

**SURVIVABILITY WITH A TOPSY-TURVY OLFACTION/RESPIRATION ORGAN**

Dear Sir,

Except for the proboscis monkey, man's nose is the largest among primates. This important respiratory/olfactory organ serves other important roles as well, including serving as an avenue for nasogastric feeds for patients unable to eat by mouth and as a route for nasal immunisation to induce systemic and mucosal immune response.

The medical/scientific community was excited at the recent award of the Nobel Prize in physiology/medicine to neuroscientists Richard Axel and Linda Buck for their work on olfaction (our ability to smell), an oft-neglected area<sup>(1)</sup>. In fact, most of us are unaware of the uniqueness of the design of our noses and the intricacies woven within, commonly considering it just as a triangle of cartilage enclosing two downward-facing nasal canals.

In this period of "olfaction awareness", it would be interesting to ponder about our olfaction/respiration, in a quasi-humorous way, and consider the consequences if our noses had been positioned upside down, with the nostrils facing upwards.

First of all, venturing out in hot climates would have resulted in the virtual frying of sensory receptors, blood vessels and neuronal connections in the olfactory epithelium, leaving even the mucous producing Bowman's glands bone dry. Pain, tactile, temperature and pressure sensations in the nasal cavity, mouth and eyes would have just vaporised into thin air. Freezing rain and snowflakes would have been a real irritant in colder places, with the olfactory canals serving as inviting trash receptacles. Sandstorms in deserts would have effortlessly hurtled into it sand, debris and even small insects, kicking off a series of events including tickling of the nose and contamination of the mouth, stomach and the respiratory system. Sauntering out during a rainy day without an umbrella would have been a death-defying feat. Swimming, or even a mundane task such as taking a shower, would have become extremely hazardous.

Common colds would have been one of the most dreaded diseases in the world, spawning the large-scale use of portable aspirators. The phrase "overflowing nostrils" would have made its way into the layman's vocabulary instead of "running nose". People with overflowing noses in restaurants would have inadvertently shot its contents like a missile into someone else's coffee or soup in the middle of a sneezing fit.

"Bird droppings" would have terrorised both men and women alike everywhere. It would have been heyday for those discerning birds with an uncanny acumen for accurate marksmanship. Discussions during bird "meetings" would have mainly drifted toward striking successes in targeting the human nostrils. Being nose-y would have primarily meant peeking down another's nostrils. Even self-peeking into ones own hairy nostrils would have been seriously alarming and the degree of alarm would have varied with the size and shape of individual noses. Osculation would have necessitated mandatory closure of the eyes. Warnings on cigarette packs would have explicitly requested users to close their eyes or use smoke-proof goggles. Smokers would have walked around like zombies equipped with a smoldering chimney. Nose digging would have been anything but subtle. Sitting under a ceiling fan, spinning at top speed, would have been "breathtaking."

It would be good to nose through our thoughts and be really nose-y about the importance of our noses, both aesthetic and practical. However, there would not have been any reason to stop and smell the flowers, if we had been made with our noses upside down.

Yours sincerely,

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**REFERENCES**

1. Abbott A. Science of smell wins medicine Nobel. *Nature* 2004; 431:616.