

# Yoga Silvia Ioannidou & Christos Georgiou (E-RYT500), Chakra Yoga Cyprus & Oµ the yoga studio



- Ο Μαχαρίσι Πατάντζαλι ήταν γιατρός, φιλόσοφος και γιόγκι που έζησε τον 4ο 3ο αιώνα π.Χ. και είναι γνωστός ως ο συγγραφέας των Αφορισμών (Σούτρες) που είναι το κατεξοχήν θεωρητικό κείμενο στη Γιόγκα.
- Ο γνωστός Ινδός σοφός Πατάντζαλι, ο οποίος συστηματοποίησε τις μέχρι τότε προφορικά μεταδιδόμενες γνώσεις για τη γιόγκα συγγράφοντας τους περίφημους «αφορισμούς» (yoga sutras), θεωρεί ότι γιόγκα είναι η συγκράτηση του νου από το να σχηματίζει «κυματισμούς», δηλαδή σκέψεις.
- Βασική τεχνική για την πραγμάτωση στη γιόγκα είναι ο διαλογισμός. Κάτι το οποίο συχνά παραβλέπεται από σύγχρονους ασκούμενους στη γιόγκα είναι η παράλληλη εργασία για την ηθική τελείωση του ανθρώπου, ανάγκη την οποία επισημαίνει και ο ίδιος ο Πατάντζαλι.
- Χωρίς την ταυτόχρονη άσκηση του διαλογισμού και της ηθικής τελείωσης (όπως η μείωση του εγωκεντρισμού, της βιαιότητας και όλων των αρνητικών συναισθημάτων μας), η γιόγκα δεν θα μπορέσει να δώσει τα επιθυμητά αποτελέσματα.
- Τα οφέλη της γιόγκα είναι ψυχοσωματικά, καθώς αποτελεί μέθοδο εσωτερικής εξερεύνησης, η οποία αναγνωρίζει την αλληλεξάρτηση του σώματος με το νου, και επιφέρει αρμονία σε όλες τις ανθρώπινες υποστάσεις, στη σωματική, στη διανοητική-συναισθηματική, στην πνευματική.



(translation: edwin f. bryant)



## The science of yoga

- The word yoga itself means to unite, and to yoke or harness; is derived from the Sanskrit root "yuj," meaning "to control," "to yoke" or "to unite."
- Yoga is the most complete and comprehensive system for study and development of the human body, mind and spirit.
- You could look at the science of yoga as an owner's manual for the mind/body vehicle in which our spirit resides. Whenever we buy a new gadget, machine or appliance, it comes with such a manual, yet here we are in the most complex biological vehicle in the universe without an understanding of how it actually works, physiologically or mentally.
   We recognize the importance of bringing our cars in for an oil change and a tune-up, but we do not know how to do this for our own bodies. We know how to install a new program in our computers, but we know little about reprogramming our own minds.



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### THE 8 LIMBS OF YOGA - ROYAL PATH TO SELF-REALISATION

Raja Yoga as first compiled and described in the Yoga Sutras by Patanjali (ca.500 BC)

(Note: Yoga in the West is commonly practised as physical exercise or alternative medicine, rather than as the spiritual self-mastery and meditation skill associated with in the East.)



			Yogic Science for Human	Resource Management in	Business	
THINGS WE DO	1	YAMA	SOCIAL DISCIPLINES ETHICAL RULES- HOW WE BEHAVE TOWARDS OURSELF AND TO OTHERS	CHARACTER EDUCATION	HEALTHY RELATIONSHIPS & ENVIROMENT / IN PEACE WITH ALL	
	2	ΝΙΥΑΜΑ	PERSONAL DISCIPLINES- HOW WE CARE FOR OURSELVES		HEATLY SELF / IN PEACE WITH YOUR SELF	
	3	ASANA	A STEADY & COMFORTABLE SEAT <b>POSTURE</b>	HEALTHY STRONG & FLEXIBLE BODY & SPINE	Yogic body postures are probably the <b>best tools to disrupt any learned</b> <b>patterns of wrong muscular</b> efforts. Body <b>postures increase mental calm, clarity, steadiness and alertness</b> The <b>work place</b> as usually <b>contributes to structural imbalance in the body</b> . Body postures are useful in correcting structural imbalance. Ancient yoga texts <b>emphasise the importance of maintaining the</b> <b>structure of the spine</b> . With appropriate breathing and appropriate movement these postures can be used to maintain the strength and flexibility of the spine. The postures must have the dual qualities of <b>alertness and relaxation</b> . Conscious involvement of the mind in the movement of the body.	
	4	PRANAYAMA	ABSORTION AND MOVEMENT OF THE LIFE FORCE (PRANA) THROUGH BREATHING TECHINQUES	Pranayama Yoga begins with the art of proper breathing to increase oxygen levels and begin the rejuvenation process clearing the mind, weeding out old negative thought patterns, and bringing peace of mind. Some of the breathing methods are used to induce deep relaxation and meditative states.	Controlled breathing and withdrawal of mind from the domination of senses are extremely efficient techniques to divert the attention of the individual from the objects of the outer environment, to increase every person's energy potential and 'interiorize' them, to achieve control of one's inner functioning.	
	5	PRATYAHARA	WITHDRAW THE MIND FROM THE OUTER SENSES	TURNING THE ATTETION INWARD/ AWAY FROM THE DISTRUCTIONS OF THE SENSES/ STILLING OF THE MIND		
	6	DHARANA	CONCENTRATION/CONTEMPLATION	ONE-POINTED CONCENTRATION	KEEP YOUR FOCUS ON ONE POINT/ MINDFUL/AWARE	
THINGS THAT HAPPEN TO YOU	7	DHYANA	SUSTAINED UNINTERRUPTED CONCENTRATION			
	8	SAMADHI	STATE OF ONENESS			

