

# Breathing for Excellence

## Better Music and a Better State of Mind

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# Deep Breathing

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## The Words We Use

Breath - a “vital principle” - a kind of energy manifested as respiration

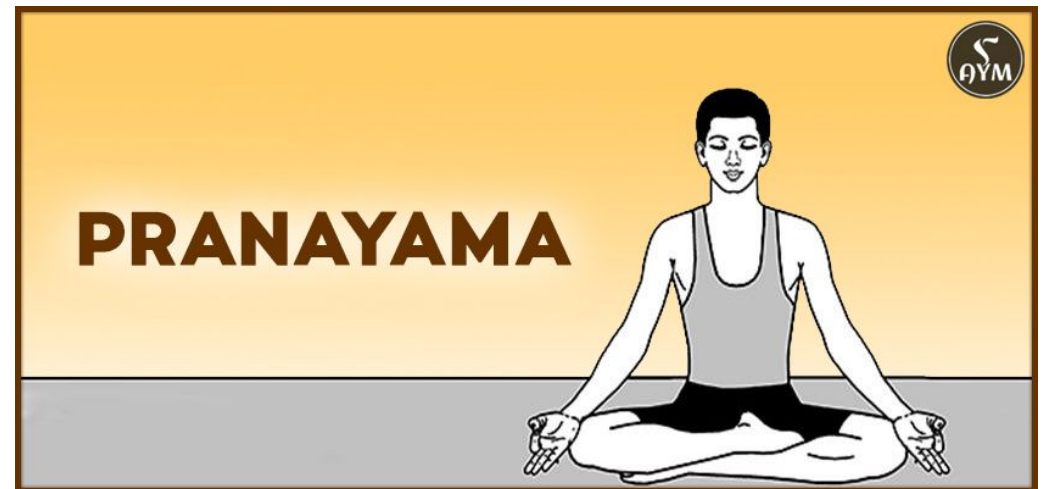
- qi - Chinese
- prana - Hindi
- pneuma - Greek
- rûah - Hebrew (both breath and the divine presence)
- spiritus - Latin (root of spirit, respiration, and conspire)



# Deep Breathing

## History

- second half of the first millennium BCE - Pranayama (“vital life force + gain control”) yoga
  - first doctrine to build a theory around respiratory control, holding that controlled breathing was a way to increase longevity.
- tai chi - internal Chinese martial art practiced for defense training, health benefits, and meditation



# Deep Breathing

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## History

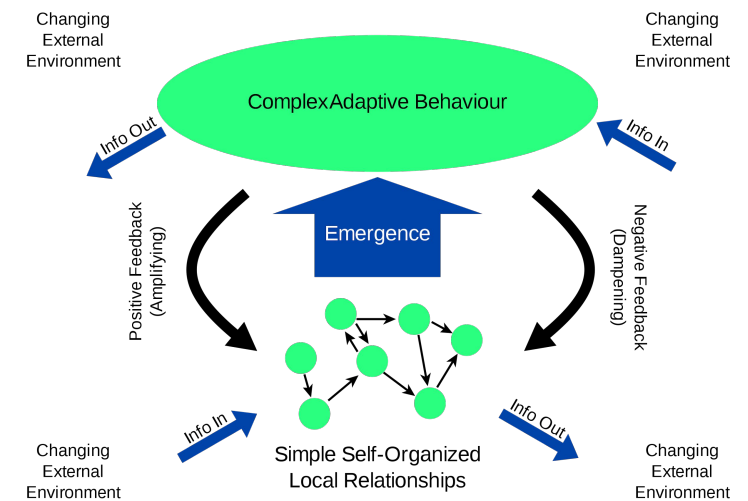


- Qi Gong - system of coordinated body-posture and movement, breathing, and meditation used for the purposes of health, spirituality, and martial-arts training
- 1932 - Johannes Heinrich Schultz - autogenic training - desensitization-relaxation technique
- modern era has many studies and methods in support of breathing techniques

# Deep Breathing

## the Science Words

- Autonomic Nervous System - the part of the nervous system responsible for control of the bodily functions not consciously directed, such as breathing, the heartbeat, and digestive processes. Has 3 main branches
  - the enteric nervous system
  - the parasympathetic nervous system
  - the sympathetic nervous system

