

# YOGIC SCIENCE

**Master of Physical Education (M.P.Ed.)**  
Course Material for Students circulation

Edited by

Dr. K. Jothi Dayanandan  
Associate Professor



**Y.M.C.A. COLLEGE OF PHYSICAL EDUCATION**

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No.497, Anna Salai, Nandanam, Chennai 600035.

Ct. No. 044-24344816; Email: [ymcanandanam1920@gmail.com](mailto:ymcanandanam1920@gmail.com)

**MCC101 - YOGIC SCIENCE**

**Unit I**

Introduction Meaning and Definition of Yoga. Ashtanga Yoga: Yama, Niyama, Asana, types of asanas - Pranayama, Pratyahara, Dharana, Dhyana, Samadhi, Concept of Yogic Practices; Principles of Breathing Awareness ~ Relaxation, Sequence Counter pose ~ Time Place Clothes Bathing Emptying the bowels ~ Stomach Diet No Straining Age Contra- Indication Inverted Asana Sunbathing Suriya namaskar Chakras - Nadis

**Unit II**

Kriyas Sha kriyas- Meaning, Techniques and Benefits of Neti Dhati Kapalapathi – Trataka Nauli Basti, Bandhas: Meaning, Techniques and Benefits of Ja1endraBandha, Jihva Bandha, Udyana Bandha, Mula Bandha.

**Unit III**

Mudras Meaning, Techniques and Benefits of Hasta Mudras, Asamyuktahastam, Samyuktahastam, Mana Mudra, Kaya Mudra, Banda Mudra, Adhara Mudra. Meditation: Meaning, Techniques and Benefits of Meditation Passive and active, Saguna Meditation and Nirguna Meditation.

**Unit IV**

Yoga and Sports Yoga Supplemental Exercise Yoga Compensation Exercise ~ Yoga Regeneration Exercise Power Yoga. Role of Yoga in Psychological Preparation of athletes: Mental Wellbeing, Anxiety, Depression Concentration, Self-Actualization. Effect of Yoga on Physiological System: Circulatory, Skeletal, Digestive, Nervous, Respiratory, Excretory System.

**Unit V**

Yoga for Skill Development Yoga for skill development yoga for performance enhancement of sports person yoga for management of selected sports injuries yoga for leadership ~ yoga for fitness and hygiene.

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## UNIT I – INTRODUCTION

**Introduction:** Traced back over 5000-10000 years, the early writings on yoga were transcribed on fragile palm leaves that were easily damaged, destroyed or lost. Some texts state that Yoga has existed since the beginning of time and consider Lord Shiva as the 'ADIYOGI' i.e., the first Yogi.

Yoga has continued to evolve with time and can roughly be divided into:

1. Pre-Classical Yoga: originated in the Indus-Sarasvati civilization in Northern India over 5000 years ago with scriptures present in Rig Veda and Upanishads. This form of yoga modified the idea of ritual sacrifice from the Vedas and internalized it, teaching the sacrifice of the ego through self-knowledge, action (karma yoga) and wisdom (jnana yoga).
2. Classical Yoga: Defined by Patanjali's Yoga-Sutras, the first systematic presentation of yoga. Patanjali is considered the father of Yoga and still influences many practices of modern Yoga.
3. Post-Classical Yoga: rejected the teachings of the ancient Vedas and embraced the physical body as the means to achieve enlightenment. This exploration of physical-spiritual connections and body centered practices led to the creation of what we primarily think of yoga in the West: Hatha Yoga.
4. Modern Period: Swamy Vivekananda presented hatha yoga to the western world and laid the foundation for the growth and innovations that we see today.

Yoga is not merely restricted to performing asanas. It can be divided into:

1. Hatha yoga: This branch uses physical poses or asanas, breathing techniques of pranayama's and meditation to achieve better health as well as spirituality. Different styles in this path include Iyengar style, integral style, the ashtanga style etc.
2. Bhakti yoga: This is the yoga of devotion and paves the path of the heart to devotion. Enables one to see "the divine" in everyone and everything.
3. Raja yoga: This is the yoga of the mind. This is considered the king of yoga. It focuses on a man's intelligence.
4. Karma yoga: This is the yoga service. It is the path of selfless service that one treads.
5. Jnana yoga: It is the yoga of rituals. These rituals are a scary experience. The meaning of yoga is union or Communion or discipline or hold fast or oneness or unity or efforts towards or concentration or reintegration or meditation or to master harnessing one's energies.

Yoga means the union of the individual self (Jivatma) with the divine self. (Paramatma). It is the union of individual will with the universal will. It is the union of individual soul with the universal soul. Yoga is the union of body, mind, heart and action; Yoga is an integration and harmony among thought, feeling and deed. It leads man from the ignoble to noble. It transforms a brute man into a godly man. Yoga is a well Balanced and perfect scientific process for success and peace in life. Yoga is the integration of the personality.

## EIGHT LIMBS OF ASHTANGA YOGA

1. Yama (Principles or moral code)
  - Ahimsa - A principle of non-violence
  - Satya - A principle of Truthfulness
  - Asteya - A principle of non-stealing
  - Brahmacharya - Continence / Celibacy
  - Aparigrah - A principle of non-hoarding or non-possessiveness
2. Niyama (Personal Disciplines)
  - Shoucha - Purity
  - Santosh - Contentment
  - Tapa - Endurance
  - Swadhyaya - Self study
  - Eshwar Pranidhan – Dedication
3. Asana (Yoga Positions or Yogic Postures): A stable and comfortable posture which helps attaining mental equilibrium.
4. Pranayama (Yogic Breathing): Extension and control of breath.
5. Pratyahara (Withdrawal of Senses): A mental preparation to increase the power of mind.
6. Dharana (Concentration on Object): Concentration of mind on one object and its field.
7. Dhyana (Meditation): With drawing mind from all external objects and focusing it on one point and meditating on it.
8. Samadhi (Salvation): State of Super bliss, joy and merging individual consciousness into universal consciousness. Union between Jivatman and Paramatman. Union of Shiva and Shakti in Sahasra Chakra (the top of the head). Realizing the Bramhan (pure consciousness) or Realization of God is the ultimate achievement of Human Birth.

Patanjali's classification of classical yoga, as set out in his Yoga Sutras explained 8 limbs of yoga as Yama (universal moral codes), niyama (self-purification by discipline), asana (postures), pranayama (rhythmic control of breath), pratyahara (withdrawing of mind from senses), dharana (Concentration), dhyana (deep meditation) and samadhi (union with the object of meditation).

1. Yama (Principles or moral code)

- Ahimsa: Ahimsa is non-violence, has a wider positive meaning of love. The prerequisites for ahimsa include Abhaya (being free from fear) and Akrodha (being free from anger).
- Satya: Satya means truthfulness in thought, word, and deed. Just how Mahatma Gandhi stated, "Truth is God and God is truth", the mind must think the truth, tongue must speak the truth and the actions must reflect the truth. There must be control of speech, which facilitates charity to others and roots out malice, and this helps them gain respect from all.
- Asteya: asteya indicates not stealing. A desire to possess what the others have creates a need to steal, which results in a breach of trust, misappropriation, and misuse.
- Brahmacharya: This indicates a life of celibacy, religious study and self-restraint. In modern times, it is the art of consistency, sustaining energy and not depleting vitality. It measures divinity in all. In case of a bachelor, a married man, and a householder as each of them are called to carry out their noble cause in life; brahmacharya can be practiced in all. Brahmacharya is fund of energy and vitality. It can fight injustice; use forces wisely, battery that sparks the sparks of wisdom and attains peace beyond this world filled with misery.
- Aparigraha: aparigraha means "not grasping things," or non-possessiveness. This practice helps us achieve a balanced relationship with the things that we each call "mine."

2. Niyama (Personal Disciplines)

- Shoucha - Purity
- Santosh - Contentment
- Tapa - Endurance
- Swadhyaya - Self study
- Eshwar Pranidhan - Dedication

A yogic maxim says, "All the things of the world are yours to use, but not to own." The following are the inner observances one must imbibe for a peaceful life.

1. Shoucha: Purification of self is shoucha. Impurities of body and mind may exist. Impurities of the mind such as hatred, passion, anger, greed, delusion, and pride. This consists of Asanas, pranayama's, bhakti, food, and place of practice.
2. Asanas help in toning the body, removing toxins. Pranayama cleanses and aerates lung, promotes better oxygenation in blood and purifies nerves. Bhakti or adoration washes these impurities away. Cleansing brings radiance and joy. Banishes pain and

sorrow. By this they see virtues in others. Healthy food helps in purification. Each morsel eaten giving praise to God. Vegetarian food is considered good, good for this. Must avoid food that is sour, bitter, pungent, burning, stale, tasteless, heavy, and unclean. Na finally one must eat to live and not live to eat. The place where food is easily procurable, free from insects, pleasing surroundings. For eg: Banks of the river, corner in one's room.

3. Santosha: Santosha is contentment; it means that there is bliss surpassed. When man is complete, he feels his duty to God is performed and he loves God. Individuals will be contending when the spirit does not waver in the wind of desire.
4. Tapas: A burning effort under all circumstances to achieve a definite goal in life. Leading a disciplined life is the key with 3 aims including for the body, for the mind and through speech.
5. Savdhyaya: Education or daily reading draws out the best in a person. Changes one's outlook to life by which he realizes all creation is for adoration and not enjoyment. By this the speaker and listener are of one mind. By education or daily reading it draws out the best in a person, changes his outlook to life and he realizes all creation is for adoration and not enjoyment. There is no sermonizing as one heart speaks to another. The knowledge from this is taken into the blood stream and is incorporated as part of one's life.
6. Isvara pranidhana: Dedication of ones actions and will to God. All creation belongs to God. A yogi must give up all pride, power, selfish purposes, greed, and attachment. By this he shows strength in character and adoration towards goals. This also means giving up the feeling of "I".

### **Classification of asanas**

Classification is just a dividing process that is based on physical and mental growth of human being. Swami Kuvalayananda has classified Asanas in 2 main levels. The two main categories are Meditative and Cultural. Cultural also has sub classified viz. Relaxative. The Relaxative (*meditation or activity that promotes relaxation*) posture is fatigue releasing posture.

### **Type of ASANAS:**

#### **A. Meditation:**

1. Padmasana - Padmasana is the Sanskrit name for a renowned yoga asana, otherwise known as Lotus Pose.
2. Siddh asana -Siddh asana is a yoga posture meant for Meditation. It is one of the ancient yoga postures and similar to Padmasana.
3. Swastik asana - Swastik asana is a meditation posture widely known as Auspicious Pose. It is an excellent alternative to padmasana.

4. Sam asana - In this asana the external structure of organs of the body are kept in such a way that they stand divided in to two, therefor the name of Sam asana in Sanskrit 'Sama' means equilibrium.

B. Cultural: Cultural asanas are meant for culturing the body and mental health. For a people who are doing Yogi, Physical health is very important, and then only he will be able to practice his/her Sadhana. Below are two type Classification of Cultural asanas:

1. Physical:

- Sirsasana: In Sanskrit the word 'sirsha' means "head and "asana" means pose. Sirsasana is considered the king of all asanas and is usually done at the end of the yoga asanas practices.
- Sarvang asana: Shoulder stand or more fully Salamba Sarvang asana Supported Shoulder stand.
- Bhujangasana: Bhujangasana or Cobra Pose is a reclining back-bending asana.
- Hal asana: Hal asana is a classic yoga pose or asana in Sanskrit, lough pose is an inverted asana in hatha yoga.
- Supta-Vajarasana - it is a Sanskrit name Supta means "reclining," vajra means" thunderbolt" and asana means "pose."

2. Relaxative:

- Shavasana: Shavasana is a Sanskrit word comprised of Shava means dead body and asana indicates means yoga or posture.
- Makarasna in this pose to feel the whole body touching the ground and the deep relaxation in all your muscles.

While doing Asanas, we should keep in mind - That is if Asanas are done merely by seeing here and there, they will lead to several diseases. Therefore, some important points to be remembered, while performing asanas are:

- i. Asanas should not be practiced merely from books; the guidance of a teacher is also necessary.
- ii. Asanas should not be performed with jerks, but slowly, step by step and gradually up to the final pose the return should be in the same way.
- iii. The final posture should be maintained for some time, but in no case under tension.
- iv. Do not practise beyond your limitation.
- v. There should not be a competitive attitude. This is harmful and should be avoided.
- vi. Concentrate on the effect of Asanas on mind and the body.
- vii. Every Asan is to be followed by Shavasana. But is does not mean that it is harmful if you cannot practice Shavasana after every Asanas.



- viii. If possible, maintain a diary of Asanas showing the duration of the practice of each asana.
- ix. In case of an injury or illness the teacher should be consulted and followed.
- x. Never think about breathing and while doing asanas. The constitution of the whole body is such that the breathing is adjusted as per the situation e.g., when we put a thread into the needle or when we lift weight or when we do Salabhasana, Mayurasana the breathing is adjusted automatically. Hence, we should not mix breathing with postures. But during Pranayama people suffering from High B.P. Heart disease, Asthma, the teacher should be consulted.

The early morning is the best time to perform Asanas. It is to be kept in mind that after lunch up to 4 hours, no Asanas, Mudra, or Pranayama should be practiced. But Vaman, Dhouti may be performed, if necessary. For people having weak gastric fire, even a four-hour gap is not sufficient. They should start practicing at least 5 to 6 hours after lunch.

PRANAYAMAS: When prana moves, Chitta (mental force) moves. When prana is without movement, Chitta is without movement. - Hathayoga Pradip Ika 2.02." Pranayama's are breathing exercises developed by the ancient yogis. They are used to purify the Pranicadis in the Pranayama Kosha by controlling, regulating, and channelizing the Prana in the body. Prana is taken in through the air we breathe, and since the breathing exercises increase the amount of air we take in, they also increase our intake of Prana. In Sanskrit Prana means energy or vital force and Yama means control. So, in English this would translate into control of the vital breath. However, there's much more to Pranayama than just control of the vital force. Pranayama essentially involves three things: regulating the breath, controlling the vital force and channelizing the Pranas in the right directions.

