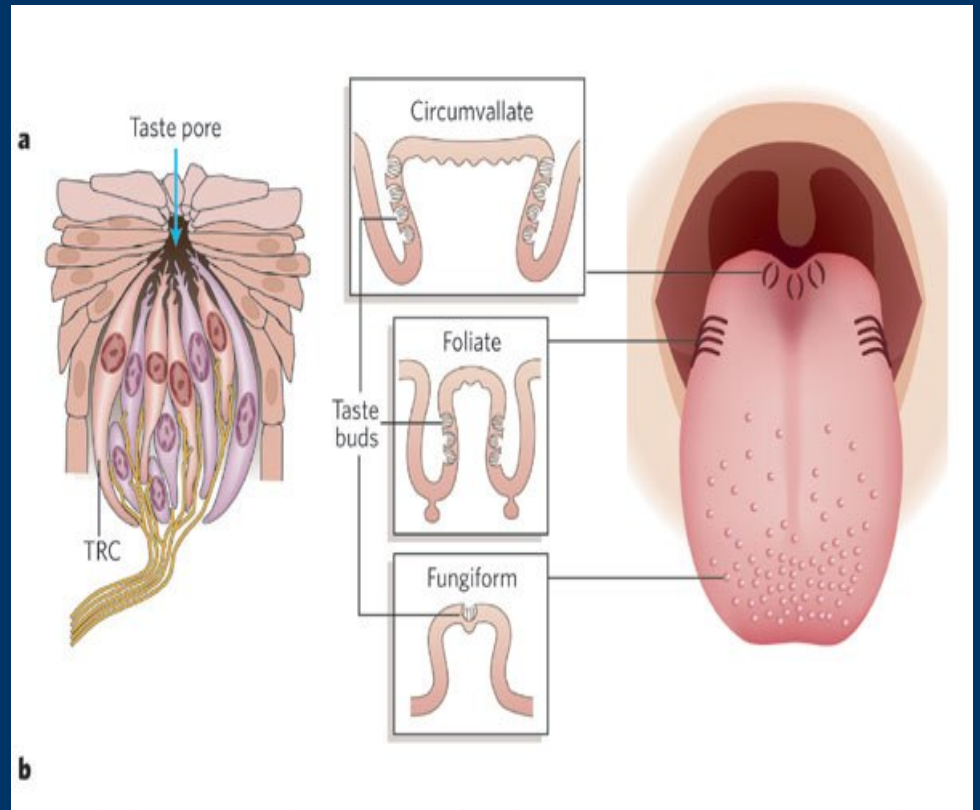
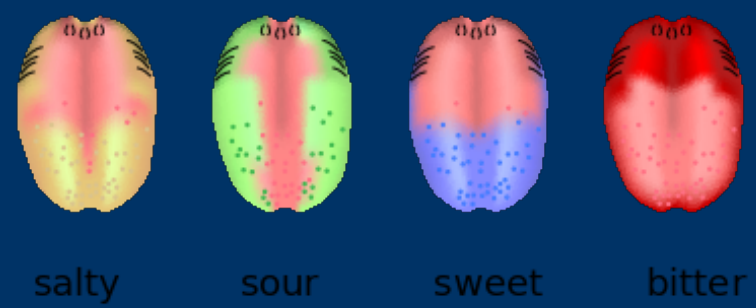
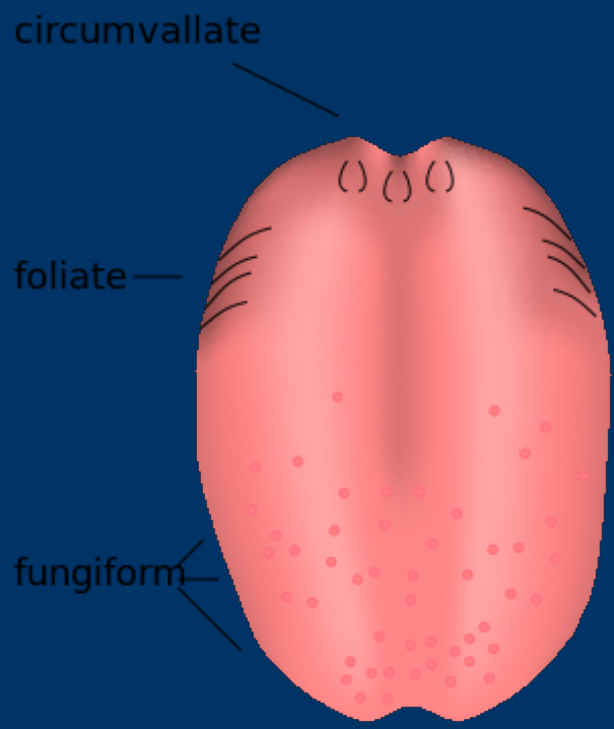
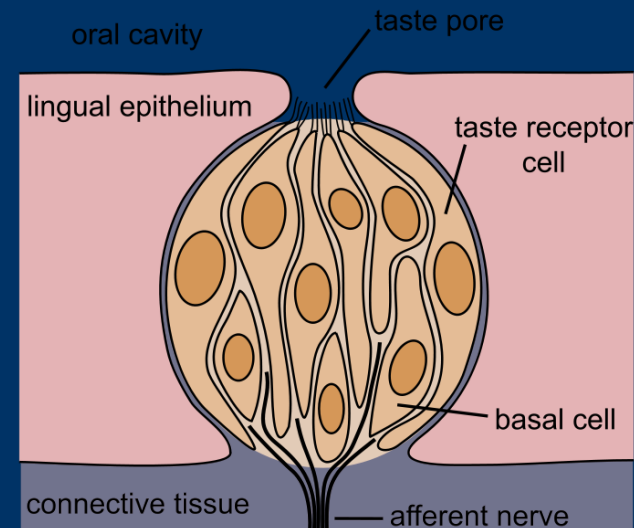


