

## INTRODUCTION OF PRANAYAMA

Pranayama is an important, yet little known part of yoga. Its techniques have been practiced for centuries by students of yoga in remote ashrams, and have been preserved for us through many generations both in practice and in hand written books. Until recently, this art and science of yogic breathing was almost completely unknown to the common man like many other ancient Indian arts. Those who knew it used to be very reluctant to share their knowledge and experience with anyone, unless a student proved by tests that he was ready to receive it.

*“ Tasmin sati swas praswas yogartivich pranayama”(1)*

<b>Tasmin</b>	<b>:</b>	<b>In this,</b>
<b>Sati</b>	<b>:</b>	<b>Being,</b>
<b>Swas</b>	<b>:</b>	<b>Inhale,</b>
<b>Praswas</b>	<b>:</b>	<b>Exhale</b>
<b>Gati</b>	<b>:</b>	<b>Flow</b>
<b>Viccheda</b>	<b>:</b>	<b>Cutting-off</b>
<b>Pranayama</b>	<b>:</b>	<b>Breath control (2)</b>

**This having been (accomplished) “Pranayam” which is controle of inspiration and expiration.**

The inspiration of prana-vayu is **swas** and expiration is **praswas** and the cessation of both is characteristic of Pranayama.

Pranayama, as traditionally conceived, involves much more than merely breathing for relaxation. Patanjali defines Pranayama as “The regulation of the incoming and outgoing flow of breath with retention.” It is to be practiced only after perfection in asana is attained. Pranayama also denotes cosmic power, or the power of entire universe, which manifests itself as conscious living being in us through the phenomenon of breathing.

## **What is Pranayama ?**

The word Pranayama consists of two parts; prana and ayama. Ayama means stretch, extension, length, breadth, regulation, prolongation, restraint and control and describes the action of Pranayama. Prana is energy, when the self-energizing force embraces the body with extension and expansion and control; it is Pranayama.

## **Rhythmic Breathing:**

It helps to establish a direct contact with the whole world. One can come to experience a sense of oneness with the universe. The result is that the feeling of separateness disappears and with it fear, loneliness, frustration, doubt, despair and other miseries. Rhythmic breathing is a great exercise for relaxation.

## **Benefits:**

- (1) Increased oxygen supply (even more than deep breathing)
- (2) Re-establishes the body's own natural rhythm.
- (3) Helps one to acquire self confidence, optimism , a calm mind and other desired qualities.
- (4) Rhythmic breathing, as well as correct concentration and meditation, can bring about a breath change in one's physical and mental stage and serves as a step towards spiritual unfolding. The yogis say that the deep rhythmic breathing exercise will allow the body to re-establish in its own natural rhythm and allow us more to the cosmic rhythm. This will protect us from any negative external influences.

## **Technique:**

- \* Sit up straight, either on a chair or cross legged on the floor. Let your hand first rest on your lap.
- \* Inhale slowly and deeply for light seconds. Push your stomach forwards, to count of four seconds, and then push your ribs sideways for count of & seconds, & then finally lift your chest & collar bone

- upwards for a count of two seconds. This makes a total of eight seconds.
- \* Don't breathe out immediately ; instead hold to the breath (called retention) for four seconds.
  - \* Exhale slowly for 8 seconds. For the first six seconds just allow the collar bone, chest & ribs to relax, so the breath goes out to expel all the air from the lungs.
  - \* Keep the stomach in this position for 8 seconds before you take the next breath.

## **Anatomy of Breathing**

In normal respiration the air is taken in through the nostrils without any special effort, sound or exaggerated movement of the nose or chest. In short, it is done unconsciously. We are not even aware of air traveling through our nostrils, down the nasal and oral parts of the pharynx, of its reaching the larynx and then the trachea and the lungs. In general, most of us are unaware of how the breathing process works.

We will take a look at:

- Stages in breathing,
- Kinds of breathing
- Organs of breathing,
- Processes in breathing
- Ways of controlling breathing.

## **Stages in Breathing**

Each single act of normal, unmodified breathing consists of four distinguishable stages:

- "Breathing In", Inhaling Or Inspiration
- The Pause, Short Or Long, Between Inhalation And Exhalation. We Will Call This Retentive Pause And Readjustment Phase
- Breathing Out," Exhaling Or Expiration.
- The Pause, Long Or Short, Between Exhalation And Inhalation. We Will Call This Stage Extensive Pause And Its Readjustment Phase.

The two "resting" stages may or may not be very restful since the whole respiratory system, including its muscular and nervous mechanisms, undergoes a reversal of direction and multitudes of minute adaptations take place whenever each such reversal occurs.

All four are entailed in a complete act of respiration.

### **Kinds of Breathing**

We can distinguish at least 12 different kinds of breathing. These are given below.

Although yogic treatises do not normally do so, Dechanet, author of 'Christian Yoga,' identifies two ways of breathing: "One for men, the other for women". He says that a woman's breathing rhythm is more rapid than a man's and that her upper chest expands first, whereas a man's breathing rhythm is slower and his abdominal expansion comes first. Although, doubtless, physiological differences in men and women do affect their breathing, I suspect that the world over, women breathe more placidly than men and that the differences which Dechanet notices may be related partly to size of body rather than sex. Smaller bodies may be expected to have a shorter, and perhaps more rapid, rhythm stroke than larger bodies. The fact that women live longer than men, on the average, may be due to many factors; but a study of breathing habits in men and women, especially in the older ages, may prove enlightening. However, distinctions of sex do not normally play a significant role in discussions of breathing.

1. Noisy versus quiet breathing is a distinction, which has its significance in other conditions. Snoring may indicate deep slumber; wheezing, asthma and panting, shortness of breath; and other noises, clogging of nasal passages. But traditional yogic exercises do deliberately seek to control the loudness or softness of breathing and, in addition to giving directions for increasing loudness and softness, often combine both increases and decreases in subtle ways, synthesizing them in larger, more encompassing experiences, as in mantric chanting of the sacred symbol om.

2. Fast And Slow Breathing

3. Regular And Irregular Breathing

4. Jerky And Smooth Breathing

5. Deep And Shallow Breathing
6. Forced And Effortless Breathing
7. Voluntary And Involuntary Breathing
8. Mouth And Nose Breathing
9. The distinction between "high," "middle," and "low" breathing, where most of the expansion is in the top, middle or bottom parts of the chest and lungs, and the joining of all three in "complete yogic breathing."
10. The distinction between the mere passage of air in and out of lungs (with related physiological and mental effects) versus experiencing breathing as an affair of the whole body, the whole self, even of the whole universe as explored in pranayama.
11. The distinction between nervous and relaxed, vs. anxious and peaceful, breathing.

As we can see from the above classification of various breathing types, the process of breathing is very complex.

### **Organs of Breathing**

Our respiratory system consists of nose and mouth, pharynx and larynx, trachea and bronchi, lungs and thorax.

### **Nose And Mouth**

The nose consists of an outer shape and skin (which often receives more attention), and two air passages (nostrils).

Your nostrils differ in size and shape from those of other people. Most people breathe primarily through one nostril more than another. Whether relatively long or short, large or small, straight or crooked, nostrils vary in circumference and contour throughout their length. The bottom or floor surfaces of the nostrils tend to be more horizontal and the top or roof

surfaces have been shaped more like an arch. A bony and cartilaginous septum separates your two nostrils.

The several nasal sinuses, including the better-known frontal sinuses in the forehead above the eyes and the maxillary sinuses on each side of the nose, play various roles in breathing, thinking, illness and in yoga. Most of us realize their existence when they become infected, as with colds, hay fever, or noxious gases or dusts, resulting in headaches. Some sinuses appear to perform an important function in cooling the brain. Nervous activity uses energy, which seems to generate heat that needs to be conducted away. Thus, somewhat like the radiator of an automobile, the sinuses may serve as a cooling system for the brain, which supplements the circulatory system wherein the blood serves as a coolant. We seem to be able to think better when we have a "clearer head" resulting from well-ventilated sinuses. Deep breathing and posture exercises not only increase oxygenation through the lungs and circulation of the blood within the brain, but also tend to enlarge and clear the sinus cavities for freer air circulation.

The skin lining the nostrils consists primarily of membranes which do not dry out easily in the

Presence of moving air. They are kept moist by secretions called mucus, which sometimes dries and hardens into a cake, which must be expelled. Hairs embedded in such membranes, especially near the outer opening, often grow into sieve-like mats, which catch and repel small objects, insects and dust. Olfactory end-organs are embedded in these membranes and some areas have a thick, spongy tissue which expands, so much sometimes-especially when irritated by infections or allergies-that it closes the nostril completely. Although yogic exercises may be insufficient by themselves to relieve clogged nasal conditions, they may help considerably.

The mouth, too, is an important air passage-especially when we need more air than can be forced through the nostrils, as when we gasp for air or pant or puff, and when the nostrils are closed by swollen membranes or mucous discharge. Membranes lining the mouth and tongue seem to dry up from air movements more rapidly than nasal membranes though saliva aids in maintaining moistness. The oral passage may be closed by the lips, by the tongue pressed against the teeth or roof of the mouth, and sometimes with the aid of the soft palate. Directions for opening and closure, partial or complete, of the mouth constitute parts of some directions for traditional yogic exercises.

## **Pharynx And Larynx**

The pharynx is the opening behind the nasal cavities and mouth. It is bounded by the root of the tongue and is lined with tissues called tonsils, which may become enlarged partially obstructing the passage of food and air. Two Eustachian tubes, which permit adjustment of atmospheric pressure in your middle ears, open from the sides of the pharynx. The pharynx ends in the esophagus or tube leading to the stomach and the larynx or "voice box," which contains the vocal cords and glottis and muscles needed for producing sounds. A cartilaginous epiglottis at the top of the larynx aids in closing it tightly so that solid and liquid foods will not be permitted to enter it during swallowing. Respiration is interrupted during swallowing. Yogins sometimes deliberately hold the epiglottis aperture closed to force holding air in or out of the lungs in certain exercises.

## **Trachea And Bronchi**

The trachea or "windpipe" is a tube kept open against pressures because its walls consist in part of cartilaginous rings, or semi-rings. It is lined with a mucous membrane containing hair like cells, which beat upward toward the nose and mouth and move mucus and the entangled dust particles in that direction. It ends by dividing into two other tubes called bronchi which in turn branch again and again until they terminate in bronchioles, thin-walled tubes which lead to tiny air sacs with their small dilations called alveoli where most of the gas exchange takes place. The mucosa of the trachea and bronchi contain ciliated epithelium.

## **Lungs And Thorax**

Each of the two lungs consists of

- Bunches of bronchioles and alveoli,

- Blood vessels and capillaries, and
- Elastic tissue.