The principle of in Yoga is that order to alter a situation we must make changes in the energy that governs it. To bring about positive changes in body and mind we must understand and work upon the energies through which they work. This is done through a set of exercises that entail synchronized breathing. In Yoga the right or solar Nadi is considered masculine or solar in nature. The left is feminine or lunar in nature. It is Pitta or fire predominant and increases energy on the right side. The left or the lunar Nadi, is Kapha or water predominant, and increases energy on the left side of the body. To maintain harmony in our Panic or Subtle body, we should have an equal number of breaths from both nostrils. Since this is not always possible through normal breathing, Pranayama helps channelize them.

It is also for precisely this reason that Yoga also prescribes a sattvic diet, rich in Prana i.e., foods full of the life-force and a mind rooted in moral and ethical values like truth and non-violence. An impure or toxic body and mind cannot remain healthy for long. But, before we proceed further,

there is something else we must understand. You might have noticed the use of the word Pranas in the last line of the first paragraph. Essentially, and little known to the general public, the Prana consists of 5 different Pranas, viz Prana, Apana, Samana, Vyana and Udana, each performing a different function. They are all contained in a sheath called the Pranayama Kosha consisting of roughly 3,64,000 Nadis or subtle nerve channels that are connected to out other gross and subtle bodies and sheaths. Thus, the one primary Prana is divided into five, basis their movement, direction, and function. Further, they can be classified as energies and processes occurring on different levels in our system.

**Prana:** Literally meaning "air flowing forward", it governs the flow of energy from the head down to the navel, the Pranicenter in the physical body. It is responsible for all types of inward reception from inhalation to eating, drinking to reception of sense perceptions and experiences. Propulsive in nature, it sets and guides things in motion, thereby governing the basic energy that sustains our lives.

**Apana:** Apana, means "regressing air" and, like the name suggests, it moves downward and outward. It governs the movement of energy from the navel down to the root chakra and is responsible for all forms of systemic discharge, including carbon dioxide in the breath, stools, urine, semen, menstrual fluids and the foetus. On a deeper level it forms the basis of our immune system and governs the expulsion of all negative sensory, mental, and emotional experiences.

**Samana:** Meaning "balanced air", Samana flows from the perimeter to the centre, in a judicious churning movement. It channelizes the flow of energy from the entire body back to the navel. Primarily, though, it governs the gastrointestinal tract, i.e., it facilitates digestion of food and absorption of oxygen in the lungs. Mentally it serves to digest and assimilate all sensory, mental, and emotional inputs.

**Vyana:** Vyana means "air flowing outward". Contrariwise Samana, this one governs flow of energy from the navel throughout the body. Flowing from the centre to the periphery, it governs all circulatory functions and, in the bargain, assists the task of all other Pranas. It regulates the flow of oxygen, nutrition and water throughout the system, as well as disseminates our thoughts and emotions.

**Udana:** Udana, "upward moving air," literally moves upwards. It governs energy movement up from the navel to the head. Naturally, it is responsible for growth, aids and abets all bodily effort, enthusiasm and will, including the ability to stand and speak. Our main positive energy in life, it facilitates development of our different bodies as well as in evolving consciousness.

In summation, Prana governs the intake of all forms of nutrients, Samana regulates their digestion, Vyana sees to their circulation, Udana administers the release of positive energy and Apana, the elimination of waste matter from the system. Pretty much like operations of an organization, Prana fetches the fuel, Samana transforms it into energy, Vyana distributes it to the various departments and Apana discharges the waste matter produced in the process. Finally, Udana decides how the positive energy generated is to be used.

The secret of good health lies in balance and harmony. Since all the Pranas are interlinked, if even one becomes unstable, the others are susceptible to similar imbalance. Result, the working of the entire machine goes out of gear. This gets translated into mental and physical afflictions and indispositions.

**The Art of Pranayama:** Pranayama is the science of purifying the Nadis in the Pranayama kosha. Through regulated breathing i.e. altering the rhythm of inhalation and exhalation, it is possible to control the vital force in the body. Pranayama is the process by which such conscious control is achieved through synchronized breathing. Purifying the channels along which the life stream of 'prana' flows helps prevent a variety of physical and mental ailments. It also increases one's overall immunity and resistance to disease.

The best position to be assumed for these practices is any comfortable position like Sukh asana. The critical thing to bear in mind, however, is posture. The body straight and back, neck and head should be kept erect, i.e., in a straight line. And yet, the body should not be stiff. It can be in natural relaxed condition. You can prepare for this by practicing shavasana, the corpse poses, for a few minutes. To prepare for pranayama it is first better to breathe relaxed in the above-mentioned ratio. Do this a few rounds, for a few days. The next step is to learn the knack of full yogic breathing. This is also called Dirgha Pranayama the three-part breath. Known as the "complete" or "three-part" breath, Dirgha Pranayama teaches you how to fill the three regions of the body with Oxygen.

- The first is the belly (on top of or just below the navel),
- The second is the chest (the thorax or rib cage), and
- The third is the clavicular region (or upper chest, near the sternum)

Technique

1. Sit in any other comfortable position with back, spine, and neck erect. Start by taking slow, long, and deep nasal breaths
2. As you inhale, let your abdomen fill with air. As you exhale, let your belly deflate like a balloon. Repeat the exercise a few times, keeping your breath smooth and relaxed. Never strain
3. Breathe into your belly as in Step 2, but also inflate your thoracic region by letting your rib cage open up. Exhale and repeat the exercise a few times

4. Follow steps 2 and 3 and continue inhaling by opening the clavicle region or upper chest. Exhale and repeat the exercise a few times
5. Combine all three steps into one continuous or complete flow

Once you have got a good feel for this style of breathing, start practicing without the aid of your hands. Finally, relax and breathe in the three positions quietly feeling the waves of breath move in and out, up and down the body.

**Pranayama benefits:** Pranayama refers to the breathing technique in Yoga, which can work wonders in improving the overall health and the function of all the organs in the body. Pranayama is also closely linked to meditation, a crucial aspect of yoga. Several health experts also refer to Pranayama as the art of effective breath control. Practicing the proper techniques of breathing can help you become more aware of your breath and therefore pranayama benefits are physical, emotional as well as spiritual. Some of the most common pranayama benefits are:

- Improvement in the rate of breathing.
- Reduction in the heart rate as well as the wear and tear of the heart.
- Helping the body get rid of excessive fat and weight.
- Curing problems that are related to the digestive system.
- Enhancing the functioning of several organs, which include the kidneys, pancreas, intestines, diaphragm, lungs and the heart.
- Removing the toxins from within the body.
- Preventing various diseases by strengthening the immune system.
- Getting rid of negative emotions like depression, anger, arrogance, greed & so on.
- Improving the circulation of blood throughout the body
- Reducing blood pressure, by relaxing the body and soothing the nerves
- Pranayama for weight loss

People often exercise to lose weight faster, because exercising regularly in the right manner can help increase the metabolism in a person, which further helps in burning off more calories. Pranayama can have a similar effect on your body. It is important to realize that the process of weight loss through Pranayama or most other yoga forms slow and gradual. However, when pranayama is modified by several levels, it can help facilitate weight loss at a faster rate. It is important to learn the various Pranayama breathing techniques through a well-qualified Yoga guru or teacher. Practicing this technique in the wrong way may have an adverse effect on the body. It is best to practice the 7 basic pranayama exercises before practicing other yoga poses. Techniques like AlomVilom, Kapalbhathi and Bhastika are believed to be the key factors in weight loss and should be practiced regularly. Just practicing these three breathing techniques for one

hour daily could help you lose up to 25 pounds in a month. However, there are several other factors that could influence the amount of weight lost. Before practicing Pranayama or any other form of Yoga, it is best to consult a doctor, especially if you are suffering from any medical conditions.

The 8 Pranayama's are:

1. Kapalpathi
2. AnulomaViloma
3. Ujjayi
4. Bhastrika
5. Shitali
6. Sitkari
7. Suryabhedana

1. Kapalpathi Pranayama: What is Kapalbhati? How to do it? Kapalpathi is related to the process of breathing but is not a kind of Pranayama. Beginners can perform this breathing exercise for three minutes and gradually increase it to five. Some of the benefits of Kapalbhati are bringing stability and peace to the mind, purifying the chakras, and improving the function of the abdominal organs. Another effective breathing exercise you could try is Anuloma Viloma or Alternate Nostril Breathing. This breathing technique is done by breathing in through one nostril and releasing the breath through the other. It is considered to be very beneficial for individuals suffering from allergy, sinus, high blood pressure, depression, and heart blockages.
2. What are all the benefits of Pranayama and Kapalpathi? The aim of pranayama's is to bring the involuntary functions of the mechanism of respiration under control. Individuals who practice pranayama's will have good strength, courage, enthusiasm, and good appetite. Some of the pranayama benefits are maintaining a blood pressure level that is healthy, increasing the supply of oxygen to the brain, and reducing stress. Some of the Kapalpathi benefits in particular are in helping with obesity, indigestion, and other diseases related to the abdomen. Practicing meditation regularly can provide you with a lot of benefits. Some of the meditation benefits include decreasing the rate of respiration, building self-confidence, and helping with chronic diseases like arthritis and allergies
3. AnulomaViloma: How AnulomaViloma will help for Weight Loss? AnulomaViloma or Alternate Nostril Breathing is a breathing exercise in which you breathe in through one nostril, hold your breath, and breathe out through the other nostril in the ratio of 2:8:4. Regular practices of AnulomaViloma along with some yoga poses can help get rid of the fat deposits all over the body, not just a specific area. Padmasana (Lotus Pose) is a sitting posture that requires your hips to be open and should be consistently practiced. It is very effective in aligning the

chakras. Bhramari is considered to be the best breathing exercise for meditating. It relaxes the mind and reduces high blood pressure, fatigue, and stress.

4. SitkariPranayam | Teeth Hissing Exercise: SitkariPranayam cools the body and affects important brain centres and regulates body temperature. It cools and reduces mental and emotional excitation, and encourages free flow of prana through the body

Procedure:

- Sit in any comfortable meditation posture.
- Close the eyes and relax the whole body.
- Hold the teeth lightly together. Separate the lips, exposing the teeth.
- The tongue may be kept flat or folded against the soft palate in khechari mudra.
- Inhale slowly and deeply through the teeth.
- At the end of the inhalation, close the mouth.
- Exhale slowly through the nose in a controlled manner.
- This is one round.

5. Ujjayi Pranayama: The Sanskrit word ujjayi means 'victorious'. It is derived from the root ji, which means 'to conquer' or 'to acquire by conquest', and the prefix us, which means 'bondage'. Ujjayi is therefore the pranayama which gives freedom from bondage. It is also known as the psychic breath, as it leads to subtle states of mind and is used together with khichari mudra, the tongue lock, in tantric meditation techniques such as mantra Japa, ajapajapa, kriya yoga and pranavidya

Procedure:

- Sit in any comfortable meditation asana. Close the eyes and relax the whole body.
- Take the awareness to the breath in the nostrils and allow the breathing to become calm and rhythmic. After some time, transfer the awareness to the throat.
- Feel or imagine that the breath is being drawn in and out through the throat and not through the nostrils, as if it is taking place through a small hole in the throat.
- As the breathing becomes slower and deeper, gently contract the glottis so that a soft snoring sound, like the breathing of a sleeping baby, is produced in the throat.
- If practised correctly, there will be a spontaneous contraction of the abdomen, without any effort being made.
- Both inhalation and exhalation should be long, deep, and controlled. Practise yogic breathing while concentrating on the sound produced by the breath in the throat. The sound of the breath should be audible to the practitioner alone.

EXTENSION: when this breathing has been mastered, fold the tongue back into khichari mudra. If the tongue becomes tired, release it, while continuing the ujjayi breathing. When the tongue is

rested, fold it back again. Surya Bheda Pranayama. The Sanskrit word Surya means 'sun', which refers to Pingala Nadi, while bheda means 'to pierce', 'pass through' or 'awaken'. Surya bheda, then, means to pierce or purify Pingala Nadi

Procedure: Assume a comfortable meditation asana. Place the hands on the knees in either chin or jnana mudra. Close the eyes and relax the whole body.

- When the body is comfortable and still, watch the breath until it spontaneously becomes slow and deep.
- Adopt nasagra mudra. Close the left nostril with the ring finger and inhale slowly and deeply through the right nostril. Exhale slowly through the right nostril, keeping the left nostril closed with the ring finger. This is one round

Duration: When first practising suryabheda pranayama, 10 rounds are sufficient. Over time, however, as the practice becomes comfortable, the duration may be increased to 10 minutes. Slowly increase the length of retention over a matter of months. A ratio of 1:1:1 may be introduced to stabilize the practice. Once this is mastered, it may be increased to 1:1:2 and then 1:2:2

Sheetali Pranayama: The Sanskrit word sheetali is derived from the root sheet which means 'cold'. Sheetal means 'that which is calm, passionless and soothing'. Sheetali pranayama is mentioned in the yoga texts Hatha Yoga Pradeep Ika and Gheranda Samhita.

Procedure:

- Sit in any comfortable meditation posture.
- Close the eyes and relax the whole body.
- Extend the tongue outside the mouth as far as possible without strain.
- Roll the sides of the tongue up so that it forms a tube.
- Practise a long, smooth, and controlled inhalation through the rolled tongue.
- At the end of inhalation, draw the tongue in, close the mouth and exhale through the nose.
- Practise yogic breathing throughout.
- The breath should produce a sucking sound.
- A feeling of icy coldness will be experienced on the tongue and the roof of the mouth.
- This is one round.

Duration:

- With practice, the duration of the inhalation should gradually become longer to increase the cooling effect.
- Gradually increase the number of rounds from 9 to 15.

- For general purposes 15 rounds is sufficient; however, up to 60 rounds may be performed in very hot weather.

#### Anuloma Viloma Pranayama (Psychic Network Purification)

Right nostril is Pingala Nadi (Sun principle or body), left nostril represents Ida Nadi (moon principle or mind). In alternate nostril breathing, one inhales through right and exhales through left then inhales through left and exhales through right nostril. This purifies the Ida and Pingala Nadis. This purification brings balance to body and mind. The metabolic processes are balanced. The purpose of the Alternate Nostril Breathing is to balance the physical energy and mental energy. It is recommended for all types of problems. As Hatha Yoga principle says that the health conditions are due to imbalance between this Ida and Pingala. Alternate nostril breathing balances these two forces.

