

YOGA FOR INTERNAL ORGANS

I. Yoga for Upper Respiratory Tract

In a room full of people if one sneezes, there are smiling faces all around and many have a pleasant “Bless You” to say. If there is second sneeze, maybe one or two in the room will say “bless you” in a more shrill voice. A third sneeze will bring frowns and a quick glance at the exit door, indicating either they would like to go out of the room or would want the multiple sneezer to vacate the room. And quadruple sneeze bout is said to be one of the documented causes of fatal road accidents!

The air we breathe day in and day out when it reaches the chest should be lungs-friendly. It should be warm at about body temperature even when we walk in freezing cold. It should be moist even if the humidity is very low outside. It should also be bereft of much atmospheric pollutants like dust and particulate matter. It should be reasonably free of harmful bacteria and viruses. So the respiratory tract should not only add warmth and moisture to the inhaled air, but also prevent the harmful substances and pathogens from reaching the lungs. And then the Yogis of yesteryears insisted that the respiratory tract or the nadis ida and pingala should be kept clean (nadi suddhi). Nadis are tubular structures-- blood vessels in the body are referred to as nadis, so also nerves; they could also be air passages.

So how does the respiratory tract deliver the conditioned air to the lungs and equally important how is the health of the tract itself maintained and renewed continually? The nostrils with those thick short hairs (vibrissae) help to trap dust and some other offending substances within the nostrils. Then the air enters the nose and goes through the much narrower naso-pharynx. The mucosa lining this tract is supplied by nerves from the para sympathetic. It is said that the nose secretes a viscous liquid continuously, but alternately. The left part of the nose gets secretion for about 2 to 2 ½ hrs and then the secretion switches to other side. The wet secretions help the nose trap dust particles and some offending organisms like virus/bacteria, etc. The cells of the respiratory epithelium have what are called cilia which move the particulate matter towards the pharynx, which passes into the esophagus and mostly this, the mucous with the offending trapped material goes to the throat. When they reach the throat, the tract changes and we involuntarily and periodically swallow it to be neutralized by the powerful stomach acids. Sometimes when the upper respiratory tract is congested due to infection etc., the cilia do not function well and sometimes we snort the secretions and bring it to the throat, when it is normally coughed and

spit out. After the two hour cycle there is the dry spell when one part of the nose dries and periodically we blow out the scabs.

There are three yoga procedures that are designed to keep the nasopharyngeal or the upper respiratory tract in good functional health. Use of the now popular neti pot helps to reduce the congestion and wash down trapped debris so that the passage of air to and from the lungs will be smooth. Clean warm water with a pinch of salt helps to reduce naso-pharyngeal congestion and breathe freely. This procedure may be followed for a short period of time until the other more involved exercises, Kapalabhati and Nadishodhana procedures, start giving more lasting benefits.

The Nadisodhana pranayama, as the name indicates, cleanses the nadis and here we are concerned with the upper respiratory tract. According to Yoga Yagnyavalkya, the two nadis ida and pingala, emanating from the Kandasthana in the pelvic region, extend up to the tip of the left and right nostrils respectively. When we breathe in, the hollow of the nostrils first fill up letting the vibrissae and moisture trap some pollutants. Then when the inhalation starts, the air goes through the much narrower nasal passage at a significantly higher velocity. This effect is enhanced in Nadishodhana. In this pranayama we use the Mrigi Mudra. In it one closes the right nostril with the thumb and uses the little and ring fingers to partially close the nasal passage on the left side, just below the ethmoid bone, giving more control over the process of inhalation. The powerful flow of air over the mucus membrane of the entire air passage when one sucks in or snorts during inhalation phase of the nadisodhana pranayama helps to trap much of the offending unfriendly pollutants and then evacuate into the throat.

Further the area just beyond the ethmoid bone is considered very sensitive (asthmagenic) and when allergens impinge on the membrane of this area, histamines are produced which send signals to the sneeze center (sneezing center) in the brain (medulla). (Believe me I did not make up the 'sneeze center'. It exists just as other centers such as the cough center, respiratory center etc). Sternutation or sneezing is a semi-autonomous convulsive expulsion of air from the lungs. The Kapalabhati is a procedure that has multiple benefits (For more information on Kapalabhati, please refer to pages 190 to 194 in my book "Yoga for Three Stages of Life"). It also helps to clear upper respiratory passages and remove congestion. Equally important is the possible beneficial effects it has on sneezing, the sneeze center. Come to think of it, Kapalabhati as one can see, simulates or closely resembles the activity of 'sneezing'. So when one does Kapalabhati, a few times at a time, and repeats it a few times a day, the procedure presumably sends signals to the sneeze center and calms down the overactive center of those who suffer from hay fever and those who overreact to allergens and pollutants. In these people the sneeze center is 'on the edge' so to

speak. And they display a nervous response to allergens, stress, etc. that is abnormal, usually resulting in nasal congestion and multiple bouts of sneezing.

This Kapalabhati procedure if diligently practiced for a while should help bring about considerable control over excessive sneezing. It is said by medical doctors that some of the methods useful in the control of sneezing would include deep exhalation of the air held in the lungs and this is facilitated by both kapalabhati and deep exhalation in nadishodhana pranayama. Holding the breath after a deep inhalation for a count of 10 is another commonly known suggestion. It is actually achieved while we hold the breath in antahkumbhaka after a deep nadisodhana inhalation. Additionally, when we hold the breath the sinuses are also filled with fresh air and are cleansed in the process. Applying pressure to the nose is another commonly popular remedy suggested with respect to sneezing. In fact that is exactly what is done when one holds the breath in antahkumbhaka of Nadisodhana. The nostrils are closed just below the ethanoid bones of the nose by the thumb on the right side and the last two fingers on the left side, using Mrigi Mudra. Hence these yogic procedures:

Kapalabhati followed by Nadisodhana breathing with the appropriate occasional use of Neti could ensure the reduction and subsequent prevention of recurrent cold, hay fever/ allergic rhinitis, and other upper respiratory problems. One will not over-sneeze.

II. Yoga and Bronchial Asthma

In an earlier letter I referred to the use of Neti, Nadishodhana, Kapalabhati, etc., for keeping the upper respiratory tract in good condition and being able to deal with many upper respiratory ailments like sinusitis, rhinitis, chronic sneezing, etc. Neti uses water or a twine to cleanse the upper respiratory tract and Nadishodhana in a way is neti using air as the cleansing medium. The lower respiratory tract has its own idiosyncrasies. The air warmed and moistened in the upper respiratory tract enters the trachea and flows through the bronchial tubes to the lungs. The bronchial tubes are a sensitive pair and tend to contract and dilate during the breathing cycle. Some yogis who have one foot in yoga and the other in modern medicine have suggested that the Kurma nadi mentioned in the yoga texts refers to the bronchial section of the respiratory system—nadis are after all tubes.

This sensitive nadi causes problems in certain people. The bronchial tubes tend to dilate and contract respectively during inhalation and exhalation in normal people at normal times. But in certain people they tend to contract during expiration but do not dilate sufficiently or remain contracted even during inhalation restricting the free passage of air. Because of the narrowing of this

section of the airway, we hear the unique whistling sound as we find among asthmatics. These constrictions in certain advanced cases can be continuous but with many asthmatics it is intermittent.

The cause of this is usually attributed to allergens. Some allergens, like pollen, dust, peanuts, cat's hair or the spouse's dandruff, produce a reaction in the respiratory center due to which the impulses coming from the Vagus nerve which control the bronchial tubes tend to produce bronchial spasm. While in most people this does not happen, this overreaction takes place in asthmatics. The conventional approach to deal with this problem is two fold. One is to find out those foods and pollutants which produce this condition and develop vairagya towards them. Avoidance, a yogic trait is recommended. "Keep away from the offending allergens" is the dictum. Another related approach is to find out the various substances that one is allergic to and then inject small doses of the allergens into the system. Hopefully over a period of time the patient will develop some immunity to these substances which she or he did not have. Related to this is to use temporary medication to mainly dilate the bronchial tubes. Such medications are available with allopathic doctors, ayurvedic vaidyas and also as home remedies. My grandmother used to make a concoction of several herbs (I do not remember the English names of them), turmeric, black pepper, basil, cinnamon and a piece of dry date (to make it palatable). So avoidance, developing artificial immunity and temporary palliatives are the cures available for the millions of those who suffer from the debilitating condition called bronchial asthma.

But the Yogis go one step deeper and say it is a functional disorder. Even though allergens are the precipitating cause the root cause is said to be sudden abnormal activity in the broncho-motor of the vagus nucleus of the medulla. The external protein, the offending allergen, excites reflectively in an asthmatic when the vagus motor nucleus is irritable and unstable and produces the spasm of the bronchial tubes.

The lower tone of the sympathetic also contributes to this condition. It is the malfunctioning of the respiratory center. In yogic parlance it is the disturbance (prana prakopa) of the pranamaya kosa. So rather than dealing with this problem empirically the yogic procedures directly attempt to deal with and try to correct the abnormality. One of them is a unique procedure called Ujjayi breathing. In this the vocal cords are approximated using the deep throat and vocal chord muscles and the subject breathes through the constriction produced, creating a unique sound, the Ujjayi hissing sound. Normally we do not use these muscles in this particular way.

