

## Clinical Yoga For Bronchial Asthma

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### ABSTRACT

*Asthma is characterized by paroxysmal and reversible obstruction of the airways. It is increasingly understood as an inflammatory condition combined with bronchial hyper responsiveness. Acute asthma involves:*

- *Bronchospasm (smooth muscle spasm narrowing airways)*
- *Inflammation of the muscles surrounding the airway passage*
- *Excessive production of secretions (plugging airways)*

*The inflammation makes the airways smaller and therefore making it difficult for air to move in out of lung. In some cases, breathing may be so laborious that an asthma attack becomes life threatening. Asthma creates symptoms like cough, chest tightness, shortness of breath, wheezing, respiratory infections, and viral infection.*

*According to yogic concept- paroxysms of asthma are initiated at mano maya kosha. Emotions like sorrow, fear and anger are triggered due to various intrinsic and extrinsic factors and alter the functional balance as breathing difficulty and cardiac dysrhythmia. Here after the prana maya kosa is also affected. The imbalance in pranayama in turn will percolate to the anna maya kosa and manifest in the form of bronchospasm, inflammation of mucous membrane and secretion of phlegm. Genetic factors can be explained as the seeds of previous births that are embedded at ananda maya kosha. Vijnana maya kosha is involved with lack of discrimination in assessing the environment.*

*Clinical yoga management is designed to address the asthma systematically at all kosha level by a complete package of kriyaas, yogasana, breathing practices and relaxation techniques.*

**Key Words-** Asthma, Clinical Yoga

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# CLINICAL YOGA FOR BRONCHIAL ASTHMA

## INTRODUCTION

Asthma is characterized by paroxysmal and reversible obstruction of the airways. It is increasingly understood as an inflammatory condition combined with bronchial hyper responsiveness. Acute asthma involves:

- Bronchospasm (smooth muscle spasm narrowing airways)
- Inflammation of the muscles surrounding the airway passage
- Excessive production of secretions (plugging airways)

The inflammation makes the airways smaller and therefore making it difficult for air to move in out of lung. In some cases, breathing may be so laborious that an asthma attack becomes life threatening.

Asthma is associated with mast cells, eosinophils and T lymphocytes. Mast cells are the allergy causing cells that release chemicals like histamine. Histamine the substance that causes nasal stiffness and constriction of airways in asthma and itchy areas in case of skin allergy. These cells, along with other inflammatory cells, are involved in the development of airway inflammation in asthma that contributes to the airway hyper responsiveness, airflow limitation and respiratory symptoms.

This creates following symptoms:

- Cough
- Chest tightness
- Shortness of breath
- Wheezing

Symptoms can be brought on by a variety of triggers such as:

- Allergens (Pollen, Mold, Animal dander, Dust mites)
- Irritant such as smoke, strong odors
- Respiratory infections
- Weather changes
- Viral or sinus infections
- Exercise
- Stress
- Gastro Esophageal Reflux disease (GERD)
- Medications
- Foods

- Emotional anxiety

## TYPES OF ASTHMA

There are different classifications of asthma

**Allergic Asthma:** caused by airway inflammation when exposed to allergens.

**Exercise Induced Asthma:** Airways narrow when triggered by vigorous activity

**Occupational Asthma:** Related to working in a particular occupational environment. Symptoms are more severe while at work during the exposure.

## ETIOGENESIS OF ASTHMA ACCORDING TO YOGA

Paroxysms of asthma are initiated at mano maya kosha. Emotions like sorrow, fear and anger are triggered due to various intrinsic and extrinsic factors and alter the functional balance as breathing difficulty and cardiac dysrhythmia. Here after the prana maya kosa is also affected. The imbalance in pranayama in turn will percolate to the anna maya kosa and manifest in the form of bronchospasm, inflammation of mucous membrane and secretion of phlegm. Genetic factors can be explained as the seeds of previous births that are embedded at ananda maya kosha. Vijnana maya kosha is involved with lack of discrimination in assessing the environment.

A similar situation is narrated in Patanjali's Yoga Sutra in the description of in the description of the companions of vikshepa certain symptoms like sorrow, depression, tremor and changes in respiration occur in association with vikshepa.

