



YogaAnatomy.org

Leslie Kaminoff's
esutra blog, teaching
and touring schedules

SWEAT POWER YOGA, MAY 17-18, 2025

Leslie Kaminoff

An Introduction to Desikachar's Yoga: The Individual, the Breath, the Relationship

Sushumna Nadi in Theory and Practice: The Central Pillar of Krishnamacharya's Yoga

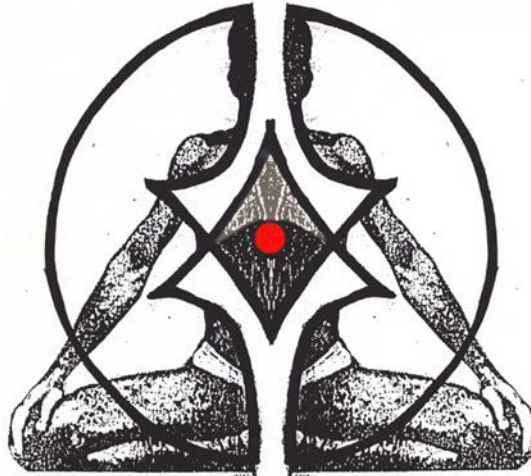
The OM Workshop: The Yoga of Sound, Breath, Resonance, and Vibration

The Most Powerful Breath You'll Ever Take: Physiological Fundamentals of Breath-Centered Yoga

Prana apana samayogah pranayamah iti iritah.

Pranayama is the balanced joining of the in-breath and the out-breath.

YOGA YAJNAVALKYA 6:2



Prana logo by Leslie Kaminoff based on the photo of T. Krishnamacharya from "The Heart of Yoga"

PRANA AND APANA NYASA

Om namo pranayá

Pranaya nama om

Pranaya swahā

Om namo apanayá

Apanaya nama om

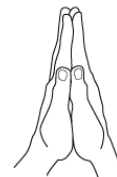
Apanaya swahā

Om swahā

Harīh om



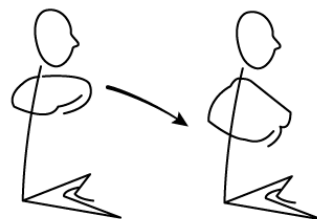
Om



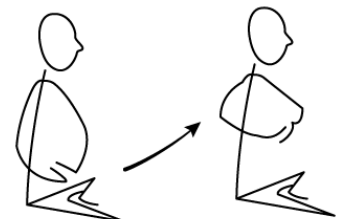
Namo



Pranaya/Apanaya



Pranaya swaha



Apanaya swaha

Still photos may be posted to social media if you tag lkaminoff (Facebook)/leslie.kaminoff (Instagram).

- leslie@yogaanatomy.org
- facebook.com/LeslieKaminoffYogaAnatomy
- twitter.com/lkaminoff
- workshop page: yogaanatomy.org/sweat-25
- survey: <https://y-an.org/student>
- breathingproject.com

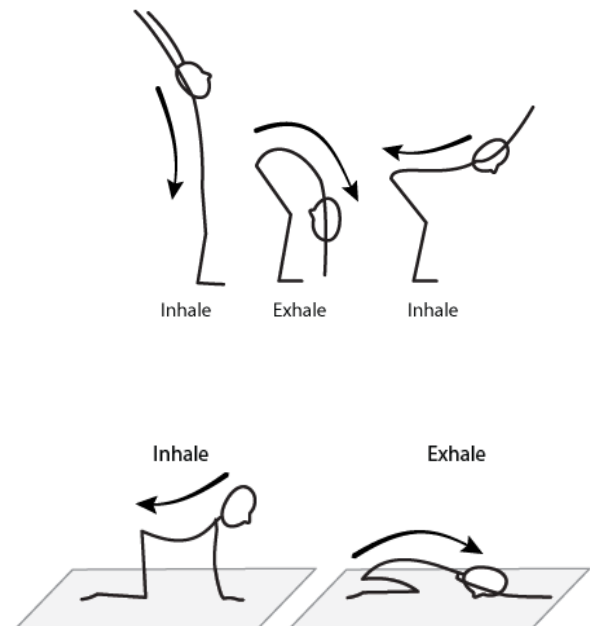
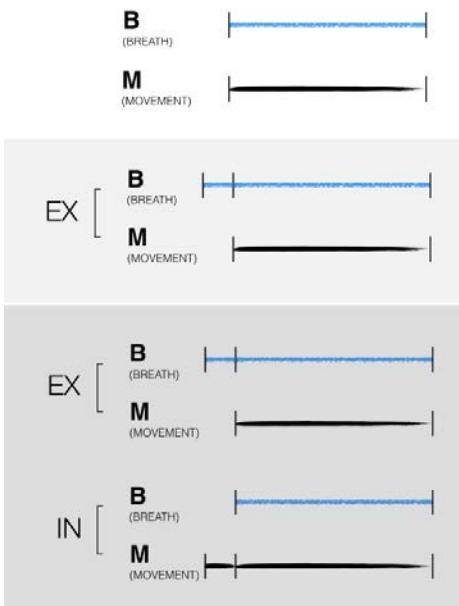
Print on-demand selections from Lydia Mann's anatomy art collection available at bit.ly/anatomy-art