While yogis are familiar with this breathing for many others it is unfamiliar. But since we keep the vocal cords together for a considerable amount of time, breathing in and out, we tend to gain control over these muscles. Since the bronchial tubes are also controlled by the same vagus nerve, one would gain control over the muscles activating the bronchial tubes. In fact the effect is optimal if one does the Ujjayi correctly by using proper jalandhara bandha. In this the chin is brought way down and placed against the breast bone and the whole rib cage pulled up by straightening the spine, giving a very powerful bandha. In such a lock, one is able to breathe, controlling the breathing way down in the respiratory tract, very close to the bronchial tubes, the kurma nadi. A few days of attentive practice of this unusual procedure will bring very good control over the lower respiratory tract musculature. Ujjayi breathing will appear very unusual for non yogis. Further the prolonged, deliberate constriction of this area will also stimulate the sympathetic to send impulses to open the bronchial tubes and tone of the sympathetic also will be improved. A better tone of the sympathetic will help dilate the bronchial tubes during normal breathing. Without getting much into technicalities it may be said that this reprogramming done for a sufficiently long time will help the asthmatic have improved breathing and less severe and less frequent attacks, and in some cases complete normalcy. With proper care of food, reduced stress levels and other yoga friendly life style changes and regular practice one could, hopefully, be free of the debilitating asthmatic attacks. Ujjayi closely resembles asthmatic breathing. Another concomitant problem is the dry chronic cough. For this Bhastrika, which simulates a cough, should be practiced.

The other exercises that may be beneficial are, as you can guess, the inversions, especially head stand. Once the patient is reasonably healthy and strong the head stand or its variants with or without help or props may be attempted. Headstand as it has been mentioned in earlier articles, helps to direct the CSF into the ventricle in the brain to stimulate the pituitary the secretions which help produce adrenalin, a hormone which used to be given in the olden days for asthmatics. Further it nourishes the spinal nerves which will help the proper functioning of the autonomic nervous system thereby giving a healthy control over the bronchial tubes. A short stay in Sarvangasana also is helpful as it gives a natural jalandhaarabandha and the quality of Ujjayi breathing is also good. Assisted sarvangasana(Viparitakarani) can also be attempted. It is also a good practice to work on the accessory muscles to breathing. In an asthmatic the chest muscles tend to be rigid and breathing shallow. Arm exercises and thoracic exercises are very helpful to free the tightness of the chest. Please refer to the hasta vinyasas and the Parsva bhangi vinyasas in the Tadasana sequence in my book "The Complete Book of Vinyasa Yoga". Many of these exercises can be done even sitting, and some even lying down depending on the condition of the patient. Singing (perhaps in the bathroom), full throated chanting (prabalam adhiyita)and reading aloud (with or without an audience) are also helpful. Yoga

can be very useful for asthmatics as an adjunct therapy, one may continue with medical treatment one is undergoing like allopathic, ayurvedic or any other. Normally it will be a good idea to start treating an asthmatic during the season when the atmospheric pollutants are the least troublesome and asthmatic attacks minimal.

One may start with the accessory muscle exercises and then teach Kapalabhati, then Bhastrika and Ujjayi breathing with Kumbhaka within one's capacity. Some kind of assisted inversion can be attempted after the participant feels more comfortable. Over a period of time with regular practice almost everyone shows improvement. The frequency and severity of the attacks come down.

When I started teaching way back in the mid seventies, with the blessings of my guru, I taught yoga to a bunch of asthmatics in a nearby hospital. The patients varied from about 8 years to about 60 years. I met each one individually once a week for about 8 weeks, teaching them slowly and progressively. I did not keep any records but later when I met the doctor he looked quite pleased. He mentioned that many had shown improvements over a year and it was possible to reduce and in one or two cases suspend medication. Their vital capacity showed significant improvement. One important aspect of yoga therapy is that the patient gets fully involved in it. When you give medicines alone, the patient is a passive helpless participant. In yoga chikitsa the patient is fully involved and when she/he sees improvement there is a psychological boost-- a feeling of achievement is there which will help them practice regularly and take care of themselves. They are slowly able to overcome the despair and helplessness associated with these attacks and start becoming more positive. They start feeling equal to the challenge.

When anyone asks me if yoga cikitsa works for bronchial asthma, I say yes. Because I was an asthmatic as a teenager. Since I started studying with my Guru I have been—touch wood-- free of attacks, for 50 years now. Children from families who have asthmatic members may benefit immensely from relevant yoga practice if they could start appropriate yoga early in life.

III. HEAD AND SHOULDERS ABOVE

The two important inversion poses, Sirasasana and its better half Sarvangasana, called the King and Queen of yogasanas are a unique contribution of Yoga towards physical culture and physical therapy. Several contemporary yogis have disputed the place of these poses and have claimed that they perhaps are later day inventions. But in Hatayoga they are considered as viparita karani mudras. Hatayogapradipika refers to inversions as follows:

“There is a wonderful karana or procedure which helps to starve the sun,(here the gastric fire). One may learn it only from a Guru, and not from the books. If the position of the sun(stomach) is above and the moon(the head) below (i.e., upside down) it is called viparitakarani(inversion). Learn it from a Guru“

The pelvic area—kandasthana-, according to some yogis is a breeding ground for many ailments. It is also the area from where 72.000 nadis are said to emanate and also Kundalini. This area should be kept clean. The dross should be burnt and blown away, figuratively speaking.

How does the Yogi do it? We have an air principle in that area which is Apana Vayu. We have also the fire principle in us in the abdominal area in the form of gastric fire or Jataragni. This flame is flowing upwards and in the normal upright position the gastric fire is above the pelvic area, flowing upward, sometimes when overactive, produces a burning sensation in the esophagus producing the typical ‘heart burn’. The Yogi by resorting to the inversions, as Headstand and Sarvangasana, is able to place the pelvic area above the gastric area. Now the gastric fire or jataragni,-- figuratively speaking—flows towards the pelvic area and heats and purifies the Nadias and the Kandasthan, arouses the Kundalini with the heat. The fire is further supposed to be fanned and intensified by directing the air tatwa or apana by Mula bandh; it draws the apana closer to the fire principle and thereby the apana air also becomes hotter and in turn melts away the dross of the kandasthana and arouses the sleeping kundalini. So headstand and shoulderstand, the mulabandha and the intense gastric fire help to cleanse the nadis and the rogasthana or the disease prone area is cleaned and spruced up.

There is another interesting concept associated with the inversions of which I may have referred to in one of the earlier letters/articles. It is said that our head contains a liquid called amrita which may be translated as nectar. This nectar gives us life and drips drop by drop through the uvula into the stomach where it is consumed by the gastric fire to provide the life energy to live. This reservoir of nectar is slowly used up and with its total depletion comes the end of one’s life.

The Yogi tries to ration the flow of the nectar, by remaining in inverted position for a length of time every day—say between half an hour to an hour or so. During the period of time the yogi is in head stand and shoulder stand, the amrita remains stored in the head without dripping down.

The Hatayogapradipika explains the inversion mudra as follows:

“The cool nectar that flows from the moon (here the head) is swallowed by the hot sun (the gastric fire). Hence one’s body becomes aged. There is a wonderful karana or procedure which helps to starve the sun, (here the gastric fire). One may learn it only from a Guru, and not from the books. If

the position of the sun is above and the moon below (i.e., upside down) it is called viparitakarani (inversion). Learn it from a Guru. Do abhyasa of this inverted pose and increase the duration every day. One who practices this for a year (3 hrs) daily will conquer death”.

When I was young I came across a Yogi who was said to be practising sirsasana for three hours every day. His face had a unique bluish tinge. He also practised Mouna or silence. So by this daily practice, the Yogi is able to increase, so to say, his/her lifespan by 5%, or say between 3 to 5 years. Normally after Headstand the yogi is supposed to spend equal time in shoulder stand as well. In shoulder stand, amrita while still confined to the skull/brain portion, now is allowed to flow to the entire head portion above the neck and nourish all the sensitive sense organs, the two eyes, the two ears, the mouth and the nose (shamukha). This is also considered necessary to maintain the acuity of the sense organs as they are way up in the body and may not get the full nourishment. Sarvangasana herefore is considered good for the sense organs whereas the headstand is good for the brain.

The normal upright position and the chin up position in which we keep our head, both result in a wasteful free flow of the limited amrita in the head down the uvula to the gastric fire, like a free flowing tap. The Yogis found it necessary to constantly control the flow of this nectar and even temporarily stop it. They developed a simple technique called Jalandhara bandha to temporarily stop and control the flow. The term Jalandhara-bandha itself indicates the effect it is said to produce. Jala means water and here it refers to the amrita or nectar which is said to be in the liquid form. Dhara is to hold, here holding the amrita in the head itself and bandha is the lock, the procedure which helps to achieve the holding operation. So Jalandharabandha means the lock that enables holding the nectar in the head. Of course while we do asanas and pranayama we adjust the bandha in such a way that we allow only a small and necessary amount of amrita to flow and also maintain a good ujjayi control over the breath. That is why the default position of the head in asana practice whether it is tadasana or the seated Padmasana or Vajrasana is the head down position. One could see the pictures of my Guru doing asanas and one could see his head down position in most of them—even in asanas like urdhvamukha svanasana or the well known upward facing dog pose. In the entire vinyasakrama one would find the relaxed default head down position is resorted to control the flow of amrita and the ujjayi breath.