This may be further explained by an example Smt. Sushma aged 40 years, a house wife. She is suffering from frequent episodes of bronchial asthma. She is allergic to house dust, smoke, paddy dust, cockroach etc. her history reveals that from childhood she is an introvert (Ananda Maya Kosha). After her marriage she was send to far away from from her parents. At husband's house she was forced to do all the house hold work under the supervision of mother in law. She could not express or share the feelings with husband and she developed anger towards mother in law and husband. Since she does not have the courage to express, she suppressed the emotions (Mano maya

kosha). She was unable to take a decision and believed it as destiny (Vijjnaana maya kosha). Anger was later converted as hypersensitive reaction and sorrow turned as heaviness of chest (Prana maya kosha). Very soon, asthma is manifested with breathlessness, inflammatory changes and secretion of phlegm ( Annamaya kosha). Later this behavior is conditioned subconsciously. Whenever she is reminded of those bad days with visual or olfactory stimulus, all those emotions are triggered in mano maya kosha and induced asthma

### MANAGEMENT THROUGH YOGA

Clinical yoga management is designed to address the asthma systematically at all kosa levels.

#### ANNA MAYA KOSA

Shat kriyaa, loosening movements, yogasana and yoga chair breathing are used to operate at the anna maya kosa level to remove the physical symptoms of the ailments.

1. **Kriyaa-** jala neti, sutra neti, kapala bhaati, agni saara, vamana dhauti are useful. Procedures help to clean the airway passage, tone up the functions of lungs and respiratory muscles, desensitize the hyperactive muscle membrane and enhance the internal awareness.
2. **Loosening movements-** movements of all joints with slow rhythmic pattern help to relieve the stiffness of the joints, stretch and relax the muscles and improve the strength and stamina.
3. **Yogaasana-** in severe acute asthmatic attack any exertion can further worsen the condition. Hence after overcoming the acute condition using medication, various yogic postures can be practiced as preventive and curative.
  - Practice should include postures in standing, sitting, supine and prone positions.
  - Emphasis should be given to the postures that stretch respiratory muscles. (ardha chakra asana, pada hastaasana, trikonaasana, shansakaasana, ustraasana, pashimotanaasana, supta vajrasana, bhujangaasana, dhanuraasana)

- Perform asana in a slow and relaxed manner with awareness.
  - Stay in final posture effortlessly as long as possible.
  - Avoid jerky movements and repetitions.
  - Give adequate relaxation after every posture.
  - At the end of practice savaasana should be performed at least for 10 minutes.
4. **Yoga Chair breathing-** SVYASA Bangole has developed an effective technique to prevent episodes of asthma. Bronchial asthma patients could identify prodromal symptoms of an asthma attack. They should use a chair to practice chair breathing technique just before the attack starts.

#### PRANA MAYA KOSHA

Through the practice of proper breathing and pranayama, the imbalance of the pranamaya kosha can be corrected. Generally asthma aggravates due to cold food and environment. Therefore suryabhedana pranayama, the warmth generating pranayama should be practiced and cooling practices like seetali and seetakari are to be avoided.

#### MANO MAYA KOSHA

Patanjali prescribes certain remedies to reduce the negative emotions. They are friendliness, compassion, satisfaction and indifference towards happiness, misery, virtue and vice. That means,

- One can reduce his emotions by sharing with good friends who are in pleasant mood.
- Another technique is by showing compassion to people who are suffering more.
- Avoid persons and situations that create negative emotions.
- Feel contented with what one possesses and not yearning for more.
- Learn to maintain an equipoise state of mind in gain and loss.

Devotional sessions like prayers, chants and bhajans are also useful in alleviating negative emotions.

Following three limbs of astanga yoga can directly operate at the level of mano maya kosha.

1. Culturing the mind by focusing (Dharana)
2. Relaxed dwelling at a single point (Dhyana)
3. Continuing the process for longer period leading to the state super consciousness (Samadhi)

### **VIJNAANA MAYA KOSHA**

Elimination of misconception is the important treatment at vijnaana maya kosha. Analyses of causes that lead to the misery are to be done. The following measures are useful in this regard.

- Counseling
- Awareness classes
- Self-study
- Spiritual discourses
- Psychotherapy
- Hypnosis

### **ANANDA MAYA KOSHA**

Ananda maya kosha is purified by practice of karma yoga thereby minimizing the effect of karma (Karma Phala).