Integrating Bandha into Asana Flow: Theory and Practice

Part of Desikachar's methodological legacy – at the root of much of his teachings' therapeutic benefit – was derived from his unique way of linking breath and movement.

FOUNDATIONS, WITH VARIATIONS

- ▶ One breath per movement
 - Variation: Asynchronous initiation
- ▶ Continuous breath action
 - Variation: Discontinuous breath action (krama/steps)
- ▶ Inhale on spinal extension / exhale on spinal flexion
 - Variation: Exhale on spinal extension / inhale on spinal flexion
- ▶ Direction of breath flow linked to direction of spinal action
 - Variation: "Free breathing" unlinked from spinal action



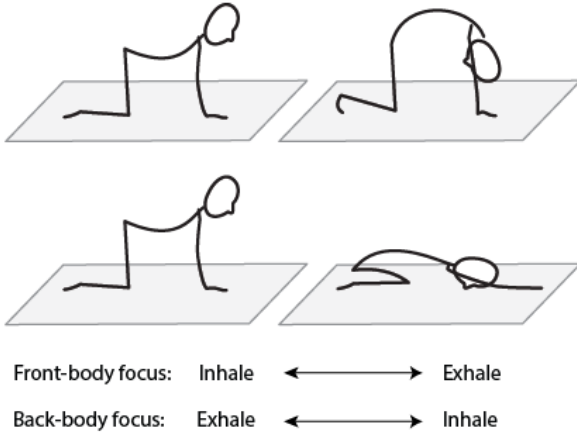
- ▶ All these techniques structure breath to movement with a sequential, linear, 2-dimensional focus.
- ▶ Desikachar offered limited explanation from a Western anatomical, biomechanical perspective.

Individualized anatomical, multidimensional, unstructured breath and movement

ANATOMICAL

Standard breath cueing of inhaling on extension and exhaling on flexion is based on an anatomical assumption that privileges the front body over the back body.

BREATH CUEING on spinal flexion and extension



MULTIDIMENSIONAL

Desikachar's foundational breath cueing divides the in-breath (prana) from the out-breath (apana) and locates them in the chest and abdominal regions respectively. Additionally, the direction of flow of the inhale is oriented into the body from the head region downwards, while the direction of flow of the exhale is oriented from the belly upwards towards the head. It is possible, however, for the breath to be everywhere, all at once, and moving simultaneously in all three dimensions.

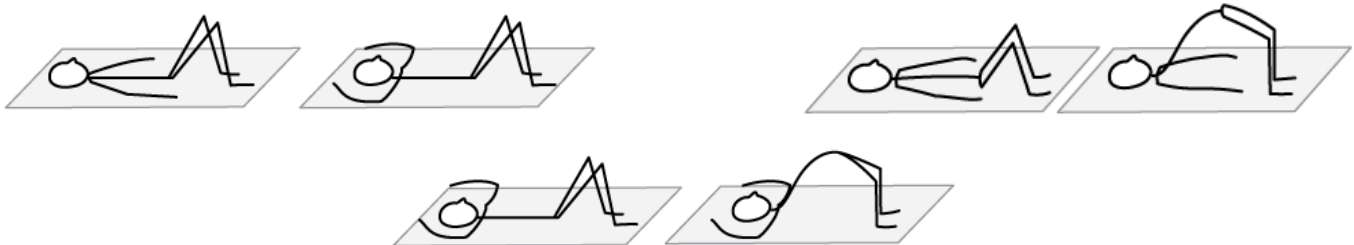
SEESAW BREATH

- Division
- Initiation
- 3-D



UNSTRUCTURED

Structured breathing links breath and movement in a variety of ways. It is also possible to unlink breath from movement by making the movement length exceed breath capacity or vice versa.