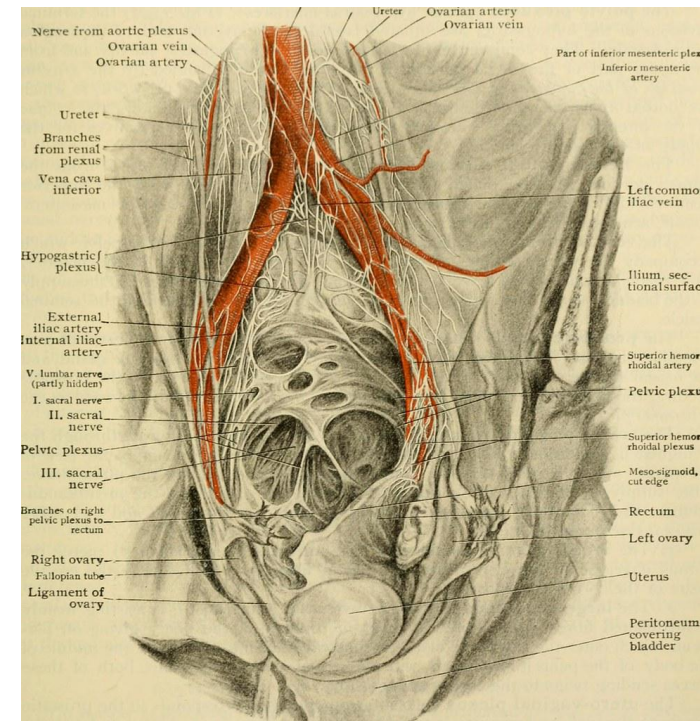


# Deep Breathing

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## the Science Words

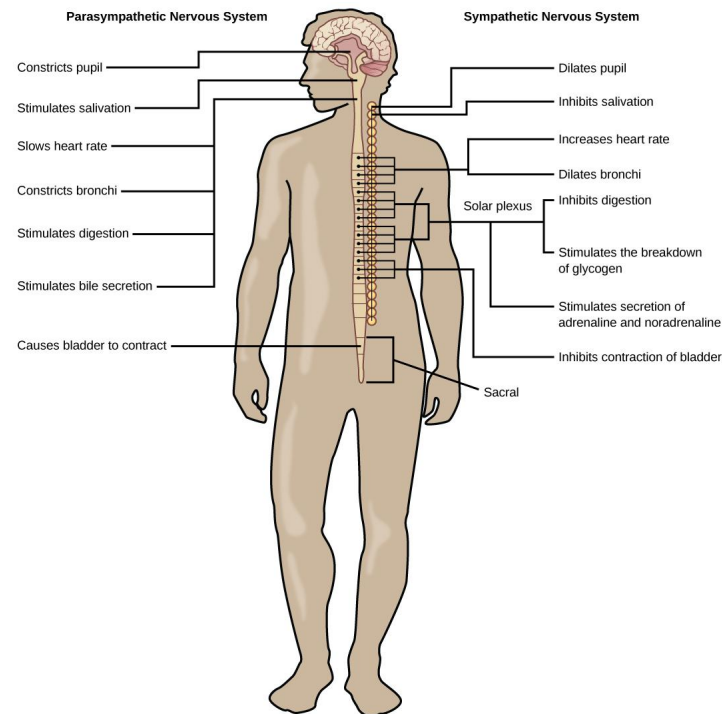
- the enteric nervous system
  - a mesh-like system of neurons that governs the function of the gastrointestinal tract



# Deep Breathing

## the Science Words

- the parasympathetic nervous system
  - controls bodily functions when a person is at rest - homeostasis