Some contemporary yogis may read these metaphorical narrations with a wry smile. However these inversions should be considered as unique contributions of Yoga, for health. Within the first few minutes of Sirsasana practice, the leg and thigh muscles, the gluteal muscles, relax. The chest, back, shoulders and neck muscles also relax as all these are not required to maintain the postural tone as

in the upright position. It has been found that due to the relaxation of the leg muscles, the blood pressure in the legs drop to about 30mm. There is no great rush of blood to the head among the adept yogis due to auto regulation; yet the gravity helps to open up many capillaries in the brain, head and face which may otherwise remain partially closed.

People with high blood pressure and retinal problems will have to be careful. However persons with mild hypertension and under control with diet, life style change and even medication could benefit from this posture if they had learnt it from early life. It appears to increase pressure on the shoulders which would result in the brain trying to reduce the blood pressure. Therefore if one would practice Sirshasana regularly for a sufficient duration, one's pulse rate tends to reduce, thereby reducing the strain on the heart. Gradually there is a reduction in the blood pressure.

What is equally important is that Sirsasana helps improve circulation of the cerebro spinal fluid, which is helpful to the brain and also for the spinal nerve bundles—the chakras. Because of the increased pressure in the brain due to this fluid, the pituitary secretions increase helping the better functioning of the sympathetic nervous system which will help in many ways including the dilatation of the bronchial tubes giving great relief to asthmatics. There is draining of the bronchial tubes, giving some welcome relief for those with chronic chest congestion. Many feel increased memory power and general better brain capacity. There are cases of even some correction of the eyesight. The vinyasas like the twists, Akunchanasana, the backbends like Viparitadandasana in Sirsasana and Uttanamayurasana in Sarvangasana help the spine considerably, by not only maintaining the flexibility of this structure but also nourish the nadis and chakras or nerve fibers and nerve bundles in the spinal chord.

In the inversions, as mentioned in earlier articles, the internal organs get positional correction. Pregnant yoginis may find the inversions help relieve pelvic congestion, oedema of the legs, conditions that are prevalent during pregnancy. Practising the inverted poses with the variety of vinyasas gives a complete massage to all the muscles, organs and considerably increases the blood circulation. Perhaps equally important is the effect of the twin poses on the major joints-- the ankles, the knees, the hips and the spine. The intra-articular space within the joints improves and hence the joint movements when one does the various vinyasas also will improve.

Dorsal and plantar flexions performed in the ankle joints while in these asanas help the ankles significantly. Asanas like Akunchanasana in inversions give good relief to the knees, while inversions help to open the hips by dragging the big pelvic girdle down a bit and giving more space for the femur to move and rotate

nicely within the hip socket(pl refer to Complete Book of Vinyasa Yoga for headstand and shoulder stand vinyasas). Perhaps the most benefit accrues to the entire spine. The inter-vertebral space is enhanced and person who practises these inversions and the vinyasas like akunchanasana and backbends will find the spine stretching nicely and becoming more flexible. The narrowing of the inter-vertebral space can be tackled positively and the low back pain reduces significantly. I would say that the inversions are the best yoga postures to alleviate low back pain. Overall these inversions and the vinyasas in them help to keep the spine supple and strong. It is said one is as old as the condition of the spine. Further, because of the relaxation of the lower extremities Sarvangasana is a good pose to help overcome insomnia.

These twin poses are very good for health. Contemporary Yogis find the other important inversion, viz., the Handstand or Vipritvrukshasna very popular. This is a great pose, with a number of variations possible. However since the head is not fixed in this group of poses, some of the finer aspects of the other two head-fixed inversions (sarvangasana and sirshasana) may be missing. One finds it more difficult to maintain balance and also stay for a sufficiently long time in viparitavrikshasana or inverted tree pose (Hand Stand) and other similar poses like scorpion pose etc. These two regal poses stand 'head and shoulders' above the rest in conferring health benefits to the yogabhyasis.

IV. Meditating on Meditation

I was watching a live television program in India some 30 years back when TV had just been introduced in India. It was a program in which an elderly yogi was pitted against a leading cardiologist. It was virtually a war. The yogi was trying to impress with some unusual poses which were dubbed as potentially dangerous by the doctor. Almost everything the yogi claimed was contested by the non-yogi and soon the dialogue degenerated. The yogi stressed that headstand will increase longevity by retaining the amrita in the sahasrara in the head and the medical expert countered it by saying that there was no scientific basis for such claims and dubbed it as a pose which was unnatural and dangerous and will lead to a stroke. The Yogi replied by saying that Yoga had stood the test of time for centuries; it had been in vogue much before modern medicine became popular. Thank God it was a black and white program; else you would have seen blood splashed all over the screen.

Things have become more civil in these three decades. Now neti pot, asanas, yogic breathing exercises and yogic meditation have all become part of the medical vocabulary. There is a grudging appreciation of yoga within the medical profession. Many times doctors suggest a few yogic procedures, especially

Meditation, in several conditions like hypertension, anxiety, depression and other psychosomatic ailments.

Ah! Meditation. The Yoga world is divided into two camps. On one side we have enthusiastic hata yogis who specialize in asanas and the other group which believes fervently in meditation as a panacea for all the ills.

But how should one meditate? Many start meditation and give it up after a few days or weeks as they fail to see any appreciable benefit or perceivable progress. The drop out rate is quite high among meditators. The mind continues to be agitated and does not get into the meditating routine. Or quite often one tends to take petit naps while meditating. Why does this happen? It is due to lack of adequate preparation. Basically one has to prepare oneself properly for meditation. The Yogis mention two sadhanas or two yogic procedures as preparations. They are asanas and pranayama. Asanas, as we have seen earlier, reduce rajas which manifests as restlessness of the mind, an inability to remain focused for an appreciable amount of time. But another guna, tamas also is not helpful during meditation, manifesting as laziness, lethargy and sloth and this also should be brought under control if one wants to meditate. Patanjali, Tirumular and several old Yogis advocate the practice of Pranayama to reduce the effects of Tamas. Patanjali says Pranayama helps to reduce avarana or Tamas. He along with conventional ashtanga yogis also mentions that Pranayama makes the mind capable of Dharana or the first stage of meditation.

Pranayama is an important prerequisite of meditation. There is evidence that pranayama has a salutary effect on the whole system. In an earlier article I had explained the beneficial effects of deep pranayama on the heart and the circulatory system. Further, when it is done correctly, it helps to draw in anywhere between 3 to 4 liters of atmospheric air compared to just about ½ liter of air during normal breathing. This helps to stretch the air sacs of the lungs affording an excellent exchange of oxygen and gaseous waste products. These waste products are proactively thrown out of the system by deep pranayama, which yogis refer to as reduction of tamas.

Thus soon after pranayama, the yogi feels refreshed and calm and becomes fit for the first stage of meditation which is called Dharana. What should one meditate on? Several works talk about meditating on cakras, mantras, auspicious icons, various tatwas and on the spirit/soul etc. But, the method of meditating, only a few works detail.

Perhaps the most precise is that of Patanjali in Yoga Sutras. Patanjali details not only a step by step methodology of meditation but also the various objects of

prakriti and ultimately the spirit within to meditate on. Hence his work may be considered as the most detailed, complete and rigorous on meditation.

For a start Patanjali would like the abhyasi to get the technique right. So he does not initially specify the object but merely says that the Yogi after the preliminary practices of asana, pranayama and pratyahara, should sit down in a comfortable yogasana and start the meditation. Tying the mind to a spot is dharana. Which spot? Vyasa in his commentary suggests going by tradition, a few spots, firstly inside the body, like the chakras as the Kundalini Yogi would do, or the heart lotus as the bhakti yogi would do, or the mid-brows as a sidhha yogi would do or even an icon outside as a kriya yogi would do.

The icon should be an auspicious object like the image of one's favorite deity. Many find it easier to choose a mantra and focus attention on that. Thousands everyday meditate on the Gayatri mantra visualizing the sun in the middle of the eyebrows or the heart as part of their daily Sandhyavandana** routine. It is also an ancient practice followed even today to meditate on the breath with or without using the Pranayama Mantra.

(** Namarupa published my article "Sandhyavandanam-Ritualistic Gayatri Meditation" with all the routines, mantras, meanings, about 40 pictures, and also an audio with the chanting of the mantras in the Sep/Oct 2008 issue).

What of the technique?

The Yogabhyasi starts the antaranga sadhana or the internal practice by bringing the mind to the same object again and again even as the mind tends to move away from the chosen object of meditation. The active, repeated attempts to bring the mind back to the simple, single object again and again is the first stage of meditation (samyama) called dharana. Even though one has done everything possible to make the body/mind system more satwic, because of the accumulated samskaras or habits, the mind continues to drift away from the object chosen for meditation. The mind starts with the focus on the object but within a short time it swiftly drifts to another related thought then a third one and within a short time this train of thoughts leads to a stage which has no connection whatsoever with the object one started with.