These are arranged in lobes and are surrounded by a membrane that secretes a lubricating fluid. The lungs, together with the heart, occupy most of the thoracic or chest cavity, bounded on the sides by the ribs and on the bottom by the diaphragm. The diaphragm separates the chest cavity from the abdomen containing most of the digestive system.

The pleural sacs and the inner lining of the thorax are airtight. Since the only opening from the outside is the trachea, air may be forced in or out of the lungs by enlarging or compressing the thoracic area. Three sets of muscles are primarily responsible for changing the size of the thorax. These are:

\*Those acting on the ribs,

\*Those acting between the ribs and

\*Those acting on the diaphragm

Other muscles of the body, such as those in the arms, legs and back, may twist the body so as to distort its usual shape and exert pressures that squeeze or expand the chest cavity. A blow on the abdomen, wearing tight clothes, a full stomach or intestinal gas may also provide temporary pressures on the thorax thus affecting the breathing process.

## **Processes in Breathing**

### **Respiration**

An average adult at rest inhales and exhales about sixteen times per minute. Each time, half a liter (about a pint) of air is drawn in and expelled. At the end of a normal expiration, one may force out an additional liter and a half of air, leaving about an additional liter in the lungs, which cannot be forced out. Also, after normal inspiration, one may inspire an additional one and a half liters. So it is possible to increase the amount of air inspired and expired during each breath from half a liter to three and a half liters.

Not all of the air breathed can be used by the body because some must remain to fill the nose or mouth, sinuses, larynx, trachea, bronchi and their larger branches. This is the "dead air" in contrast with "alveolar air" which participates in gas exchange. The shallower the breathing, the larger becomes the percentage of dead air in each breath. But also, in shallow breathing, more impurities are retained.

Most breathing exercises in yoga have the effect of increasing both the amount and percentage of air, which enters actively into the purifying gaseous exchange processes.

The air inhaled normally consists of about 79% nitrogen, about 20% to 21% oxygen, about 0.04% carbon dioxide, with traces of other gases and water vapor. Exhaled air often consists of about 79% nitrogen, about 16% oxygen, about 4% carbon dioxide, with traces of other gases and water vapor. Since the nitrogen content remains approximately the same the most significant change during the breathing process is an exchange of about 4% oxygen for about 4% carbon dioxide.

### **Oxygenation**

When the percentage of oxygen exchanged for carbon dioxide remains the same, the total amount of oxygen and carbon dioxide exchanged per minute tends to increase as a greater air volume is breathed. One may, by strenuous exercise, increase the volume of ventilation to ten times the resting level. Or one may deliberately force increased ventilation without exercise. When muscular exercise increases, the body needs more oxygen. When ventilation is forced intentionally, some increase in oxygen content and decrease in carbon dioxide content of the alveoli and blood may be expected. Part of the aim of both deep breathing exercises and posture movements and rests is to "purify" (increase the ratio of oxygen to carbon dioxide) the blood and the various parts of the body through which blood circulates.

The interchange of oxygen and carbon dioxide is possible because of the structure of the cells joining the alveoli and the capillaries and the laws and processes of gas exchange. The movement of carbon dioxide from the blood to the alveoli takes place by diffusion. In diffusion, the carbon dioxide moves from the rich side to the lean side. When the blood contains more carbon dioxide than the air, the carbon dioxide will diffuse from the blood to the air. If, on the other hand, the air is rich in carbon dioxide, the

diffusion of carbon dioxide from the blood to the air is inhibited. In extreme cases the carbon dioxide may even diffuse or flow from the air into the blood. Thus our breathing habits are very important.

### **Regulation**

A group of nerve cells in the medulla, the respiratory center of the brain, controls the contractions of muscles used in breathing. Inspiration takes place when the nerve cells of this group send impulses through motor nerves to respiratory muscles. When something, we do not know what, prevents these cells from sending impulses, inspiration ceases and expiration occurs. Apparently we do not use muscular energy and force to expel air but merely stop inhaling; then exhaling takes place automatically, without muscular effort. Since all respiratory muscles contract in a harmonious way, some organizing process in the brain marvelously coordinates their movements. Apparently the respiratory center cells function much like the pacemaker tissue of the heart, since they seem to induce rhythmical patterns of respiration without outside help, even though they are sensitive to various influences, which modify their action.

In addition to the involuntary regulation and regularization of breathing patterns, many involuntary reflexes also exist, such as those noticeable in choking, sneezing, coughing, and swallowing. It is almost impossible to breathe while swallowing food. Other reflexes may be noted, such as sudden holding of breath when you sniff ammonia and similar chemicals. If your air supply has been cut off, you automatically gasp for breath. Emotional excitement, fear, anger, enthusiasm all stimulate breathing, as may sudden increase in either heat or cold.

There are voluntary controls of breathing. For example, you can deliberately take a deeper breath or stop breathing momentarily. Such direct control may be supplemented by indirect intentional control, as when we dance or kiss or drink or smoke or sing. We may deliberately run for such a distance that we get our "second wind," after which we breathe more easily even though exercising strenuously.

Part of the significance of distinguishing between voluntary and involuntary control of breathing is that yogic exercises aim first at changing unhealthy involuntary patterns voluntarily and then at an establishment of more healthy patterns. Whereas nervous tension produces some inhibiting influence upon deep, regular breathing patterns, deliberate effort to counteract these

influences in such a way that our more completely spontaneous and uninhibited rhythmic patterns become restored as needed.

## **Effect of Pranayama on various systems :**

### **Nervous system:**

Pranayam maintains normal body functions. It influences higher functions of the central nervous system (C.N.S.) like perception, planning, execution of tasks, learning & memory.

It improves coherence between the two cerebral hemispheres signifying synchronization of logical and intuitive function. It increases alertness, along with relaxation. Alertness decreases the reaction time of the brain. Twelve weeks of yoga is known to decrease the visual and auditory reaction times (3-4). Pranayama alone and Mukh Bhastrika have shown similar effects (5-6). Spatial tasks are enhanced during left nostril breathing and verbal tasks during right nostril breathing. Breathing through a particular nostril also improves spatial memory scores.(7)

Yogic breathing exercises include right and left nostril breathing. These breathing techniques stimulate different divisions of the ANS, thus having useful implications in treating psycho physiological disorders associated with hemispheric and autonomic imbalance (8-9). Right nostril breathing correlates with the activity phase of the basic rest activity cycle, it activates the sympathetic nervous system as shown by an increase in the oxygen consumption and left nostril breathing decreases the sympathetic activity as manifested by an increase in the level of volar galvanic skin resistance (10-11). Nostril rhythm increases the theta rhythm, the mean alpha (a) and beta (b) power followed by reduction in the asymmetry in b band in the EEG (12-13). Pranayama exercise of Ujjayi and Bhastrika also increased the amplitude and decreased the latency of Na wave of middle latency AEP, indicating facilitation of processes of sensory signal transmission.

these practices involve the use of various cortical mechanisms and corticofugal control processes that may alter the process of information processing at the level of the brain stem (Telles et al 1992). Similarly in epileptics, improvement in AEP, visual contrast sensitivity has also been observed (14).

### **Pranayama & Harmonal Balance :**

The glandular activity increased and hormonal profile is balanced through pranayam . Ujjayi with long and short kumbak effects adreno-medullary secretions (15).

### **Pranayama & Psychiatric Disorders :**

The Pranayama shows a reduction in sympathetic activity which is the basis of its use in stress management. Sudarshan Kriya yoga (One of the rhythmic breathing process) has been used in depression and melancholia (16). A thirty minute session of yogic stretching and breathing exercises produced marked augmentation in perception of physical and mental energy. It increases the falling of alertness and enthusiasm. It is more invigorating than relaxation or visualization techniques especially when practiced in a group setting (17).

### **Pranayama & Cardiovascular Response :**

The cardiovascular system is controlled by the ANS. Yoga accompanied by breath control increases cardiac output, decreases the hepatic, renal blood flow and increases cerebral blood flow in the peripheral vessels. Heart rate alterations in various types of pranayama and in single thought and thoughtless states have been described (18-19). The effects of inspiratory and expiratory phases of normal quiet breathing, deep breathing and savitri pranayama breathing on heart rate and mean ventricular QRS axis was investigated in young healthy untrained subjects. Pranayama breathing produced significant cardio acceleration and an increase in the QRS axis during the inspiratory phase compared to eupnoea. These changes were similar to the changes observed during the corresponding phase of deep breathing or savitri

pranayama breathing (20). Right nostril breathing activates the sympathetic nervous system and increase the heart rate. Alternate nostril breathing bring about a balance in the ANS (21) Kapalbhathi practice showed an increase in the low frequency band and decrease in the high frequency band of the heart rate variability spectrum indicating increased sympathetic activity (22) nadishohdhana pranayama increased both components of HRV.

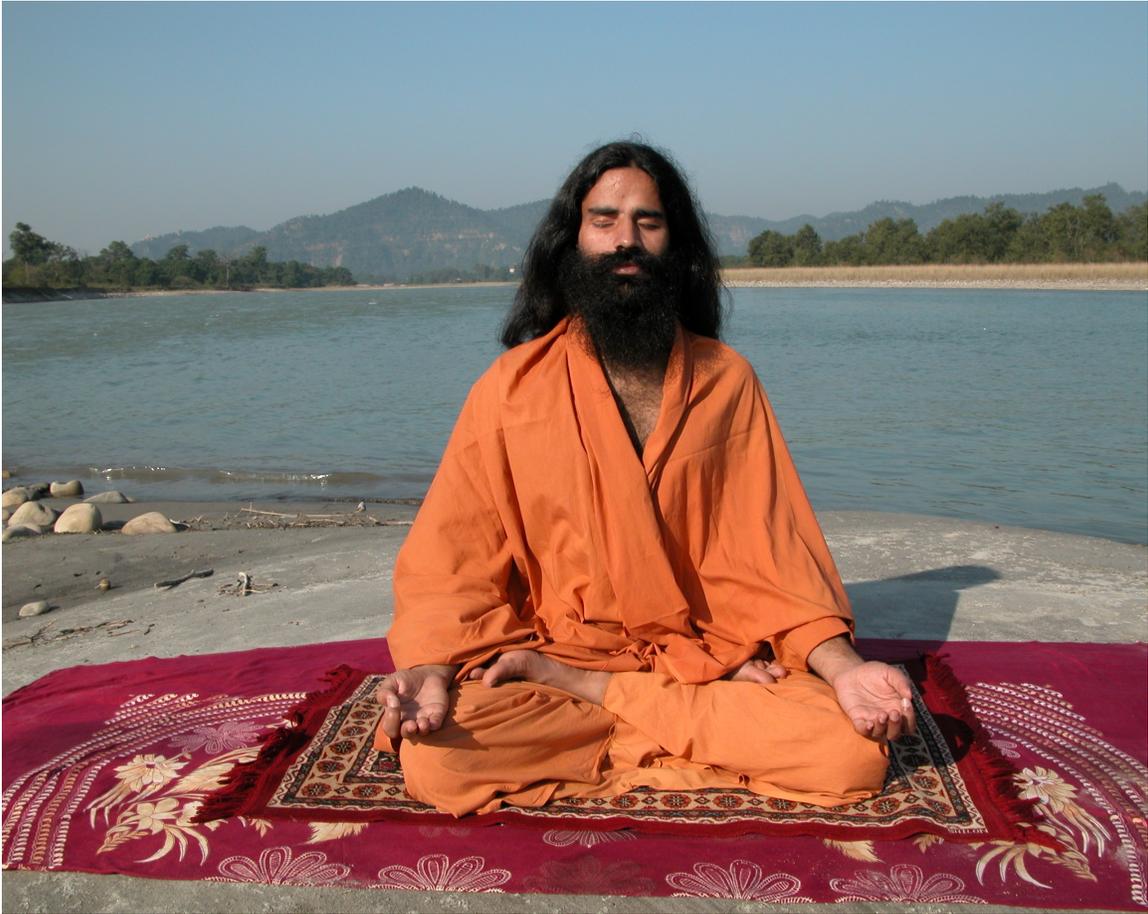
### **Pranayama & Respiratory system :**