#### Procedure:

- Sit in any comfortable meditation posture, preferably siddha/siddha yoni asana or padmasana.
- Keep the head and spine upright. Relax the whole body and close the eyes.
- Practise yogic breathing for some time.
- Adopt nasagra mudra with the right hand and place the left hand on the knee in chin or jnana mudra.
- Close the right nostril with the thumb. Inhale and exhale through the left nostril 5 times.
- The rate of inhalation/exhalation should be normal.
- Be aware of each breath.
- After completing 5 breaths release the pressure of the thumb on the right nostril and press the left nostril with the ring finger, blocking the flow of air.
- Inhale and exhale through the right nostril 5 times, keeping the respiration rate normal.
- Lower the hand and breathe 5 times through both nostrils together. This is one round.
- Making sure that there is no sound as the air passes through the nostrils.
- Practise until this stage is mastered before commencing the next stage.

Stage 2: Begin to control the duration of each breath. Count the length of the inhalation and exhalation through the left, right and both nostrils. Breathe deeply without strain. While inhaling, count mentally, "1, 2, 3, until the inhalation ends comfortably. While exhaling, simultaneously count, "1, 2, 3, Inhalation and exhalation should be equal.

Bhastrika Pranayama: The Sanskrit word bhastrika means 'bellows'. Thus, bhastrika pranayama is also known as the bellows breathe, as air is drawn forcefully in and out of the lungs like the bellows of a village blacksmith. The bellows increases the flow of air into the fire, producing more heat.



Similarly, bhastrika pranayama increases the flow of air into the body to produce inner heat at both the physical and subtle levels, stoking the inner fire of mind/body.

Procedure:

- Sit in a comfortable meditation posture with the hands resting on the knees in either chin or jnana mudra. Keep the head and spine straight, close the eyes and relax the whole body.
- Take a deep breath in and breathe out forcefully through the nose. Immediately afterwards breathe in with the same force.
- Forceful inhalation results from fully expanding the abdominal muscles and forceful exhalation from firm contraction of the abdominal muscles.
- Do not strain.
- During inhalation, the diaphragm descends, and the abdomen moves outward. During exhalation, the diaphragm moves upward, and the abdomen moves inward.
- The movements should be slightly exaggerated. Continue in this manner, counting 10 breaths take a deep breath in and breathe out slowly. This is one round. Practise up to 5 rounds.

General Principles of yogic practices

- Yogic practices are not 'exercise' as understood. The word exercise is generally applied to vigorous physical movements. Since yogic practices do not involve vigorous movements, any kind of violent action should be avoided during yoga practice.
- The nature of Yogic practices is varied and involves different mechanisms through which the results of yogic practices are obtained.
- Asanas – one of the most important and best known of yogic practices is static stretching procedure. They should be performed slowly and smoothly to influence the tonic system rather than the physical one.
- The position in a particular asana should be comfortably maintained for some time with the least effort. Effortless performance and relaxing as much as possible during the final position are the chief characteristics of the techniques of Asanas.
- Pranayamic practices are very different in purpose and technique from the "Breathing exercises." They are supposed to increase oxygen uptake. However, they are considered of little value in the literature of physical education.
- Yogic practices should not lead to undue fatigue. If there is fatigue, it should be overcome by the practice of relaxation in shavasana.
- All yogic practices should be performed according to one's own capacity and without competition with others. All yogic practices should lead to peace of mind.
- Any yogic routine should begin with psychophysical relaxation centering one's attention as one would on prayer or actual recitation of some prayer.

- It would be better to learn the yogic practices while one is having normal health. An imprudent way of practicing yoga practices is sometimes found to lead to impairment of the health of an individual instead of making it healthier. People who are very weak, or those who have recovered from illness, should be careful in this respect. It is true that many ailments can be cured by nicely administering yoga techniques, but for that, one has to take the help of an expert.
- Age and sex do not offer any bar as the yogic practices are concerned. This does not, of course, mean that every yoga technique may suit every individual. For example, women should abandon some practices during menstruation and during advanced stages of pregnancy. But there are some practices, which can be continued even during those conditions. Children may start practicing yoga techniques at about eight years of age. There is no upper age limit as far as the yogic practices are concerned.
- The place for practicing yogic practices should be well protected from the menace of animals, rodents and insects. If it is done indoors, it should be well ventilated and have sufficient light. The surroundings should not be noisy. The ground should be plain and flat, not sloping in one direction.
- Morning time is considered better from the point of view of regularity, while it is the experience of some people, especially beginners, that yoga practices can be done with ease and comfort in the evening as well.
- Yogic practices should not be done with a loaded stomach. After a full meal, nearly five hours should be allowed to pass and nearly two hours after a snack so that the exercise does not interfere in any way with the process of digestion and absorption of food.
- Both men and women should, while practicing the yoga techniques, wear as less number of clothes as permitted by the climate and their social customs. In sum, the dress should be clean, simple and least cumbersome.

#### Guidelines for practicing Asanas

- We have to keep in mind that while going in for asana practice, we have to adhere to general conditions with regard to dress, time of practice, place of practice etc., so as to achieve the maximum benefits.
- Dress - What is the dress proper for the Asanas? The minimum possible dress is recommended. More areas of our body should be exposed to the atmosphere. The dress should be loose and preferably elastic in nature prefer cotton materials to other kinds.
- Time -It can be practiced both in the morning and in the evening. The morning session will be good, because during the mornings the atmosphere is pure and calm, and it is very easy to focus our mind in the desired direction.

- Place -The place of practice is very important. While in practice you should not be disturbed by other external factors. So, your place that you are free from disturbance can select pooja room or separate hall or better if you have open terrace. The place should have proper ventilation, free from pollution, free from dust and ants and quite calm in nature.
- Body - Body should be clean; particularly our stomach and intestine should be empty. Finish your morning routines, take your bath, and after 15 minutes, practice the asana. The important instruction, the body should be light and fresh, hence the Asanas are done during in the early morning hours or during the evenings.
- Sequence - Usually the Yogic Asanas are done along with pranayama and meditation practices in the following sequence. Complete the Asanas first, then follow it with pranayama and go for meditation the last.
- Spread - The asana is done on a flat horizontal surface covered with a clean blanket preferably a cotton cloth.
- Age limit -According to Yoga literature, both male and female can practice the Asanas right from the age of twelve. However, the children should not remain in their final pose for long duration as adult's do.
- Priority - For good results asana practice should begin with Shavasana. This helps the body to attain normal metabolism level, which is a suitable stage for beginning the practice.
- Concentration - During the asana practice concentration is a must. It is easily achieved when you attempt to see the tip of the nose with your eyes or try to see with your eyes the center of your forehead.
- Initiation - Yogic asana practice needs initiation from a teacher. That is in the initial stage the learning should be from an experienced 'Guru' is essential.
- Diet - There are no specific dietary rules for the asana practitioners. However, as far as possible, natural foods that are in light and easily digestible condition should be included in our daily diet. For any Yoga practitioner, regulation of food is very much essential. He should never take stomach full of food. Yoga teachers insist that two quarters of the stomach volume alone should be filled with food, one quarter with water and the remaining quarter should be kept empty.
- While performing the Asanas care should be taken to adhere to the following:
  - Start with simple to complex Asanas in a progressive manner.
  - Do the Asanas in Paris. That is forward bend followed by backward bend and vice versa, similarly on the right and left side.
  - Make the movements only with tolerable pain or discomfort.
  - Don't jerk your body unnecessarily.
  - Keep the breathing rate normal.
  - Keep the body in a completely relaxed position. Don't be tense.

- Avoid any kind of talk. Don't swallow anything including saliva. If you feel like sneezing dismantle the asana and do it.
- Don't practice the asana when you are ill.
- Women should not practice during periods.
- Yogic practice is a scientific system. We must understand the proper method of doing each Asanas through a guru or from a qualified Yoga teacher.

What is Surya Namaskar? Surya Namaskar is the most useful and popular mode of Yogic exercises which briefly bestows the benefits of Asanas, pranayama, and Mudras altogether. It consists of a series of 12 postures which are performed early in the morning facing the rising Sun. Surya Namaskar energizes the entire neuro-glandular and neuro-muscular system of the body and its regular practice ensures a balanced supply of oxygenated blood and perfect harmony to all the systems of the body, thus invigorating the entire psychosomatic system of human constitution.

#### Meaning of Surya Namaskar

- On telling different names of Soorya Bhagwan with full meaning we get our soul love devotion of power, health strength then only unity with God such good habits are formed.
- Surya -> sun, Namaskar – Salutation, salvation to sun
- It is a series of twelve physical postures.
- Combination of Asana & Pranayama
- General flexibility
- Regulation of prana with om bija mandhra and name of sun

Effects of Surya Namaskar: Surya Namaskar practice interacts with the physical organs of the body directly, by applying pressure, massaging, stretching and generally toning up and supporting internal tissue structures. This aids the eliminative function as well as stimulating nerves.

1. Effects on respiratory system
  - Increases the hypo ventilation.
  - Lungs are fully expanded, stimulated, and then cleansed.
  - Oxygenate the blood.
  - Prevention of diseases such as tuberculosis.
2. Effects on skin
  - Regulate the body temperature.
  - Excreting waste matter through perspiration.
  - Speeds up circulation, enhances the elimination of waste through the digestive and urinary system.
  - Removes the toxins.

- Vitamin D production takes place.
3. Effects on Nervous system
    - Stimulates and circulates the whole spinal cord and all nerve plexuses.
    - Stretching the nerves enhances prana in the spine.
    - Activates brain center.
    - The whole nervous system is activated.
  4. Effects on endocrine system
    - Production and secretion of hormones
    - Chemical substances are released into the blood stream.
  5. Effects on Pituitary Gland
    - It has many hormonal secretions.
    - Stimulates the hypothalamus.
    - Beneficial effect on the vital center.
  6. Effects on Pineal Gland
    - Increasing the awareness
    - Maintenance of this gland.

### CHAKRAS

Anyone can do chakra meditation. Usually, people have three chakras already open which are located at the bottom of the spine. If anyone had all the seven chakras opened, he would already be a spiritual master. Most people do not have the fourth chakra opened at all, which is the heart chakra. This chakra when opened radiates love and compassion towards others. The opening of the higher chakras or energy centers

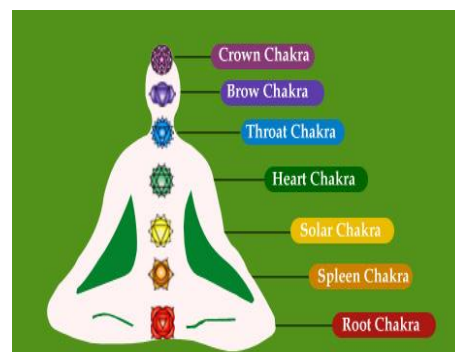


Figure 1: Seven Chakras

requires meditation. Chakra meditation is easy to learn but requires dedication and a willingness to do this regularly. A person needs to dedicate at least a half hour every day. Through the practice of chakra meditation, you will experience a sense of balance and relief from emotional stress. It helps you achieve health in mind and body. There are seven chakras in the body, corresponding to energy centers, and each has its own color of light associated with it. These are:

- Crown (Shasrara) - Violet
- Between the brows (Ajna) - Indigo Blue
- Throat (Vishudda) - Pale Blue
- Heart (Anahata) - Emerald Green
- Navel (Manipura) - Golden Yellow
- Sacral (Svadhithana) - Orange
- Root (Muladhara) - Red

Each chakra rules a certain symbolic area. For example, the Root chakra or the first chakra is the lowermost chakra and the organs/areas it supports is the whole body. This includes the spine's base, rectum, the bones, feet and legs, and the immune system. The emotional and mental issues that the Root chakra covers are safety and security, emotional grounding, ability to provide for oneself, ability to stand up for oneself, and the ability to be practical and rational. When this chakra is unbalanced, it leads to a disorganized mind. Physical manifestations of imbalance would be lower back pain, varicose veins, rectal tumor, depression, and lowered immunity.

Opening Chakras: The need to open these chakras arises because they are clogged with unwanted feelings, thoughts and emotions that cause physical and mental stress and imbalance. To practice chakra meditation, choose a place which is quiet and a time when you will be uninterrupted for at least a half hour. Switch off all outside communications. Wear comfortable clothes, barefoot and lie down on the floor or on your bed. You can meditate in a sitting position if you want. Correct breathing is very important for chakra meditation. Breathe rhythmically, inhaling and exhaling for the same count. If you inhale a count of three, then you must exhale a count of three. Become aware of how you breathe. To begin with the opening of the chakras, you have to think of a light that glows at each chakra. You will start at the base or the Root chakra. Here the glowing light will be red since this is the colour of the Root chakra.

Chakra literally means wheel or circle in Sanskrit. In a more profound sense, it represents the eddies or vortexes of energy situated along the central shaft of the human body, deep within the astral spine, a long, downward trajectory of the subconscious mind. The chakras are nerve plexes or centers of force and consciousness situated in our inner or subtle bodies. They correspond to the spinal plexuses in the physical body (ganglia, glands, and nerve plexes) from which nerves branch out to provide energy to the different parts of the body. They are part of our spiritual anatomy. For, just like our physical body has an anatomy and maps to the physical world, likewise, there is an anatomy of our spiritual selves, as well as maps and guideposts on the path of inner awakening.