Sushumna Nadi in Theory and Practice – The Central Pillar of Krishnamacharya's Yoga

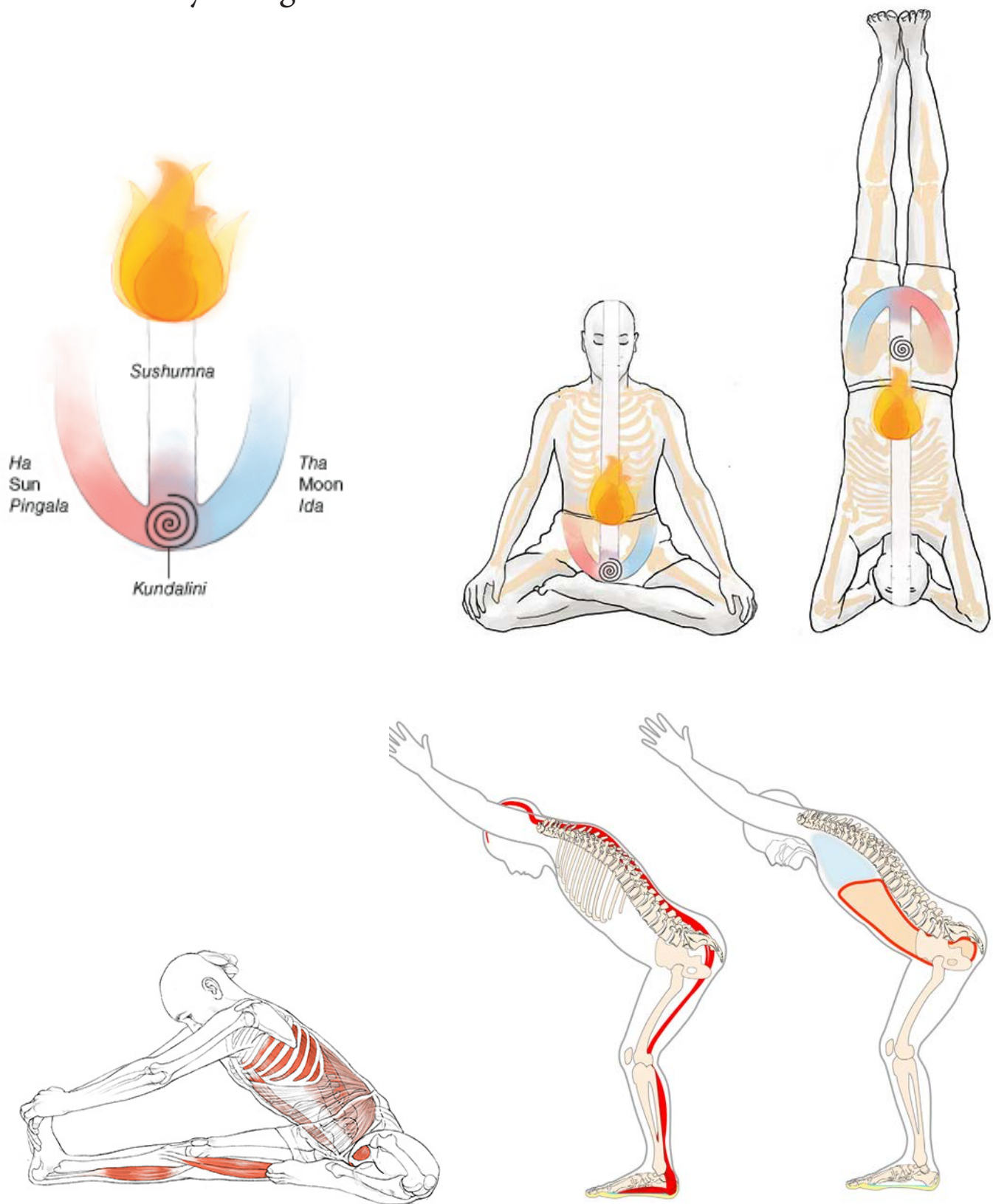
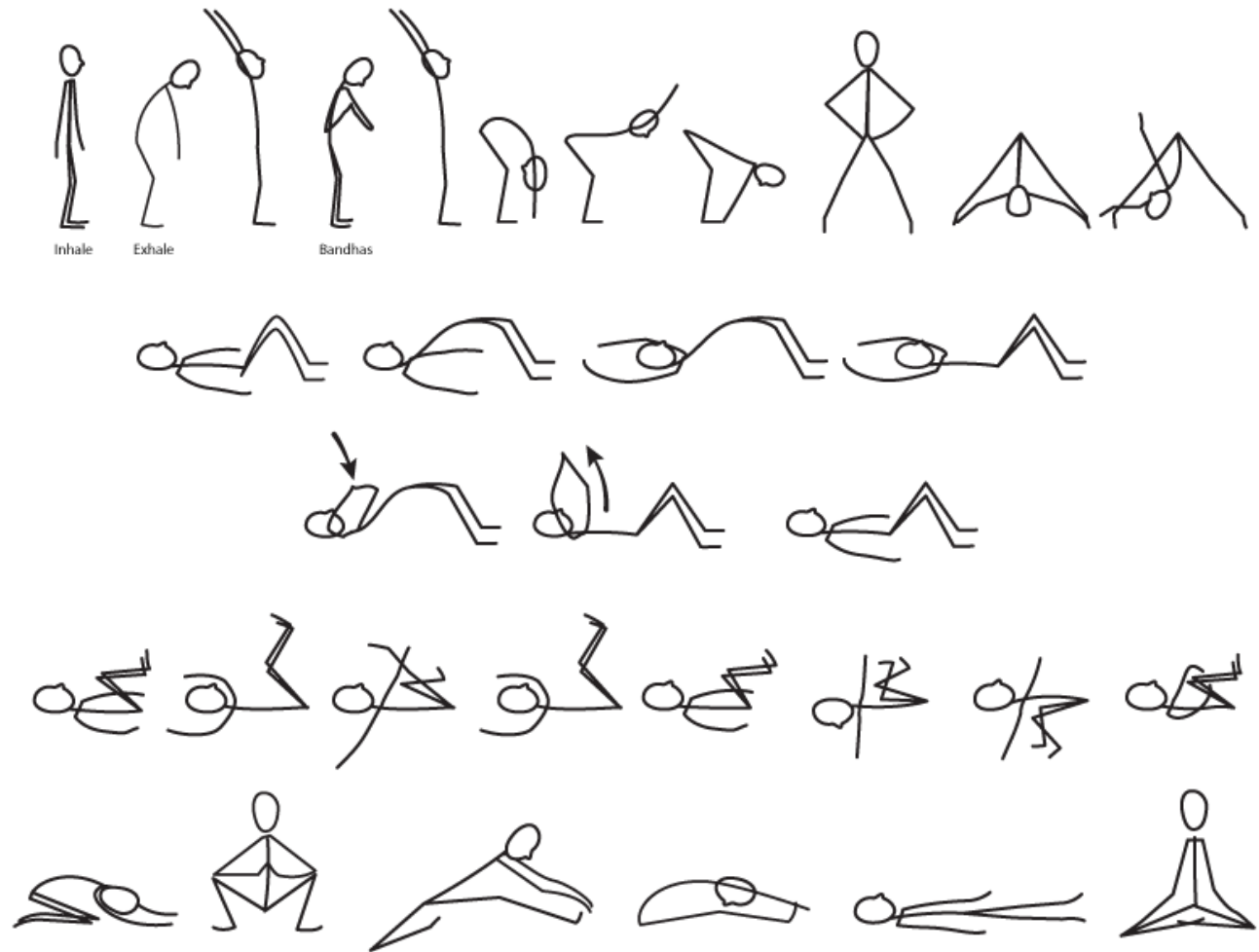


