

## GUSTATION (TASTE)

### 1) Tastes: “Basic” qualities

a) Salty

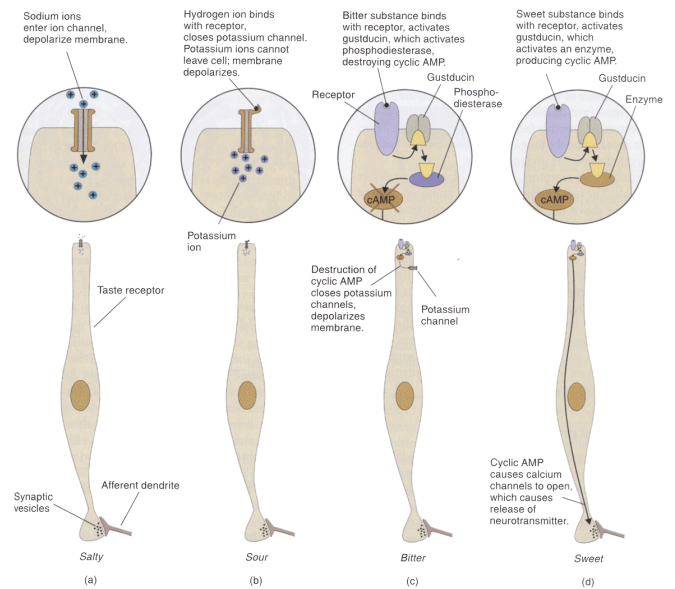
b) Sour

c) Sweet

d) Bitter

e) Umami

f) Fatty-acid



**Figure 7.29**  
Transduction of taste information. (a) Salty taste. (b) Sour taste. (c) Bitter taste. (d) Sweet taste.

2) Receptors

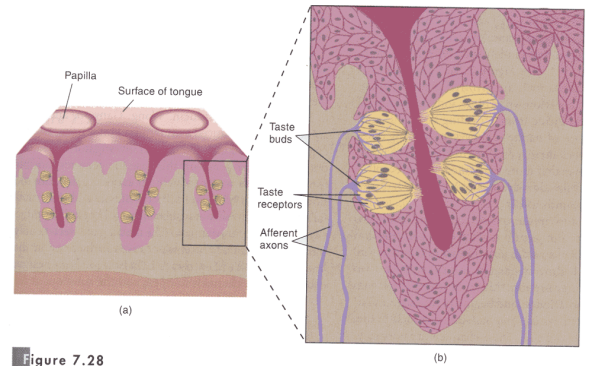


Figure 7.28 The tongue. (a) Papillae on the surface of the tongue. (b) Taste buds.

3) Tongue

a) Taste cells

b) Taste buds

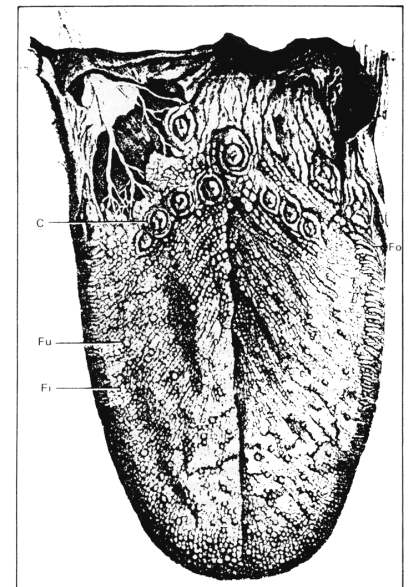
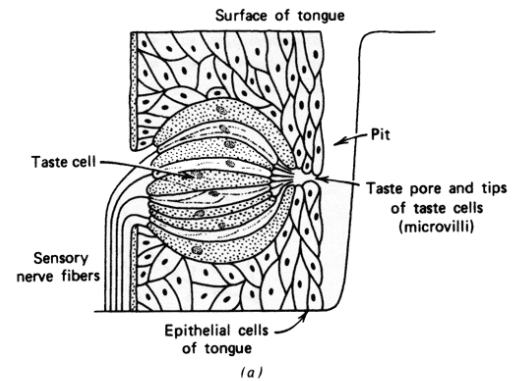
c) Papillae

i) Fungiform papillae

ii) Circumvallate papillae

iii) Foliate papillae

iv) Filiform papillae



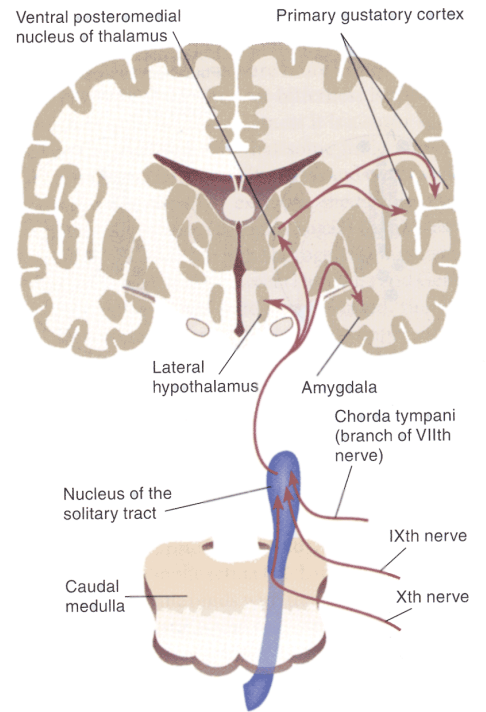
4) Pathway

a) Nerves

i) Chorda tympani

ii) Glossopharyngeal nerve

iii) Vagus nerve



**Figure 7.30**

Neural pathways of the gustatory system.

b) Medulla

c) Thalamus

d) Primary gustatory cortex

e) Secondary gustatory cortex

f) Note:

5) Coding

a) Nerve fibers...

b) Taste seems to be a combination of...

c) Neurons in cortex...

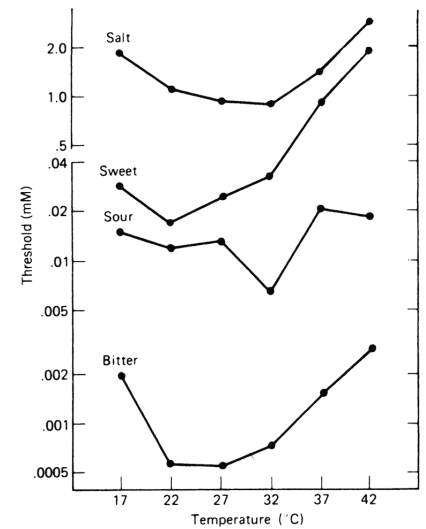
6) Thresholds

a) Temperature

b) Genetics

c) Age

d) Culture



⇒ **figure 17.5** Threshold values for the four taste qualities, each represented by a different sample compound, taken at six temperatures. (Salt: NaCl; sweet: Dulcin; sour: HCl; bitter: QSO<sub>4</sub>. Note that the threshold concentrations are given in units of millimolar, mM.) (Source: Based on McBurney et al., 1973.)