The point between the eyebrows, for example is where the mind focuses instinctively in ecstasy or concentration. You might even have observed people frown or knit their brows when engrossed in thought. The comprehension of this concept and concentration on that spot result in consciously focusing the mind there. Psychically, the seven primary chakras can be viewed as colourful, multi-petal wheels or lotuses, situated along the spinal cord from its base to the brain. They are as follows:

Sl. No.	Name	Location	Function
1.	Muladhara	base of the spine	memory, time, space

Sl. No.	Name	Location	Function
2.	Swadisthana	just below the navel	reason
3.	Manipura	solar plexus	willpower
4.	Anahata	centre of the heart	direct cognition
5.	Vishuddha	throat	divine love
6.	Ajna	third eye	divine sight
7.	Sahasrara	crown of head	illumination, Godliness

- The first is the Muladhara chakra located at the base of the spine and called the coccyx center. From this chakra branch out nerves to the lower parts of the body: the legs and anus. The muladhara Chakra or root chakra is known to be the seat of the kundalini power which lies dormant in this chakra. The Muladhara chakra is the root from where the various life force impulses tend to cross the rest of the six chakras and reach the crown chakra thereby allowing the individual to experience the widest expansion of their state of awareness.
- Location of muladhara chakra: The location of the muladhara chakra will vary for men and for women. In case of men the muladhara chakra is located exactly between the anus and the scrotum whereas in case of omen it lies near the cervix, on the posterior side.
- Muladhara chakra awakening can be achieved by practicing the moola bandha or the perineal contraction kriya as well as the nose tip gazing or Nasik Agra Drishti kriya. Both kriyas are aimed at increasing one's mindfulness to concentrate on the root chakra so that the dormant energy residing in the individual can be awakened. While practicing these kriyas, you should ensure that they should be practiced systematically and slowly to allow the dormant energy in the root chakra to rise through a clear and clean channel thereby resulting in awakening.
- The second chakra is the Swadisthana, or sacral centre. It is situated approximately an inch and a half above the Muladhara chakra. The nerves of this chakra manage the reproductive system.
- The third is the Manipura chakra, opposite the navel in the astral spine, or lumbar centre. The nerves of this chakra serve to operate the digestive system and all internal organs and glands in the abdominal cavity such as the spleen, liver, kidneys, and adrenals.
- The fourth is the Anahata chakra, or dorsal centre located in the region of the heart, from which nerves flow out to the heart, lungs, and chest, and thence to the arms and hands.
- The fifth or Vishuddha chakra, also called the cervical centre, is opposite the throat in the spine. From here nerves drift to the throat, neck, and vocal cords.
- The sixth or highest spinal centre is the Ajna chakra situated in the medulla oblongata, at the base of the brain. It is the centre from which the entire body is fed with prana (life force or cosmic energy).
- The seventh chakra is by tradition known as the thousand-petaled lotus, or crown chakra. This is the Sahasrara chakra in the cranium, at the apex of the head.

## UNIT II - KRIYAS

KRIYAS: The father of Western medicine, Hippocrates, used purification such as emesis, enema, purgation, sweating, diet, fasting, hydrotherapy, and massage as a first line of defense. Hippocrates resorted to herbal medicine only if the disease was already too far neglected. So too did the other physicians of ancient Greece and Egypt as well as the ancient Romans, Hebrews, Arabians, American Indians, and indigenous physicians and shamans from around the world for millennia. Such a fundamental idea of inner pollution and obstructions of energy flow has been considered a primary cause (or at least a primary breeding ground for disease) since the earliest of times and thus the use of purification methods to rid the body of this burden has been a dominant theme of medicine everywhere up until the twentieth century. The hatha yoga kriyas (cleansing activities) are specifically designed to clean the body, energy body, and chakra systems quickly and painlessly. They are often broken down into six or eight divisions of action such as the shat (six) or ashta (eight) karmas (actions).

BENEFITS: The kriyas will release and thus expunge some negative emotional contractions (kleshas) and holding patterns (Vasana's) such as pride, fear, anger, greed, jealousy, possessiveness, secretiveness, neurotic desire, attachment, and so forth.

1. Hatha yoga kriyas stimulate and accelerate body/mind/spirit change and evolution so we become a more powerfully embodied vehicle of evolutionary love, healing, and consciousness.
2. The dross of the body, the impurities, and constrictions of the nervous system and psychic nerves (Nadis) are washed away.
3. Such practices will be found specifically valuable to asana, pranayama, and meditation students because spiritual and physical progress can be severely hampered in the presence of physical toxins, irritants, impurities, congestive/constrictive habituations, pathway (Nadis) blockages, contractions around imbedded irritants, and other similar obstructions of the energy body or physical body.
4. As these processes affect the blood stream in a sanguine manner, a burden is lifted from all the organs including the brain and nervous system allowing them to function more efficiently and with greater lucidity.
5. Most of these purification exercises are designed to remove stagnant internal toxins, inner filth, or inner blockages (called ama in Ayurvedic medicine) consisting of both matter and its associated energy, but they also correspondingly clean out energy paths (Nadis) and allow more energy to flow within the body/mind complex.
6. In general, the hatha yoga kriyas such as the shat karmas (six actions), open obstructed energy pathways, enliven previously sluggish or stagnant areas, activate dormant circuitry and function.



7. Work on certain nerve Plexi strengthening and activating them increasing function. Other kriyas (such as Nadi shodhana) restore balance in the psychic energy channels (Nadis) clearing away causal obstructions which govern the health and balance of the entire nervous system including the brain ion.
8. Physical wastes are eliminated. Their presence irritates the nerves, slowdowns function, numb sensitivities and higher function, and burden the energy body by inviting unwanted parasites whose presence create unusual cravings and demands for additional nutriments as well as creating nervous agitation.

#### TYPES OF KRIYAS

- Ear Cleansing: Karna Dhauti
  - Tratak
  - Kapalabhati
  - Neti
  - Tongue Cleansing (Jivhanirlekhan or Jivha Kriya))
  - Upper Palate Massage including Khichari Mudra
  - Danta Dhauti (Teeth Washing)
  - Nauli Kriya, Nauli Chalana, Laukiki, or Lauiki
  - Agnisara (Vahnisara) Kriya
  - Vamana Dhauti (sometimes called, jal dhauti, kunjla Kriya, or Gaja Karni)
  - Hrid (heart) Dhauti, Danda Dhauti (stick) Dhauti and Vastra (cloth) Dhauti
  - Vastra (cloth) Dhauti (also sometimes called Hrid Dhauti
  - Vatasara Dhauti (Internal Air Washing): Bhujangini Mudra
  - Shankha Prakshalana Kriya: varisara or sahaaj basti kriya
  - Jal Basti
  - Aswini Mudra and Sthula Basti
  - Citra, Mulasodhana kriya, and Ganesh Kriya
  - Vajroli Mudra
1. Tratak Kriya: Continuous gazing of an object is called Tratak. It works on the ajna chakra or third eye. It is a preliminary for sambhavi and unmani mudras (see mudra appendix). Tratak is defined as focusing the eyes or "gazing" at an object for a prolonged period without blinking. This creates tears to flow in many people, thus washing and cleansing the eyes from the inside out, without the need for eyecups or eye washes. The usual and sufficient procedure is to stare at a candle for three to five minutes without blinking. At first you will feel like blinking, but you will soon get used to it after some practice.

The third cranial nerve innervates the medial rectus, superior rectus, inferior rectus and inferior oblique. It also supplies the levator palpebri. The sympathetic nerve supply travels along the innervation to the inferior oblique. The parasympathetic supply travels in the nasociliary nerve.

Techniques: Tratak is most often performed on a candle placed about three feet in front. Gaze steadily without blinking at the candle-flame without blinking or moving for 20 minutes (average). If the eyes feel strained visualize a light moving from the center of the ajna chakra above through your eyes to the candle. Relax the eyes and rest the mind. Begin with external objects which will steady and strengthen the eyes while increasing the power of dharana. If an image appears to move, bring it back to the central space without moving the head or eyeballs. Other objects besides a candle can be used such as the Ishta devi (personal deity), a yantra, AUM symbol, third eye (ajna chakra), the sun, etc. Make sure that the object is sanguine. After tratika bring cupped palms to the eyes and apply a soft inward motion around the eye (cupping them but not creating any pressure on the balls of the eye).

Benefits: is an eye activity. Sit in one posture constantly without moving and gaze at a particular

Advantages:

- Eye diseases are prevented, sight is improved, concentration develops, will power increases and mind feels peace and calm. It is an excellent preparation for meditation.
- Efferent nerve impulses are less burdened.
- Along with these physical cleansings many of the Eye Exercises.

Eye Exercises

The yoga practitioners attach special importance to eye exercises, for two reasons. Firstly, a lot of eye problems in later life are due to a loss of tone in the eye muscles. These muscles become rigid, and this loss of elasticity reduces the ability of the lens of the eye to focus on different distances. It also causes the eyesight to become weaker. These exercises tone the eye muscles up and keep them elastic. If you already have eye problems when you begin these exercises, you will find your eyesight improving after a few months. Secondly, any eye tension present will tend to produce a general feeling of tension, due to the eye's connection to the brain via the optic nerve. What happens is that eye tension produces an increase in the nerve impulses in the eye muscles. This increase in nerve impulses travels along the optic nerve and bombards the brain, causing a general feeling of tension and anxiety. The eye exercises will reduce tension in the eye muscles, as well as reduce general tension.

It is best to do these eye exercises while lying down after you've finished the asanas. This way you're resting after the asanas and doing the eye exercises at the same time, thus reducing the time taken to do your yoga routine.

When doing the eye exercises keep your eyes open and don't move your head.

- i. Sitting (as in the exercises for the neck given above), open your eyes, and then check on your posture. Spine erects, hands on the knees, body relaxed, head straight, that is how you should always remain while doing eye exercises. The whole body must be motionless; nothing must move except the eyes.
  - ii. Raise your eyes and find a small point that you can see clearly without straining, without frowning, without becoming tense and, of course, without moving your head. While doing this exercise look at this point each time you raise your eyes.
  - iii. Next, lower your eyes to find a small point on the floor which you can see clearly when glancing down. Look at it each time you lower your eyes. Breathing should be normal. In other words, you don't have to do deep breathing.
- Exercise 1: Move your eyes upwards as far as you can, and then downwards as far as you can. Repeat four more times. Blink quickly a few times to relax the eye muscles.
  - Exercise 2: Now do the same using points to your right and to your left, at eye level. Keep your raised fingers or two pencils on each side as guides and adjust them so that you can see them clearly when moving the eyes to the right and to the left, but without straining. Keeping the fingers at eye level, and moving only the eyes, look to the right at your chosen point, then to the left. Repeat four times. Blink several times, and then close your eyes and rest.
  - Exercise 3: Choose a point you can see from the right corner of your eyes when you raise them, and another that you can see from the left corner of your eyes when you lower them, half closing the lids. Remember to retain your original posture: spine erect, hands on knees, head straight and motionless. Look at your chosen point in right corner up, then to the one in left corner down. Repeat four times. Blink several times. Close the eyes and rest. Now do the same exercise in reverse. That is, first look to the left corner up, then to the right corner down. Repeat four times. Blink several times. Close the eyes and rest.
  - Exercise 4: This exercise should not be done until three or four days after you have begun eye exercises given here. Slowly roll your eyes first clockwise, then counterclockwise as follows: Lower your eyes and look at the floor, then slowly move the eyes to the left, higher and higher until you see the ceiling. Now continue circling to the right, lower and lower down, until you see the floor again. Do this slowly, making a full-vision circle. Blink, close your eyes and rest. Then repeat the same action counterclockwise. Do this five times then blink the eyes for at least five seconds. When rolling the eyes, make as large a circle as possible, so that your feet a little

strain as you do the exercise. This stretches the eye muscles to the maximum extent, giving better results.

- Exercise 5: Next comes a changing-vision exercise. While doing it you alternately shift your vision from close to distant points several times. Take a pencil, or use your finger, and hold it under the tip of your nose. Then start moving it away, without raising it, until you have fixed it at the closest possible distance where you can see it clearly without any blur. Then raise your eyes a little, look straight into the distance and there find a small point which you can also see very clearly. Now look at the closer point-the pencil or your fingertip then shift to the farther point in the distance. Repeat several times, blink, close your eyes and squeeze them tight.
- Exercise 6: Close your eyes as tightly as you possibly can. Really squeeze the eyes, so the eye muscles contract. Hold this contraction for three seconds, and then let go quickly. This exercise causes a deep relaxation of the eye muscles and is especially beneficial after the slight strain caused by the eye exercises. Blink the eyes a few times.
- Exercise 7: This exercise is called 'palming' and is very relaxing to the eyes. It is also most important for preserving the eyesight. Palming also has a beneficial, relaxing effect on your nervous system. It's an ideal way to finish off the eye exercises.
  - Benefits: This exercise helps to do away with eye strain, and tension. Your vision will get better and clearer as the ophthalmic, or eye, nerves receive a richer supply of blood. Some people use this to improve their vision.

Kapalbhati, Bhastrika Kriyas:

Kapalbhati: It is the process of cleaning the brain and the central top of the head. Breath should be inhaled fully up to navel and should be exhaled three to four times with maximum force. Inhalation should be natural, but exhalation should be deliberate, while exhaling it should be breathed out through the nose with hissing sounds.

- Advantages: This activity sharpens the thinking ability, inculcates self-confidence and also helps in developing the memory and knowledge. It makes the face charming.

Kapalabhati (or) bhastrika

- i. long deep inhale with short kumbhaka holding mulabandha, swadhi bandha, and spine long
- ii. long deep exhale with external retention (bahya kumbhaka) holding spine and torso long
- iii. create hollow in abdomen toward the spine as the chest remains lifted (uddiyana bandha)
- iv. release hollow (allow abdomen to snap back)
- v. repeat 4 and 4 back and forth, while holding the breath out continuously
- vi. Before energy subsides or any feeling of strain/distress inhale.
- vii. Immediately repeat another round of kapalabhati or bhastrika.
- viii. Perform three rounds for one sitting integrating agni sara into a daily pranayama practice

- ix. One can start with ten, and then work gradually to twenty, thirty or more (according to our capacity). If one does the slow deep versions 10 or 15 are suitable.
- Hint: Think about agnisara as a melting of any hardness in the abdomen and an energizing/warming up at the navel region and below. Think kapalabhati without the breath, emphasizing the motion of uddiyana bandha (bringing the lower abdomen back to the sacrum and spine while lifting the torso).
  - Caution: Avoid the common mistake of pulling in from the area directly below the sternum (solar plexus). This is the area of the stomach, pancreas, and liver. In other words do not allow the chest to sink and the upper back to round, but rather allow the inward motion to be created at the line of the abdomen near or below the navel after first implementing and holding mulabandha and swadhi bandha, keeping the chest open, and lengthening the spine. Remember that the navel point can go in only if the muscles release and soften. We are not trying to build muscle but rather heat. Relax, soften any hardness and tension, and tonify the region with fire or energy, thus burning up stagnant toxins (or moving stagnant chi).