Then suddenly the meditator remembers that one is drifting and soon brings the mind back to the object and resumes remaining with the "object". This process repeats over and over again. This repeated attempts to coax and bring the mind to the same object is dharana. At the end of the session lasting for about 15 minutes, the meditator may (may means must) take a short time to review the quality of meditation. How often was the mind drifting away from the object and

how long on an average the mind wandered? And further what were the kinds of interfering thoughts? The meditator takes note of these. If they are recurrent and strong then one may take efforts to sort out the problem that interferes with the meditation repeatedly or at least decide to accept and endure the situation but may decide to take efforts to keep those thoughts away at least during the time one meditates.

If during the dharana period, the mind gets distracted too often and this does not change over days of practice, perhaps it may indicate that the rajas is still dominant and one may want to reduce the systemic rajas by doing more asanas in the practice. On the other hand if the rajas is due to influences from outside, one may take special efforts to adhere to the yamanyamas more scrupulously. Perhaps every night before going to sleep one may review the day's activities and see if one had willfully violated the tenets of yamanyamas like "did I hurt someone by deed, word or derive satisfaction at the expense of others' pain". Or did I say untruths and so on. On the other hand if one tends to go to sleep during the meditation minutes, one may consider increasing the pranayama practice and also consider reducing tamasic interactions, foods etc.

Then one may continue the practice daily and also review the progress on a daily basis and also make the necessary adjustments in practice and interactions with the outside world. Theoretically and practically when this practice is continued diligently and regularly, slowly the practitioner of dharana will find that the frequency and duration of these extraneous interferences start reducing and one day, the abhyasi may find that for the entire duration one stayed with the object. When this takes place, when the mind is completely with the object moment after moment in a continuous flow of attention, then one may say that the abhyasi has graduated into the next stage of meditation known as dhyana. Many meditators are happy to have reached this stage. Then one has to continue with the practice so that the dhyana habits or samskaras get strengthened. The following day may not be as interruption free, but Patanjali says conscious practice will make it more successful. "dhyana heyat tad vrittayah". If one continues with this practice for sufficiently long time meditating on the same object diligently, one would hopefully reach the next stage of meditation called Samadhi. In this state only the object remains occupying the mind and the abhyasi even forgets herself/himself.

Naturally if one continues the meditation practice one would master the technique of meditation. Almost every time the yagabhasi gets into meditation practice, one would get into Samadhi. Once one gets this capability one is a yogi—a technically competent yogi-- and one may be able to use the skill on any other yoga worthy object and make further progress in Yoga. (tatra bhumishu viniyogah) The consummate yogi could make a further refinement. An object has a name and one has a memory of the object, apart from the object itself (sabda,

artha gnyana). If a Yogi is able to further refine the meditation by focusing attention on one aspect like the name of the object such a meditation is considered superior. For instance when the sound 'gow' is heard (gow is cow), if the mediator intently maintains the word 'gow' alone in his mind without bringing the impression (form) of a cow in his mind then that is considered a refined meditation. Or when he sees the cow, he does not bring the name 'gow' in the meditation process, it is a refined meditation.

The next aspect-after mastering meditation— one may consider is, what should be the object one should meditate upon. For Bhakti Yogis it is the Lord one should meditate upon. According to my teacher, a great Bhakti Yogi, there is only one dhyana or meditation and that is bhagavat dhyana or meditating upon the Lord. There is a difference between a religious person and a devotee. A devotee loves the Lord and meditates on the Lord, all through life. The Vedas refer to the Paramatman or the Supreme Lord and bhakti yogis meditate on the Lord.

The Vedas also refer to several gods and some may meditate on these as well. By meditating on the Lord one may transcend the cycle of transmigration. At the end of the bhakti yogi's life one reaches the same world of the Lord (saloka), the heaven. Some attain the same form as the Lord. Some stay in the proximity of the Lord and some merge with the Lord. The Puranas which are the later creation of poet seers personify the Lord and the vedic gods. Thus we have several puranas as Agni purana, Vayu purana and then those of the Lord Himself like the Bhagavata Purana , Siva Purana , Vishnu Purana. Running to thousands of slokas and pages the puranic age helped to worship the Lord more easily as these stories helped to visualize the Lord as a person, which was rather difficult to do from the Vedas. Later on Agamas made the Lord more accessible by allowing idols to be made of the Lord and divine beings and consecrating them in temples. Thus these various methods helped the general populace remain rooted to religion and religious worship.

So meditating upon the charming idol/icon of the Lord made it possible for many to worship and meditate . Of course many traditional Brahmins belonging to the vedic practices stuck to the vedic fire rituals, frowned upon and refrained from any 'form worship', but millions of others found form worship a great boon. Meditating on the form of the chosen deity either in a temple or at one's own home has made it possible to sidestep the intermediate priestly class to a great extent. One can become responsible for one's own religious practice, including meditation. The ultimate reality is meditated on in different forms, in any form as Siva Vishnu etc or as Father, Mother, Preceptor or even a Friend. Some idol meditators define meditating on the whole form as dharana, then meditating on each aspect of the form as the toe or head or the arms or the bewitching eyes as dhyana and thus giving a different interpretation to meditation. Some, after

meditating on the icon, close the eyes and meditate on the form in their mind's eye (manasika).

Darshanas like Samkhya and Yoga which do not subscribe to the theory of a Creator commended 'the understanding of one's own Self' as a means of liberation. The Self which is non-changing is pure consciousness and by deep unwavering meditation after getting the technique right, one can realize the nature of oneself and be liberated. Following this approach, the Samkhyas commend meditating on each and every of the 24 aspects of prakriti in the body-mind complex of oneself and transcend them to directly know the true nature of oneself, and that will be Freedom or Kaivalya. Similarly the Yogis would say that the true nature of the self is known when the mind transcends(nirodha) the five types of its activities called vrittis to reach kaivalya, by a process of subtler and subtler meditation.

The Upanishads on the other hand while agreeing with the other Nivritti sastras like Yoga and Samkhya in so far as the nature of the self is concerned, indicate that the individual and the Supreme Being are one and the same and meditating on this identity leads to liberation. They would like the spiritual aspirant to first follow a disciplined life to get an unwavering satwic state of the mind. Then one would study the upanishadic texts (sravana), by analysis (manana) understand them and realize the nature of the self through several step by step meditation approaches (nidhidhyasana). The Vedas, for the sake of the spiritual aspirant, have several Upanishad vidyas to study and understand It from several viewpoints. For instance, the panchkosa vidya indicates that the real self is beyond (or within) the five koshas (sheaths). It could also be considered as the pure consciousness which is beyond the three states of awareness (avasta) of waking, dream and deep sleep, as the Pranava(Om) vidya would indicate. The understanding and conviction that Self and the Supreme Self are one and the same is what one needs to get, before doing Upanishadic meditation following the advaitic interpretation.

Summarizing one may say that traditional meditation warrants proper preparation so that the mind becomes irrevocably satwic and thus fit for and capable of meditation. Secondly it requires practice on a simple object until the meditation technique is mastered and such meditative samskaras developed. Then the Yogi should set the goal of meditation based on the conviction of a solid philosophy—bhakti, samkhya, yoga, vedanta, kundalini (or if comfortable, nirvana) or whatever.

V. YOGA FOR THE HEART

Sri Krishnamacharya, my Guru would characterize yoga as a Sarvanga Sadhana or a method that is helpful for all parts of the body, not just the skeletal muscles. Every part of the body can be accessed and treated, aver the yogis. Therefore some of Yoga's influence on the heart may be considered here. One of the views expressed repeatedly by my Guru was that the heart should not be strained; that even while you exercise yoga procedures like asanas, the heart rate should not increase significantly, which is markedly different from the 'aerobic' approach. Further there is another aspect. There are six vital kosas or sacs in the body which are the six important internal organs. The Heart is called the hrudaya Kosa or the Heart sac, which is in the thoracic cavity and is responsible for the circulation of blood (rakta-sanchara) to all the purificatory organs like the kidneys, the lungs etc., and also to all the tissues in the body. The heart is surrounded by the twin walled heart covering or sac called pericardium, which allows the heart to move smoothly within the thoracic cavity. This organ which is made up of musculature is attached to the chest walls which are also made of muscles. These muscles, due to our upright position most of the time, tend to sag due to gravity, over time, even though they are well supported. This sagging of the Hrudaya Kosa according to Yogis has a progressively debilitating effect on the Heart-- which becomes less efficient by the slow downward displacement of the organ from its original intended position. This hypothesis of the 'heart sag' engaged the attention of the yogis.

So in this article let us examine what the yogis of yesteryears did to 1. Help the heart in its function of pumping blood and also 2. Correct the slow decline in its efficiency due to physical descent, albeit slight, of the heart and also its elasticity. There are two segments to rakta sanchara or blood circulation. First is the return of the blood to the heart so that the heart can then pump blood to various parts of the body including the purifying organs like lungs (svasa Kosa) and kidneys. All the blood that is received by the various muscles and tissues will have to return to the heart. The muscles, especially the skeletal muscles are partially contracted all the time so that they maintain a tone. This slight contraction helps to squeeze some 'used' blood out of the muscles into the venous system. The veins contain valves which prevent the blood from backtracking to the muscles. Further, during the movements of these muscles the blood is pushed slowly towards the main vein which carries all the return blood to the heart. In terms of skeletal muscles both the extensor and flexor muscles under normal enervation maintain constant tone while at rest. Thus even a 'couch potato' is able to get the blood circulating, due to this phenomenon called 'muscle pump' though such circulation is not very efficient. If the return blood to the heart is scanty or below normal, the heart will have to pump more often to push out the same amount of blood per unit time. If this 'stroke volume' is increased then the heart would be able to pump blood

more efficiently. It will beat a fewer number of times to circulate the same amount of blood, which according to yogis will help to reduce the strain on the heart. It is considered desirable. There are a few things the yogi does to improve this venous return. By doing a number of vinyasas, she/he is able to squeeze out more blood out of the cells. In vinyasakrama, by a well thought out regimen of vinyasas and asanas, one will be able to work out all the muscles, tissues and cells of skeletal system, so much so that there is a more complete scavenging of the system. And as the 'deoxygenated blood' is wringed out of the tissues, fresh nourishing blood enters the tissues.