### **Breathing Practices**

Good breathing habits harness the energies for systematic development of the body and mind. Respiratory system is a bridge between conscious and subconscious, voluntary and involuntary or, in general body and mind. The system is voluntary as well as involuntary. Using the voluntary control we change the involuntary functions.

#### **The objectives of breathing practices:**

1. Training for full utilization of all lobes of the lungs.
2. Normalize the breathing rate.
3. Make the breathing uniform, continuous and rhythmic.

#### **The Principles involved in regularizing the breathing are:**

- I. Ability to increase and decrease the breathing rate.

- II. Developing awareness of breathing through the movements of different parts of the body.
- III. Slow down exhalation so as to be longer than inhalation.

### **1. Hands Stretch Breathing**

#### **Posture: Taadaasana**

#### **Practice:**

- Stand erect with feet together (Heels together and toes 4 to 6 inch apart) and hands relaxed by the side of the body.
- Gently bring the hands in front of the chest.
- Interlock the fingers and place the palms on the chest.
- Collapse and relax shoulders
- Close the eyes.

#### **Stage I (Horizontal)**

While in haling, stretch the arms straight out in front of the body so that the arms are at shoulder level (90°).

#### **Stage II ( At 135°)**

Repeat the same movements now stretching the arms above the forehead at an angle of 135°.

#### **Stage III (Vertical)**

Again repeat the same movements, this time stretching the arms vertically (180°) above the head.

#### **Benefits:**

1. Help in opening of lower, middle and upper zones of the chest.
2. Awareness of expansion and contraction of airways in these three sections.
3. Trains the chest wall muscles for rhythmic breathing.

### **2. Ankle Stretch Breathing**

#### **Posture: Taadaasana**

#### **Practice:**

- Open the eyes and fix the gaze on a point on the wall ahead. Place the palms on front of your thighs.
- While inhaling, raise the hands and stretch the ankles. Feel yourself growing taller and firm.

- As you exhale, bring your hands and heels down.
- Feel the stretch from your ankles up to finger tips as you reach upwards.
- Relax in standing position, hands by the side of the thighs. Observe your breath and enjoy the stability for a few seconds.

**Benefits:**

Awareness of expansion and constriction of airways in mid zones of the lungs.

**3. Dog Breathing**

**Posture: Vajraasana**

**Practice:**

Place the palms of the hands on the ground beside knees. Make the spine slightly concave and fix the gaze straight ahead. The mouth is opened wide; the tongue is pushed out to its maximum. Practice rapid, forceful inhalation, expanding and contracting the abdomen vigorously.

**Benefits:**

1. Full diaphragm contraction empties locked up air in the alveoli of the lower lobes.
2. Rapid exhalation cleanses the lower and middle portion of lungs by expelling residual air and getting it replaced by fresh air.
3. Awareness of airway in lower and middle zones helps in relaxing the bronchi.

**4. Rabbit Breathing**

**Posture: Vajraasana**

**Practice:**

- Keeping the knees together, bend forward and rest the forearms on the floor, keeping the elbows by the side of the knees and palms flat on the ground.
- Maintain the head at a distance from the ground to chin. Open the mouth partially. Protrude the tongue partially. Touch the lower lip resting on the lower set of teeth.

- Feel the expansion and contraction of the chest muscles. Close the mouth and relax in sasaankaasana.

**Benefits:**

1. One gets trained in effortless rapid breathing that is necessary during acute episode of asthma.
2. Very good practice to develop awareness of the airways that is necessary for voluntary control.
3. Mastery over diaphragmatic breathing by voluntarily increasing the speed of diaphragmatic movement.

**5. Tiger Breathing**

**Posture: Sithiladandaasana**

**Practice:**

Sit in vajraasana, lean forward and place hands flat on the floor in line with the shoulders with fingers pointing forward. While inhaling, raise the head and look at the ceiling. At same time, depress the spine making it concave. While exhaling, arch the spine upwards and bend the head downward bringing the chin towards the chest.

**Benefits:**

1. Awareness and mastery over all three sections of chest wall.
2. Expansion and contraction of chest wall leads to harmonious functioning of muscles of respiration.

**6. Straight Leg Raise Breathing**

**Stage I: Alternate Legs**

**Posture: Supine Posture**

**Practice:**

- While inhaling slowly raise the right leg without bending the knee, as far as comfortable.
- While exhaling return the leg to the floor as slowly as possible.
- Repeat the practice with the left leg.
- This is one round.
- Perform 10 times.