Bhastrika: Bhastrika is also like Kapalabhati Kriya. Breath is continuously inhaled and exhaled without any interruption. Forceful exhalation is important in Kapalabhati, whereas inhalation and exhalation both are equally forceful in Bhastrika.

- Advantages: Bhastrika helps in reducing gases, constipation and acidity.
- Note: Stomach should be expanded when breathing in and it should be contracted when breathing out in both Kapalabhati Kriya and Bhastrika.

Jala Vaman Dhauti Kriya: Elephants follow this process when they are ill. So, it is also called Kunjal Kriya or Gajakarni (Kunjal = Gaja = Elephant). Yogis learnt this by observing elephants. Water is heated to lukewarm, little salt is added and filtered. Squatting on the feet, drink the saline water till stomach is full to its maximum say eight to ten glasses in succession. Then stand erect and move the waist front and back, left, and right and rotate it clockwise and anti-clockwise three to four times. With this movement the unwanted acids, gases and other wastes accumulated in the stomach are mixed in the drunk water. Now stand before a wash basin, press the stomach with the left hand and press lightly the inner tongue with the two right pointed fingers. With this sensation, the water in the stomach gushes out like a spring or fountain from the mouth bringing the accumulated wastes out. Hold the fingers inside the mouth and go on tickling the inner tongue till the entire drunk water is vomited out. If at all a little water is remained that is let out either through stool or through urine.

- Note: Fingernails should be trimmed or else the soft palate may be hurt and blood may start oozing. Saline water turns red when unwanted acids mix in it. During this process red water may come out. It is not blood. After the completion of the process either Arogyamritam or warm milk or both should be taken. Later a little rest is a must. After this process spiced food like pakodas, mirchees etc. should not be taken on that day. Non-veg food also should not be taken. This activity should be undertaken at least once a week. If needed it may be practiced continuously for two or three days.
- Note: People suffering from High B.P. should use lime juice instead of salt. People suffering from ulcers, heart diseases or any stomach disorder or pregnant women should not attempt this process.
- Advantages: Stomach is cleaned. Gastric trouble, constipation, indigestion, acidity, burning sensation in the stomach, headache etc. are relieved. Even the extra weight of the body is also reduced gradually. If it is done regularly Jaundice does not effect. People suffering from breathing problems get relief.
- Benefits: In yoga therapy vamana is excellent for disorders of udana, prana, samana, vyana, and apana. It cleanses and stimulates the stomach, esophagus, lungs, chest, heart, throat, nose, eyes, ears, and sinus. It balances the vayu (winds) in the body especially the upward moving prana-vayu (the prana that moves upwards). It alleviates depression, sloth, and heaviness. It is a remedy for many kapha and tamasic imbalances, Vamana dhauti is one of the specific remedies in Ayurvedic medicine for stomach, throat, asthma, and lung affliction (along with hrid dhauti). It is counter-indicated in cases of hiatal hernia and ulcers.

#### Vasti Kriya (enema):

- Either lime juice or salt is added to warm water and the enema pot is filled. A rubber tube is fitted to the hole of the enema pot. The other end of the rubber tube is inserted into anus in lying position. The water enters the large intestine.
- The abdomen is gently massaged with the palms. The impurities flush out along with the enema water. So, it should be practiced near to the toilet.
- In ancient days the rishis and the Yoga practitioners used to sit in a water tub or a river or in a tank and suck the water into the stomach through anus. Their willpower helped them in this process. Now there are only a few people, who can do it, so the water is conveniently sent in by enema process these days.
- When we pass out the water, gases, acids, and other dirt particles that have been accumulated in the large intestine gush out. After enema one should take rest for some time

and should take light food on that day. Enema should be taken empty stomach before breakfast. Enema can be taken once a month or whenever one feels.

- Advantages: Large intestine is thoroughly cleaned. Constipation and indigestion problems are solved. Appetite is increased.

#### NETI:

Neti is used to cleanse the entire area above the chest. Classically there are two types, jal (water) neti and vastra or sutra (string) neti. Jal neti is especially designed to clean out irritants in the nose and upper pharynx and to rehydrate and moisten the delicate goblet and ciliated cells of the nasal passageway, while sutra neti is a great stimulant of the nerves in the sinus, nose, ears, eyes, and throat greatly relieving congestion and stagnant mucous conditions of the sinus, eyes, ears, throat, and head. Sutra neti being more stimulating is best done in the daytime or morning. It works on the ajna and crown chakras and is beneficial for success in pranayama.

#### Benefits of Jala Neti

- Neti removes all the dirt and bacteria filled mucus from within the nose.
- It also helps to drain the sinus cavities. This in turn, will help to reprogramme the body's natural mechanisms against nasal infections such as hay fever, allergies, sinusitis and other upper respiratory complaints like sore throats and coughs, post nasal drip, inflammation of tonsils and adenoids.
- It is beneficial for illnesses such as asthma and bronchitis as it reduces the tendency for mouth breathing by freeing the nostrils of mucus.
- It has a cooling and soothing effect on the brain by drawing out excessive heat, and is therefore beneficial for headaches, migraine, epilepsy, temper tantrums, hysteria, depression, and general mental tension.
- Neti is of great benefit for problems associated with the eyes. It helps flush the tear ducts, encouraging clearer vision and gives a sparkle to the eyes.
- It can be beneficial for certain types of ear disorders such as middle ear infections, glue ear, tinitis.
- Neti improves sensitivity of the olfactory nerves, helping to restore lost sense of smell, and thereby benefits the relationship with taste and the digestive processes.
- It has subtle effects on the pineal and pituitary glands which control the hormonal system. This has a harmonising effect on emotional behaviour.
- Neti affects the psychic centre known as Ajna Chakra which helps in awakening higher states of meditation.
- It helps to stimulate better powers of visualisation and concentration and gives a feeling of lightness and clarity to the mind.

- Neti is excellent for those trying to give up smoking. Since it reduces the tendency for mouth breathing, Neti re-sensitises the nose to the actual pollution of ingesting smoke, thereby de-programming the brain of the physical and psychological addiction.

Sutra Neti - Nasal Cleansing Using a Rubber Catheter. This is a very effective way of opening up the nasal passages to their fullest capacity.

- Technique
  - Pass a rubber catheter of about 1mm dimension into your nose through one nostril.
  - Slowly keep pushing it in until you feel it in your throat.
  - Now gently draw it out your mouth.
  - Then gently tug the catheter to and for a couple of times.
  - With practice, it can even be passed from one nostril through the other. But this requires a certain level of proficiency and is also not very necessary. The effect, however, is still the same.
  - Before and after usage it is advisable to rinse the catheter in warm water or medicated oil.
  - Repeat the exercise with the other nostril.
- Benefits: Both Jala and Sutra Neti help extract all the impurity and bacteria filled mucus from the nasal and sinus cavities. This in turn, will help to restore the body's mechanisms to natural and increase its immunity to nasal allergies like hay fever, sinusitis and other respiratory conditions like sore throats, chronic coughs and colds, postnasal drips, adenoids, and tonsillitis. By cleansing the nasal passages, it frees them of mucus and automatically reduces the tendency breathe orally. Neti is also of great benefit for eye and ear related disorders. By flushing the tear ducts, it facilitates clearer vision. Further, it has subtle effects on the pineal and pituitary glands that govern the hormonal system, resulting in harmonized emotional behavior.

Sutra or Vastra Neti (sometimes called Brahma Datuna Karma) Nasal String Cleansing Technique. Sutra Neti is also one of classic Shat Karmas (Six Cleansing Activities) of ancient Hatha Yoga. Its benefits are extolled by the great treatises on Hatha Yoga and Yoga Hygiene as an important synergist in accelerating the yogic process. Although water cleansing or bathing of the nasal cavities mechanically removes dust, irritants, and impurities from the nasal passages and is thus beneficially soothing, Sutra Neti goes further in stimulating and tonifying the nerves, glands, and organs of the entire nasal and cranial area including the eyes, sinuses, ears, and cranium. For centuries it has been a specific treatment in India for sluggishness, sinus headaches, congestion, eye and ear complaints, heaviness of the head, excess kapha (mucus), lack of alertness, opening of the third eye, and the like.



From the *Hatha Yoga Pradipika* of Swami Swatmarama, Chapter 2 (Purification of the Nerves) verses 30-31: "A smooth braided string of fine threads, a cubit (18 inches) in length should be introduced into the throat through the nose. One should rub slowly."

**Agnisar Kriya:** One must spread a good cloth, carpet or blanket on the floor and sit on it in the Vajrasana posture and inhale fully and exhale totally leaning forward a little. The stomach should be sucked in and retained in that state as long as possible. Slowly the air is inhaled, and all the parts of the stomach are gradually brought to their normal position. This is called one chakra or a round. One may practice 3 to 4 such rounds. The Agnisar Kriya can be practiced in the standing posture also in the same way. Some experts opine this as a Dhauti Kriya.

**Uddiyan Kriya:** One should sit either in Sukhasana or Padmasana on a small pillow. First inhale fully and then exhale totally through mouth. Holding the breath outside, the stomach should be sucked in to its maximum, so that it seems touching the backbone. After being in that state for some time inhale slowly. It is repeated 3 to 4 times. This can be practiced even in standing position in the same way.

**Nauli Kriya:** After practicing Agnisar Kriya and Uddiyan Kriya perfectly, then only one should attempt Nauli Kriya. Making centre of the abdomen as a pipe is important in this exercise. The practitioner has to stand and keep his hands on thighs and inhale to maximum and exhale totally. Now the abdomen is sucked in such a way that it touches the backbone. At this stage, the centre of the abdomen is turned as a vertical pipe. Gradually one hand is lifted from the thigh and raised. The pipe like abdomen is moved from one side to the other. Then another hand is raised, and the process is repeated.

- Note: Nauli Kriya is to be attempted after attending to the calls of nature, empty stomach before breakfast. It should never be attempted after meals. People below 14 years of age or suffering from fever or high blood pressure, ulcer, hernia, and pregnant women should not attempt Nauli Kriya.
- Advantages: Potential Nauli Kriya cures the diseases of stomach and liver, increases appetite - removes disabilities. Nauli Kriyas such as central nauli, right nauli, left nauli etc. are to be practiced strictly under the guidance of experts.

**Ajna Kriya or Kapalarandhra Kriya**

- Procedure: Place the pad of the thumb of the right hand on the third eye with the nail pointing down and the four other fingers pointing straight up. Vibrate and massage the third eye region pressing firmly but with no strain or pain. Keep the scapula from raising up toward the ears, but rather allow it to release down toward the sacrum. Keep the armpit/chest open and the

occiput raised so that the chin falls and in toward the notch above the sternum (in a relaxed Jalandhara bandha). This will keep tension out of the neck, Sandalwood oil or paste although not at all necessary is often used as an adjunct.

- Benefits: This awakens and purifies the third eye region, is stimulating, clears congestion of the head and sinus, improves circulation, clarity, energy, and the eyesight. A similar practice is called Kapala randhra Prayag which stimulates the third eye region by massaging cold water on the forehead, temples, and bridge of the nose. Traditionally these ajna kriya exercises are performed daily.

**KAPALA BHATI:** *Kapala Bhati is also known as the 'Cleaning Breath' exercise. The meaning of the Sanskrit term 'Kapala' means 'skull' while 'Bhati' refers to 'shinning'. Kapal Bhati cleans all the respiratory passages including the nasal passage of the skull. The Kapala Bhati process (which incorporates exhalations and inhalations in quick succession) resembles the blowing of the blacksmith's bellows.*

#### Methodology

- Firmly sit in a cross-legged posture.
- Your head, neck and spine must be in the erect position.
- Completely exhale.
- Then take a few deep breaths.
- Next, relax the abdominal muscles.
- After that, inhale but not deeply.
- Finally, expel the breath through both the nostrils in a short and forceful manner.
- The breath expulsion process must produce an audible hissing sound.
- At the same time, contract the lower abdomen with vigorous and rapid thrust of the abdominal muscles.
- Quickly release the contraction of the abdominal muscles.
- Your lungs will automatically take in air.
- Don't leave any gestation periods.
- Instantly follow up with forcible expulsions of your breath buy contracting the abdominal muscles.
- Let the abdomen relax once air is drawn in.
- Concentrate on the portion just below the navel.
- Repeat several times in quick succession to make a round.
- Complete a round as you exhale.
- Take in a deep breath slowly to resume the normal breathing rhythm.

- This will provide rest to the lungs.

#### Points to Remember:

- The rule is to perform two breath expulsions in a second. Thus, you will be performing 120 expulsions in a minute. Though this may be not possible at the initial stages, endeavour to attain this optimum level with practice.
- In each sitting perform three rounds.
- Between two rounds, take rest with normal breathing for at least 15 seconds.

#### Advantages:

- Kapala Bhati is the most beneficial breathing means to provide elasticity to the diaphragm.
- Kapala Bhati increases the capacity of your lungs.
- Kapala Bhati flushes out residual air that is stale in the lungs.
- Thus, Kapala Bhati brings in fresh supply of air to your lungs.

Vatasara Dhauti -- Washing the intestines with air. There exists a different form of vatasara dhauti. Here we give one form which is drinking the air from the mouth and swallowing it, then churning it around through the intestines and expelling it out the anus, thus providing an air bath for the entire gastro-intestinal tract. Before attempting this form, attempt to master bhujangini mudra below. The above form of vatasara dhauti is also called bashis kriya.

