

Is Your Nose Really Necessary?

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Bo-Tau

Your nose acts as an air conditioning plant treating between 5 and 6 litres of air per minute, or the amount present in a small room each day, by purifying, warming and moistening it en route to the lungs.

While we tend to think of our nose solely in terms to the fleshy protuberance jutting from the middle of the face, it is in fact much more than that. In fact our external nose – the bit we can see – is uniquely human, being found in no other animal on earth, including our nearest primate relatives.

Their evolutionary role as an air conditioning plant means that noses come in a variety of shapes and sizes, depending on the climate in which a particular race evolved. Those from cool and, or, dry climates have bigger, longer noses to ensure air is effectively warmed and moistened by passing it over a large surface area. People from countries where the air is already warm and moist, by contrast, have wider and more open nostrils.

Our nostrils – known medically as *nares* – derive their name from the Middle English word *thrillen* meaning “to pierce”. It is the same root from which we get “to be thrilled”, as when we are “pierced by emotions.”

Their function is to shape inhaled air into a fast moving jet stream as it passes into the inner nose. This relatively narrow entrance quickly opens up into a wide nasal passage, the floor of which is formed by the roof of the mouth, or palate.

The front part of the palate is hard and back soft. You might like to explore your palate now by moving the tip of your tongue from the front teeth as far to the rear of your mouth as you can comfortably manage.

Close to the end of its range of movement, you should find the hardness ends and soft, spongy, tissue begins.

The palate ends in a fleshy, teardrop shaped, piece of muscle, connective tissue and mucus membrane called the uvula (Latin for “little grape”). This lifts to close off the nasal passage whenever we swallow, so helping to prevent food going up the nose.

The roof of the inner nose is also the floor of the brain. Directly above it are the eyes, the optic nerves, and the pituitary gland that regulates hormone production. The first cranial nerve, the olfactory nerve that allows us to smell, terminates in the upper part of this nasal passage. When we sniff, whether from enjoyment or disgust we direct the flow of air upward towards these nerve endings.

The most obvious structures of the inner nose – we can glimpse them by looking in a mirror – are three bulges known as *turbinates*. These prominences agitate the incoming air so as to ensure it circulates over as wide an area as possible.

Being warm and moist the *turbinates* prepare incoming air for the delicate tissues in our lungs by heating and humidifying it. Anyone who has found themselves fighting to catch a breathe on a cold, dry, day will appreciate how vital these bulges are. Although the *turbinates* become cooler and drier as the outside air passes over them the passage of warm, moist air flowing in the opposite direction every time we exhale helps to restore them.

So much for the warming and moistening functions of the inner nose. But it is also there to act as a first line of defence, trapping dust, smoke, pollen, bacteria, viruses, fungi and any other potentially harmful foreign matter in the surrounding air.

As Dr Lyall Watson points out in his fascinating book *Jacobson's Organ* even in the least polluted areas of our planet, such as the middle of the South Pacific or Antarctica every breath we take draws around 200,000 minute particles of debris into our lungs, while inhaling the polluted atmosphere around a six-lane highway in downtown Los Angeles during the rush hour can potentially flood your lungs with more than two million particles. These include an extraordinary mixture of natural and made-produced pollutants: “Salt, clay and ash from forest fires and distant volcanic eruptions. And mixed in with, or growing on, or simply being carried along by this fertile soil is a garden of exotic flora and fauna...a few stray viruses in transit between their hosts; four or five common bacteria; fifty or sixty fungi, including several rusts or moulds, one or two minute algae drifting in from the coasts; and possibly a fern or moss spore, or even an encysted protozoan.”

Little wonder, then, that nature should have equipped us with an extremely powerful and normally highly effective way for cleaning this potentially harmful gruel before it gets the chance to take up residence in our lungs.

This involves a mucus producing membrane that lines the inner nose and, like flypapers capturing unwary bugs, traps the majority of airborne invaders.

Fortunately since all the muck adhering to our mucus membrane must be disposed of as rapidly as possible, nature has evolved an ingenious way of cleansing it. Millions of tiny cilia, hair like structures, within the membrane which are constantly moving in a coordinated “wafting” action that moves mucus and its contents into the throat where they are swallowed and destroyed by the gut. Cilia move the mucus blanket so swiftly and efficiently that any microbes are unable either to make themselves at home or to make good their escape.

*The **Bo-Tau** Home Training Programme DVDs contains a section on nasal health and an explanation of how best to keep them healthy and efficient.*

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