Illustration by Sharon Ellis

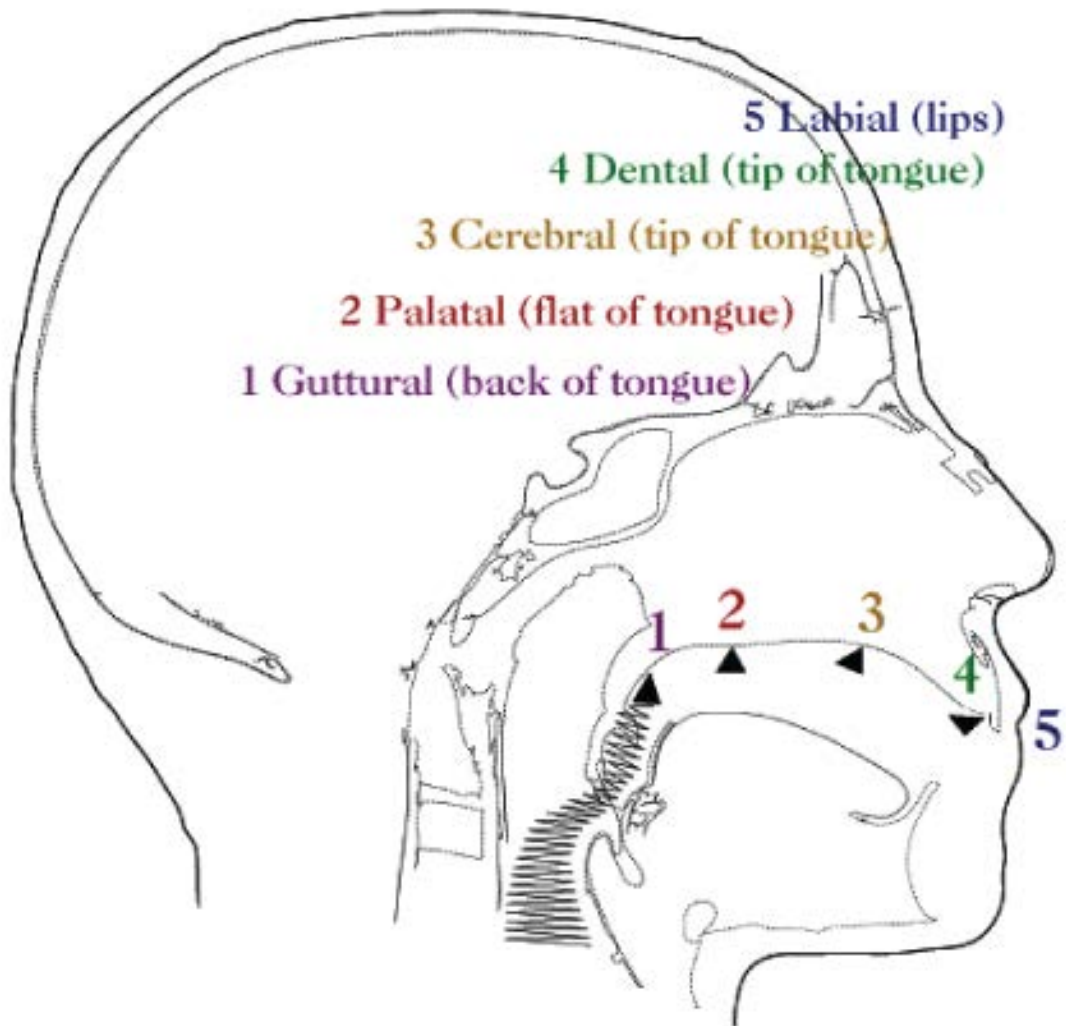


The OM Workshop: The Yoga of Sound, Breath, Resonance, and Vibration

ॐ

The five locations

- Labial
- Dental
- Cerebral
- Palatal
- Guttural



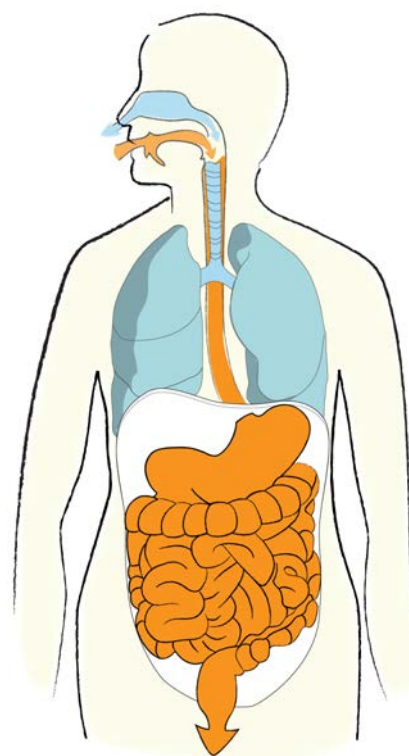
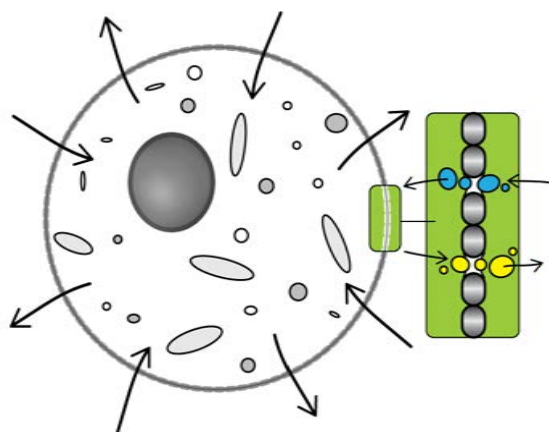
*Sanskrit handout by Vyaas Houston
Images courtesy of The American Sanskrit Institute
(<http://www.americansanskrit.com>)*

Mouth structure and phonetics

Root vowels	a → ā → i → ī → u → ū
	अ आ इ ई उ ऊ
Diphthongs	ए ऐ ओ औ
	e → ai → o → au
Endings	ऋ ॠ लृ अं अः
	am ← ah
Consonants	unvoiced voiced nasal
Guttural BACK OF TONGUE, BACK OF PALATE	ka ← ख ← ga ← घ ← ṇa