What is equally important or more important is the effect of breathing on this venous return of the blood. When we breathe in we do it by expanding the chest. When we expand the chest during inhalation, the diaphragm also descends and there is a partial vacuum created in the thoracic cavity, -- there is a significant pressure gradient between the thoracic cavity and the outside atmosphere. So as the chest expands, due to the pressure difference, the air rushes into the lungs through the nostrils, trachea etc. Normally this takes place for a couple of seconds, then the involuntary inhalation stops, then the exhalation starts due to the relaxation of the chest muscles and some air, say about 500ccs out of the 5 liters or so of air in the chest is expelled. This is normal breathing.

What is important in our discussion is that when the chest expands, the partial vacuum created has also an effect on the heart which is in the same thoracic cavity. The blood which is slowly moving through the main vein, the vena cava, is sucked in by this partial vacuum and its suction has the effect of accelerating the flow of blood to the heart chamber. The Yogis take advantage of this phenomenon, also called the 'respiratory pump' effect. By expanding the chest more, and more slowly, the negative pressure in the chest cavity is increased and maintained longer, by holding the breath for a period of time, during Kumbhaka.

During the long inhalation and breath holding, the suction pump effect is maintained and the flow of blood back to the heart is accelerated. Thus a good Pranayama practice helps the venous return of the blood to the heart. The Vinyasakrama method of doing yoga practice therefore has an additional advantage. Performing the tens of scores of vinyasas helps squeeze out 'bad blood' from every muscle and joint, the simultaneous synchronized slow breathing employed especially the inhalation helps to suck more blood to the heart. As the vinyasas and asanas help to squeeze out blood, the slow deeper inhalation by maintaining a negative pressure of the chest cavity for a much longer period of time helps to return more blood to the heart, so much so that every time the heart beats it is able to pump more blood, i.e., the stroke volume increases. In about half an hour of Vinyasakrama practice one can do about 100 vinyasas taking the rest periods into account and during this period there is a

significant improvement in the blood circulation in the entire system. This yoga method has a marked difference with aerobic workouts. In these types of aerobic exercises-- which is what happens when people do yoga as a workout, without any reference to slow breathing-- the blood circulation improves but due to faster working of the heart and lungs. The same amount of blood circulation is achieved by a greater number of heart beats, which according to Yogis is inefficient and strains the heart.

Further in the workouts, the body creates more waste products and creates more 'bad blood' due to substantially increased metabolism, whereas in Yoga where slow synchronized breathing is involved as in Vinyasakrama taught by Sri Krishnamacharya, the increase in metabolism is minimal.

Yoga also takes care of blood circulation to the internal organs. Whereas the asanas help basically the skeletal muscles, Yogis have devised methods by which the vast amount of muscles and tissues inside the body are also exercised so that the large quantity of blood in the muscles and tissues inside the body also is squeezed out and brought into circulation. Deep inhalation done during pranayama pushes the diaphragm down and puts useful pressure on the abdominal and pelvic organs. Further some adept yogis also do mulabandha and some Uddiyanabandha after inhalation (and holding the breath) so that there is pressure on the internal organs (the abdominal and pelvic organs) from above, below and the anterior side, virtually wringing more blood out of these organs and muscles. Again after exhalation more powerful bandhas are employed by which the internal muscles and organs are exercised, squeezed and massaged.

In Uddiyana bandha while doing bahya Kumbhaka, the adept Yogi, like my Guru, is able to push the diaphragm pretty deep up into the thoracic cavity providing a healthy external pressure on the heart muscles to squeeze out blood even from the heart muscles and providing a gentle massage to the heart, thereby helping the elasticity of the heart muscles in the process.

There is another unique procedure the yogis employ for the venous return of blood to the heart. It is the inversion asanas, like Headstand, Shoulder stand and the various vinyasas in these poses. The heart is way up in the body, almost 2/3rd or even higher up, in normal upright position. While it helps the heart to pump out more blood efficiently to the 2/3rds of the body like the visceral organs and the lower extremities, the return of the blood to the heart is somewhat hampered due to gravitational resistance. So the inversions like Sarvangasana help to drain fluids, especially blood from the lower extremities and also visceral muscles. This is accentuated by doing a variety of Vinyasas in the inversions. The combination of Vinyasas in inverted poses, synchronized breathing and employing the bandhas helps to return more blood to the heart from the muscles

and tissues below the heart. Again exercises like Kapalabhati, Vanhi sara (agni sara) and the bandhas help in the process.

As mentioned earlier, another view that used to be strongly expressed by my Guru is that all the internal organs get slowly displaced or tend to sag from their original positions and thus become less efficient/ become diseased over a period of time due to partial loss of tone. The muscle tone of the heart is very good when one is young but with age and gravity the muscles start sagging--lose their tone a bit, become less elastic, like all other muscles. So the yogis resorted to inversions or viparitakarani. For the heart, Sarvangasana is ideal, and in that position the heart snugly rests in the upper portion of the chest cavity, well supported and rested. Perhaps this is one of the reasons why Sarvangasana is referred to as the Heart of the Asanas. A ten minute stint in Sarvangasana, with the bandhas helps to restore -- or slightly overcorrect-- the heart back to its original position. The Pranayama that is done thereafter is said to normalize the position by neutralizing any over correction during the inversion.

Deep Uddiyanabandha and other abdominal exercises like Kapalabhati, Vahni Sara etc, help to massage and strengthen the heart muscles, so that the heart can continue to pump blood to all parts of the body efficiently. Therefore, if the heart condition is normal for a person, then, it may be a good practice to do exercises for the chest and the accessory muscles of the thorax first. Please refer to hathavinyasas in Tadasana chapter in my book "The Complete Book of Vinyasa Yoga". These help to exercise the accessory muscles of breathing and help to expand the chest significantly. Then do as many vinyasas as possible in different asanas to cover the whole body. Stay in Shoulder stand for a good ten minutes doing also a variety of Vinyasas. It is better if one can do Headstand as well for several minutes. Do Pranayama for about ten minutes preceded by Kapalabhati and accompanied by Bandhas. Do good meditation for about 10 to 15 minutes so that the mind relaxes and the heart and the chest muscles relax. You may also consider chanting aloud vedic or other laukika mantras like Sahasranamas etc. Or read aloud from the scriptures for about 15 to 20 minutes everyday. It is said that prayer is very efficacious. There is a vedic prayer addressed to Sun god (the sun is the god of health) specifically for the good functioning of the heart.

“hrudrogam mama surya
harimaanca nasaya”

Oh! Lord Sun. Do remove my heart ailment and the greenish patches in my skin (due to improper oxygenation and blood circulation) In due course the rest heart rate itself comes down. Following my Guru's advice, one should avoid doing yoga as a workout as that substantially increases the heart rate. In

Hatayogapradipika, the author Svatamarama, quoting another great Hatayogi, Gorkshanatha, mentions that the yogi should not do strenuous activities (kaaya klesa) and these are detrimental to overall progress in Yoga.

Brahmananda who has written a lucid commentary on this text, gives examples that are considered to be strenuous exercises that are fit to be eschewed by the Yogi. He specifically gives the examples like lifting and carrying heavy weights and doing repeated Sun Salutations (bahu surynamaskara) as strenuous exercise which a yogi should avoid doing. My teacher also would say that the yogi should be thin (krisa) and not overweight. One could say, "Overweight is bad Lean or fat" as overweight puts additional strain on the heart.

Aerobic Exercises are good in their own way; they help to strengthen the cardiovascular system. Even so Yoga, as practiced by the Vinyasakrama system, is the antithesis of aerobic exercises. The Breath-yoga deliberately reduces the breath rate and consequently the heart rate, whereas the aerobic and the aerobic like yoga (like the continuous 108 Suryanamaskaras), significantly increase the breath rate and heart rate during exercise. While workouts and practice of yoga as a workout help to reduce Rajas, they also accentuate Tamas. But, breath-vinyasakrama-yoga done slowly, with synchronized breathing, followed by deep Pranayama helps not only reduce Rajas but also Tamas. The reduction of these Gunas makes the mind calmer and fresh or Satwic and a calmer mind is conducive to the healthy functioning of the heart. Therefore it may be a good 'Health Policy' to encourage youngsters, especially teenagers to practice yoga, the breath-ASANAS and vinyasas, pranayama, various mudras, viparitanakarani and appropriate meditation, eat moderate and satwic food and thereby they can take lifelong care of the heart.