The various practices use breathing exercises (pranayama), suryanamaskar, dhyana, devotional sessions, asanas, kriyas, and yogic chair breathing (23-24-25). Kapal bhati removes the residual secretions by moving the neck in all directions and forcing out secretions forcefully through the nose. Hence, by this mechanism yoga and naturopathy may be both useful in treating asthma (26).

Pranayama techniques form an important component of yoga. The types of pranayama generally used are surya bhedana, bhastrika, and nadi shodhana. The idea is to maintain a slow rhythmic pattern of breathing using both nostrils alternately. The produces a balancing effect on the ANS. Short kumbhak or breathholding increases O<sub>2</sub> consumption while long kumbak decreases O<sub>2</sub> consumption (27). Prolongation of breath holding time with increase in Forced Vital Capacity (FVC), forced vital capacity in first second (FEV1), maximum voluntary ventilation (MVV), peak expiratory flow rate (PEFR) and lowered respiratory rate has been reported after six weeks of training in pranayama (28). Techniques involving focusing on a single thought resulted in regularity of respiration while in the no thought state there was reduction in the rate and regularity of respiration (29). Savitri type breathing had a similar effect as deep breathing on cardiovascular parameters (30). In a study of patients practicing hatha yoga, long term manipulation of breathing by practicing slow deep breathing likely results in overstretching of pulmonary stretch receptors, chronic manipulation results in vagus blockage, thereby vagal manipulation is decreased. This also leads to a

conditioning or learning of a pattern of breathing with ample tidal volume and a slow rate (31).

Various respiratory parameters improve after yoga & pranayama. A significant increase in FVC, FEV, FEV1, PEER, increase in the vital capacity, tidal volume increase in expiratory and inspiratory pressures, breath holding time and decrease in the respiratory rate is documented to help symptoms of weekly attacks, and scores for drug treatment, Improved exercise tolerance, faster recovery after exercise, decrease in inhaler use, and improvements in bronchial provocation response has also been documented (32-36). Pranayama is believed to decrease the anxiety element as well. Since asthma is a psychosomatic and chronic diseases, a psychosomatic imbalance with an increased vagal tone is one of its various etiopathogenesis. Yoga therapy may first bring internal awareness, correct autonomic imbalance, control the breathing, improve the immune status and alter physiological variables. Even one week after yoga therapy, improvements in ventilatory functions in asthmatics have been observed. This could be due to reductions in sympathetic reactivity and relaxation of voluntary inspiratory and expiratory muscles. Both transcendental meditation and Yoga have proven to be effective alternative medicines for controlling symptoms of asthma (37-38). Yoga is also valuable in the treatment of COPD (39).



## **EFFECT OF PRANAYAMA IN PSYCHOSOMATIC DISORDER**

Pranayama is an important part of Astang yog. It is basically a breathing exercise. It is very effective in all types of mental & physical disorder.

On the basis of received letters of patients from all over India of various disorders, interpretation of diseases were represented in bar diagrams. The patient were doing pranayama & taking also Ayurvedic medicine from Divya Yog Mandir O.P.D, Kankhal, Hardwar from 6-12 months regularly. The percentage of curing of the patients were reflected in graphical Bar diagrams which are as follows :-