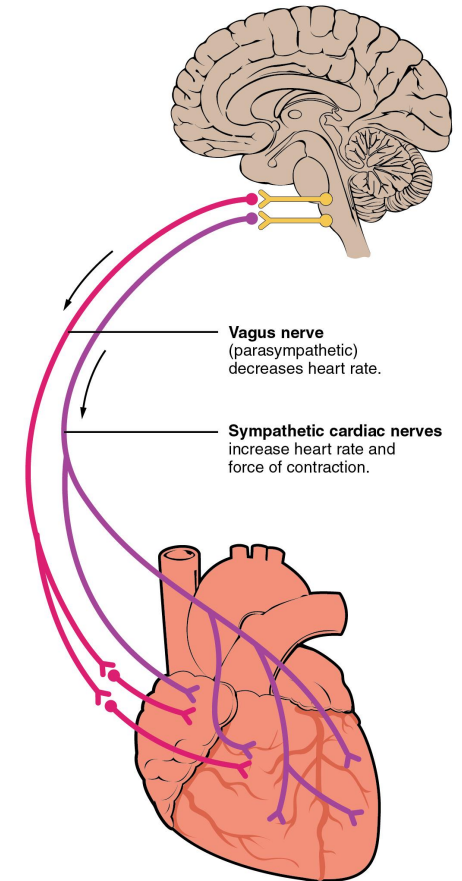


# Deep Breathing

## the Science Words

- the sympathetic nervous system
  - division of the nervous system that functions to produce localized adjustments (such as sweating as a response to an increase in temperature) and reflex adjustments of the cardiovascular system
  - fight or flight

Increase heart rate.  
Dilation of the pupils  
Secretion of sweat glands  
Dilated muscles  
Increased alertness  
Slowing down or stopping digestion  
Relaxation of the bladder

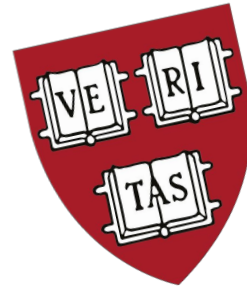




# Deep Breathing

## Studies show...

- Harvard Medical School - by cardiologist Dr. Herbert Benson
- Frontiers in Human Neuroscience
- US National Library of Medicine
- National Institutes of Health
- JAMA
  - Otolaryngology
  - Internal Medicine
  - Neurology
  - more



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of Mental Health



# Deep Breathing

## Studies show...

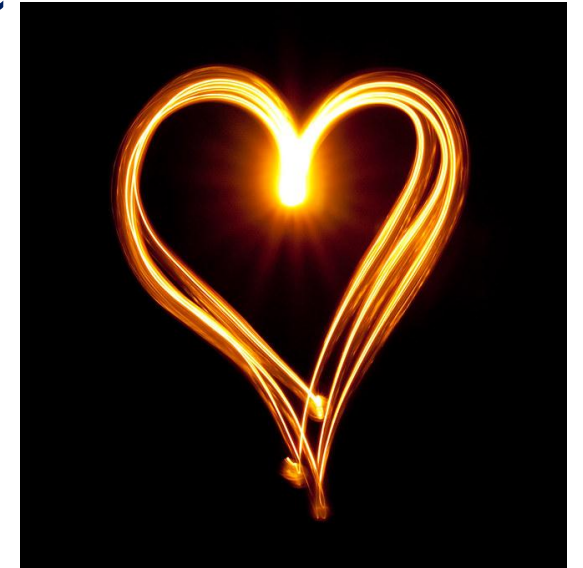
- deep breathing techniques can calm the sympathetic nervous system
  - activate the vagus nerve (parasympathetic nervous system) and calmness pervades the body
    - the heart rate slows and becomes regular
    - blood pressure decreases
    - muscles relax



# Deep Breathing

## Studies show...

- When the vagus nerve informs the brain of these changes, it relaxes
  - increased feelings of peacefulness
- technique works through both neurobiological and psychological mechanisms
  - Cardiac coherence - a particular pattern of heart rate variation, where heart rate changes in sync with the breath - speeding up on the inhalation and slowing down again on the exhalation.



