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# Smell & Taste Disorders

**How Common Are Smell and Taste Disorders?**

One study estimates that more than two million Americans have smell and taste disorders. Another estimate suggests that more than 200,000 people visit a physician for a smell or taste problem each year. Many more smell and taste disturbances go unreported.

**Are Smell and Taste Disorders Serious?**

A person with a faulty sense of smell and taste is deprived of an early warning system that most of us take for granted. Smell and taste alert us to fires, poisonous fumes. leaking gas, and spoiled foods. Loss of the sense of smell may also be a sign of sinus disease. growths in the nasal passages or. in rare circumstances. brain tumors. Because an intact sense of smell and taste is required in some professions, chefs and firemen. among others. may be subject to serious economic hardship.

**How Do Smell and Taste Work?**

Smell and taste belong to our chemical sensing system. or chemosensation. The complicated processes of smelling and tasting begin when molecules released by the substances around us stimulate special nerve cells in the nose. mouth or throat. These cells transmit messages to the brain. where specific smells or tastes are identified.

Olfactory (smell nerve) cells are stimulated by the odors around us-the fragrance from a rose. the smell of bread baking. These nerve cells are found in a tiny patch of tissue high up in the nose, and they connect directly to the brain.

Taste cells react to food or drink mixed with saliva and are clustered in the taste buds of the mouth and throat, Many of the small bumps that can be seen on the tongue contain taste buds. These surface cells send taste information to nearby nerve fibers. which send messages to the brain.

Taste and smell cells are the only cells in the nervous system that are replaced when they become old or damaged. Scientists are examining this phenomenon while studying ways to replace other damaged nerve cells.

A third chemosensory mechanism, called the common chemical sense, contributes to our senses of smell and taste. In this system. thousands of free nerve endings- especially on the moist surfaces of the eyes. nose. mouth and throat-identify sensations like the sting of ammonia, the coolness of menthol and the "heat" of chili peppers.

We can commonly identify four basic taste sensations: sweet. sour. bitter and salty. Certain combinations of these tastes-along with texture. temperature. odor and the sensations from the common chemical sense-produce a flavor. It is flavor that lets us know whether we are eating peanuts or caviar.

Many flavors are recognized mainly through the sense of smell. If you hold your nose while eating chocolate. for example. you will have trouble identifying the chocolate flavor-even though you can distinguish the food's sweetness or bitterness. This is because the familiar flavor

of chocolate is sensed largely by odor. So is the well-known flavor of coffee. This is why a person who wishes to fully savor a delicious flavor (i.e.. an expert chef testing his own creation) will exhale through his nose after each swallow.

**What Causes Smell and Taste Disorders?**

The predominant problem is a natural decline in smelling ability that typically occurs after age 60. Scientists have found that the sense of smell is most accurate between the ages of 30 and 60 years. It begins to decline after age 60. and a large proportion of elderly persons have lost their smelling ability. Women of all ages are generally more accurate than men in identifying odors. Some people are born with a poor sense of smell or taste. but most patients develop them after an injury or illness. Upper respiratory infections are blamed for some losses. and injury to the head can also cause smell or taste problems.

Loss of smell and taste may result from polyps in the nasal or sinus cavities, hormonal disturbances or dental problems. They can also be caused by prolonged exposure to certain chemicals such as insecticides and by some medicines.

Tobacco smoking is the most concentrated form of pollution that most people will ever be exposed to. It impairs the ability to identify odors and diminishes the sense of taste. Quitting smoking improves the smell function. but very slowly. For example: Two-pack-a-day smokers must quit for as many years as they smoked to completely restore their sense of smell.

Many patients who receive radiation therapy for cancers of the head and neck later complain of lost smell and taste, They can also be lost in the course of some diseases of the nervous system.

Patients who have lost their larynx or "voice box" commonly complain of poor ability to smell and taste. These senses are greatly improved when laryngectomy patients use a special "bypass" tube to breathe through the nose again rather than through an opening in the neck. (This emphasizes the contribution of air flow through the nose for smell and taste.)

**How Are Smell and Taste Disorders Diagnosed?**

The extent of loss of smell or taste can be tested with a measurement of the lowest concentration of a chemical that a person can accurately detect and recognize. A patient may also be asked to compare the smells or tastes of different chemicals. the intensities of smells or taste of different chemicals. or how the intensities of smells or tastes grow when a chemical's concentration is increased. Scientists have developed an easily administered "scratch-and-sniff" test to evaluate the sense of smell. A person scratches pieces of treated paper to release different odors, sniffs them, and tries to identify each odor from a list of possibilities,

In taste testing. the patient reacts to different chemical concentrations: this may involve a simple "sip, spit and rinse" test, or chemicals may be applied directly to specific areas of the tongue.

**Can Smell and Taste Disorders Be Treated?**

Sometimes a certain medication is the cause of a smell or taste disorder, and improvement occurs
when that medicine is stopped or changed.

Although certain medications can cause chemosensory problems, others-particularly anti-allergy drugs-seem to improve the senses of taste and smell. Some patients - notably those with

serious respiratory infections or seasonal allergies- regain their smell or taste simply by waiting for their illness to run its course. In many cases. nasal obstructions such as polyps can be removed to restore airflow to the receptor area and can correct the loss of smell and taste, Occasionally, chemosenses return to normal just as spontaneously as they disappeared.

**What Can I Do To Help Myself?**

If you experience a smell or taste problem, try to identify and record the circumstances surrounding it. When did you first become aware of it? Did you have a "cold" or 'flu" then? A head injury? Were you exposed to air pollutants. pollens, danders or dust to which you might be allergic? Is this a recurring problem? Does it come in any special season, like hay fever time?

Bring all this information with you when you visit a physician who deals with diseases of the nose and throat, Also be prepared to tell him about your general health and any medications you are taking. Proper diagnosis by a trained professional can provide reassurance that your illness is not imaginary, You may even be surprised by the results. For example, what you may think is a taste problem could actually be a smell problem, because much of what you think you taste you really smell.

Diagnosis may also lead to treatment of an underlying cause for the disturbance. Many types of smell and taste disorders are reversible, but if yours is not. it is important to remember that you are not alone: thousands of other patients have faced the same situation.