# EFFECT OF PRANAYAMA ON OBESITY –

## OBESITY

### ( WEIGHT LOSS RANGE FOR THE MALES)

Weight loss in Kg

%age relief

0- ---5

32.6

6----10

25.74

11----15

27.72

16----20

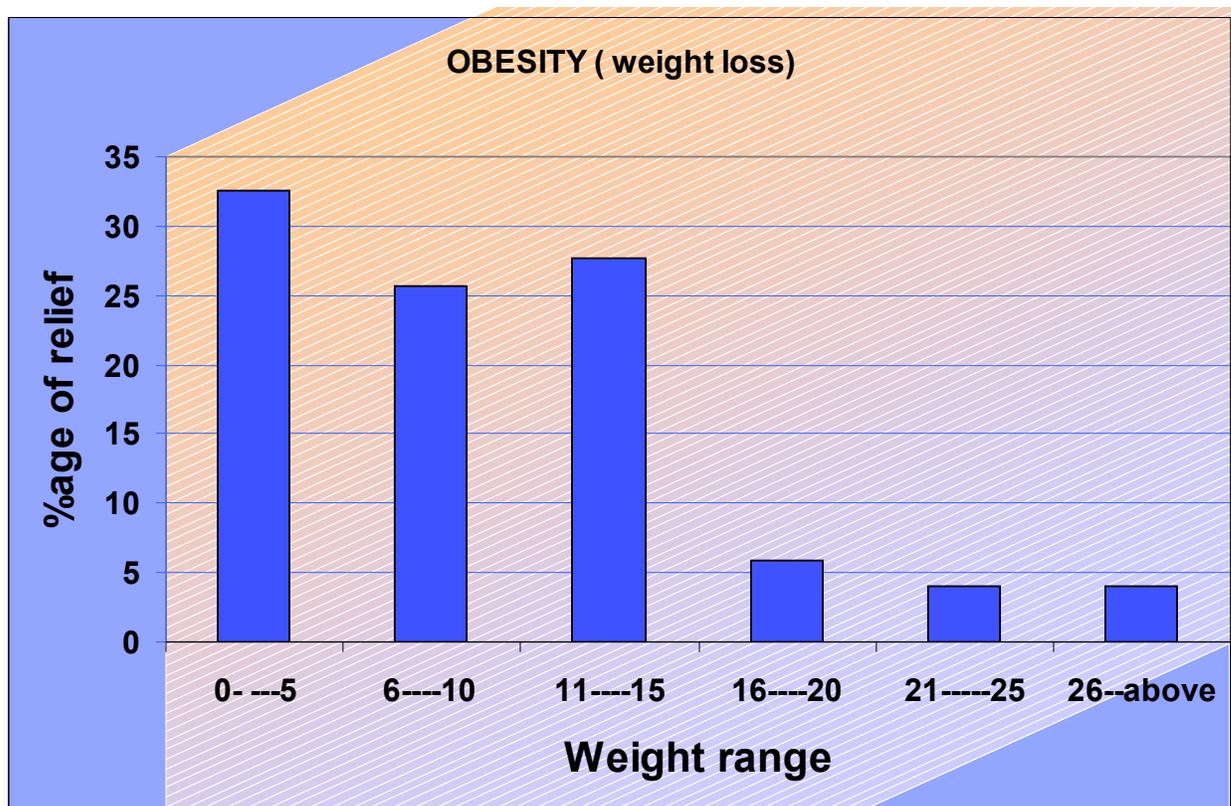
5.94

21----25

3.96

26—above

3.96



## OBESITY

### (WEIGHT LOSS RANGE FOR THE FEMALES)

Weight loss in Kg

%age relief

0---5

31.25

6---10

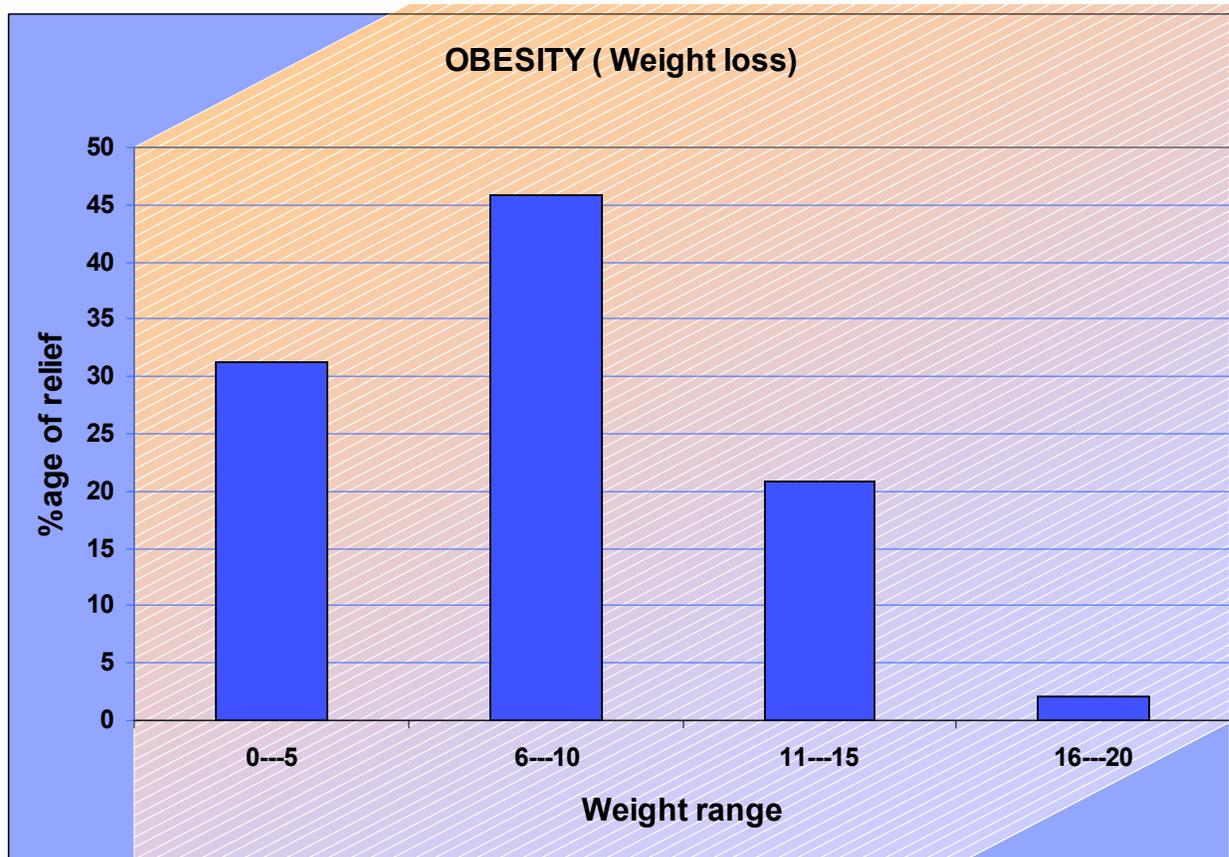
45.83

11---15

20.83

16---20

2.08



## EFFECT OF PRANAYAMA ON JOINTS PAIN -

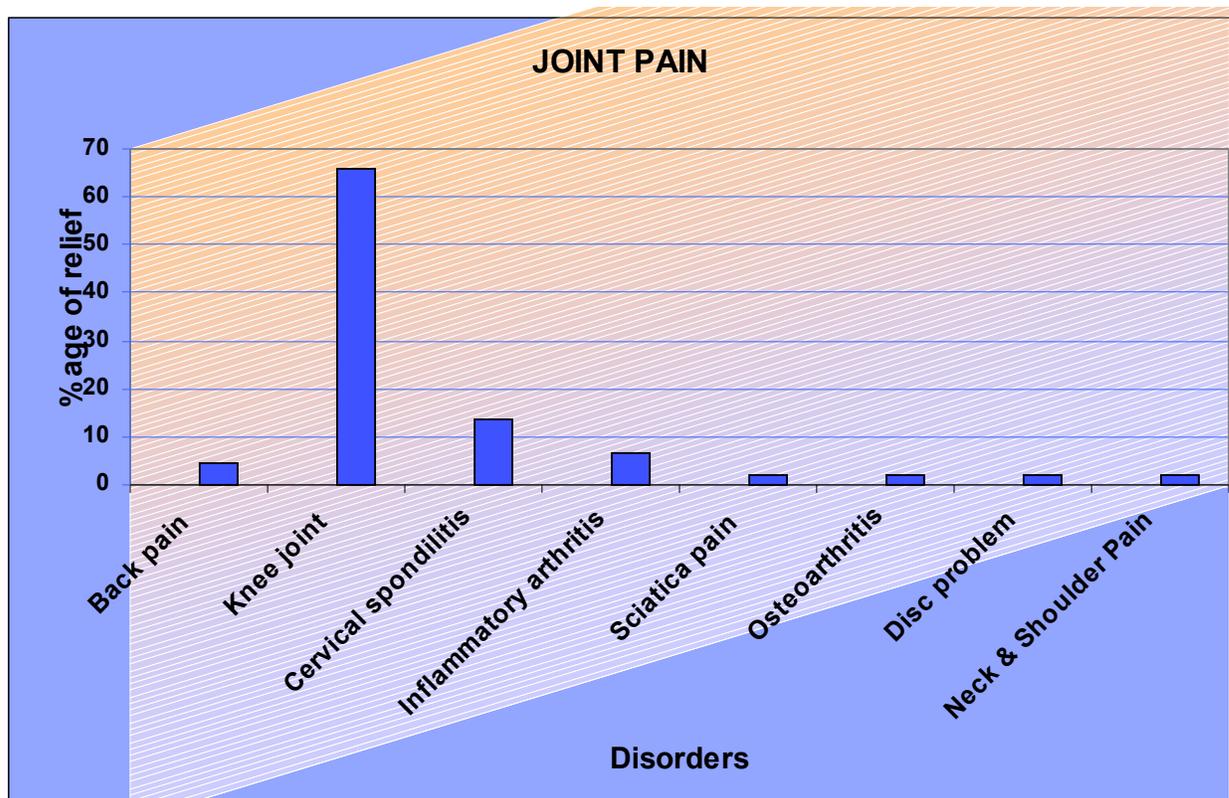
## JOINTS PAIN

### MALE

#### Disorders

#### % of relief

Back pain	4.5
Knee joint	65.90
Cervical spondilitis	13.63
Inflammatory arthritis	6.81
Sciatica pain	2.27
Osteoarthritis	2.27
Disc problem	2.27
Neck & Shoulder Pain	2.27



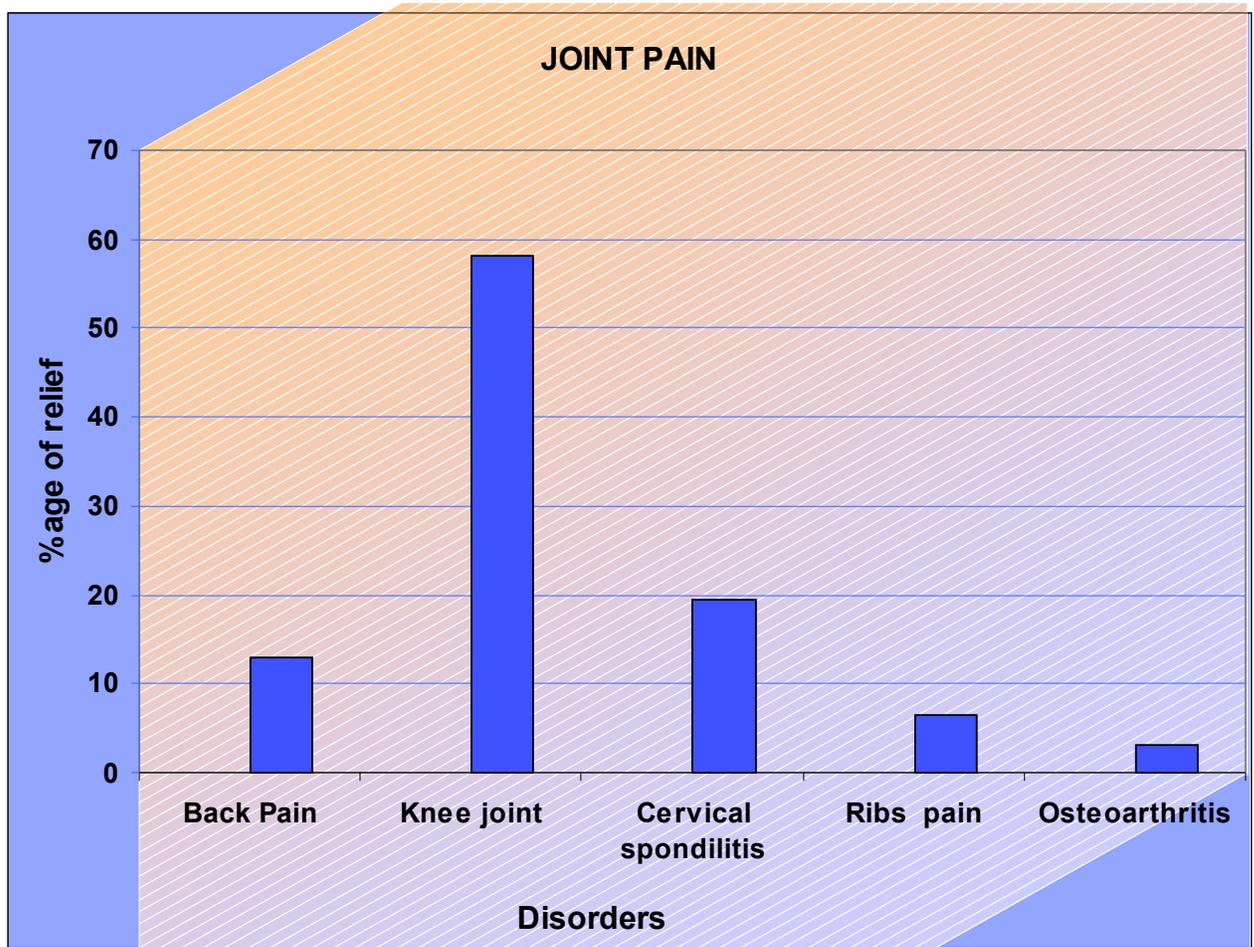
## JOINTS PAIN

### FEMALE

**Disorders**

**% of relief**

<b>Back Pain</b>	<b>12.90</b>
<b>Knee joint</b>	<b>58.06</b>
<b>Cervical spondilitis</b>	<b>19.35</b>
<b>Ribs pain</b>	<b>6.45</b>
<b>Osteoarthritis</b>	<b>3.22</b>