The Yogic Enema: Jal basti is the yogic enema using water. The ancient yogis having as few possessions as possible, instead of carrying an enema gourd or pouch, simply carried an enema bone made from a hollow stick or reed. The yogi would go into a river at navel depth, and after lubricating his anus and rectum with oil, he/she would lubricate and insert the hollow reed through the opening at the rectum and into the colon. Then practicing uddiyana bandha (with the aid of the positive pressure of the navel-deep water), the water would be sucked up into the colon wherein the yogi would then practice nauli kriya to wash the insides of the colon and then evacuate. It is said that one can learn to do this without the use of the reed or enema bone, but I have not met anyone who has done so. There is a similar practice done by yogis with air instead of water (sucking air into the colon through a long enema bone, aerating the colon with nauli kriya, and then evacuating the air).

**BANDHS:** The word Bandha means hold or lock in Sanskrit. Yoga Bandhas are an integral part of yogic practice. These play a prominent role in the practice of Hatha Yoga. A Bandha is essentially a static posture which constricts a certain part of the body thereby re-directing the flow of blood and lymph to other parts.

- Benefits of Yoga Bandhas: Let us take a look at some of the ways in which utilizing Yoga Bandhas can enhance the benefits that you gain from the practice of yoga:
  - Understanding and utilizing the appropriate Bandhas can simplify the performance of complex yoga poses.
  - When you make use of these yoga Bandhas, you also amplify the benefits that the practice of yoga grants your body.
  - Bandhas help you to control and improve the function of your body's internal organ systems such as the nervous system, digestive system, reproductive system, and hormonal system.
  - The practice of yoga Bandhas will also allow you to increase the duration for which you hold your postures.

#### Precautions

Bandhas are a very powerful tool in yoga. They provide a number of benefits if performed in the proper manner, but conversely, if not performed properly, they can prove detrimental in the long run. Hence, it is important to learn the proper method for performing a yoga Bandha from your yoga teacher. He or she will also be able to demonstrate the best method to incorporate the Bandha into your yoga asanas. Yoga bandhas should also not be practiced by pregnant women.

- Type of Bandhas
  - Mula Bandha,
  - Uddiyana Bandha,
  - Jalandhara Bandha
  - Maha Bandha.

**Mula Bandha:** The word Mula means root. Thus, the Mula Bandha is the most basic of all the Bandhas. It is also the easiest of yoga bandhas to master. This Bandha can be performed in any of the yoga postures, whether standing, sitting, or supine. In order to perform this Bandha, you should contract the perineum-the area between your anus and genital organs. Engaging the Mula Bandha allows you to perform your yoga practice for longer without getting fatigued. It also makes you feel lighter on your feet, thereby making the other asanas easier to perform. Performing the Mula Bandha also stimulates the digestive, excretory, and reproductive system. It can also help with digestive ailments and is also good for treating depression.

Mula Bandha - Anal Lock

Starting Position: Meditation Pose

Concentration: on the Muladhara Chakra

Breath: inhale deeply and hold the breath

Repetitions: 3–5 rounds

- Practice: Inhale deeply and hold the breath. Place the hands on the knees, raise the shoulders and tilt the upper body slightly forward.
  - Concentrate on the Muladhara Chakra and firmly contract the anal muscles.
  - Hold the muscular contraction and the breath as long as possible and comfortable.
  - With a long exhalation return to the starting position.
  - Breathing normally remains in this position for some time.
- Benefits: Strengthens the pelvic floor, relieves hemorrhoids and congestion in the pelvic area. Calms the autonomic nervous system, calms, and relaxes the mind. On the spiritual level, Mula Bandha activates and purifies the Muladhara Chakra. It awakens dormant consciousness and the Kundalini Shakti.
- Caution: *A longer and more intensive practice of Mula Bandha should only be undertaken with the guidance of an experienced "Yoga in Daily Life" instructor.*

Uddiyana Bandha: The Uddiyana Bandha means flying lock. This refers to the fact that by practicing this Bandha, you direct the energy in your body upwards. In order to practice this Bandha, stand up straight with your feet slightly apart. Inhale and lift your arms straight up over your head. Exhale and bend forward from the back and place your hands just above the knees to support the body. Hold your breath on the exhale as you straighten your arms and arch your back so that your abdominal organs are pushed upwards towards your back. You know you are performing the Uddiyana Bandha properly when your ribs protrude outwards while your abdominal section is sucked in towards your back. Engaging the Uddiyana Bandha makes inverted postures and airborne exercises easier. In addition to strengthening and massaging the abdominal organs, it also stimulates the muscles of the lower back. The Uddiyana Bandha is one of the best exercises for the entire digestive system and can help to cure a wide variety of digestive ailments. It also stimulates the adrenal system. If you are looking for washboard abdominals, the Uddiyana Bandha is also a great exercise. Uddiyana Bandha - Lifting the Diaphragm

Starting Position: Meditation Pose or Standing

Concentration: on the Manipura Chakra

Breath: completely exhale and hold the breath out

Repetitions: 3–5 rounds

- Practice: Completely exhale and hold the breath out. Place the hands on the knees, raise the shoulders and tilt the body forward slightly, keeping the back straight. (To practice this Bandha standing, separate the legs a little and bend the knees slightly.)
  - Concentrate on the Manipura Chakra, pull the abdominal muscles in and up into the abdominal cavity as far as possible.
  - Hold the position as long as comfortable.
  - Release the muscular tension and return to the starting position with a deep inhalation.

- Breathing normally remains for some time in this position.
- Benefits: Activates the Manipura Chakra and solar plexus. Stimulates intestinal activity and helps relieve constipation. Stimulates the pancreas and is helpful for diabetes. Strengthens the immune system. Balances the mind, soothes irritability and anger and dispels a depressive mood.
- Caution: *Perform only on an empty stomach! Do not practice this Bandha with high blood pressure.*

Jalandhara Bandha: The Jalandhara Bandha is a throat lock that is performed in conjunction with breathing exercises. To perform this lock, sit in the Padma Asana or Lotus Pose. Now inhale slowly as you bring your chin towards your chest. Try to maintain this posture while holding your breath as you try to further deepen the lock by straightening your elbows and trying to tuck your chin into your throat. You should be able to feel a double chin forming when you practice this posture correctly. To come out of this lock inhale some more, slowly lift your chin back to the normal position and then exhale. The Jalandhara Bandha is one of the best yoga bandhas for relieving stress. It also helps to stimulate the circulatory and respiratory systems and is beneficial for those who suffer from respiratory disorders.

Jalandhara Bandha - Chin Lock

Starting Position: Meditation Pose

Concentration: on the Vishuddhi Chakra

Breath: inhale deeply and hold the breath

Repetitions: 3–5 rounds

- Practice: Inhale deeply and hold the breath. Place the hands on the knees, lift the shoulders and tilt the body forward slightly, keeping the back straight. Press the chin firmly against the chest or between the collarbones so that the windpipe and esophagus are firmly closed.
  - Concentrate on the Vishuddhi Chakra and hold the breath for as long as comfortable.
  - Raise the head and with a long exhalation return to the starting position.
  - Breathing normally remains in this position for some time.
- Benefits: This exercise awakens the inner energy centers, especially the Vishuddhi Chakra. Improves the ability to retain the breath for a long period of time and develops the ability to concentrate. Beneficial for throat diseases and regulates thyroid function.
- Caution: *The breath should only be held for as long as easily possible. Consult a doctor before practicing if there is an existing thyroid problem.*

Maha Bandha: The Maha Bandha or Great Lock is so called because it combines all three of the previously mentioned Bandhas into one comprehensive exercise. The Maha Bandha should only

be attempted once you have mastered the Uddiyana Bandha, Jalandhara Bandha, and Mula Bandha individually. This Bandha is also performed in the Lotus Pose. While sitting in the Lotus Pose inhale deeply and then try to exhale all the breath out of your body. Hold the exhale and first engage the Mula Bandha. Once you have done so, attempt to engage the Uddiyana Bandha while sitting in the same posture. Now inhale slowly to expand your chest.

Maha Bandha - The Great Bandha

Starting Position: Meditation Pose

Concentration: on the Muladhara, Manipura and Vishuddhi Chakras

Breath: exhale completely and hold the breath

Repetitions: 3–5 rounds

- Practice: Inhale deeply and exhale fully through the mouth.
  - Hold the breath out.
  - Place the hands on the knees, raise the shoulders and tilt the upper body forward slightly, keeping the back straight.
  - Perform Jalandhara Bandha and concentrate on the Vishuddhi Chakra.
  - Perform Uddiyana Bandha and concentrate on the Manipura Chakra.
  - Finally, come into Mula Bandha and concentrate on the Muladhara Chakra.
  - Remain in this position, with all three Bandhas maintained, for as long as the breath can easily be held.
  - Release the Bandhas in the same sequence as they were applied.
  - Inhale deeply and return to the starting position. Breathing normally remains for some time in this position.
- Benefits: Beneficial for the health of the whole body, especially the autonomic nervous system, internal organs, muscles and nerves. Has a positive influence upon the mind.

*Caution: The precautions given for each of the individual Bandhas are also valid for Maha Bandha, Jalandhara Bandha. The Maha Bandha provides the benefits of all three of the Yoga Bandhas. It increases your stamina and endurance and also helps to balance the endocrine system.*

### Unit III - MUDRAS

#### MUDRA

'Mudra' means a seal or lock that closes the body apertures for a while. It is believed that prana flows in the body through various channels and energy points. Mudras help in diverting prana constantly back to the brain, otherwise it will flow into the atmosphere through the openings of the body and fingertips.



#### Warning

All mudras are not practiced as a routine. It is important for a practitioner to understand the purpose behind the practice of mudras. Proper guidance from a guru for the specific purpose either of yoga meditation or yoga asana, is imperative. The practice should progress slowly and steadily. Some mudras can be practiced before or after other yoga asanas or Pranayama. It appears that mudras were practiced by ancient yogis to hear the internal sounds and to experience the most important energy of life force, the Kundalini. Mudras are not as simple as they appear. No theory can explain their intricacies. The mudras specified here may sound different as there is no definitive method followed by all schools and can be practiced by Hatha Yoga practitioners. It is important to teach these mudras as a part of Kundalini.

1. Chin Mudra: Hold the thumb and index finger together lightly while extending the remaining three fingers. The thumb and index finger need only touch together, without exerting any pressure. Keep the three extended fingers as straight as possible. The hands can then be placed on the thighs, facing upwards. Now, observe the flow of breath and its effect.



#### o Benefits of Chin Mudra

- Better retention and concentration power
- Improves sleep pattern
- Increases energy in the body
- Alleviates lower backache

2. Chinmaya Mudra: In this mudra, the thumb and forefinger form a ring and the three remaining fingers are curled into the palms of the hands. Again, the hands are placed on the thighs with palms facing





upwards and deep comfortable ujjayi breaths are taken. Once more, observe the flow of breath and its effect.

- Benefits of Chinmaya Mudra
  - Improves flow of energy in the body
  - Stimulates digestion

3. **Adi Mudra:** In Adi Mudra, the thumb is placed at the base of the small finger and the remaining fingers curl over the thumb, forming a light fist. The palms are again placed facing upwards on the thighs and the breathing repeated.



- Benefits of Adi Mudra
  - Relaxes the nervous system
  - Helps reduce snoring
  - Improves the flow of oxygen to the head
  - Increases capacity of the lungs

4. **Brahma Mudra:** Here both hands are placed in Adi Mudra, then with the knuckles of both hands together, the hands facing upward are placed at the navel area and the flow of breath continued.



5. **Nabho Mudra**

- Sit in a comfortable asana.
- Curl the tongue upward towards the palate of the mouth.
- The tongue should remain steady without movement.
- The lips are to be closed so that air does not enter the mouth.
- Keep the eyes open and the gaze fixed to a point. Keep the thoughts steady and focus on the point of gaze all the time.
- Breathing must be normal.
- Hold in this position for 2 minutes and release the tongue to rest. Repeat this mudra 5 times.
- Saliva gathered during this mudra must be gently swallowed.
- **BENEFITS:** This mudra causes the thymus gland to release beneficial hormones that release stress from the body.

6. **Bhujangini Mudra**

- Relax on the ground with the chest facing the floor.
- Lift the chest up, and legs up like Salabasana and do a complete Adho Mukha Navasana.

- Look up towards the ceiling and fix the gaze at a point from the centre of the brow (Bhrumadhaya).
- Inhale deep and exhale with a hissing sound like that of a snake.
- Antara Kumbhaka (for 15 seconds) can be practiced in this mudra before exhaling.
- Exhale completely and rest on the floor.
- Repeat again 3 times if you are doing it with Antara Kumbhaka or 5 times without Antara Kumbhaka.
- BENEFITS: This mudra strengthens the abdomen and eliminates toxic gases from the abdominal region. It activates digestive juices and strengthens the digestive tract. It also subsides hunger.

#### 7. Kaki mudra

- Sit in a comfortable asana.
- Inhale and exhale 5 times.
- Form an Uddiyana Bandha (p. 30) and a Jalandhara Bandha (p. 30)
- Point the mouth like you are trying to drink water from a straw.
- Keep the tongue inside the mouth stable and settled.
- Suck air into the mouth with pointed lips and swallow it, pushing the air into the area of the navel.
- Holds the breath for 10 seconds or till you are comfortable.
- The abdomen should not feel bloated.
- Lift the head up gently.
- Maintain a Samadrishti or close your eyes when you practice this mudra.
- Do not practice for more than 5 rounds.
- BENEFITS: This mudra benefits the facial muscles, affects the thyroid and parathyroid glands and keeps the skin healthy and glowing.

#### 8. Mula Bandha Mudra

- Place the left heel in the perineum.
- The heels should feel the contraction.
- Inhale and do Antara Kumbhaka before proceeding to do a Uddiyana Bandha.
- Fix the gaze at the Nasagrai (Nose centre).
- Do not repeat more than 5 times.
- BENEFITS: Mula Bandha takes place in the centre of the body. It builds up core strength and establishes focus and concentration for higher spiritual practices.

#### 9. Shanmukhi Mudra

- Sit in a comfortable asana.
- Spread your fingers above your eyes. Then close all your senses by the following steps:
  - Using your thumbs, close both the ears.
  - Using your index finger, close your eyes.
  - With the middle finger, block the nostrils.
  - Place the ring finger above the upper lip.
  - Place the little finger below the lower lip.
- Shape your lips into a gentle circle.
- Breathe in like you are sucking air. Hold the breath for an Antara Kumbhaka.
- Hold the Antara Kumbhaka for as long as possible and release through the nostrils at a slow, steady, and comfortable pace.
- Relax for a while and repeat 5 more times.
- Do not exceed more than 10 times a day.
- BENEFITS: This mudra calms the mind and relaxes disturbing thoughts. It also creates a balance in the thyroid that controls hormonal fluctuations.