Palatal FLAT OF TONGUE, BACK OF PALATE	cha ← छ ← ja ← झ ← ña
Cerebral TIP OF TONGUE, MID-PALATE	ṭa ← ठ ← ḍa ← ढ ← ṇa
Dental TIP OF TONGUE, BACK OF TEETH	ta ← थ ← da ← ध ← na
Labial LIPS	pa ← फ ← ba ← भ ← ma
Semi vowels	ya → ra → la → va
	य र ल व
Sibilants	śa → ṣa → sa → ha
	श ष स ह
	Pure aspirate

Sanskrit handout by Vyaas Houston, appended by Leslie Kaminoff
 Images courtesy of The American Sanskrit Institute
 (<http://www.americansanskrit.com>)

The Most Powerful Breath You'll Ever Take: Physiological Fundamentals of Breath-Centered Yoga



Fetal circulation

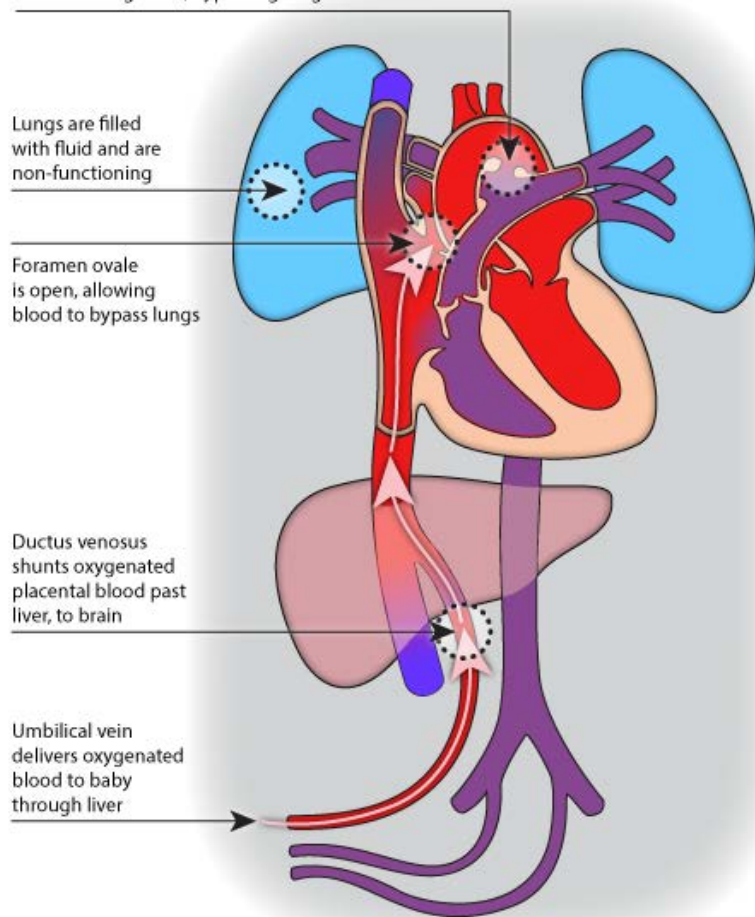
Ductus arteriosus connects pulmonary artery to descending aorta, bypassing lungs