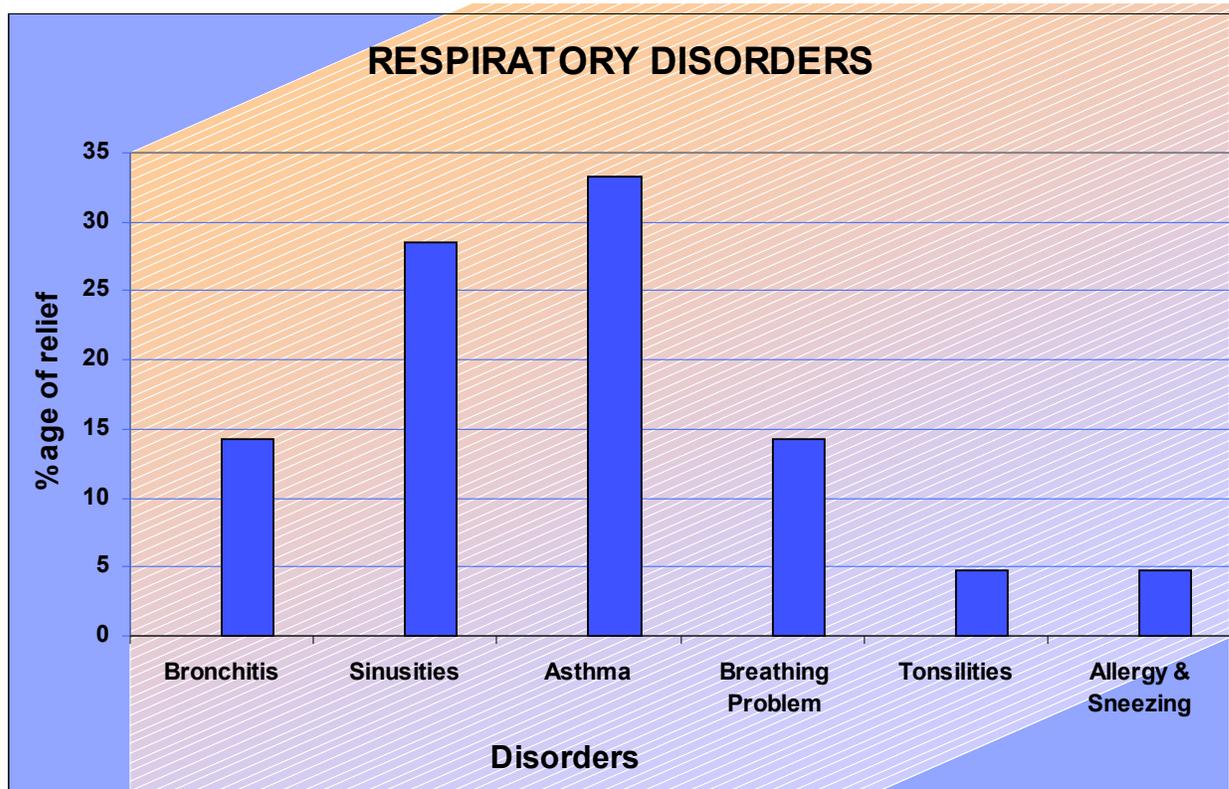


# EFFECT OF PRANAYAMA ON RESPIRATORY DISORDERS –

## RESPIRATORY DISORDERS

### MALE

<u>Disorders</u>	<u>% of relief</u>
Bronchitis	14.28
Sinusitis	28.57
Asthma	33.33
Breathing Problem	14.28
Tonsillitis	4.76
Allergy & Sneezing	4.76



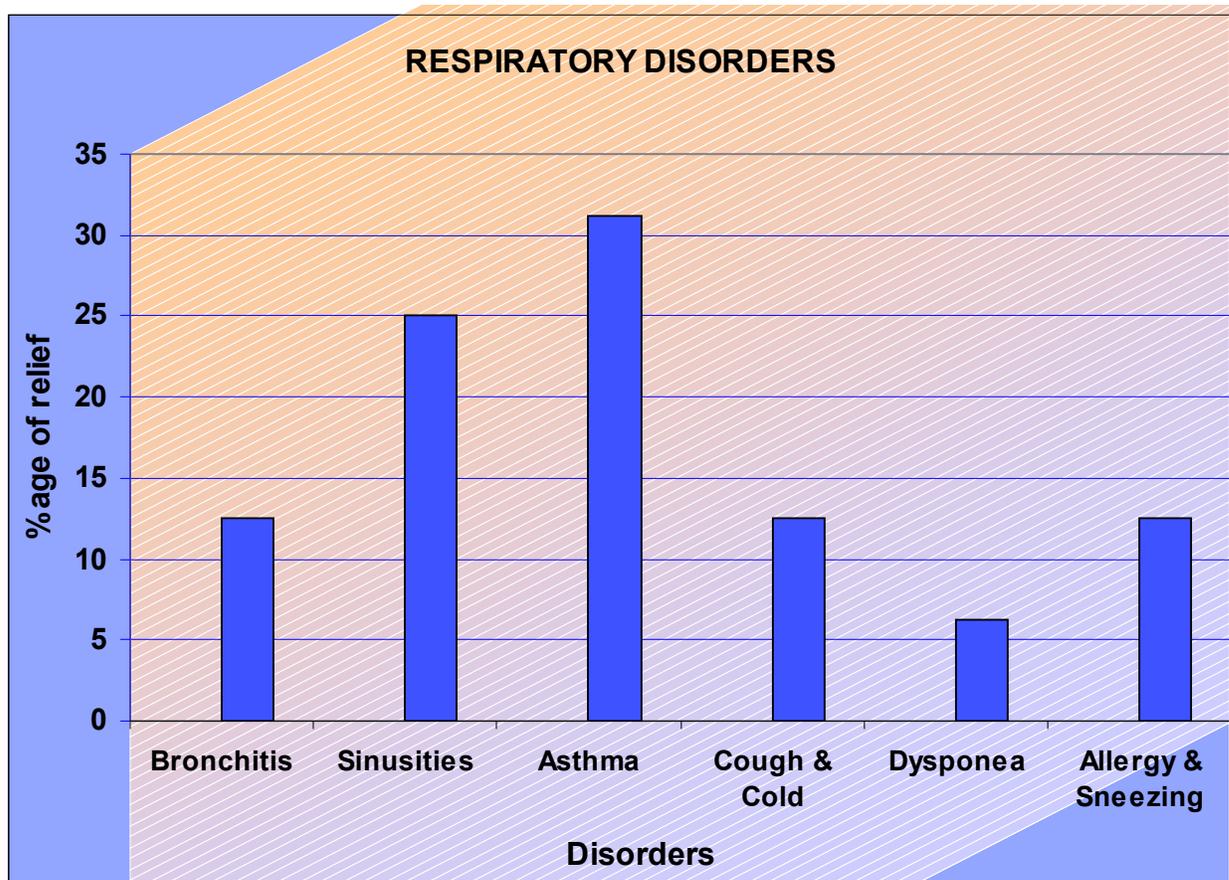
## RESPIRATORY DISORDERS

## FEMALE

### Disorders

### % of relief

Bronchitis	12.5
Sinusitis	25.0
Asthma	31.25
Cough & Cold	12.50
Dyspnea	6.25
Allergy & Sneezing	12.50



