

## Editorial

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# The Hidden Epidemic of Smell Loss (Hyposmia) in the United States

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There is a hidden epidemic of hyposmia in the United States. While most otolaryngologists may see one or two patients with hyposmia yearly there are as many as 21 million people in the United States with hyposmia.<sup>1</sup> Most of these patients experienced hyposmia following an influenza-like infection.<sup>2</sup> Data suggest that there are 30 million patients who experience a flu-like illness yearly; our data suggest that about 1% of these patients develop permanent hyposmia or about three million people develop and suffer with this symptom on a yearly basis. As many as two million patients who have what can be termed allergic rhinitis suffer with hyposmia on a chronic basis.<sup>2</sup> Otolaryngologists do see these patients but if they do not exhibit rhinitis, sinusitis or nasal polyps the patient's hyposmia may not be paramount in their evaluation or treatment. Patients with hyposmia after a traumatic brain injury represent a third major etiology of hyposmia with as many as 500,000 patients exhibiting a persistent hyposmia after their head injury.<sup>2</sup> Hyposmia associated with aging, head and neck radiation or chemotherapy, Parkinson's disease or other metabolic or neurological issues constitute a part of this epidemic which is not recognized by otolaryngologists as a major medical problem.

While hyposmia may not be life threatening for most of these patients their lives are inhibited by their inability to obtain flavor from food, enjoy social events around meals or to smell both pleasant and unpleasant or dangerous odors. Most patients are deeply disturbed and can become depressed by this loss and search unsuccessfully for methods to restore their smell function.

The major problems related to this epidemic are lack of understanding of the mechanisms responsible for it, how to evaluate it or how to treat it.

Most patients with hyposmia do not have an anatomical or neurological etiology as the cause of their loss. Most patients exhibit hyposmia related to abnormalities of their olfactory receptors which are damaged by the viral RNA associated with their influenza or by an underlying immunological pathology associated with their rhinitis.<sup>2</sup>

Most otolaryngologists do not have the equipment to evaluate quantitatively the sensory changes about which the patients complain. We have established specific testing techniques to help to evaluate these patients.<sup>2</sup> Results of these tests define the roles of the receptors, the brain and the interaction between the receptors and brain play in hyposmia.

Most otolaryngologists are unaware that drugs are available to treat these patients.<sup>2</sup> Many studies have demonstrated that treatment with oral theophylline has been successful in restoring smell function in many of these patients.<sup>3</sup> And recently, intranasal theophylline has been even more efficient in helping these patients restore their smell function.<sup>4</sup>

It is up to otolaryngologists to understand the extent of this epidemic and to respond to it with the same energy and enthusiasm that they extend to their surgical practice for which they were well trained. Recognition of this hidden epidemic is the first step in its evaluation. Understanding the mechanisms which initiated it and its treatment will help otolaryngologists deal with this hidden epidemic.

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