**4. Instant Relaxation Technique (IRT)**

**Posture: Shavaasana**

**Practice:**

- Bring the legs together; join the heels and toes together and place the palms by the side of thighs.
- Keep the face relaxed with a smile throughout the practice.
- Start tightening from the toes.
- Tighten the ankle joints and calf muscles.
- Pull up the knee caps.
- Tighten the thigh muscles.
- Compress and squeeze the buttocks.
- Breathe out and suck the abdomen in.
- Make fists and tighten the arms.
- Inhale and expand the chest.
- Tighten the shoulders, neck muscles and compress the face.
- Tighten the whole body from the toes to the head.
- Tighten....tighten....tighten
- Release and let go the whole body instantaneously.
- Legs and arms go apart with the open palms facing the roof.
- Collapse the whole body.
- Enjoy the instant relaxation.

#### 4. Yoga Chair Breathing

Bronchial asthmatics invariably know as to when they get episodes of airway obstruction. They are asked to resort to the yoga chair breathing technique when the attack starts. They are asked to pull nearby chair and start the following procedure without resorting to drugs.

### Eight Steps of Yoga Chair Breathing

#### 1. Instant Relaxation technique (Relaxation using chair as support)

- Sit on the floor with legs stretched under the chair. Pull the chair towards the chest and hold onto it with the arms.
- Start IRT stretch and tighten the entire body from toes to the head.
- Start tightening from the toes, ankle joints and calf muscles.
- Pull up the kneecaps.
- Tighten the thigh muscles.
- Compress and squeeze the buttocks.
- Breathe out and suck the abdomen inside.

- Form the fists and tighten the arms.
- Inhale and expand the chest.
- Tighten the shoulders, neck muscles and compress the face.
- Tighten the whole body from the toes to the head.
- Tighten....tighten....tighten...
- Release and relax. Collapse the whole body. Legs go apart.
- Relax the whole body at once rest the head and the arms on the seat of the chair as in makaraasana or simply relax the arms forward and head resting on the chair.

#### 1. Neck Muscle Relaxation with Chair Support

- Neck movement (5 Times)
- Neck movement with breathing (5 Times)
- Neck movement with 'A'-kaara Chanting (5 Times)

#### 2. Neck Movement in Vajraasana Sitting on heel without chair support

- Neck movement (5 Times)
- Neck movement with breathing (5 Times)
- Neck movement with 'U'-kaara Chanting (5 Times)

#### 3. Sasaamkaasana

- Sasaamkaasana movement (5 Times)
- Sasaamkaasana movement with breathing (5 Times)
- Sasaamkaasana movement with 'M'-kaara Chanting (5 Times)

#### 4. Taadaasana (Standing Posture)

Stand in this posture for about a minute.

#### 5. Neck Movement in Taadaasana-

- Neck movement (5 Times)
- Neck movement with breathing (5 Times)
- Neck movement with 'M'-kaara Chanting (5 Times)

#### 6. Ardha Chakraasana, Pada Hastaasana

- While inhaling, move to ardhachakraasana and while exhaling move to padahastaasana.
- Movement with 'M' kaara chanting (5 times).

## 7. Quick Relaxation Technique (QRT)

### Phase1

Feel the abdomen movement. Observe the movement of abdominal muscles going up and down as you breathe in and out normally. Observe 5 cycles.

### Phase2

Synchronize the abdominal movement with deep breathing. The abdomen bulges up with inhalation and sinks down with exhalation. Observe 5 cycles.

### Phase3

- As one inhales deeply and slowly, energize the body and feel the lightness. As one exhale completely, collapse all the muscles, release the tension and enjoy the relaxation. Observe 5 cycles.

- Chant 'A'kaara in a low pitch while exhaling. Feel the vibration in the lower part of the body.
- Slowly come up from either the right or the left side of the body.

## Conclusion

Asthma is characterized by paroxysmal and reversible obstruction of the airways. It is increasingly understood as an inflammatory condition combined with bronchial hyper responsiveness. The inflammation makes the airways smaller and therefore making it difficult for air to move in out of lung. In some cases, breathing may be so laborious that an asthma attack becomes life threatening.

So in the case of asthma yoga asana, pranayama, yogic kriyaas and yoga chair breathing will be helpful.

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