## EFFECT OF PRANAYAMA ON DIABETES-

**DIABETES**

**MALE**

**Sugar level**

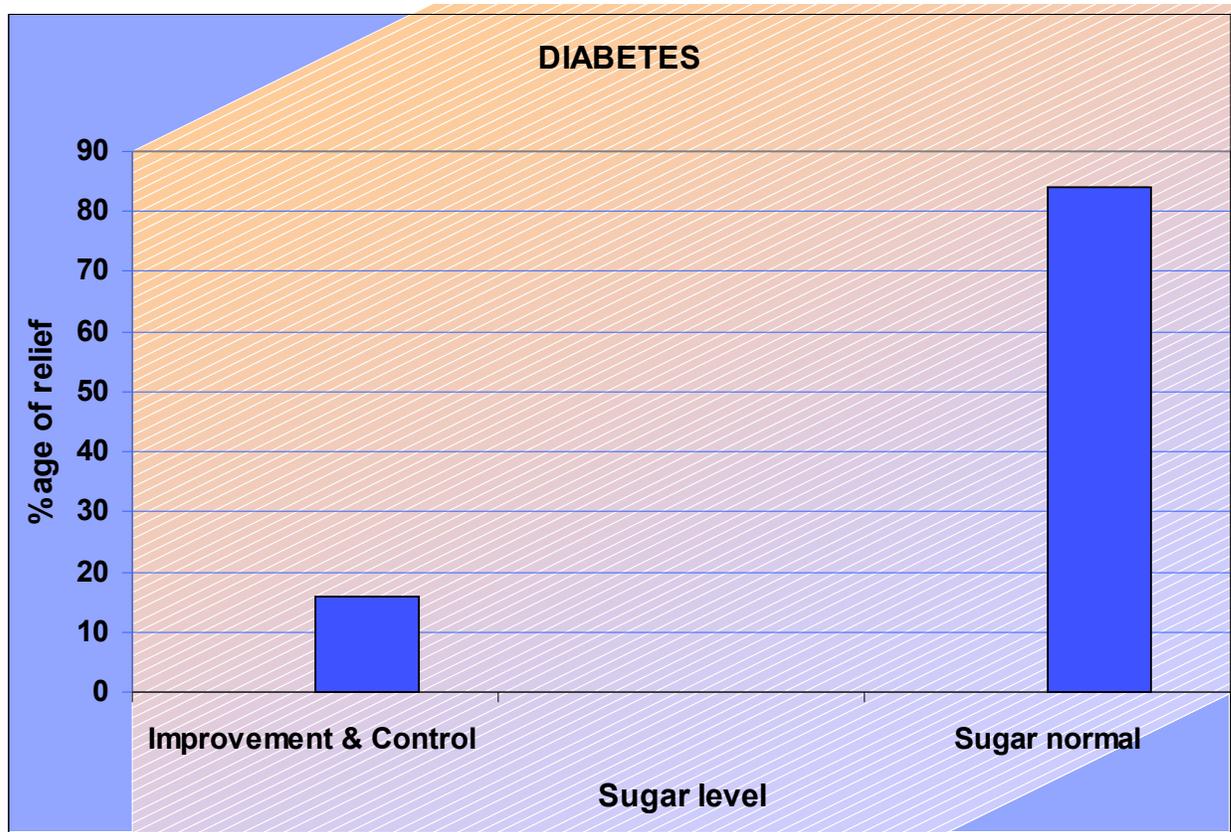
**% of relief**

**Improvement & Control**

**15.95**

**Sugar normal**

**84.04**



**DIABETES**

**FEMALE**

**Sugar level**

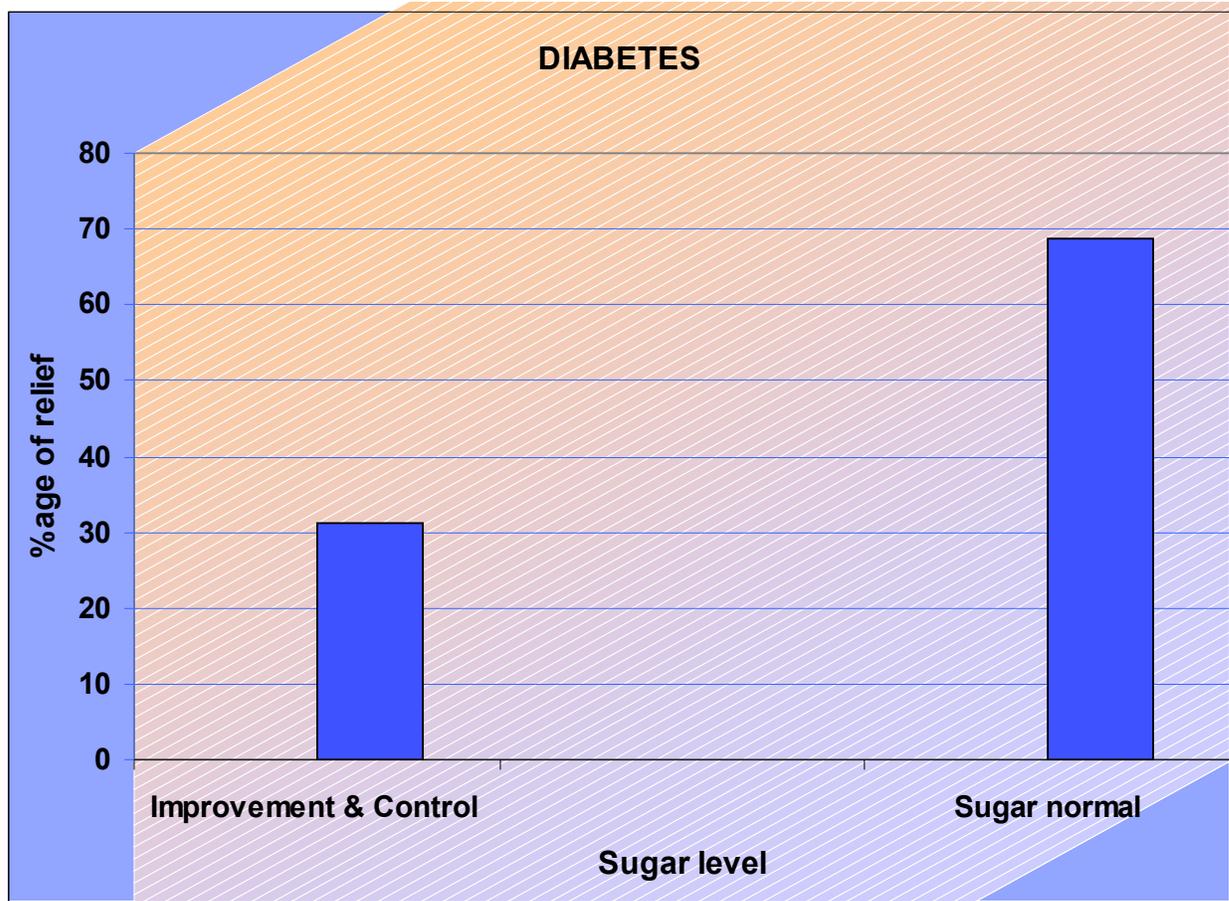
**% of relief**

**Improvement & Control**

**31.25**

**Sugar normal**

**68.75**

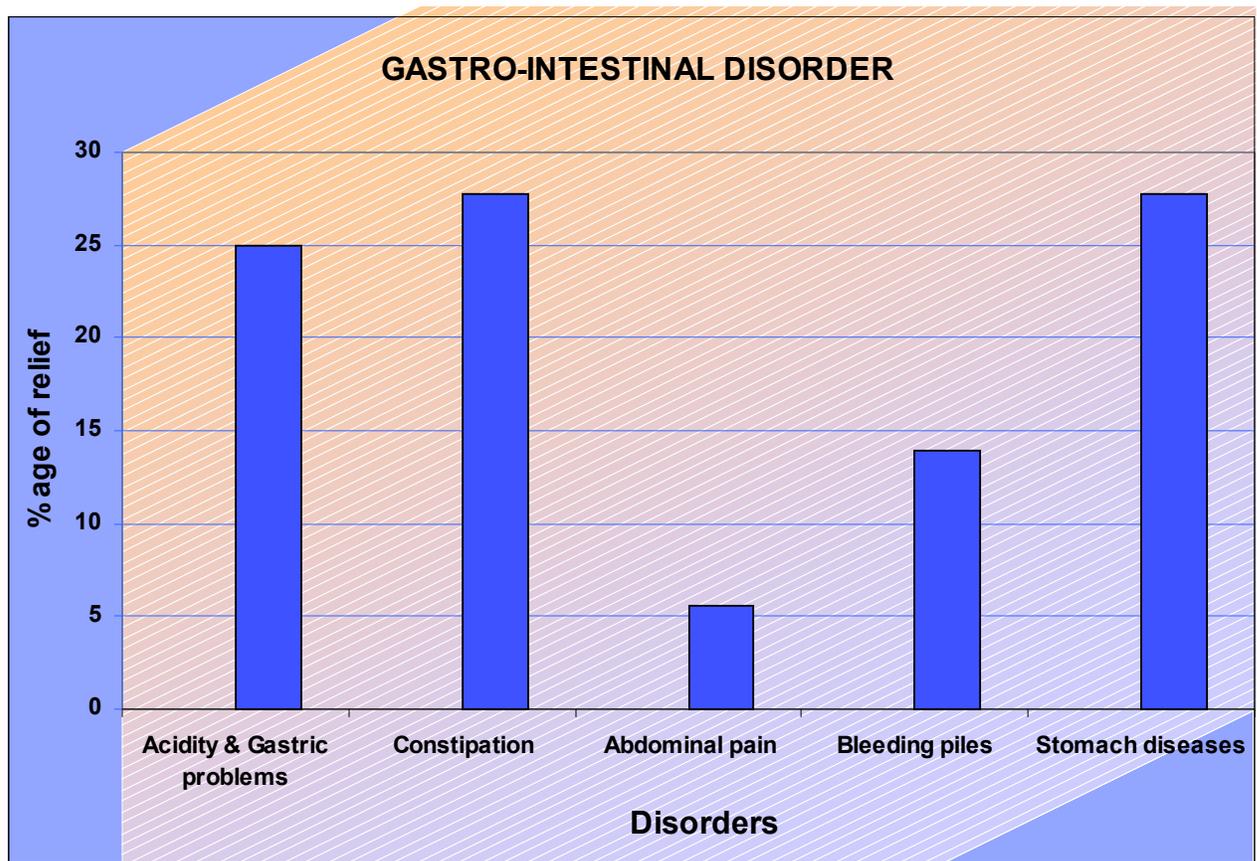


**EFFECT OF PRANAYAMA ON GASTRO-INTESTINAL DISORDER-**

# GASTRO-INTESTINAL DISORDER

## MALE

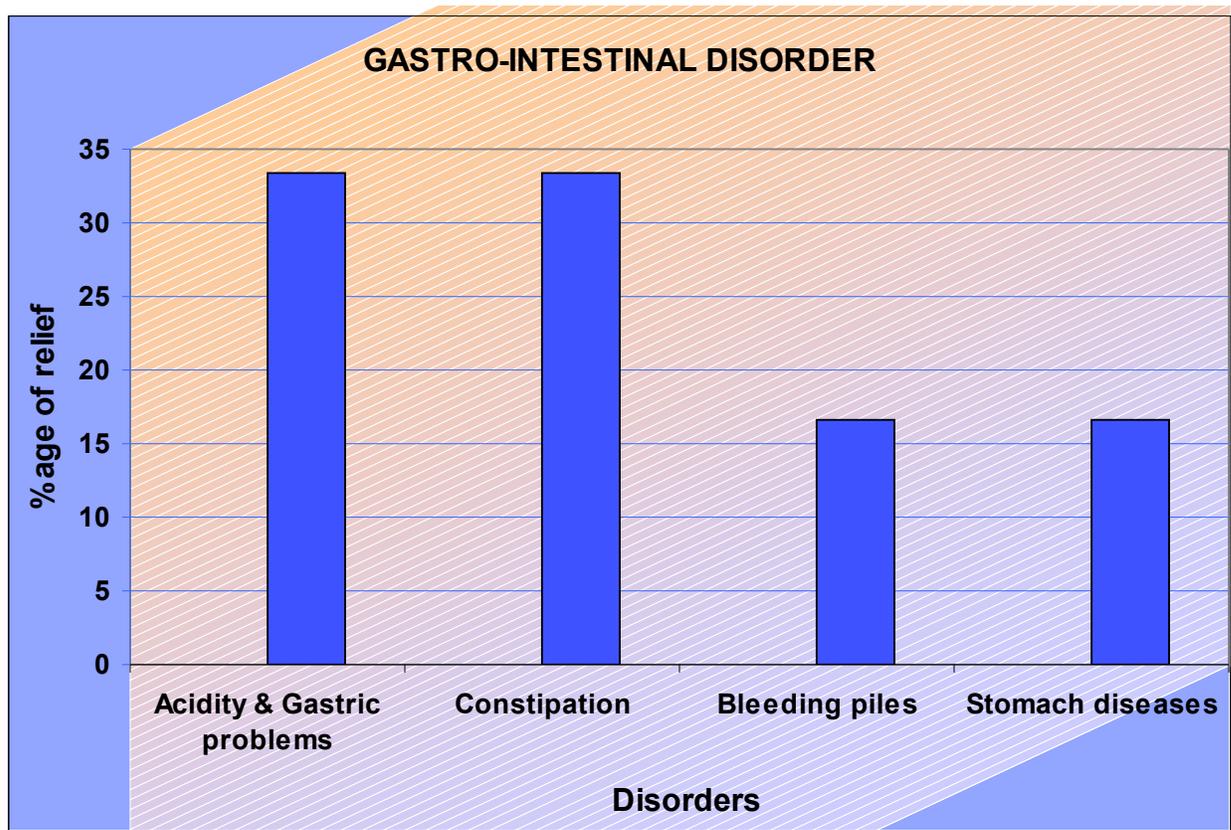
<u>Disorders</u>	<u>% of relief</u>
Acidity & Gastric problems	25.0
Constipation	27.77
Abdominal pain	5.55
Bleeding piles	13.88
Stomach diseases	27.77



# GASTRO-INTESTINAL DISORDER

## FEMALE

<u>Disorders</u>	<u>% of relief</u>
Acidity & Gastric problems	33.33
Constipation	33.33
Bleeding piles	16.66
Stomach diseases	16.66



