

The Asymmetrical Nose and Its Influence on Emotion and Hemi-Brain Activity

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The nose is probably the greatest resources we have for both pleasure and posture. Our behavior and decision-making process relies on both sides of the nose and its vestibules for both oscillatory, rhythmic subconscious sense of the two sides of our body; and for conscious acceptance of the repetitive cycles we cortically design to accentuate dopaminergic signaling. We have a natural rhythmic nasal cycle, that is unique to us and our desire to position ourselves for desired outcomes, that reflect the position we place ourselves in to enhance the patterns of smell, velopharyngeal biased flow and chest dominant expansion, that best compliments the side of the brain responsible for balanced imbalance of feet, hand, teeth, and sight function.

Our left brain is synchronized with the right, through information received by the two ears, the two eyes, the two sides of the mouth, the two feet and the two hands. Fundamentally however, it is the right nostril that influences the left cerebral cortices and associated physiological patterns the most. (Telles, et al. *Physiological Measures of Right Nostril Breathing*. J. of Alternative and Complementary Medicine, 1996;2(4).)

The ability to erect ourselves comes directly from muscles and their respective joints and indirectly through the erectile tissue located in the paranasal sinuses of each side of the vomer, vertical plate of the ethmoid and septal cartilage, that divides the nose into two halves. When erectile tissue expands in one nostril or on one side of the midline of the nose, the other side with its erectile tissue shrinks. A few hours later, the swelling switches to the other nostril. This gives a different airflow in each nostril or nasal vestibule, which helps the brain interpret different smells differently, depending on who you have become, how you work your body effortlessly, and where you place your head and neck to best enable you to interpret the most overall “pleasure” you can get from all your senses, through pharyngeal flow of air that is associated with laryngeal and respiratory cortical “approval”.

Nasal cycling of air through our two nasal passages and the cycle itself, in other words, the timing of the cycle initiation and completion, is regulated by selective activation of one half of the autonomic nervous system by the hypothalamus. Nasal congestion is not considered to be “selective activation”. Turbinate congestion is, however.

The inferior turbinate is the predominant turbinate of the three that are located in each side of the nose. It is the first to fill when lying on a side and is the most engorged when upright. Therefore, it is postulated that the alternating positional obstruction in the nose and its associated phasic asymmetry has a purpose in causing a person to turn from one side to the other, on an average of 37 times a night, for gut and thoracic organ health. In patients with a fixed septal deviation and intermittent nasal obstruction, the sensation of obstruction frequently mirrors the congestion phase.

We “shift” our nose like we “shift” our bodies, when we sense poor alternation of physiologic function. Our nasal cycle may exacerbate nasal congestion caused by the common cold or the common way we stand over to one side, sleep on one side or sit to one side. The lack of motility of the cilia in one half of the nose may lead to an uncomfortable sensation of not being able to shift mucus by blowing the nose, moving to the other side of body when horizontal or by leaning to the other side of a chair, through crossing our legs. Our nose provides the physiologic reasoning behind the postural position we put ourselves in for vestibular, autonomic, and respiratory system

homeostasis. And, if we become sub-conscious dependent on vagal (hypothalamus) intensity for control of central nervous (thalamus) control, our conscious effort magnifies the mindful symptomology and minimizes the mindless solution.

Shifting our airflow, mucous, and paranasal sinuses from side to side, humidifies the air, filters the air and warms the air we inspire, so that the associated oscillatory movement of the bronchial tree enhances the balance of the asymmetrical lungs and their individual pleural air sac function. Our two sides of our nose initiate the oscillatory, resonating and alternating mechanical and neural function through a cycle of reciprocating inhalation and exhalation. The autonomic nervous system's handle on the ultradian cycles and the variability associated with these cycles (dorsolateral prefrontal right cortex and basal ganglia) is a reflection on the pacemaker role of the nasal cycle (suprachiasmatic nucleus of the hypothalamus).

Research supports these shifting concepts and also indicates that there are variants of the nasal cycle. That is, cyclic changes on one side of the nose, only can occur. These cycles, none the less, are produced by alterations in autonomic tone of the nasal vasculature and reportedly correlates with a number of ultradian rhythms, including asymmetries in left/right cerebral electroencephalographic (EEG) activity and differential performance on visual, spatial psychological tasks. In addition to these concepts, research also suggests the classic nasal cycle may be a marker for age-related central nervous system changes. (Mirza N, et al. *Influence of Age on the 'Nasal Cycle'*, The Laryngoscope, Vol 107, Issue 1.)

Electrical impulses from the left nostril go to the left side of your brain, while those from the right nostril goes to the right brain for smell. The left brain tends to deal with language and words, while your right brain tends to deal with emotions. The brain processes identical odors that are presented to each of your nostrils, through one cortical hemisphere more so than the other; because of this association with hemispheric processing of ipsilateral hemi-nasal flow. When odors come in through the right nostril, some of us think we are smelling something more pleasant than when the same odor came through the left nostril. The right brain does indeed process emotions. Therefore, the brain can name odors more accurately when they are sniffed through the left nose.

Overall the nose, and its asymmetrical mechanical influence on the central nervous system, via the neurologic influence on the autonomic nervous system, is an anatomical feature that our visual system uses to align binasal visual fields and our vestibular system uses to re-align bilateral respiratory centers for mandatory, acceptable and pleasurable biologic shifting of cranial, thoracic, abdominal, and pelvis mass.



[A CT scan showing evidence of the nasal cycle. The more patent airway is on the right of the image; the swollen turbinates congesting the left. From: https://en.wikipedia.org/wiki/Nasal_cycle]