the stress or fight - flight response. It cools the body and mind, The blood pressure is also lowered. This pranayama is very effective in hyperacidity or even ulcers.



The purpose of the Sheetalani breathing is to reduce the body temperature, this may have positive effect on the endocrine glands and nervous system. In ancient text of Hatha Yoga Pradipika, Swami Swatmaram says that person becomes young and attractive by practicing this pranayama. Also he says that this pranayama removes excess heat accumulated in the system, reduces the excess biles, corrects the disorders of spleen, works on fever. This pranayama gives control over hunger and thirst. It has a calming effect on entire nervous system, especially it stimulates the parasympathetic nervous system, which induces muscular relaxation and is very effective in stress management. If you are stressed then 10 minutes of Sheetalani breath can calm you. So this pranayama is very effective for relaxation of body and mind.

In this pranayama the tongue is rolled in a specific manner as shown in figure. But many people can not roll their tongue in this fashion. For these people alternate Sitkari Pranayama gives very similar effects.

Not only Sheetalani ,Bhramari pranayama also helps a lot.



The word "Bhramari" comes from the sanskrit name bhramar which is Humming black bee. The practice of bhramari breathing calms the mind, reduces the stress or fight - flight response. It reduces cerebral tensions, anger, anxiety, insomnia, The blood pressure is also lowered. This pranayama is very effective in speeding up the healing of

body tissues and may be practiced after surgeries.

The purpose of the Bhramari breathing is to reduce throat ailments. This may have positive effect on the endocrine glands specially thyroids and nervous system. In ancient text of Hatha Yoga Pradipika, Swami Swatmaram says that person becomes Lord of Yogis and mind gets absorbed in the supreme bliss. It has a calming effect on entire nervous system, especially it stimulates the parasympathetic nervous system, which induces muscular relaxation and is very effective in stress management. So this pranayama is very effective for relaxation of body and mind.

In this pranayama one needs to create a sound while exhaling and inhaling in the throat. The sound is similar to chanting of Om, especially the long mmm..in Omkar. The sound should be deep, steady and smooth

- i. Beginners can start with deep breathing practice in sitting position (Padmasana - Lotus, Swastikasana- Auspicious, Vajrasana - Thunderbolt, Any Cross legged position in which the body can be relaxed and spine is erect.)
- ii. Then start inhaling through both nostrils, and then start creating sound while you exhale.
- iii. Initially 4 seconds inhale through both nostrils while creating sound while exhaling for 6 seconds through both nostrils, this can be practiced for about 5 minutes.
- iv. With practice one can increase the counts to 4:8, or 5:10 or 6:12 seconds
- v. Once the exhalation sound is mastered, one can start trying to create similar sound while inhaling. The inhalation sound is very difficult, but is possible with constant efforts.

Even sitting in Sukhasana also help in straightening the spine, slowing down metabolism, promoting inner tranquility, and keeping your mind still.

If patient can meditate comfortably, we can introduce them Hridaya Mudra.



Hridaya Mudra which is well known as a heart gesture, this mudra diverts the flow of prana from the hands to the heart area, improving the vitality of the heart. The middle and ring fingers relate directly to nadis connected with the heart, while the thumb closes the pranic circuit and acts an energizer, diverting the flow of prana from hands to the nadis. Hridaya mudra is therefore beneficial for the heart diseases.

Utilizing yoga as therapy for high blood pressure is most useful if done as part of a multi-therapeutic approach, including lifestyle changes and Ayurvedic remedies for stress and high blood pressure. As always, when it comes to natural healing, getting results are not usually as quick and easy as popping a pill. The good news is, however, that when you take steps to lower blood pressure naturally by helping the body's own healing response to take care of the problem, you get true, holistic healing. Not only will you avoid unwanted side effects from blood pressure medication, when blood pressure is lowered naturally because your nervous system becomes more balanced, your whole mind and body system benefits. This mean you, generally speaking, will feel better, have more energy, will perform better during the day, and have more resources for coping with stress.



end☺