## EFFECT OF PRANAYAMA ON BLOOD PRESSURE

### BLOOD PRESSURE

#### MALE

B.P Level

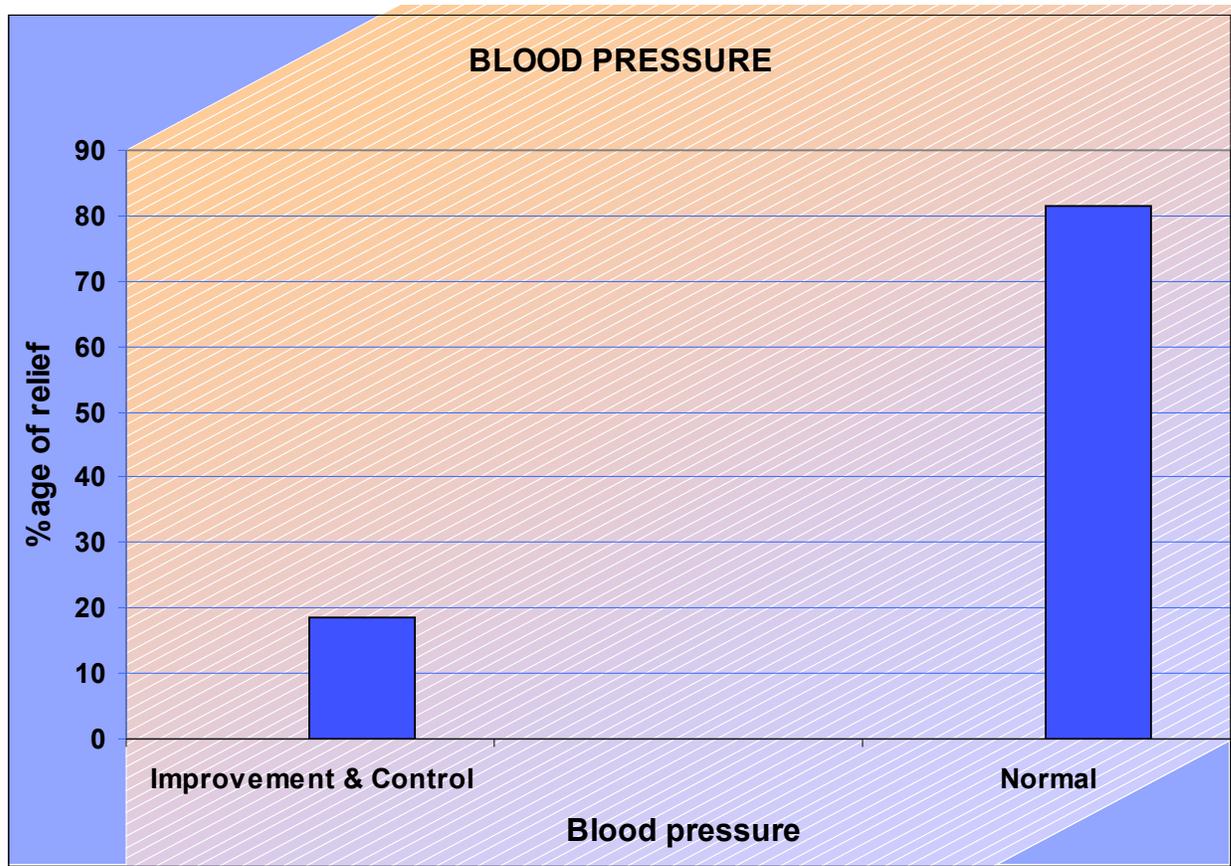
% of relief

Improvement & Control

18.42

Normal

81.57



BLOOD PRESSURE

FEMALE

B.P Level

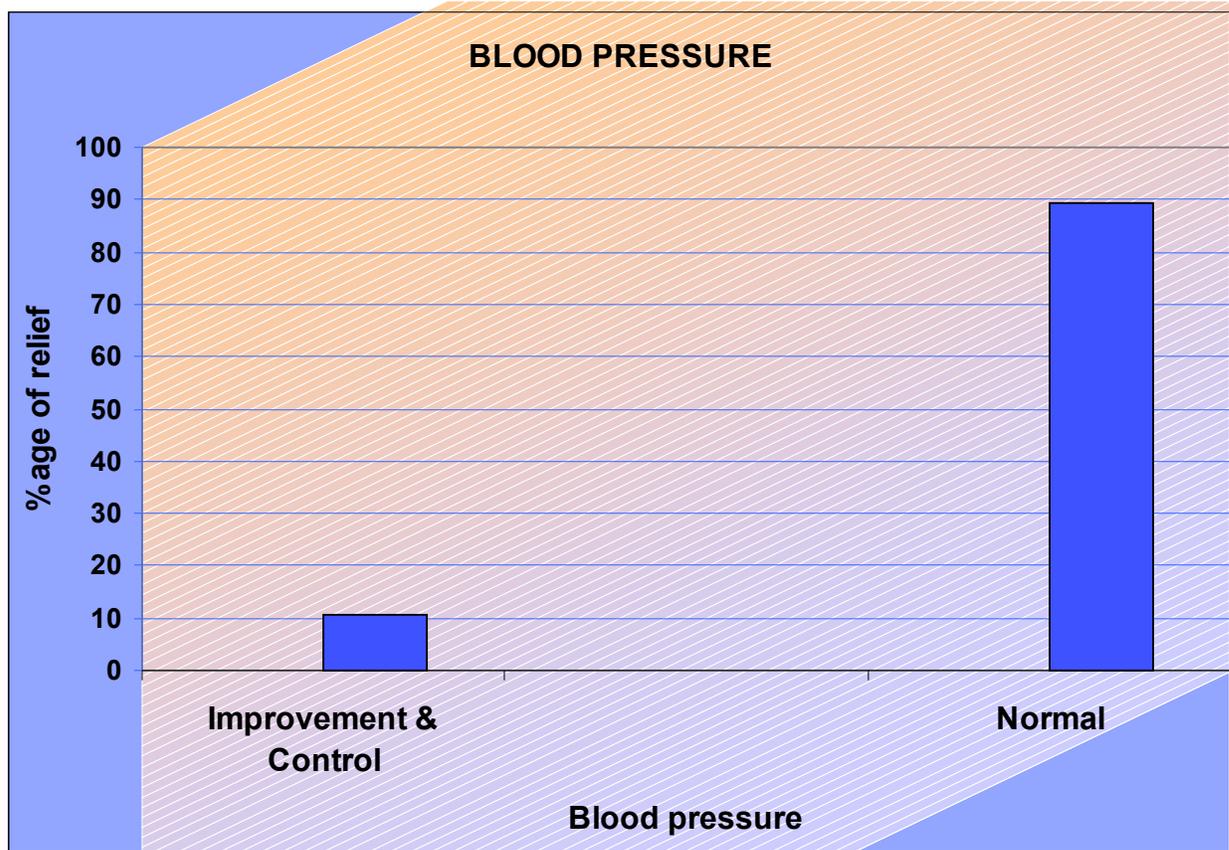
% of relief

**Improvement & Control**

**10.52**

**Normal**

**89.47**



**EFFECT OF PRANAYAMA ON MIGRAINE,  
HEADACHE, DEPRESSION & INSOMNIA**

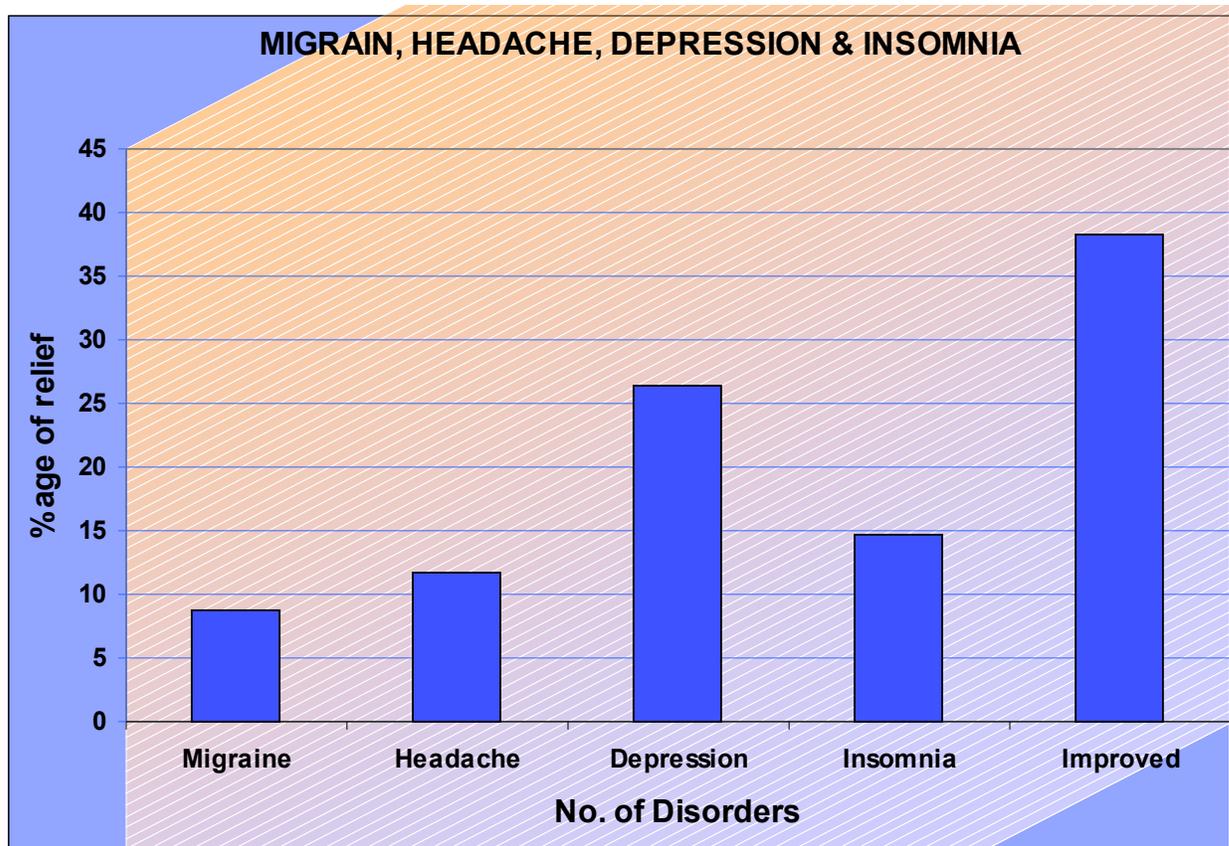
**MIGRAINE, HEADACHE, DEPRESSION , INSOMNIA**

**MALE**

**Disorders**

**% of relief**

<b>Migraine</b>	<b>8.82</b>
<b>Headache</b>	<b>11.76</b>
<b>Depression</b>	<b>26.47</b>
<b>Insomnia</b>	<b>14.70</b>
<b>Improved</b>	<b>38.23</b>