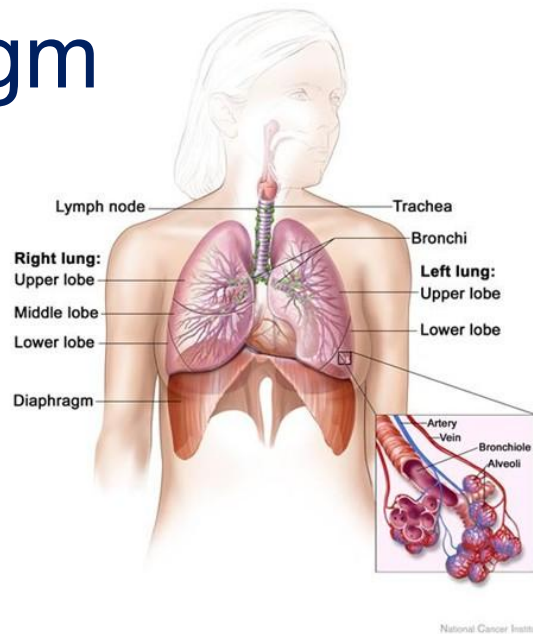
# Deep Breathing

## The Anatomy of Breath...

### Organ or Muscle?

- lungs
- intercostals
- diaphragm
- abs

Air pressure - Gases move from high-pressure areas to low-pressure areas. And the bigger the difference between the pressures, the faster the air will move from the high to the low pressure.



# Deep Breathing

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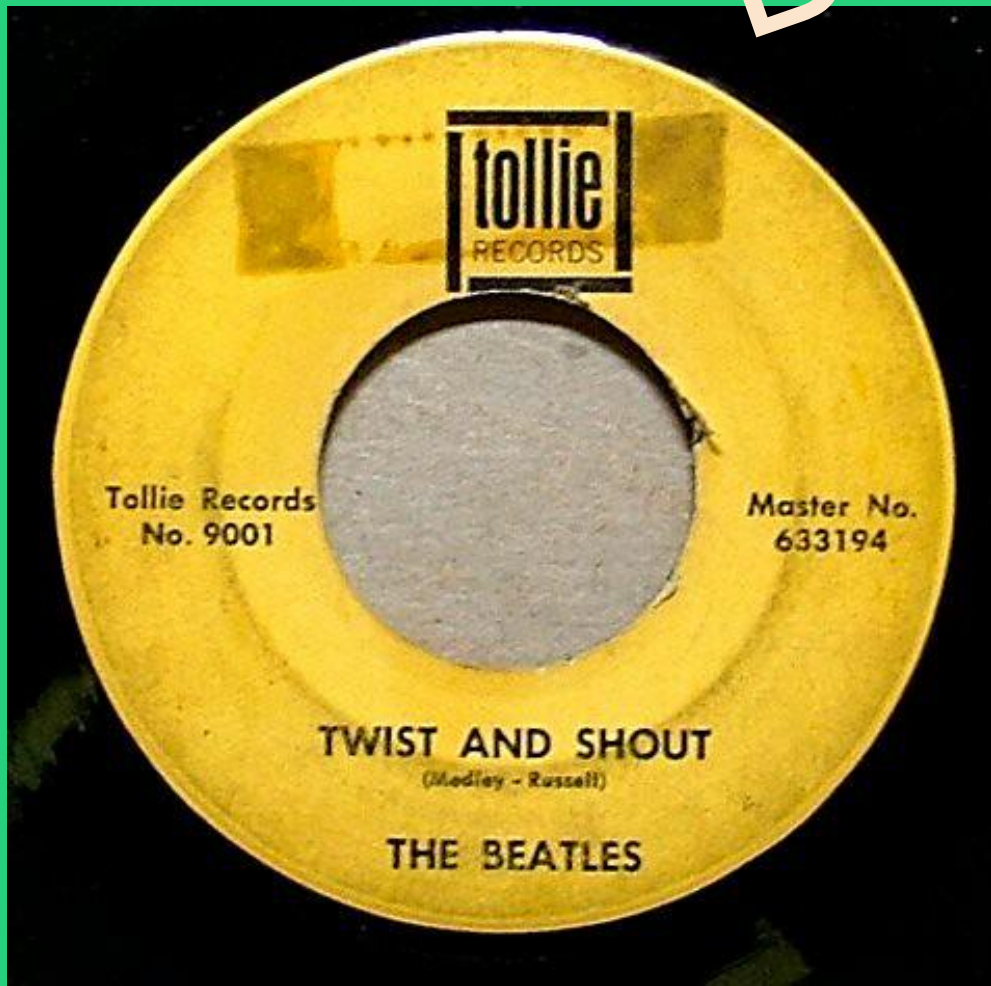
## Breath Exercises