VI. YOGA NERVES

The brain and its nerve pathways form an important system of the human being and again Yoga has some unique procedures to help the efficacy of the nervous system. The brain, the spinal cord containing the nerve fibers, the ganglions, the plexuses and the peripheral nerves form this system. We have already seen the benefit the yogic technique of meditation can bring to the brain. It helps to create new neural connections and reduce disturbances. This Raja Yoga technique works within the brain and transforms (parinama) it to a better functioning organ. The Hata Yogis through the Hata Yoga practices such as Pranayama, viparitanakarani and some mudras help to maintain good health of the brain. The two postures that really help the brain are, as you can guess, the inversions, Sirasasana and Sarvangasana.

Many people, when they start to practice Headstand, find that their faces flush and they feel a rush of blood to the face and the skull. After some regular practice for a short period of time, the body adjusts to the new posture and auto regulates the flow of blood. Even so when one practices this posture for a significant time, the blood circulation in the brain improves considerably, since the blood vessels in the brain do not contract or dilate the way other blood vessels do. This is very refreshing to the brain and normally people get a cleansed feeling. Equally important is that the cerebro-spinal fluid, which is a clear and colorless liquid surrounding the brain and the spinal cord, drains and pools upon the top portion of the brain. It enters the ventricles and small recesses in the brain and helps in the nourishment of the brain cells. The third ventricle conveys a small recess to the posterior portion of the pituitary gland. The pressure of the CSF, while staying in Headstand, helps the gland to secrete more of the hormones into the CSF which again is said to stimulate the sympathetic nervous system. So people who have a weak sympathetic system may benefit from remaining in Headstand for a considerable amount of time. The weak sympathetic is considered to be one of the causes of some ailments like bronchial asthma. Hence this exercise could be useful for those who suffer from such conditions as bronchial asthma, its cousin eczema and distant relative, epilepsy by stimulating the sympathetic.

Sarvangasana is similar to but yet different from Headstand. In this, instead of the crown, the occipital portion of the head is on the floor, and the CSF pools into the midbrain and the back of the brain including the medulla. These areas are really stimulated by a good stint in Sarvangasana. It is said the Vagus nerve nuclei are stimulated by this exercise. Thus it results in the activation of the para sympathetic. It results in reduction in anxiety and insomnia. My Guru used to say that it helps normalize sexual functions. Thus a judicious mix of Headstand and Shoulder stand would help to bring about a healthy balance between sympathetic and parasympathetic nervous systems.

Yoga is particularly directed towards maintaining the integrity of the spine. The spinal cord is about 45 cm long for men and 43cm for women. The enclosing bony vertebral column protects the relatively shorter spinal cord. In fact, the spinal cord extends down to only the last of the thoracic vertebrae, or the thoracic spine, and then the tail flows down the lumbar region. The spinal cord is inside the neural canal -- almost the diameter of the thumb-- of the backbone. The nerves from the spine emanate on either side through openings called neural foramina and then proceed to the autonomic nervous system and then various organs. The slightest displacement of the vertebrae will result in chronic or acute pain. In Yoga, efforts are made to maintain the spinal column in proper position and mobility. There are fibers of both the central and autonomic nervous system. When there is some pressure on the nerves due to even the slightest displacement of the vertebrae, there is pain which inhibits the various impulses

that pass through the brain, spinal cord, the various organs and muscles. This can be compared to 'noise' in the telephone transmission system. In such cases the signals do not properly reach the organs or the brain and spinal cord do not receive the signals properly resulting in the inefficiency of those organs. So Yogis take special care to see that the spinal column is properly exercised, mobile and supple. The exercises are designed to prevent any vertebral pressure on the nerves by maintaining a healthy inter-vertebral space. And then these spinal exercises help to circulate blood and CSF to nourish the spinal nerves. They also suggest strengthening the back muscles so that the spinal column is well supported. Paschimatanasana, as the name implies, will meet the requirement admirably.

The movements for the spine include side bending, forward bending, curving the back, back bending and of course twisting. These may be done in different postures as is usually done in Vinyasakrama. One of the simple sequences that helps achieve this is hasta vinyasas and thoracic exercises in Tadasana, which include all these movements.

(See my book "Complete Book of Vinyasa Yoga, Chapter on Tadasana).

This stretching of the spine will be enhanced if one practices the scores of vinyasas in inversion poses like Sarvangasana and sirsasana. The spinal cord is inside the thoracic region of the vertebral column. So when we move the arms and do the various movements the spine at the thoracic region does not stretch as the ribcage moves up and down as one unit. The intervertebral discs in the region of the thoracic spine are much thinner than in the cervical and the lumbar regions. As a result there is generally less movement between the vertebrae of the thoracic spine. The yogis have found a unique way of stretching the thoracic spine. This is achieved by doing all the movements with deep breathing, especially inhalation. When we do deep inhalation, the chest expands side to side, front to back and also up and down which will help stretch the vertical thoracic spine and maintain a good intervertebral space for mobility and freedom for the nerves. Hence the vinyasakrama method of doing asanas with good breathing has this additional advantage. Again a good stint of Pranayama practice especially Nadisodhana (nerve cleansing) with an easy, graceful and secure Jalandharabandha should be very useful for the spinal cord. Pranayamic deep inhalation and the long breath holding (1:4:2) after inhalation (antah kumbhaka) directly benefit the nerves inside the spine.. So when you do deep inhalation, hold the breath and stretch the spine, the breathing itself acts as an internal traction of the thoracic spine.

VII. VINYASAKRAMA PRACTICE

Most of the readers of this newsletter have studied Vinyasakrama Asana practice with me for varying durations, a weekend program, a weeklong Core Vinyasa program, a 60 hour complete Vinyasa Yoga program or the 200 hour Teacher Training Schedule. Many people see something unique about this system, somewhat different from the contemporary mainstream yoga. Most have read the “Complete Book of Vinyasa Yoga” book and finally ask the question, what next? How can I do a daily practice from these sequences? There are more than 700 asanas/vinyasas and I normally recommend doing each vinyasa three times. At the rate of about 4/5 movements per minute (it could be even 3 per minute for good breathers), it could take about 8 to 9 hours to do the complete vinyasakrama. Then my Guru would commend doing a short stint of Pranayama, say for about 15 to 30 mts and then chanting or meditation for another 15 to 30 mts, daily. We also have to consider that in asana practice, there are a few heavy weight poses which require one to stay for a long time. So it is almost impossible to practice all of it everyday even by a full time ‘practice-live-and-sleep-in-yoga mat’ yogi. The book was written to give as complete as possible, a presentation of all the vinyasas in a series of sequences that is logical and easy to learn, as I learnt from my Guru. It is a book for learning the system. Any serious student of yoga who would spend years studying and teaching yoga should have in one’s repertoire as many asanas, vinyasas and logical sequences (krama) as possible. So, one should firstly study the entire range of asanas and vinyasas of the vinyasakrama system from a teacher say in the 60 hr vinyasakrama program.

Then note down all the vinyasas that are a bit difficult to do. One should practice daily for half hour to one hour as many vinyasas as possible following the recommended sequence, with special emphasis on the difficult ones. In about six months to one year of consistent practice one would be comfortable with the system, the sequences and especially the required synchronous breathing. This would complete the learning process. Then one may prepare a green list of asanas and vinyasas one would be able to do and wants to practice regularly. There will be another list, amber list which would contain those vinyasas which are difficult now but one would like to practice them even if they are somewhat imperfect. Then there would be another red list which will contain procedures that are not appropriate or possible for the practitioner—which could probably be taken up in the next janma. Then it would be time for concentrating on using vinyasakrama for daily practice and also teaching to individuals for their daily yoga practice.

Adapting yoga to individual requirements is an art by itself. We must understand that there is no one standard practice that is suitable to everyone. In medicine you have to give different treatment to different patients; what is suitable to one

suffering from digestive problem would be different from the one that is suitable for one who is suffering from some low back pain. According to an important motto of Krishnamacharya, yoga for children and the adolescents (growth stage) is different from yoga practice in their midlife which again is different from the practice in old age. The body, mind and goals change during different stages of life. Sri Krishnamacharya's teaching is based on this principle as we could discern from his works, Yoga Makaranda and Yoga Rahasya.

Basically yoga for kids and young adults will have a considerable amount of asana vinyasa practice -- many vinyasas, difficult poses, etc. It will help them to work out the considerable rajas in their system and proper growth (vridhhi). Of course they should also practice some pranayama and meditation or chanting.

For the midlife yogi, the practice will still include some asana, but specifically some of the health giving and restorative postures like the Inversions, Paschimatanasana, Mahamudra, etc., in which poses one may be required to stay for a longer period of time. There will be more emphasis on Pranayama and then more meditation, chanting, worship etc.

When I started studying with my Guru I was 15 years old. During the beginning years of my study it was mostly difficult asanas and vinyasas. Swing throughs, jump arounds, utplutis etc and other fun filled unique sequences were the order of the day. As I grew up, my teacher slowly but surely changed the mix, focus and direction of my yoga practice. On the last day I was with him (I was close to 50 then) it was just chanting of Surya Namaskara (Aruna) mantras for the entire duration with him. During the third stage of life, the old age, the emphasis is usually spiritual and/or devotional even as one is required to do some simple movements and pranayama.