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The mind is the king of the senses, but the breath is the king of the mind.

HATHA YOGA PRADIPIKA



## The Respiratory System



# **Function of the Nose**

- The only externally visible part of the respiratory system that functions by:
  - Providing an airway for respiration
  - Moistening and warming the entering air
  - Filtering inspired air and cleaning it of foreign matter
  - Serving as a resonating chamber for speech
  - Housing the olfactory receptors

#### The 3 Major Nadis (rivers) and the 7 Chakras (wheels of energy)



# Why do we have 2 nostrils.....



➤Left brain hemisphere (logic, Analysis, Maths, Science, Physics,

Sympathetic Nervous system (Fight and Flight mode)

Physical Activity (Sports, PE)

➢ Helps digestion

>Increases energy



#### **LEFT** IDA – Chandra Nadi

 Right brain hemisphere (creativity, art, languages, dance, music)

➢Parasympathetic Nervous System (Rest and Digest mode)

≻Calming activity

➤Cooling effect – Anger Reduction

≻Good time to relax, low metabolism rate

# The 'Nadi' System

- · Channels for the flow of subtle energy
- 72,000 nadis; 3 most important: Sushumna, Ida, Pingala
- Ida: moon/mental energy/female/left
   nostril/right hemisphere of brain
- Pingala: sun/vital energy/male/right nostril/left hemisphere of brain
- Sushumna: spiritual awakening/central channel along the spinal column
- Nadis start at Mooladhara, crossing over chakras, terminating at Ajna chakra
- Connected with 'Svara Yoga' (yoga of breath)





# Lungs





## **Anatomical Dead Space**

#### Anatomical Deadspace Conducting Airway - No Gas Exchange

#### Anatomical Dead Space

- Internal volume of the upper airways
  - Nose
  - Pharynx
  - Trachea
  - Bronchi



Anatomic dead space is the total volume of the conducting airways from the nose or mouth down to the level of the terminal bronchioles, and is about 150 ml on the average in humans. The anatomic dead space fills with inspired air at the end of each inspiration, but this air is exhaled unchanged

# www.designmate.com

https://www.youtube.com/watch?v=kacMYexDgHg&feature=y outu.be&t=4

# Deep breathing is economical and efficient

	Normal	Shallow	Deep
Rate/min	12	30	6
Volume (ml)	500	200	1000
Ventilation (ml)	6000	6000	6000
Dead space (ml)	150	150	150
Dead space Volume(ml)	1800	4500	900
Alveolar V (ml)	4200	1500	5100

# Basic Breath Training

#### ADHAM PRANAYAMA: Abdominal Breathing.

- Sitting on a chair, with the back held straight, head up. In this position practice the abdominal breathing, by moving the diaphragm down and up. Feel the movement.
- This movement of the diaphragm pushes the digestive organs down and they subsequently move forward due to the elasticity of the abdominal wall, causing the abdomen to bulge out like a balloon.
- In this way the **air is sucked down into the inferior or lower lobes of the lungs** to fill a vacuum created there.
- The diaphragm muscle moves down onto the digestive organs during inhalation and back up into the chest during exhalation.
- When the air is expelled, the abdomen is pulled in as well, the navel being drawn in towards the spine so as to squeeze all the air out. This movement of the diaphragm muscle in the lower section of the torso provides a massage for all the organs in the lower body area, stimulating better function of those organs, good circulation, good digestion and elimination, and healthier sexual functions.
- The movement of the whole abdominal area acts as a second heart pumping the blood in and out of the area, as well as the lymphatic fluids, providing the motive force for circulation in the entire lower body all the way down to the toes.
- Many physical disorders that occur below the rib cage can be prevented through this form of breathing, and can be healed when this simple breathing is done in combination with various asanas, kriyas (movements), and proper diet. This includes all the digestive organs down to the intestines and bowels, the reproductive organs and prostate gland; abdominal breathing also has a positive influence on the kidneys and adrenal glands.
- With the lower section of the body in good health the nervous system in the area becomes a better conductor, and energy from the first two chakras accumulates and begins to rise up to the brain for mental evolution.