1. Alignment matters
2. Follow and notice your breath - how?
  - a. Twist and Breathe
  - b. Ujjayi/Ocean Breath
3. Abdominal - Breath Of Fire
4. Alternate Nostril Breathing
5. Breath Walking
6. Rhythmic Breath
7. Breathe & Hum
8. Intent - Inhale Calm, Exhale Joy



# Twist and ~~Shout~~

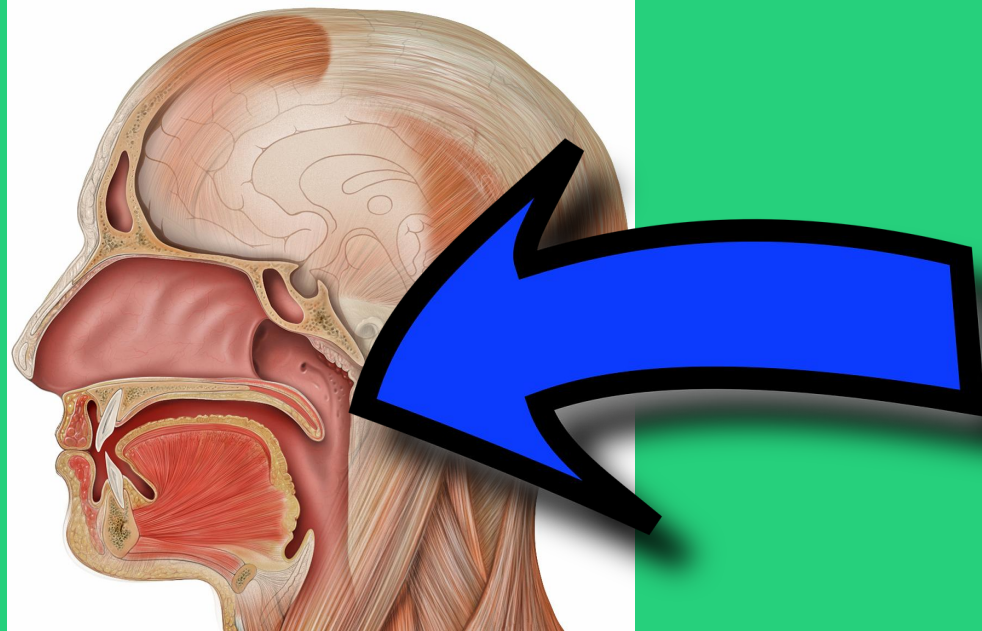
BREATHE!



- Self-hug - breathe into back
- Evita arms - breath into upper chest
- Twist left/right - breathe into side
- Now feel it all stretch and open

# Ujjayi Breath Or Ocean Breath

According to Central Michigan University, ujjayi breathing is a technique that allows you to calm your mind by focusing on your breath. This helps you override thoughts that could possibly distract you from your meditative state.





Breath of Fire

(3:06-8:10) <https://www.youtube.com/watch?v=aAVOdXvdtk8>



YOGA *with* ADRIENE



# Nadi Shodhana



- \*\*Infuses the body with oxygen
- Clears and releases toxins
- \*\*Reduces stress and anxiety
- \*\*Calms and rejuvenates the nervous system
- Helps to balance hormones
- Supports clear and balanced respiratory channels
- Helps to alleviate respiratory allergies that cause hay fever, sneezing, or wheezing
- Balances solar and lunar, masculine and feminine energies
- \*\*Fosters mental clarity and an alert mind
- \*\*Enhances the ability to concentrate
- Brings balance to the left and right hemispheres of the brain