And within the group, the daily practice can be varying depending upon the requirements and goals set forth by the yogi for herself/himself. For instance, for the midlife yogi, the main goal will be to maintain good physical and mental health, rather than being able to stand, say, on one leg or even on one hand (Of course the child in me wants to do that). He/She would like to avoid risky movements so that the practice would be safe and does not cause injuries— immediate or cumulative. Too much exertion (kayaklesa), like several rounds of continuous, breathless Suryanamaskaras again should be avoided, says Brahmananda in his commentary on Hatayogapadipika. A few may be more inclined to have some spirituality thrown in. Many would like to develop the ability to and the habit of visiting the peace zone of the mind daily.

There are some who are more rajasic or tamasic in which case the mix of asana and pranayama should be properly adjusted, sometimes taking care of even the day to day variations of the gunas. It requires some careful attention in deciding a particular day's practice. Hence, to suggest a practice of a set of asanas or a routine for everyone irrespective of the age, condition, temperament and goal is incorrect.

Such an approach does not take into consideration not only the versatility and richness of orthodox, traditional vinyasakrama yoga practice but also does not take the varying factors of individual requirements. Sri Krishnamacharya's yoga can appropriately be termed as 'Appropriate Yoga'.

However, as a general rule, for the serious mid-life yogi, a daily practice of about 90 mts to 2 hrs will be necessary and sufficient. Here is modifiable one. After a short prayer, one could do a brief stint of Tadasana doing the main vinyasas two or preferably three times each. It should take about ten minutes. Then one subsequence in the asymmetric could be taken up, say Marichyasana or Triyangmukha or the half lotus. The choice may be varied on a daily basis. Five minute stay in Paschimatanasana and the counter poses may be practiced. Then one may do preparation of Sarvangasana and a brief stay in it, followed by headstand stay for about 5 to 10 minutes or more and then staying in Sarvangasana for 5 to 10 more minutes, if one can do inversions. Paschimatanasana, Sarvangaana and Headstand are to be practiced preferably daily for their health benefits. If time permits one may do few vinyasas in these inversions. One may do a subsequence of Triangle pose like warrior pose and /or one sequence in one legged pose. Mahamudra for about 5 minutes each on both sides can then be practiced. Why are these important? In an earlier article I had tried to explain the unique health benefits of the twin inversions. In fact the inversions, Sirsasana and Sarvangasana are mudras, the viparitakarani mudras. I remember my Guru asking us to do Paschimatanasana sequence quite often-- it is said to be an important pose for Kundalini Prabhoda, especially when the bandhas are also done and the pelvic muscles/floor are drawn towards the back. You could also observe that Paschimatanasan helps to stretch all the muscles and tissues in the posterior portion (as the name of the asana indicates) of the body where there are heavy muscles--thighs calves, glutei etc. Mahamudra as the name indicates is considered to be the best/great of Mudras. It is believed that it helps to direct the prana into the sushumna as it is supposed to block the ida and pingala separately. Aided by Jalandharabandha, it also helps to keep the spine straight Then sitting in Vajrasana or Padmasana after doing some movements one should do a suitable variant of Kapalabhati, say for about 108 times and then an appropriate Pranayama, Ujjayi, Nadisodhana or Viloma with or without mantras for about 15 minutes to be followed by five minutes Shanmukhimudra and then chanting or meditation of about 15 minutes. The

efficacy of Pranayama on the whole system and mind cannot be overemphasized. Please read the article on “Yoga for the Heart”, in an earlier newsletter... It refers to the benefits of Pranayama to the heart and the circulatory system.

If interested, one may allocate an additional 30 minutes (or practice at another time in the day, say, in the evening) during which time one may practice a few subroutines from the other scores of sequences that have not been included in this core yoga practice. Even though the book contains 10 main sequences, the reader will be able to discern more than a hundred asana sequences, each one having a unique structure. In fact each chapter is a major sequence (wave) of many specific sequences (ripples), which itself is made up of a few vinyaas (drops of water). Then the whole book is a mega sequence (tide) of major sequences in the ocean of Yoga. If you take Tadasana itself, there are firstly the hasta vinyasas, then, parsva bhangis, different uttanasanas, utkatasana, pasasana and finally the tadasana. Each subroutine itself may have anywhere between 3 to even 20 vinyasas. So there is considerable versatility in the system. It is better to stick to the integrity of the subroutines (like Ushtrasana, Virabhadrasana or Vrikshasana for instance), as enunciated in the book. Thus we have a variable component and a fixed component in the daily practice.

Everyday before the start of the practice the yogi should take a minute and decide on a definite agenda and as far as possible try to stick to the agenda. What asanas and vinyasas, which pranayama and how many rounds and other details should be determined before hand and one should adhere to it. It brings some discipline and coherence to one's practice. It is customary to end the practice with peace chant.

Adapting vinyasakrama to individual requirements can be termed as viniyoga krama. For instance when my Guru gets a middle aged person or a nine year old with specific condition like scoliosis, he would design a specific program to the individual requirement. Almost everyone who comes to him will have a routine developed which will not be the one that is given to someone else. I have written about the family class we had with my Guru when we started learning from him. During the same time period he would teach different vinyasas, poses and procedures to each one of us, my older father, my somewhat heavy-set mother, my supple, talented younger sister, my more challenged brother and me. One reason why people nowadays look for a definite routine is because a few of the more popular vinyasa systems have a very small number of regimented sequences which are taught over and over again almost to all students. So there is a mindset that there should be a rigid sequence that is applicable for everyone, but that is not the way we learnt yoga from my Guru. Firstly the teacher should learn the whole system and then apply it to individuals as per the requirements --

pick and choose those vinyasa sequences, pranayama and meditation practices, dietary requirements, etc.. The question that is to be answered is what does the practitioner want/need and how should the yoga routine be designed to get the required benefit.

Vinyasakrama is like a yoga supermarket, and each one should put into the cart what one needs. And the term Vinyasakrama includes not just asanas but also other aspects of yoga like pranayama, meditation, etc. It is a progression of different aspects of Yoga. The Vinyasakrama has a huge collection of asana vinyasas, a well stocked section on Pranayama, then the meditation department and a spiritual study/contemplation section as well. So a lot of initiative should be taken by the individual consumer, like our practitioner who should take the responsibility of working out with the teacher how to design an intelligent purposeful yoga practice pertaining to oneself. To reduce Vinyasakrama to a standard routine as is done with several other contemporary Vinyasa systems and put it in a straight jacket is not desirable. I have explained these ideas to many participants of the longer versions of the programs and thought to touch upon them for the general reader who would be wondering how to force the VK elephant (or a camel) into the needle's eye of daily practice.

There are some friends who after completing the program take a few private lessons to tailor-make the VK system to their requirements. We discuss about their physical conditions and mental makeup, age, obesity, pulse rate, blood pressure, breath rate and breathing constraints, general disposition, time availability, stress levels, etc., and design a routine for their benefit. Because there is a bewildering array of vinyasas, pranayama methods, mantras, etc., we have a better choice of designing and fine-tune a program suitable to the particular individual. If there is problem with VK it is a problem of plenty.

There are a few serious practitioners who have their daily routine cut out, but then do the complete vinyasakrama separately say in the evening for about an hour so that they could go through all the vinyasa sequences in a span of one week. In Vedic chanting, the Taittiriya saka , consists of about 80+ chapters and it would take about 40 to 45 hours to chant the whole. Those who have learnt the entire Taittiriya Saka during their childhood, have to keep chanting them all their lives. They do it by doing chanting for about 1 to 1 ½ hours per day so that they could complete it in a Mandala or about 40 days. Similarly Carnatic musicians learn several songs, but for their practice they take a few songs per day and over a period of several weeks they would cover all the songs they had learnt. Likewise the yoga practice can be varied and rich. The rich variety makes it possible to maintain abiding interest in a personal Yoga Practice at home. It does not become a chore.

A list of more than 120 asana vinyasa routines contained in the book, “The Complete Book of Vinyasa Yoga” is added as a post script. Based on the discussion above on the criteria for daily practice you may decide on your daily routine by picking specific asana sequences and have a unique program made specifically for you and by you every day.

Please stick to the integrity of the sequences in the asana. If you teach, you may modify them for persons who are sick or physically challenged. Pranayama, inversions, paschimatana mahamudra and meditation may be included for sure. You have myriad possibilities. There is no one rigid universal daily practice routine in Vinyasakrama as I have explained. I would request our friends to kindly consider the possibility of videographing (good quality) of themselves doing an asana sequence or two (see post script for choices) they enjoy and load it on YouTube.

It will be good to have the audio of breathing added and brief instruction/ introduction. You may give the caption “Vinyasakrama Yoga---***** asana sequence and your name. Have it linked to your website and let me know the link; I can include it my next newsletter.

Tailpiece:

Question: Why did God design the human body the way He created it?

Answer: ..so that one can do and enjoy the hundreds of beautiful movements and postures contained in the Vinyasakrama yoga system.

Sincerely

Srivatsa Ramaswami

PS List of individual Asana sequences in the book.