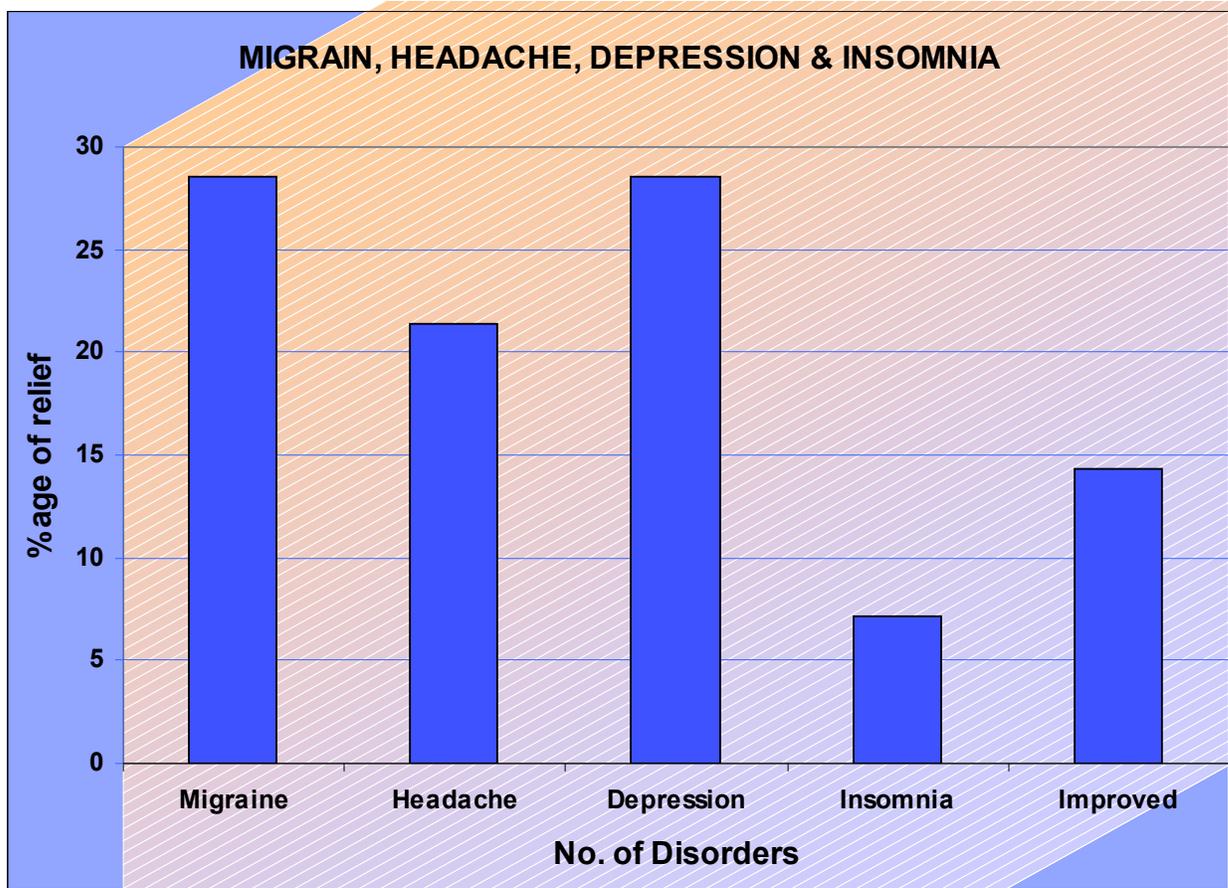
**MIGRAINE, HEADACHE, DEPRESSION, INSOMNIA**

**FEMALE**

**Disorders**

**% of relief**

<b>Migraine</b>	<b>28.57</b>
<b>Headache</b>	<b>21.42</b>
<b>Depression</b>	<b>28.57</b>
<b>Insomnia</b>	<b>7.14</b>
<b>Improved</b>	<b>14.28</b>

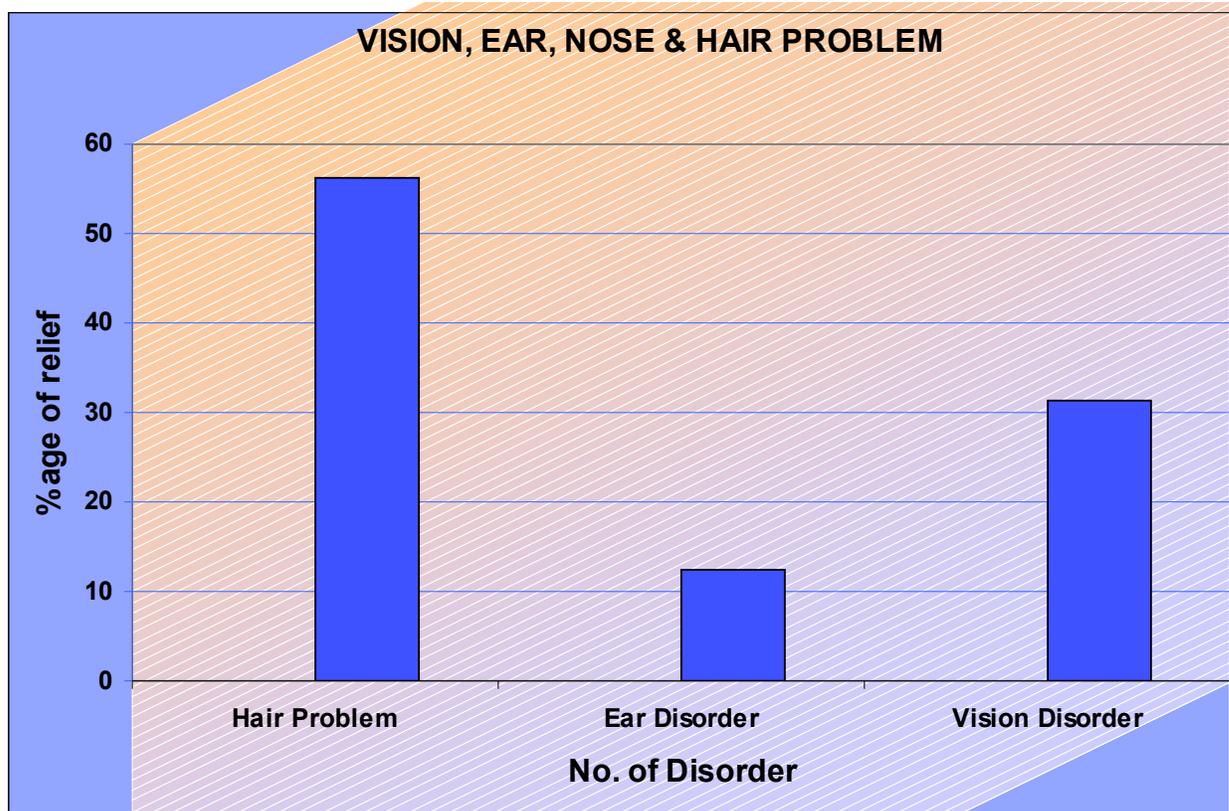


**EFFECT OF PRANAYAMA ON VISION, EAR, NOSE & HAIR PROBLEM**

## VISION, EAR, NOSE & HAIR PROBLEM

### MALE

<u>Disorders</u>	<u>% of relief</u>
Hair Problem	56.25
Ear Disorder	12.50
Vision Disorder	31.25



## VISION, EAR, NOSE & HAIR PROBLEM

### FEMALE

## Disorders

## % of relief

Hair Problem

8.33

Ear Disorder

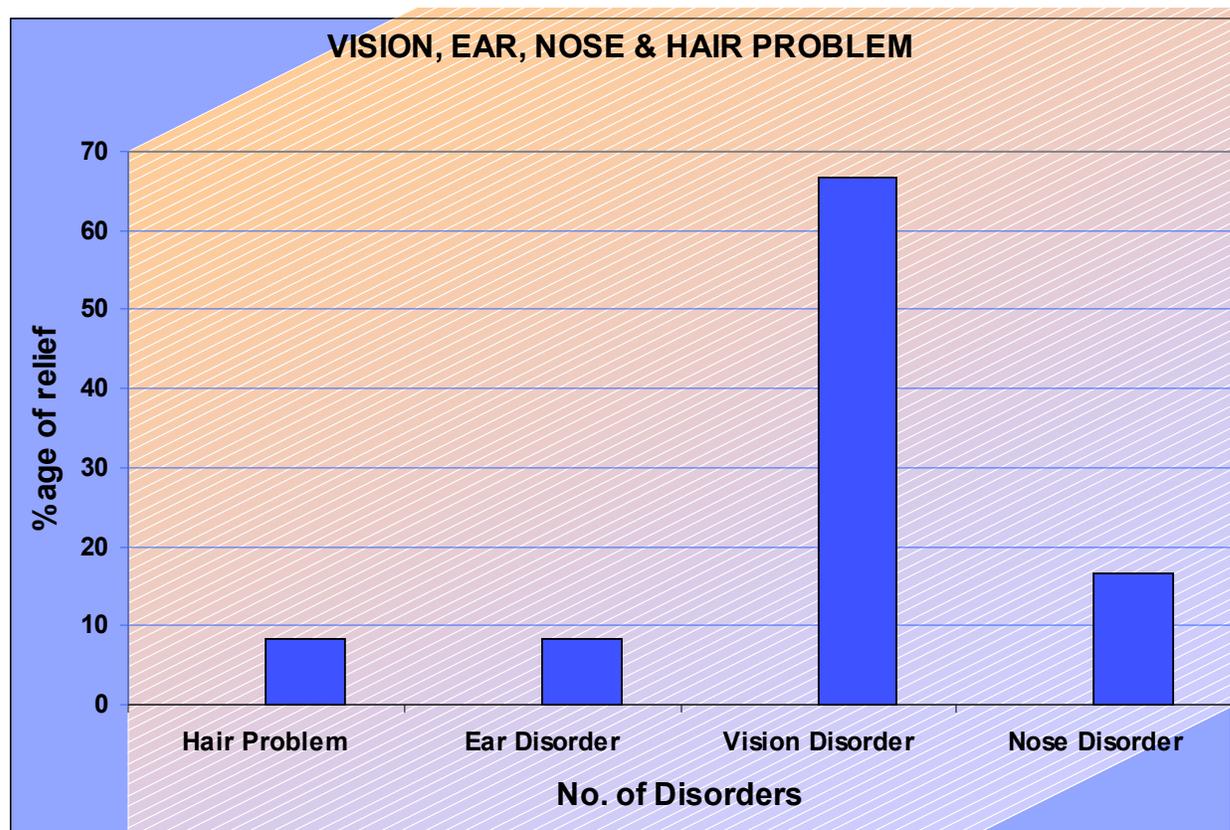
8.33

Vision Disorder

66.66

Nose Disorder

16.66



## **Conclusion:**

The practice of Pranayama is a tremendous gift from our Indian Traditional science & culture. Science of yogic breathing was almost completely unknown to the common people. The credit for making the

practice of pranayama popular in common people as a discipline in its own right and as a mean for maintaining the health of the body & mind goes to Pujya Swami Ram Dev Ji Maharaj & Divya Yog Mandir trust. Pujya Swami Ram Dev Ji Maharaj rediscovered & proved that Patanjali's Pranayama has scientific basis through his Challenging yoga camp. From the received letters of the patients from all over India of various disorder, who get a relief from there disorder it can be argued that the benefits of pranayama may be due to the dynamics of group activity and the mere fact that the persons engaged in any exercise. This psychological aspect can influence the physiological state. Now a day there are several psychosomatic diseases emerging through the world. The immunomodulatory activity of Pranayama can be an accurate solution for all these diseases, which are, involve with immune system. Hence, Pranayama is a science of breath & breath is life.

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