



The Seasonal growth of acute respiratory diseases in the World is catastrophic

Y. Ulyanov

Head of the ENT-Department of the Medical Centre 'The 1-st Doctor'
22, Str. Kievskaya, Moscow, Russia

Email: airsilver@yandex.ru

Website: <http://www.1doctor.ru/index.php?ch=4&id=255674533>

Today, around the World continues to increase the incidence of seasonal acute respiratory diseases (ARD) with rhinosinusitis (RS), and the trend has continued in subsequent years, despite the most modern advances in microbiology, pharmacology, medical technology and the most advanced techniques of prevention and treatment that is usually associated with the deterioration of the environment.

However, the seasonality of ARD clearly indicates a seasonal hypothermia, which contributes to the activation, as conditionally pathogenic microorganisms (<http://tiny-girls.ru/2011/07/prostuda/>) and viral infection with the development of Acute Respiratory Viral Infection (ARVI), which everywhere began to consider the leading one among the common seasonal respiratory morbidity occurs in the form of a cold.

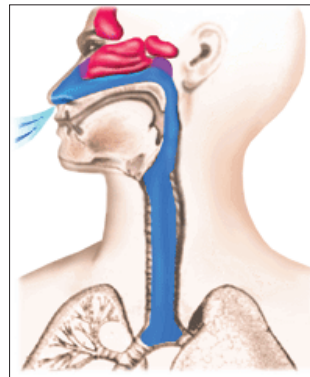
As a result, the factor of hypothermia as a cause uninfected respiratory illnesses like ARD are left without the necessary attention, and the desire to treat and to prevent ARD like ARVI, has naturally not been sufficiently effective, which could be one reason for the continuing rise of widespread seasonal respiratory diseases, in the form of a cold with ARD and RS.

A significant proportion of uninfected respiratory disease ARD among common seasonal respiratory morbidity, according to the World Health Organization, evidenced by the fact that even in years of severe epidemics of influenza accounts for only 40% (ARD, the symptoms and treatment of ARD).

This is confirmed by the Minister of health of Russia Veronika Skvortsova at the First national Congress of doctors (5 October 2012): 'In the World today is growing global epidemic of uninfected diseases (including respiratory diseases), which... Worldwide and in the Russian Federation lead to catastrophic social and economic consequences'.

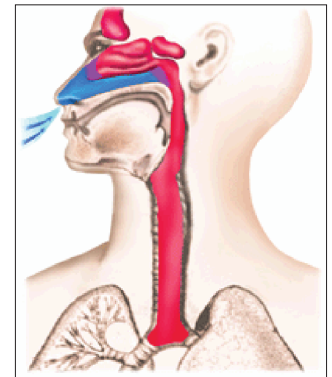
A clearly negative effect cooling of the respiratory tract on the development of seasonal ARD and the formation of stagnant processes in the sinuses, in the form of RS was confirmed by our studies of the nasal aerodynamics in the patients with "Southern" variant of the nasal aerodynamics (SVA), when a stream of cold air goes past the nasal sinuses (Figure 1).

Figure 1.
'Southern' variant
of the nasal aerodynamics
(SVA)



The cold air goes past
the nasal sinuses

Figure 2.
'Northern' variant of the
nasal aerodynamics
(NVA)



The cold air passes
through the nasal sinuses

And if 'Northern' variant of the nasal aerodynamics (NVA), when the cold airflow flows through the nasal sinuses (Figure 2) where it is warmed to 25 degrees of heat even at 20 degrees below zero and humidified to 100%, patients successfully resisted a seasonal ORD and not likely to develop colds RS, despite the growing deterioration of the environment.

More than 30 years of experience of successful use of methods of protection against disturbances of the nasal aerodynamics and techniques of surgical reconstruction of the NVA from the SVA enabled us to identify a real opportunity to use the protective properties of aerodynamics of a nose in the fight against the increasing tendency to the development of the seasonal ARD with RS, even with the current deterioration of the environment that most fully represented in the manual: Nasal Aerodynamics and Rhinosinusitis. Ulyanov Y. P., Shadiev H. D., Shodiev T. H. (Moscow, 2013, 200 pages).

The Main Findings:

1. Relevance of nasal aerodynamics violations as a cause of seasonal ACUTE RESPIRATORY DISEASE (ARD) with RHINOSINUSITISES (RS) especially evident due to the rise in the World of a global epidemic of non-communicable respiratory diseases because even in the years expressed influenza epidemics reach at least 60%.

