[?/??Receptor binding produces depolarization of the gustatory cells, stimulating the sensory nerve fibers that send information to the brain for processing.Taste buds detect at least five broad categories of tastants: sodium ions (salty); hydrogen ions from acids (sour); sugars and related compounds (sweet); alkaloids and certain toxins (bitter); and amino acids such as glutamate and aspartate (umami; Jap.?] Dr/Samaher Mohammed ?: The lamina propria of the olfactory epithelium possesses large serous glands, the olfactory glands (of Bowman), which produce a constant flow of fluid surrounding the olfactory cilia and facilitating the access of new odoriferous substance [?/???] Dr/Samaher Mohammed ?: Olfactory Epithelium The olfactory chemoreceptors for the sense of smell are located in the olfactory epithelium, a specialized region of the mucous membrane covering the superior conchae at the roof of the nasal cavity.They are not restricted to papillae and are also widely scattered elsewhere on the dorsal and lateral surfaces of the tongue, where they are also continuously flushed by numerous minor salivary glands.The apical (luminal) pole of each olfactory cell is its dendrite end and has a knoblike swelling with about a dozen basal bodies, from which long cilia project into the overlying aqueous layer.Supporting cells are columnar, with narrow bases and broad, cylindrical apexes containing the nuclei and extending microvilli into the fluid layer.The paranasal sinuses communicate with the nasal cavities through small openings; mucus produced there is moved into the nasal passages by the activity of the ciliated epithelial cells.?] Dr/Samaher Mohammed ?: Paranasal Sinuses The paranasal sinuses are bilateral cavities in the frontal, maxillary, ethmoid, and sphenoid bones of the skull (Figure 17–1).Approximately 250 taste buds are present on the lateral surface of each vallate papilla, with many others present on fungiform and foliate (but not the keratinized filiform) papillae.?] Dr/Samaher Mohammed ?: Taste buds are ovoid structures within the stratified epithelium on the tongue's surface, which sample the general chemical composition of ingested material (Figures 15–4 and 15–5).Salt and sour tastes are produced by ion channels and the other three taste categories are mediated by G–protein–coupled receptors.Olfactory neurons are bipolar neurons present throughout this epithelium.?:?????:???:??[??/???:??

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