# Breath Walking

Mudras (Hand Movements) & steps in time with rhythm of breath

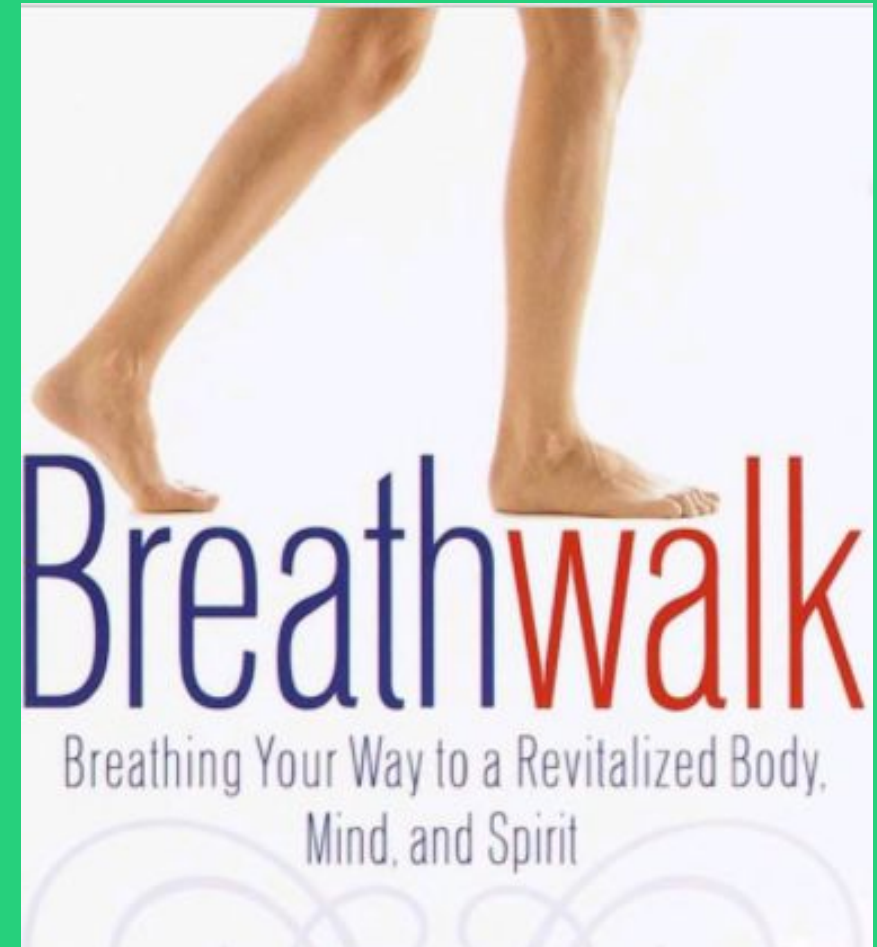
Mantra - Sa Ta Na Ma

## PATTERNS

Balance - 4 Counts In / 4 Counts Out

Energizing - 8 Counts in / 4 Counts Out

Calming - 4 Counts In / 8 Counts Out



Source: Gurucharan Singh Khalsa and Harbhajan Singh Khalsa

# Box breathing...



- Calms your nervous system
  - Slows heart rate
  - Helps focus
- Energizes your breathing muscles

# Breathe & Hum

- Place feet on ground
- Feel contact of feet and sit bones
- Inhale silently, then exhale on a hum (any pitch)
- Continue for two minutes
- At end, raise arms above head
- Lower arms
- Notice sensations



- Pairs breathing with “unplanned” sound
- Silent inhalation & steady exhalation as ideal for singing technique
- Centers in body
- Stimulates vagus nerve
- Opens ribcage

Source: My Grandmother's Hands - Resmaa Menakem

# Silent Phrasing...



- Exhale for 8 beats
- Inhale for 1 beat
- Suspend/retain your breath for 1 beat
- Repeat

Intensify the exercise by

- Opening up (low jaw/high palate)
- Keep breath flow even
- Extend exhalation further than 8 (12? 16? 400?)

# The 365 Breathing Program

The name given to a common technique recommended by therapists to counter accumulated stress:

- 3 - at least three times a day
- 6 - breathe six times per minute (inhaling for five seconds and exhaling for five seconds each time)
- 5 - for five minutes
- Repeat all 365 days of the year.