#### MADHYAM PRANAYAMA: Mid-chest Breathing.

- Sitting on the chair, practice the mid-section of the breath, so that the rib cage opens out to the sides.
- This controlled movement **channels the air into the middle lobes of the lungs**, the ribs moving out to the sides like an accordion and outward in all directions.
- This motion pulls the air into the middle area around the heart. Expelling the air here requires a squeezing effort that feels a bit unnatural at first but good to get used to, since exhaling completely is just as important as inhaling fully, in all areas.
- The massaging effect is thus raised from the lower body organs to the area of the heart and the thymus gland. The thymus is in charge of our immune response system and can be easily reactivated by this type of breathing, in most cases, while the area around the heart can be cleared of the usual cholesterol and fatty deposits that inevitably lead to heart trouble.
- The lungs themselves get a massage and workout with this movement. The circulation of lymph through the body is carried on partly by movement and pulsation of the heart and arteries, but more so by the expansion and contraction of the mid-chest area.
- There is also a slight massaging effect on the upper digestive organs like stomach, liver, gall bladder and pancreas with this breathing. When the area has been detoxified, energy begins to charge up the nerve plexus associated with the third and fourth chakras, and move up from there.
- When practicing this be mindful that it can create a cleansing effect on the lungs, which you will
  experience as coughing up mucous. People with heart disorders and immune problems should spend extra
  time focusing on this method of breathing

#### ADHYAM PRANAYAMA: Upper Breathing.

- Sitting on a chair, do a few rounds of upper breathing.
- The **air is drawn into the uppermost section of the lungs, up into the clavicular lobes**. This is accomplished by raising the whole chest area upwards, as if the neck is sinking down into the chest.
- A good way to practice in the beginning is with the shoulder rolls, lifting them up and back to the inhalation. This can greatly help to loosen up the upper chest area, although particular care must be taken not to tense up the shoulders during inhalation, nor to hold them up during retentions.
- When expelling the air it feels like the chest and shoulders are dropping down and the neck is sticking out; a certain amount of downward pressure must be exerted to actually get all the air out. With enough practice it becomes a flowing up and down motion that creates a very fulfilling feeling; at that point, only the breathing muscles are used without the exaggerated shoulder movements.
- Obviously this breathing will be most beneficial to the higher body region, from the upper lungs to the top of the head. The pulsation of the lungs here provides an extra boost to the circulation in the clavicular area, affecting the neck with the thyroid and parathyroid glands, and continuing up through the voice box, tongue, mouth and entire head area.
- The brain itself is the most energized and highly stimulated organ when this breathing is performed, something to be remembered when doing any form of intellectual work. Disorders in the head (from headaches to brain tumors), can be alleviated through proper breathing in this area, and once things have been detoxified the energy flow from the breath will be amplified and empower the opening of the fifth and sixth chakras

MAHAT YOGA PRANAYAMA: Complete Deep Breathing.

- This constitutes complete deep breathing and is the base of most of the breathing techniques practiced in the science of yoga.
- It combines the three previous methods of sectional breathing to form one complete cycle, inhalation and exhalation, where the lungs are both filled and emptied from the bottom up.
- Take the same sitting position. The abdomen is pushed out as the diaphragm is lowered to pull air into the bottom of the lungs; then the rib cage is expanded out to the sides to fill the mid-lungs; and finally the whole chest is raised up to pull the air into the top lobes.
- Exhalation follows the same sequence: the diaphragm is raised and abdomen pulled in to squeeze the air out of the bottom lobes; ribs are then pulled in towards the center, forcing the air up and out; finally the chest is dropped down, forcing the last of the air out of the top lobes.
- Try to make a habit of breathing in this manner, as it will greatly help to promote immunity and increase vitality ... you will know if you practice.



References:

- The science of yoga TTmanual by David Goulet
- Prof Madanmohan, Director CYTER and Head Department of Physiology, MGMC & RI Centre of yoga therapy/education & research