“The Complete Book of Vinyasa Yoga”

<http://www.amazon.com/Complete-Book-Vinyasa-Yoga-Presentation-Based/d...>

Ch I. 1. Samasthitis 2. hasta vinyasas (arm movements). 3.parsva bhangis (side poses) 4. ardhattanasana 5. uttanasana 6.ardha utkatasana 7. utkatasana 8 malasana 9 pasasana 10. tadasana. (special sequences from 11th chapter) 11.uttanasana-utkatasana routine 12. khagasana 13. suryanamaskara 14. dingnamaskara

Ch II. 15 Lead sequence 16. dandasana 17. marichyasana 18.mahamudra 19. ardhapadmasana 20. akarnadhanurasana/cakoranasana 21. ekapadasirsasana 22. triyangmukha 23. marichyasana(advanced) 24. bharadwajasana 26. Mahabandha 26. matyendrasana 27.return sequence

Ch III. 28.Suptasana/paschimatanasana 29. paschimatanasana 30. purvatanasana 31. chatushpadapeetam 32. upavishtakonasana 33. pratikriya 34. samakonasana. 35. baddhakonasana 36 siddhasana 37.gomukhasana 38.yoganrisimhasana

Ch IV. 39. bhagiratasana 40. vrikshasana 41. standing mariachi 42. uttita-padangushtasana 43. virabharasana 44. trivikramasana 45 natarajasana 46. durvasasana. 47.utplutis

Ch V. 48. advanced lead sequence 49. tatakamudra 50. jataraparivritti (simple) 51. apanasana 52. dvipadapitam 53.madhyasetu 54. urdhvadhanurasana 55. advanced dvipadapitam 56.urdhva-prasarita-pada- hasta asana 57. supta padangushtasana 58. supta trivikramasana 59. yoganidrasana 60. jataraparivritti advanced 61. jataraparivritti advanced II 62. sarvangasana preparation sequence 63. sarvangasana-advanced lead sequence 64. akunchanasana 65. halasana 66. urdhvakonasana 67.urdhvapadmasana 68. niralamba sarvangasana 69. halasana-uttana mayurasana 70. sarvangasana-mandala 71.karnapidasana 72. savasana

Ch VI. 73. makrarasana 74. mandukasana 75.bhujangasana 76. rajakapotanasana 77.salabhasana asymmetric 78. salabhasana 79. vimanasana 80. viparita salabhasana 81. bherundasana 82. dhanurasana-asymmetric 83. dhanurasana

Ch.VII. 84. Uttita trikonasana 85. parivritta trikonasana 86. uttita parsvakonasana 87. parsvakonasana 88. virabhadrasana 89. prasarita padottanasana 90. samakonasana

Ch VIII 91. sirsasana 92. sirsasana vinyasas 93.urdhva padmasana 94. urdhvadandasana 95. viparitadandasana 96. mandala 97. niralamba sirsasana 98. vrischikasana 99. viparita vrikshasana (hand stands)

Ch. IX 100. vajrasana lead sequences 101. vajrasana 102. balasana 103. ushtra nishada 104. advanced ushtrasana 105. kapotasana 106. virasana 107. simhasana

Ch X 108. ardhpadmasana 109. padmasana 110. utpluti 111. baddhapadmasana 112. matsyasana 113. urdhvapadmasana 114. suptapadmasana-simhasana dynamic sequence 115. garbhapindasana 116. arm balancing poses 117. padmasana-inversions 118.

Ch. XI 119. vasishtasana 120. anjaneyasana 121. halasana-pascimatana-uttanamayura sequence 122. utplutis

VIII. Chitta Vritti

The Sanskrit word vritti is used commonly in many Indian languages to indicate one's main activity or avocation. A farmer is said to be in krishi vritti or agriculture. A sanyasin is said to live on Uncha vritti or high way of living which is basically asking for minimal food with a begging bowl. So vritti is used to indicate one's jivana or livelihood, vritti- jivane as the grammar book says. One mantra in Suryanamaskara is "apa ca avrittim" which is a prayer to be gainfully employed -- a+vritti meaning joblessness. Some other prefixes also modify the meaning of the word: pra+vritti or pravritti will indicate activities towards getting what one wants whereas ni+vritti or nivritti will indicate activities (and the result) associated with getting rid of what one does not want. Chitta vritti would mean the activity of the chitta. Chitta itself has an interesting meaning.

Chitta which is usually translated as mind-stuff or brain is that which though is inert matter appears to have consciousness. "Cit iva bhavayati", like my computer which does not even have life but appears to be super intelligent (I know I have used this comparison earlier).

So what does the chitta do, what are its vrittis or activities? Basically the chitta through the vrittis gives us experiences of varied types. It projects different images within its confines-- in its own space, mental space, even though the projections appear to be in the outside real space. For the sake of convenience several works divide functionally the chitta into manas (mind), buddhi (intellect), ahamkara(ego) and smriti/citta(memory). I receive information from the outside world through my senses, eyes, ears, etc., due to the vrittis of the indriyas. Then the manas or mind which is also known as the 11th indriya collates and coordinates and presents to another faculty of the chitta called buddhi. Buddhi analyzes all the information and makes a judgment and then the ego or ahankara aspect of chitta comes into play. If it likes the presentation, it is happy but if not it shows its unhappiness and produces various reactions. When the Buddhi or intellect is active then the chitta vritti is also known as buddhi vritti but when it is dominated by ahankara aspect of chitta the chitta vritti is known as ahamkara vritti. When some one says that I am a good person I am happy, my ahamkara vritti makes me expansive and I hit the roof. If then someone says I am a lousy yoga teacher, I feel bad, very bad and am down in the dumps due to the ahamkara vritti. So moment after moment I have a chitta vritti which includes images not only of the outside objects but also me as the subject of the whole experience. Therefore the chitta vritti is the totality of my experience at any given moment. The one that experiences or observes all these successive chitta vrittis is the real "I", the purusha, the drashta or observer or the non-changing and hence eternal pure consciousness.

Patanjali says the chitta is capable of transcending all the vrittis and remaining oblivious to all the vrittis. To understand that state he lists all the chitta vrittis in five categories, the main purpose of it is to indirectly know or infer the state which is beyond the chitta vritti state, trying to show the unknown from the known . What are these known chitta vrittis? The first one is called the pramana vritti or those vrittis which produce correct knowledge of the various objects. Through the senses, I get information of the outside world thanks to the tanmatras received from the objects and the knowledge produced is the pramana vritti. If the knowledge produced is incorrect then that vritti is classified as the viparyaya vritti.

Either one interprets the incoming information correctly or incorrectly but the chitta produces a vritti for experience. The chitta sometimes needs no outside information to produce a vritti experience in which case it is called vikalpa vritti, the typical example is the dream vritti. Then we have deep sleep which is considered another activity of the chitta which vritti is due to the dominance of Tamas and hence is known as tamo vritti. Finally we have a lot of information stored in our chitta and when we recall something vividly in the mind it is termed smriti vritti. Is there a moment in our lives when the chitta is without a vritti? No, according to the exhaustive classification of chitta vrittis, there is not a moment when the chitta stops its activities, its projections in the mental space, its vrittis.

While ordinarily the chitta wallows in these vrittis, Patanjali talks about a state in which the chitta transcends all the vrittis mentioned above and remains in that state. That is the state of Yoga. It happens when the chitta uses all its faculties and yogic training to concentrate and knows for sure the true nature of the observing self/soul, the non-changing, hence eternal consciousness. With that knowledge, with that direct experience, the chitta remains in a state of resolution, on realizing the nature of the the Self in its true form (svarupa). When there is realization in the chitta that nothing, none of the vrittis changes the essential nature of the pure purusha, it becomes quiet-- completely quiet. In that state the chitta does not have any of the vrittis mentioned above. But when not in the state of Yoga, it does not know the true nature of the soul. Rather than trying to locate and realize the nature of the Self (as a Raja Yoga practitioner attempts to do), it creates and projects a shadow self using its own vritti, a viparyaya vritti. The chitta is capable of creating this deception. Take for example what the lazy chitta does during dream state. Getting out of deep sleep, but yet unable to wake up completely, the chitta creates its own dream space, dream objects and also creates a self, a dream self, only to discard it when it wakes up.

Patanjali uses two terms about the nature of the Self and the nature of the pseudo self. He uses the term swarupa or own form to indicate the nature of the true Self. He uses the term sarupa or something similar to the form of the Self for the self image created by the chitta. It is like the difference between the subject

and the wax model. The model however much it may look like the original is still a copy and not the original/Self. In fact Patanjali uses the term sarupa which would mean similar to rather than tadrupa which would mean identical with or the exact replica. The emphasis is not so much on how similar or look alike they are (like the mirror image or reflection, etc. which would be tadrupa) but that the model is not the real thing. The implication is that the created self or ego or ahamkara is a creation of the chitta itself; it is itself a chitta vritti (vritti saarupya).

The ultimate state of Yoga of the chitta is that in which it transcends all its vrittis. In that trance-like state the Yogi is oblivious to the surroundings, not sleeping, not dreaming nor thinking of the past.

The brain or the mindstuff has also another set of vrittis. The samkhyas call it the samanya or samanya karanaa vrittis. This set of vrittis helps to maintain life even of the Yogi. These are vrittis of prana which itself is an aspect of chitta. These non-descript or ordinary vrittis maintain life. They are known as prana, apana, vyana, udana and samana vrittis and correspond to the life sustaining autonomic activities of the brain. They function until the Yogi decides to call it quits.

What do I do?

I teach a class.

What do I experience?

I experience that I teach a class.

In the last sentence, there are two "I"s

Which "I" am I?