TASTE



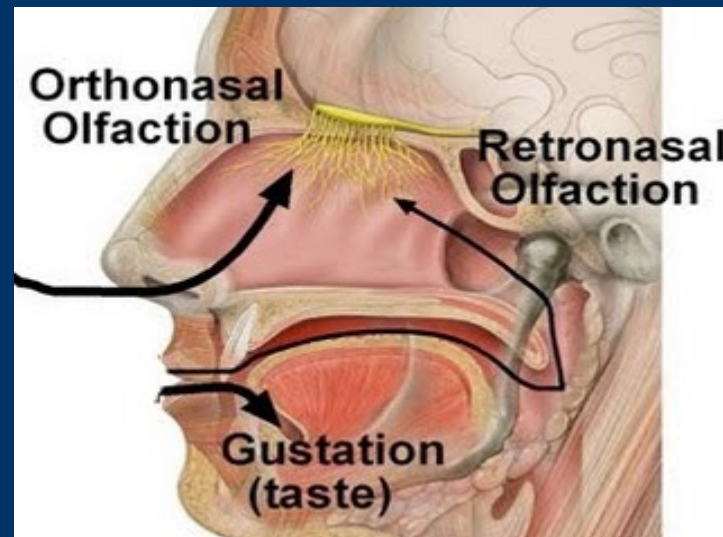
What is taste?

- Taste is one of the five traditional senses. Taste is the sensation produced when a substance in the mouth reacts chemically with receptors of taste buds.



Let's smell!

- Taste, along with smell (olfaction) and trigeminal nerve stimulation (which also handles touch for texture, also pain, and temperature), determines flavors, the sensory impressions of food or other substances.



Basic tastes

- Sweetness
- Sourness
- Saltiness
- Bitterness
- Umami



Sweetness

- Sweetness, usually regarded as a pleasurable sensation, is produced by the presence of sugars and a few other substances. Sweetness is often connected to aldehydes and ketones, which contain a carbonyl group.



Sourness

- Sourness is acidity, and, like salt, it is a taste sensed using ion channels. Hydrogen ion channels detect the concentration of hydronium ions that are formed from acids and water.



Saltiness

- Saltiness is a taste produced best by the presence of cations (such as Na^+ , K^+ or Li^+) and, like sour, it is tasted using ion channels.



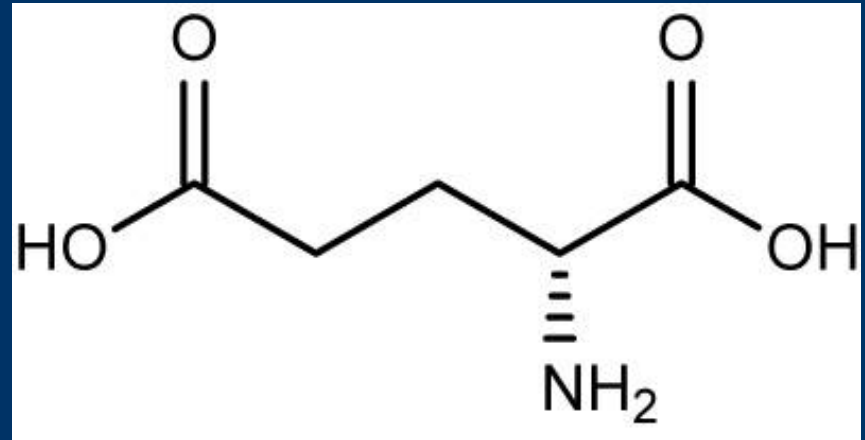
Bitterness

- Research has shown that TAS2Rs (taste receptors, type 2, also known as T2Rs) such as TAS2R38 are responsible for the human ability to taste bitter substances.



Umami

- The amino acid glutamic acid is responsible for umami, but some nucleotides (inosinic acid and guanylic acid) can act as complements, enhancing the taste. Glutamic acid binds to a variant of the G protein-coupled receptor, producing an umami taste.



Further sensations

- **Astringency:**

Some foods, such as unripe fruits, contain tannins or calcium oxalate that cause an astringent or puckering sensation of the mucous membrane of the mouth. Examples include tea, red wine, rhubarb, and unripe persimmons and bananas.

- **Temperature:**

Temperature can be an essential element of the taste experience. Food and drink that—in a given culture—is traditionally served hot is often considered distasteful if cold, and vice versa.



Recent discoveries

- The receptors for the basic tastes of bitter, sweet and umami have been identified. They are G protein-coupled receptors (a large protein family of receptors that sense molecules outside the cell and activate inside signal transduction pathways and, ultimately, cellular responses).
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