#### 10. Tadaka Mudra

- Lie down on the floor with the chest upward in Supta Tadasana.
- Inhale as you raise your hands up towards the ceiling and exhale as you drop hands towards the ground behind the head.
- Observe the expansion of the chest as you breathe in and observe your navel dropping towards the ground as you breathe out.
- Set a breathing rhythm and get comfortable with it.
- The above points would be preparations for Tadaka Mudra.
- Keep the body in a completely stretched position.
- Breathe out completely and drop the navel towards the spine. Hold in that position for as long as you are comfortable.
- The hollow of your abdominal cavity will look like a pond.
- BENEFITS: This mudra benefits the spine and hydrates it. It also benefits the circulatory system. Respiratory organs are strengthened to hold in the Kumbhaka which is important during spiritual practices.

#### 11. Matangi Mudra

- Take a dip in the water until the head is completely inside.
- Inhale through the nostril along with the water and fill the mouth with this water. Do not allow the water to enter your lungs.

- After the mouth is full, stick the head out of the water and expel water from the mouth. (It should look like the water coming out of the tap.)
- BENEFITS: This mudra removes restlessness from the mind and calms down excitement.

#### 12. Kechari Mudra

- The tongue is pulled everyday till the tongue can touch the tip of the nose.
- Every week, the nerve below the tongue must be cut further and pulled till it can be stretched into the nose.
- The tongue will then be swallowed and moved towards the throat till it reaches a point which is commonly known as second tongue.
- When the tongue touches this point, a juice is produced in the gland which yogis believe can conquer hunger and thirst.
- BENEFITS: This mudra provides the body with youthful energy.

#### 13. Maha Bandha Mudra

- Press the anus carefully with the left heel.
- Place the right foot on the left thigh.
- Contract the anal muscles and pull the perineum upward.
- Draw air to do the Jalandhara Bandha.
- Then breathe out slowly.
- BENEFITS: This mudra benefits the lower abdominal organs and increases energy in all the chakras.

#### 14. Maha vedha mudra

- Sit in Padmasana and do Jalandhara Bandha.
- Place the palms on the ground.
- With the support of the hands, palms pressed to the ground, lift the hip off the floor.
- The buttocks are to be hit to the ground gently several times by bouncing the hip up and down.
- BENEFITS: This mudra aids in spiritual practices. The lifting and dropping in this mudra build up cushioning in the sacral area which helps sit for long hours while practicing meditation.

#### 15. Yoga Mudra

- Sit in Padmasana.
- Place the palms on the heels and bend forward.

- Exhale completely by the time you lean and touch the forehead to the ground.
- Deepen the pull of the navel towards the spine and stay there for as long as comfortable. Breathe normally.
- BENEFITS: This mudra benefits the lower organs of the body by increasing circulation. It also helps expel toxic prana from the abdominal cavity, making the body light and comfortable.

#### 16. Viparita karani Mudra

- Lie on the ground with the chest facing up.
- Raise the legs to do the Sarvang asana with the palm supporting the hips, and elbows pressing to the ground.
- Keep your raised leg at an angle of 45°.
- Stay steady in this position.
- Gently pull in your neck and fix it into the collarbone to form a Jalandhara Bandha.
- Pull in the anal muscle and do a partial Mula Bandha and do not stress the muscle if it is tired.
- The position can be held for 2 to 3 minutes or more.
- BENEFITS: This position increases blood supply to all areas of the body.

#### 17. Vajroli Mudra

- Sit in the Padmasana with the palms placed on the thighs.
- Inhale through the nose and hold your breath.
- Pull up the sexual organs by contracting the lower abdominal muscles like you would to stop the flow of urine.
- Continue to hold the breath as you relax and contract these muscles ten times.
- On the tenth relaxation of the muscles, exhale completely.
- BENEFITS: This mudra strongly influences the Nadis that supply the sex organs with spiritual energy. This is practiced before Kundalini meditation.

#### 18. Ashwini Mudra

- Sit in a comfortable asana.
- Breathe normally.
- Gently contract the sphincter muscles and relax them.
- The action should be confined to the anus only.
- Repeat for 5 times and gradually increases the speed of the contraction.
- The contraction should be rhythmic.

- **BENEFITS:** This mudra benefits the muscles of the rectum, colon and perineum. It builds up efficient functioning of the abdominal organs and keeps the body light and clean.

19. Shakti Chalana Mudra: This mudra is practiced reaching the spiritual high of the Kundalini practice of yoga.

- Sit in the Padmasana on a wooden plank. Make sure the place of practice is quiet and secluded.
- Inhale air forcibly and hold a tight Mula Bandha.
- Close the right nostril with the right fingers (Shanka Mudra).
- Now swallow the air like you are swallowing food and push it towards the naval.
- Do this swallowing 4 to 5 times.
- Exhale gently and relax in the Shavasana.
- **BENEFITS:** This mudra is practiced reaching the spiritual high of the Kundalini Yoga practice. It improves the power of concentration and conquers lust, thus freeing the mind for higher spiritual practices.

20. Manduka Mudra: This mudra is usually conducted to control anger.

- Sit in a comfortable asana.
- Roll the tongue upward to touch the soft palate of the mouth called the Chandra Mandala.
- Move the tongue left to right in small movements until comfortable.
- A juice is produced when you do this. Swallow the juice.
- The juice is the nectar which helps control hunger.
- The mudra should be repeated of 4 or 5 times and not more.
- **BENEFITS:** This mudra decreases the fluctuations of the mind and balances the energies of the Ida and Pingala.

21. Shambhavi Mudra: This mudra should be done only in sunlight and can be done 2 to 3 times daily.

- Draw a circle of about 5-inches radius on a black paper.
- Mark a white spot in the center of the circle.
- Sit in a comfortable position seven feet away from the circle.
- Stare into the white spot in a straight line without blinking.
- If you experience strain in the eyes, relax your eyes by blinking 10-15 times till you no longer feel the strain.
- Keep staring at the white point until tears form in the eyes.

- The eyes should be cleaned with a fresh handkerchief by dabbing them dry and not by rubbing.
- BENEFITS: This mudra, while practiced as a pre-meditation routine, improves the vision to see the self (self-assessment), which is an important step before meditation.

#### When to do?

- Can be practiced at all times while sitting, lying, standing, walking, or even talking.
- For good results should be practiced for 24 minutes continuously. Can be practiced for 4-5 minutes also at one time.
- If a mudra cannot be made in both hands, you may do it in one hand only

#### MEDITATION

The different types of meditation help keep your body and mind healthy. Meditative practices have existed for centuries and since the last couple of decades, the use of meditation has increased due to the rise of interest about the teaching of the eastern cultures and the stress and anxiety of modern life. Beside a practice for spiritual growth or a way to enlightens, people also use meditation with specific purposes such as:

- Meditation for anxiety
- Meditation for pain relief

The different types of meditation techniques that have evolved from Hinduism, Christianity, and Buddhism can be classified under five categories:

1. Concentration
2. Reflective Meditation
3. Mindfulness Meditation
4. Heart centered Meditation
5. Creative Meditation

Concentration Meditation: Concentration is at the heart of all the types of meditation, but in some techniques, focus is predominantly on building concentration. Why is concentration so important? This is because in order to gain the fruits of meditation, you need to train the mind to concentrate and focus on an object or nothingness, which is to cut all distractions. This allows your mind to be calm and awaken beyond thought elaboration and even beyond your sense of self. Once you hold this view of awareness, you can use it for your wellness and for the greater good. It is more correct to say that it affects positively all the beings, yourself included.

There are several types of meditation techniques. There are several types of meditation techniques in concentration meditation category that can help you overcome distractions within and outside your mind and sustain mental focus. The different types of techniques that will help you gain concentration include:

- Zen meditation
- Transcendental Meditation
- Om meditation
- Shine Meditation or Samadhi
- Chakra Meditation

**Reflective Meditation:** Reflective meditation is also known as analytical meditation and refers to disciplined thinking. In order to successfully practice reflective meditation, you will need to choose a question, theme, or topic and focus your analysis or reflection upon it. Initially, your thoughts may wander to other topics but then you need to train your mind to come back to the topic in question. In order to do this, you need to learn concentration meditation first. As you practice this every day, your mind will be more in control and not wander off. It is one of the most important types of meditation and is considered to have a calming effect on the mind. It stimulates transformative power and provides you with great conviction and strength to change the course of your life. There are different types of questions or reflective ideas that you can focus on, such as:

- Who am I?
- What is the true purpose of my life?
- What is my role in this universe?
- How can I help remove the sufferings of others?

**Mindfulness Meditation:** Mindfulness meditation is one the most powerful and alternative meditation techniques, which lays emphasis on cultivating a highly receptive mindful attention toward any action or objects within your sphere of influence. Mindfulness meditation is one of the important meditation types that helps you learn a simple thing: to pay attention or be "mindful". This type of meditation is known to provide pain relief and help for those suffering from anxiety and depression. There are different types of techniques in this category that you can practice, like:

- Vipassana meditation - read what Olga writes about it!
- Deep breathing meditation
- Body scan meditation
- Visualization meditation
- Mindful breathing
- Mindful eating
- Sitting Meditation



➤ Walking Meditation

1. Heart centered Meditation: Heart centered meditation will help you release all your fears and sadness and bathe in the radiance of loving kindness and compassion. It is also known as the heart chakra meditation. Practicing this meditation over a period of time will help you to heal your heart and that of others. This meditation technique helps in opening the heart chakra and removes any negative energy that exists. In order to practice this meditation technique, choose a quiet place, set the right posture and focus on the heart area while inhaling and exhaling slowly but smoothly. You can also connect your heart to the heart of a teacher or a person you feel that is compassionate. This is considered as one of the important types of meditation techniques.
2. Creative Meditation or Visualization: A different type of meditation technique, this form of meditation will enable you to consciously cultivate as well as strengthen different qualities of your mind. It focuses on strengthening qualities, such as appreciation, joy, compassion, patience, empathy, love, gratitude, compassion, humility, fearlessness, and tenderness, among others.
3. Transcendental Meditation: Transcendental meditation is probably one of the most practiced meditation techniques for beginners in the western world. It has grown in popularity since its introduction in the west in the 1950s probably partly as a result of the connection between the Beatles and its founder, Maharishi Maresh Yogi, starting in the 1960s. As a form of meditation, it benefits from huge support internationally, through well-established centres of expertise and teaching. It is very likely that you will find a centre near to you where you may follow the official training in this approach to meditation, for a fee. It is probably also by far the most researched meditation technique, with several hundreds of academic publications that attempt to qualify and quantify what happens to the meditator during transcendental meditation, as well as the longer term effects on physical health, mental health, anxiety, and concentration and so on.

In this type of meditation you are given a mantra. This is a sequence of vocalised sounds or a word (but without meaning) that is repeated many times over. After some time, the repeated recitation results in a change of consciousness, from 'monkey mind' to pure consciousness, pure being 'Monkey mind' is the term often used to describe the second-to-second activity of our mind, jumping from thought to thought, impression to impression. Transcendental meditation, like every other form of meditation, calms the monkey mind and thereby opens the mind up to a completely new vista of pure experience. The unique aspect of this meditation technique is probably its focus on sound, rather than meaning, thereby enticing the mind to let go of its unremitting attempt to make sense of the world.

Transcendental Meditation is trademarked and its approach to teaching certified. As I do not yet have personal experience of it, I cannot provide you with an example of how this works in practice. Moreover, teachers of transcendental meditation are probably not allowed to divulge in any detail what their teaching consists of. However, below you will find a simple mantra-meditation for beginners that just use the same idea. Just keep in mind that I am not claiming this is an example of the specific technique, just my interpretation of what it might be like:

- Step 1: Make yourself comfortable, as usual. Feet on the floor, back supported, hands in lap. Sit on a chair, or on the floor, whatever posture will allow you to relax but stay awake.
  - Step 2: Take a few deep breaths, filling and emptying your lungs completely.
  - Step 3: Carry out a brief global body scan, letting go of any obvious tension in your jaw, neck, shoulders, back, pelvis and legs.
  - Step 4: Keep still; keep breathing, allow you to relax.
  - Step 5: Here is a sound sequence: "shruliffa baduhma" (don't worry about the exact pronunciation, as it does not mean anything)
  - Step 6: Say "shruliffa baduhma", "shruliffa baduhma", "shruliffa baduhma", "shruliffa baduhma", "shruliffa baduhma", "shruliffa baduhma"...over and over again. You could vary in pitch, speed, and so on as and when it comes to you. Or you could keep the pronunciations and intonation constant.
  - Step 7" Do this for about 20 minutes (you could set a timer to warn you, gently). Then stop and slowly return your awareness to the here and now. Get up, stretch, and drink a glass of water. Then get on with your normal activity.
4. Chakra Meditation: Before you can use Chakra meditation you need to get a basic understanding of the chakras and their relationship to the body, mind, and spirit. Some people, when they hear the word 'chakra,' immediately think about Indian mysticism, or perhaps Chinese medicine. I personally still need to learn much more about these mysterious energy centres of the body. But the important thing, as always, is to keep an open mind, obtain some basic information of the ideas and then see if these can have meaning for you. You may well feel a natural affinity to the chakras, or you may find that you cannot yet sense how these energy centres work or apply to you.

Chakra Meditation Exercise: This is a brief exercise that focuses on getting in touch with your heart chakra (fifth chakra) through your physical heart.

- Step 1: Make yourself comfortable, preferable sitting upright on a comfortable, straight chair. Your back may be supported.