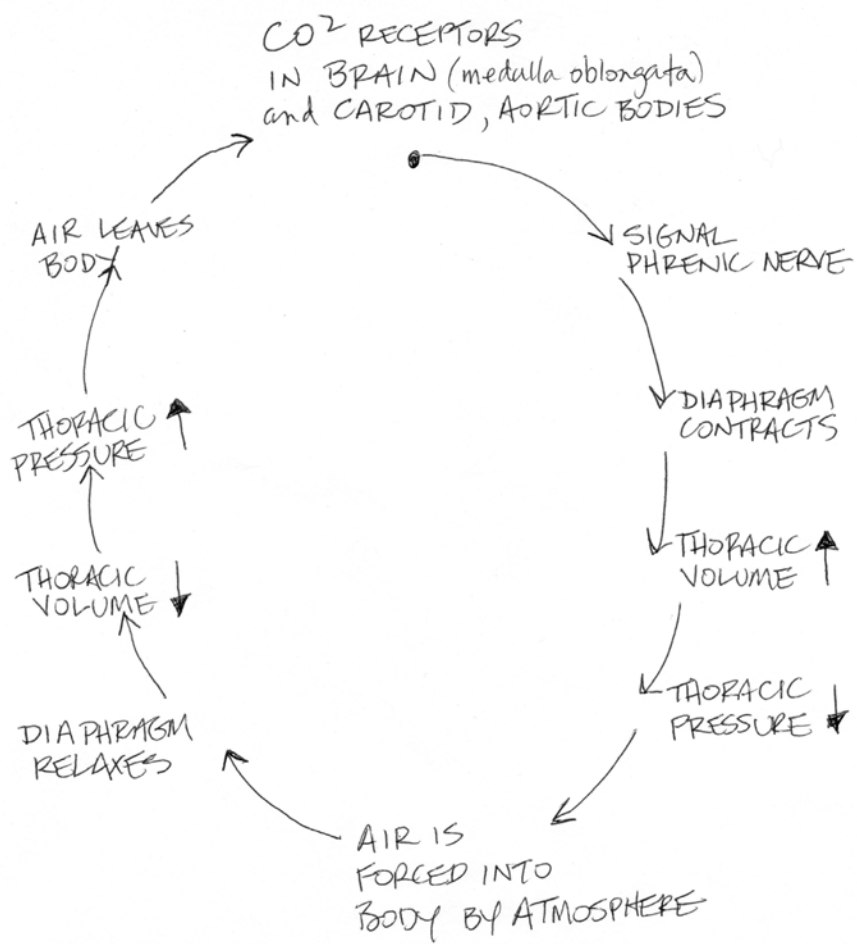
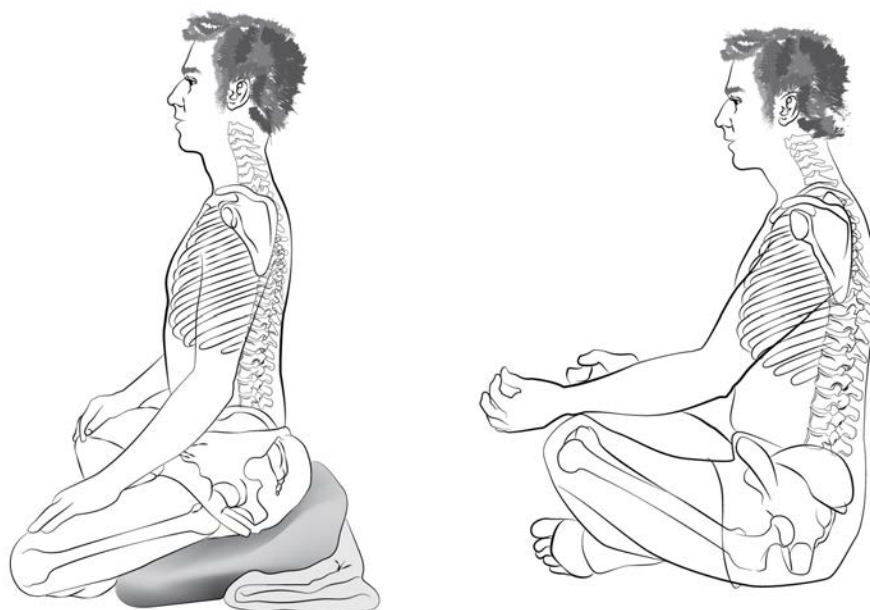
Lungs are filled with fluid and are non-functioning