2. Basic protection from of the seasonal ARD with RS is the mucociliary protective mechanism of nasal mucous membrane, which consists of the mucociliary transport on helium film and the mucociliary clearance beneath the helium film, which successfully complement each other.
3. The protective properties of nasal aerodynamics are playing a leading role among the nasal protective mechanisms that aim to preserve the activity of the mucociliary protective mechanism.
4. The nasal aerodynamics consists of two parallel respiratory structures, as form of the middle and superior nasal passages together with nasal sinuses, which perform the basic respiratory structures and protective functions of the nose, and inferior nasal passage together with common nasal passage, which perform the reserve respiratory function, that is activated when the bandwidth of the basic respiratory nasal airways is not enough for nasal respiration.
5. When the main air stream passes through the basic respiratory nasal airways (nasal sinuses), the air is warming to plus 25oC even at minus 20oC outside, that successfully protects against seasonal ARD with the RS and therefore, such type of the nasal aerodynamics is regarded as the Northern Variant of the nasal Aerodynamics (NVA), which corresponds normogramme of nasal aerodynamic.
6. A distinctive feature of the NVA is a distance between the anterior end of the inferior turbinate and the nasal septum within 2 mm and therefore an air column in the gleam of such width in fact blocking the inferior nasal passage and directs the main air flow in the middle and superior nasal passages with nasal sinuses, actually performing the role of 'physiological jumper'.
7. When the main air stream passes through the reserve respiratory nasal airways, during cold temperature season the inferior nasal passage and nasopharynx on so much cool, that programming seasonal ADR, so such variant of the nasal aerodynamics is more suitable to a warm climate of Southern latitudes, due to the what he regarded as the Southern Version of the nasal Aerodynamics (SVA).
8. The distinctive feature of SVA is not only the width of a lumen more than 2 mm between the anterior end of the inferior turbinate and the nasal septum, which leading to seasonal ARD, but also stagnant inflammatory process in the middle and superior nasal passages with the nasal sinuses, forming stagnant RS which is manifested in the form of seasonal ARD with the RS.
9. Overlapping of the reserve respiratory nasal airways programmed with the help of the physiological oedema his cavernous bodies, especially during sleep that is directing the main air stream of the nose passes through the nasal sinuses, in order to achieve maximum protective properties of a nose during sleep from ARD, but when a person is awake the bandwidth of the main nasal respiratory way becomes not enough, physiological oedema is receding and opening the reserve respiratory nasal airways that no longer threatens the ARD development due to sufficient activation the protective properties of the waking organism.
10. Additional overlap of the inferior nasal passage with the help of the limen nasi, anterior synechia, spikes and curvatures of the nasal septum, promote the diversion of the main nasal air flow in the middle and superior nasal passages with nasal sinuses which activates the protective properties of the nasal aerodynamics.
11. Exceptionally only small ostiums of the nasal cellular system and nasal sinuses, working like a spray mechanism of the H.L.Bergson (1859–1941), provide their extremely active ventilation.
12. The protective properties of the nasal aerodynamics is also evident during expiration when warm and moist air stream helps to restore the nasal mucous membrane injured during inspiration, especially for the SVA.
13. The unilateral SVA is the most aggressive, because it leads to a double overload of the inferior nasal passage, which working for both halves of the nose, that is typical for a deviated septum, so during septoplasty the NVA reconstruction from the SVA is needed.
14. Pathogenetic therapy of seasonal ARD with the RS in SVA, should be directed as at the treatment of acute post-traumatic inflammation of the reserve nasal respiratory airways, as well at the treatment of stagnant chronic inflammation in the middle and superior nasal passages with nasal sinuses.
15. Methods of therapeutic protection from violations of the SVA as well as surgical reconstruction of the NVA from of the SVA should be recognized as pathogenetic grounded prophylaxis of the seasonal ARD with the RS.
16. Since the main cause of the night snoring is blocking of the reserve respiratory nasal airway at SVA because physiological edema cavernous bodies, protective rhinedema of the inferior nasal passage and oedema of the basic respiratory structures by the chronic congestive RS, which leads to the mouth breathing, pathogenetic treatments snoring during sleep should be recognized as forced airing nasal sinuses or surgical reconstruction the NVA from the SVA.

More detail see on the website: <http://www.airsilver.net/>