- Step 2: Take a few deep breaths, inhaling and exhaling as far as you can, without straining. You may close your eyes, or keep them open, resting your eyes on the floor a little distance in front of you or on the wall opposite.
- Step 3: Sitting still, allow your breathing to resume its gentle rhythm and the focus your attention on your heart. Become aware of the sensations around your chest and heart and lungs. Just observe, feel and accept whatever you experience.
- Step 4: You may experience subtle changes in the sensations of your heart, it's beat and of the movements of your rib cage and lungs. Allow all this to happen. Just observe.
- Step 5: After a few minutes, come gently back from this intensive observation. Feel your body on the chair. Become aware of your surroundings.
- Step 6: Come fully back with your attention to the here and now and gently resume your normal activities.

After the meditation: Remember that after a meditation, it is a good idea to spend a few minutes reflecting on the experience. You could write down what it was like for you in your own personal journal. Give yourself time to resume your normal activities, after drinking a glass of water.

## Unit IV - YOGA AND SPORTS

Yoga is a multifaceted spiritual tool with enhanced health and well-being as one of its positive effects. The components of yoga which are very commonly applied for health benefits are asanas (physical postures), pranayama (regulated breathing) and meditation. In the context of asanas, yoga resembles more of a physical exercise, which may lead to the perception that yoga is another kind of physical exercise. This article aims at exploring the commonalities and differences between yoga and physical exercise in terms of concepts, possible mechanisms, and effectiveness for health benefits. A narrative review is undertaken based on traditional and contemporary literature for yoga, along with scientific articles available on yoga and exercise including head-to-head comparative trials with healthy volunteers and patients with various disease conditions.

- Physical exercises and the physical components of yoga practices have several similarities, but also important differences. Evidence suggests that yoga interventions appear to be equal and/or superior to exercise in most outcome measures.
- Emphasis on breath regulation, mindfulness during practice, and importance given to maintenance of postures are some of the elements which differentiate yoga practices from physical exercises.
- Yoga is able to mobilize joints, stretch tissues and ligaments, tone muscles, bring flexibility to the spine and strengthen internal organs.
- Yoga exercises are based on the formula of stretching, relaxation, deep breathing, increasing circulation and concentration. As such, yoga is beneficial to a professional athlete as it enables them to strengthen their concentration ability, foster a calm and relaxed mind, enhance the mind / body connection allowing an athlete to have greater muscle coordination and fluidity of movement.
- Yoga is also beneficial to a professional athlete as it positively contributes to the health and vitality of the body, strengthens internal organs such as the heart, lungs and liver and helps to maintain fitness and agility.
- Yoga also helps to reduce stress and anxiety, cultivate self-confidence and self-belief. All of these elements are pivotal to sporting excellence and peak performance.
- As highlighted above, in order to perform a sporting action efficiently and effectively, a person needs to have a high degree of concentration and focus with a mind that is calm and controlled. Swami Sivananda states the importance of mind control; he asserts "*without concentration you cannot have success in any walk of life*".
- Yoga can help a sportsperson to have evenness of mind and control of their thoughts even during stress and/or adversity.
- Yoga is able to help a person have control over their body through control of their mind. As such, Yoga can play a key role in cultivating mind control and concentration which helps a

sportsperson to perform at their peak level. Moreover, many sports such as golf, tennis, badminton and squash encourage the 'leading' side, whether right or left-handed. Practicing these sports develops the side holding the bat or racket more than the passive side, resulting in stronger muscles on one side of the body.

- Yoga can help to redress this postural imbalance and the problems it can cause. Working both sides of the body in a yogic practice will help to release tension in the muscles and strengthen the body in a balanced way. The effect of yoga is always to bring into balance the different parts of the body, and to lead to a harmony between body and mind. Injury management in sports also remains an intrinsic process of yoga.
- In sports, yoga makes overall physical conditioning of the sportspersons more balanced; combats their physical problems; strengthens mental fortitude; eliminates toxic waste substances; avoids harming genetic material in women; uses as cross training; discourages doping; helps as complementary treatment process; encourages to aspire for balanced diet; aids to stay present and aware responsibility; avoids fatigue; keeps up psychological advantage and hunger can be reduced or enhanced by yoga benefiting sportspersons who maintain a fixed body weight for certain events.

Restorative yoga: While these types of yoga all have their mind and body benefits, when your goal is healing, turn to restorative yoga, which promotes stillness and stress relief. It is ideal for muscle recovery because it is designed to use props to support the body and encourage complete relaxation. The rejuvenating and curative effects experienced by yoga practitioners could be attributed to repair and regeneration of tissues by replacement and recruitment of cells differentiated from the stem cell which is beyond the drug action. Restorative yoga is good for an active recovery workout. Ananda yoga and yin yoga are as well.

1. Soccer: Successful soccer players have mastered the art of continuous movement in different directions, while maintaining balance. Extending your hip flexors beyond a normal range of motion (ROM) as you leap out to tackle requires core strength, coordination and balance, an important skill in soccer. Otherwise, you'd fall over. Yoga can help soccer players (or footballers) achieve and refine this skill.

In a 2016 study published in the *International Journal of Yoga*, researchers asked a group of college soccer players to add in two yoga sessions per week to their regular training for 10 weeks. The researchers reported improvements in flexibility and balance and an increase in joint mobility and ROM.

That's why world-class soccer players have revealed their love for yoga, praising its ability to work hamstrings, groin, quads, calves, glutes, lower back, neck, sides, and core. Yoga can also help to prevent injuries, especially as athletes' age.

2. Basketball: Legendary basketball player LeBron James has advocated for yoga as a way to improve athletic performance. Basketball players need to be agile, flexible, and coordinated to avoid injury. Yoga can help each of these components for basketball players, from beginners to all stars.

A study published in 2013 in *Pedagogics Psychology Medical-biological Problems of Physical Training and Sports* examined yoga and basketball. The researchers asked a group of college basketball players to incorporate a yoga practice into their training routine. They went to classes four times a week for nine months. The outcome was a significant increase in key performance markers such as vertical jump, free throw, three-point shots, tactical execution, speed and speed endurance, and balance.

It's not just for NBA or professional basketball players. Novice basketball players can benefit from adding in a weekly yoga practice. A 2019 study in the *Journal of Sports* found that yoga plus basketball resulted in better agility, flexibility, speed, strength, body fat, shooting ability, passing ability, and dribbling ability when compared to a group who just did basketball practice. What's more, these participants only did 30-minute yoga sessions.

3. Football: NFL players also practice yoga. Most of their football practice is spent lifting weights and practice drills, but a key focus for football players is to prevent injury and handle stress. Yoga does both things.

A recent 2021 study examined how many football players get injured. Over the course of four NFL seasons, 3,025 injuries were reported. It's evident that injury prevention is vital to maintain and improve performance as a football player. That's why the Seattle Seahawks mandated yoga as part of training.

Let's take a deeper dive into yoga's role in preventing injuries.

- Yoga for Injury Prevention: Yoga can prevent injury by alleviating tightness. For example, hip-opening yoga poses such as pigeon pose can improve the lower kinetic chain.
- The stress-busting nature of yoga also helps to prevent mental fatigue, a factor that increases injury risk. A 2020 study found that athletes who reported anxiety and depression

had a 2.1 times greater injury incidence rate. It's essential to take care of your mental health, and doing yoga as exercise can help.

- Yoga Combats Stress and Enhances Focus: Yoga, of course, isn't just a physical practice. It's also a mental practice and another aspect of the performance-enhancing benefits of yoga: the mental benefits of meditation that's often part of the practice. Many athletes struggle with stress. Research has found that college and professional athletes experience more stress than non-athletes. A rigorous training regimen and demanding expectations can lead to stress, which ultimately impairs performance.
- Yoga allows for body awareness. Slowing down you're breathing and entering into a parasympathetic "rest and digest" state increase the flow of oxygen. Breathing centers your mind as each pose center your body. It's a mind-body workout that relaxes your nervous system.
- Regular yoga practice allows athletes to practice mindfulness or the act of slowing down racing thoughts and finding stillness. Findings from a 2011 study concluded that yoga assists in the reduction of stress, anxiety, depression, and chronic pain, in improving sleep, and in enhancing overall well-being and quality of life.
- Yoga Strengthens Movement Patterns: Yoga can be part of sport-specific athletic training. Certain poses, for instance, may mirror the types of movements you'll be doing in that sport. For example, leg extension lifts and holds resemble a kicking motion that you'd do in soccer. You could do the leg extension machine or hip adductor machine at the gym to build muscle and enhance the movement that way. But you aren't going to be working on joint flexibility and balance like you would do it in yoga.
- A vinyasa flow can promote fluidity of movement patterns. A common yoga flow is a sun salutation. Instead of static stretches, vinyasa classes encourage constant movement as you stretch beyond a normal range of motion (ROM). This exercise helps to elongate muscles and build muscular endurance and stamina.
- Yoga improves alignment, ROM and muscle fiber recruitment. This strengthens the kinetic chain of movement, which results in boosted performance, whatever your athletic sport or your status as a beginner or pro.

**ROLE OF YOGA IN PSYCHOLOGICAL PREPARATION OF ATHLETE:** Yoga has many mental and physical benefits that can enhance an athlete's performance. It can also help relieve stress, encourage relaxation, and support healthy sleep patterns. These benefits are useful for athletes who are prone to overexertion.

Effect of Yoga on Physiological System

- Circulation: In yoga preferential shunting of blood is possible. In other forms of exercises, it is involuntary. In yogic practices one can shunt blood to any area consciously, as the geometric shapes of the asanas vary.
- The digestive system: Yogasanas massage the entire gastro-intestinal tract. They promote expulsion of excessive wind; maintain peristalsis, blood supply and freshness of the tissues. All physiological functions are toned up Pancreas, are benefited by rotational movements. Inverted and twisting poses are very helpful for this organ. Asanas massage liver, improve perfusion, and enhance elimination of toxins. Twisting poses are invaluable for all liver disorders. Asanas massage the gall bladder and prevent any stagnation of secretions.

#### Effects on Digestive system:

- The flow of breath in sitali pranayama stimulates the taste buds. In the types of the salivary glands get rest.
- The proper return of lymph and venous blood improves the digamma absorptive and eliminating functions of the abdominal organs.
- Constipation is relieved. The stomach is massaged. The intestines all contracted and reflex expansion promotes excellent blood flow active not return.
- The liver and gall bladder are massaged, improving their function.
- Die to reduction in sympathetic tone, acid secretion diminishes reliever stress related peptic disorders.
- The nervous system: There are several major and minor plexuses of nerves throughout entire length of the body. All are in communication with each other and with the sympathetic and parasympathetic nervous systems. Yogic texts describe centers or chakras, which are points of energy. The chakras correspond to the autonomic nervous system. As with the other. Systems of the body yogic practices regulate the health of the nervous System. The chakras are activated, and the practitioner remains alert even Up to a ripe age. All asanas are helpful. The back bends are the ones that stimulate the chakras vigorously. All the nerve roots are toned up by asanas they maintain healthy electrical transmission in the brain and prevent senility.

#### Effects on Nervous system: This is the area where the effects of pranayama can be felt excellently.

- The constant awareness of the mind on the breath and its rhythm quiet the entire body. The mind becomes tranquil.
- Neuro-physiological activity is stabilized, and the excitability of sympathetic nervous system is reduced. Hence relaxation ensues.
- The organs of perception are pacified and lightened.



- Pranayarnic practices stabilize the membrane potential of nerves.
- Pranayama works particularly well on the various autonomic plexuses' chakras.
- Pranayama endows mental peace. This improved ability to with stress.
- As the mind is withdrawn there is reduction of stress. Dispassion attitude to everyday challenges results.
- As the nerves are soothed, cerebral circulation improves.
- Both the sympathetic and parasympathetic systems are balanced.
- Respiratory system: Pranayama strengthens the inner vital energy at micro -cellular levels. Elasticity of lungs is maintained; oxygen uptake is improved. Asanas promote and maintain elasticity of ribs and inter costal muscles. The diaphragm is strengthened. Standing poses stimulate the lung. Inverted poses toughen the lung. Forward bends train one to breathe in a limited cavity. Back bends strengthen circulation in the entire lower respiratory tract. The cartilages are toned up and they remain soft and elastic.

Effects on Respiratory system: The concept of pranayarna is often mistaken. There is no time for the cells to situation, movement of breath is fast and forceful the movements are so slow that get soaked in the inhaled oxygen. In pranayarnathere is adequate time for every alveoli to soak in oxygen.

- The respiratory system is geared to aerate the internal atmosphere.
- The venous return is much better due to phasic changes in breathing. The Pulmonary vascular bed relaxes to accommodate more inflow of oxygen and blood. Better diffusion of gases occurs.
- Elasticity of the lungs and the entire respiratory tract is maintained to a ripe old age.
- The hemoglobin/oxygen saturation is enhanced during kumbhaka, as there is enough time for saturation.
- The vital capacity, inspiratory volumes are increased. The dead space is reduced. The residual volume is decreased as more complete exhalation is performed.
- The alveoli are exercised, which promotes excellent excretion of toxins and gases.

Due to more efficient changes in blood gases, proper maintenance is achieved. This is the most important relief better cellular function.

## Unit V - YOGA FOR SKILL DEVELOPMENT

Yoga prevents injury by:

- Improving flexibility
- Addressing muscle imbalances
- Strengthening movement patterns
- Aiding recovery by fighting inflammation and increasing oxygen flow

A 2020 study that examined how yoga can prevent injuries among a group of soccer players concluded that yoga mitigated injury. Specifically, yoga strengthens the muscles and joints so that they can handle injury if one does occur. Increasing your flexibility is good for you in many ways.

Some of the most important benefits include:

- Greater range of motion. Increased flexibility makes it easier to move your joints in a normal direction with less effort.
- Less muscle tension. Stretching your muscles can help release tension and tightness, making it easier to move.
- Better posture. Tight, tense muscles can lead to muscle strain and poor posture.
- Less pain. When your muscles aren't tense, there's usually less stress and pressure on certain parts of your body and, as a result, less pain in your back, neck, and shoulders.
- Lower risk of injuries. Greater strength and flexibility in your muscles and joints may make you less prone to injuries.
- Less stress. When tension is released in your muscles, it may help you feel more relaxed. In turn, that may lower your stress levels.
- Improved circulation. Better blood flow may help your muscles recover more quickly after a workout and prevent stiffness.