Foramen ovale is open, allowing blood to bypass lungs

Ductus venosus shunts oxygenated placental blood past liver, to brain

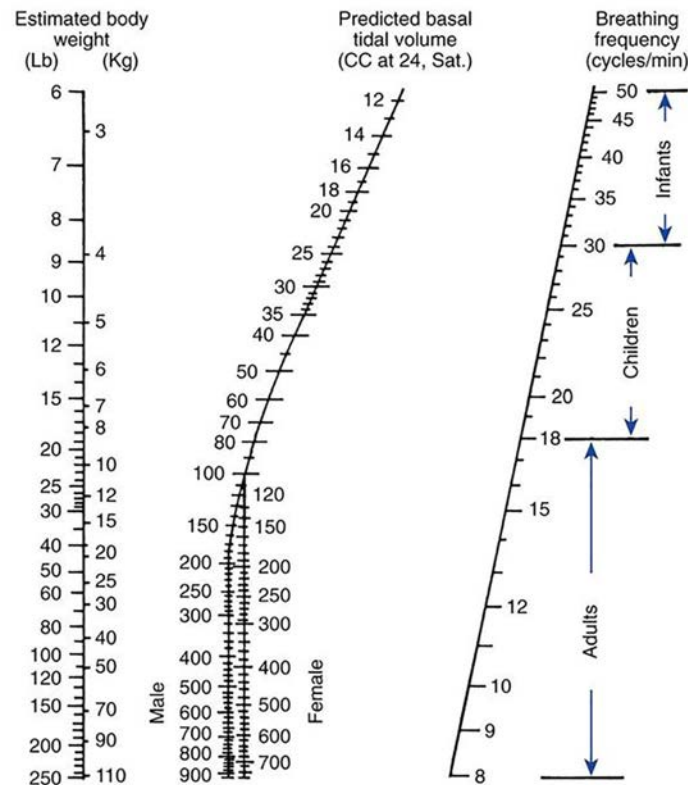
Umbilical vein delivers oxygenated blood to baby through liver





SIMPLIFIED
CAUSAL CHAIN OF BREATHING

Radford Breathing Nomogram



Physiological reasons for the increased susceptibility of infants for respiratory compromise in comparison to adults

CAUSE of DIFFERENCE	ANATOMICAL/PHYSIOLOGICAL BASIS
Metabolism ↑	O ₂ consumption ↑
Risk of apnoea ↑	Immaturity of control of breathing
Airway resistance ↑	Nose breathing
Upper airway resistance ↑	Large tongue
	Airway size ↓
	Collapsibility ↑
	Pharyngeal muscle tone ↓
	Compliance of upper airway structures ↑
Lower airway resistance ↑	Airway size ↓
	Collapsibility ↑
	Airway wall compliance ↑
	Elastic recoil ↓
Lung volume ↓	Numbers of alveoli ↓
	Lack of collateral ventilation
Efficiency of respiratory muscles ↓	Efficiency of diaphragm ↓
	Rib cage compliance ↑
	Horizontal insertion at the rib cage
	Efficiency of intercostal muscles ↓
	Horizontal ribs
Endurance of respiratory muscles ↓	Respiratory rate ↑
	Fatigue-resistant type I muscle fibres ↓

Hammer J, Eber E (eds): Paediatric Pulmonary Function Testing.
 Prog Respir Res. Basel, Karger, 2005, vol 33, pp 2–7